

**SAMSUNG TECHWIN**

# **8 CHANNEL/ 16 CHANNEL DVR**

**User Manual**

SDS-P5101/SDS-P5100/SDS-P4080



# 8 Channel/ 16 Channel DVR


## User Manual

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❖ Design and specifications are subject to change without prior notice.

❖ The default password can be exposed to a hacking thread so it is recommended to change the password after installing the product.  
Note that the security and other related issues caused by the unchanged password shall be responsible for the user.

## IMPORTANT SAFETY INSTRUCTIONS

Read these operating instructions carefully before using the unit.

Follow all the safety instructions listed below.

Keep these operating instructions handy for future reference.

- 1) Read these instructions.
- 2) Keep these instructions.
- 3) Heed all warnings.
- 4) Follow all instructions.
- 5) Do not use this apparatus near water.
- 6) Clean only with dry cloth.
- 7) Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- 8) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- 9) Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- 10) Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- 11) Only use attachments/accessories specified by the manufacturer.
- 12) Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
- 13) Unplug this apparatus during lightning storms or when unused for long periods of time.
- 14) Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.



# overview



## CAUTION

RISK OF ELECTRIC SHOCK.  
DO NOT OPEN



**CAUTION** : TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK) NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



This symbol indicates that dangerous voltage consisting a risk of electric shock is present within this unit.



This exclamation point symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

## WARNING

- To reduce the risk of fire or electric shock, do not expose this appliance to rain or moisture.
- To prevent injury, this apparatus must be securely attached to the floor/wall in accordance with the installation instructions.

## WARNING

1. Be sure to use only the standard adapter that is specified in the specification sheet.  
Using any other adapter could cause fire, electrical shock, or damage to the product.
2. Incorrectly connecting the power supply or replacing battery may cause explosion, fire, electric shock, or damage to the product.
3. Do not connect multiple cameras to a single adapter. Exceeding the capacity may cause abnormal heat generation or fire.
4. Securely plug the power cord into the power receptacle. Insecure connection may cause fire.
5. When installing the camera, fasten it securely and firmly. The fall of camera may cause personal injury.
6. Do not place conductive objects (e.g. screwdrivers, coins, metal parts, etc.) or containers filled with water on top of the camera. Doing so may cause personal injury due to fire, electric shock, or falling objects.
7. Do not install the unit in humid, dusty, or sooty locations. Doing so may cause fire or electric shock.
8. If any unusual smells or smoke come from the unit, stop using the product. In such case, immediately disconnect the power source and contact the service center. Continued use in such a condition may cause fire or electric shock.
9. If this product fails to operate normally, contact the nearest service center. Never disassemble or modify this product in any way. (SAMSUNG is not liable for problems caused by unauthorized modifications or attempted repair.)
10. When cleaning, do not spray water directly onto parts of the product. Doing so may cause fire or electric shock.
11. Do not expose the product to the direct airflow from an air conditioner.  
Otherwise, it may cause moisture condensation inside the Clear Dome due to temperature difference between internal and external of the dome camera.
12. If you install this product in a low-temp area such as inside a cold store, you must seal up the wiring pipe with silicon, so that the external air can not flow inside the housing.  
Otherwise, external high, humid air may flow inside the housing, pooling moisture or vapor inside the product due to a difference between internal and external temperature.



## BEFORE START

This user manual provides Information for using the DVR such as brief introduction, part names, functions, connection to other equipment, menu setup, etc.

You have to keep in mind the following notices :

- SAMSUNG retains the copyright on this manual.
- This manual cannot be copied without SAMSUNG's prior written approval.
- We are not liable for any or all losses to the product incurred by your use of non-standard product or violation of instructions mentioned in this manual.
- Prior to opening the case, please consult a qualified technician first. Whenever this is needed power must be removed from the unit.
- Before installing an additional HDD or connecting an external storage device (USB HDD) to this DVR, check the compatibility. Consult your provider for the compatibility list.

## Warning

### ❖ Battery

It is essential that when changing the battery in the unit, the replacement battery must be of the same type otherwise there may be a possibility of an explosion.

The following are the specifications of the battery you are using now.

- Normal voltage : 3V
- Normal capacity : 170mAh
- Continuous standard load : 0.2mA
- Operating temperature : -20°C ~ +85°C  
(-4°F ~ +185°F)

#### CALIFORNIA USA ONLY

This Perchlorate warning applies only to primary CR (Manganese Dioxide) Lithium coin cells in the product sold or distributed ONLY in California USA.  
"Perchlorate Material - special handling may apply, See [www.dtsc.ca.gov/hazardouswaste/perchlorate](http://www.dtsc.ca.gov/hazardouswaste/perchlorate)."

### Caution

- Connect the power cord into a grounded outlet.
- The Mains plug is used as a disconnect device and shall stay readily operable at any time.
- Batteries shall not be exposed to excessive heat such as sunshine, fire or the like
- Risk of Explosion if Battery is replaced by an Incorrect Type. Dispose of Used Batteries According to the Instructions.

### ❖ System Shutdown

Turning off the power while the product is in operation, or undertaking improper actions may cause damage or malfunction to the hard drive or the product.

Please turn off the power, please right-click to display the context sensitive menu and select <Shutdown>. After selecting <OK> in the pop-up menu, you can pull off the power cord.

You may want to install a UPS system for safe operation in order to prevent damage caused by an unexpected power stoppage. (Any questions concerning UPS, consult your UPS retailer.)

### ❖ Operating Temperature

The guaranteed operating temperature range of this product is 0°C ~ 40°C (32°F ~ 104°F).

This product may not work properly if you run right after a long period of storage at a temperature below the guaranteed one.

Prior to using a device that has been stored for a long period in low temperatures, allow the product to stand at room temperature for a period.

Especially for the built-in HDD in the product, its guaranteed temperature range is 5°C ~ 55°C (41°F ~ 131°F). Likewise, the hard drive may not work at a temperature below the guaranteed one.

### ❖ Ethernet Port

DVR is designed for indoor use only and all the communication wirings are limited to inside of the building.

## CONTENTS

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<b>OVERVIEW</b>	<b>3</b>	Important Safety Instructions
	<b>5</b>	Before Start
	<b>6</b>	Contents
	<b>8</b>	Features
	<b>11</b>	Part Names and Functions (Front)
	<b>12</b>	Part Names and Functions (Rear)
	<b>13</b>	Remote Control
<b>CONNECTING WITH OTHER DEVICE</b>	<b>15</b>	installation
	<b>15</b>	Checking the Installation Environment
	<b>16</b>	Connecting the Video, Audio and Monitor
	<b>16</b>	Connecting the USB
	<b>17</b>	Connecting the Camera (SDC-5340BC)
	<b>19</b>	Connecting the RS-485 Device
	<b>19</b>	Connecting the Network
<b>LIVE</b>	<b>21</b>	Getting Started
	<b>23</b>	Live Screen Configuration
	<b>28</b>	Live Mode
	<b>31</b>	Zoom
	<b>31</b>	Audio On/Off
	<b>31</b>	Freeze
	<b>32</b>	Event Monitoring
<b>MAIN MENU</b>	<b>33</b>	System Setup
	<b>45</b>	Setting the Device
	<b>51</b>	Setting the Recording
	<b>55</b>	Setting the Event
	<b>57</b>	Backup
	<b>58</b>	Network Configuration
	<b>72</b>	Controlling a PTZ Device

**SEARCH & PLAY**

75

- 75 Search
- 78 Playback

**WEB VIEWER**

80

- 80 Introducing Web Viewer
- 81 Connecting Web Viewer (Mac)
- 82 Using Live Viewer (Mac)
- 83 Connecting Web Viewer (Windows)
- 84 Using Live Viewer (Windows)
- 90 Using Search Viewer
- 94 Viewer Setup
- 105 About
- 106 Mobile Viewer

**BACKUP VIEWER**

108

- 108 SEC Backup Viewer

**APPENDIX**

111

- 111 Product Specification (Camera)
- 112 Product Specification(DVR)
- 118 Default Setting
- 121 Troubleshooting
- 124 Open Source License Report on the Product

# overview

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## FEATURES

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The DVR employs H.264 video encoding for 8 or 16 channel inputs and G.711 audio encoding for 8 or 16 channels while simultaneously supports hard disc recording and playback.

These DVRs also supports network connectivity, providing remote monitoring from a remote PC transferring video and audio data.

- Provides a convenient User Interface
- 8/16 CH Composite Input Connectors
- Supports CIF(S)/2CIF(M)/4CIF(L) recording formats
- With the network specific codec, network transfer enabled regardless of the recording conditions
- De-interlacing processor for better picture quality
- Display of HDD information and status by using HDD SMART
- Hard Disk overwrite function
- Mass storage hard disk backup through high-speed USB 2.0
- Simultaneous Record and Playback of 8/16-channel video data
- Various Search Modes (Search by Time, Event, Backup and Motion Detection)
- Various Recording Modes (Manual, Event, Scheduled Recording)
- Alarm Interface
- Remote Monitoring function by Network Viewer, Smart Viewer and Mobile Viewer

## Standards Approvals

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- 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.

## Package Contents


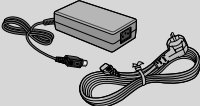


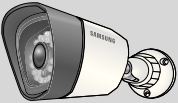

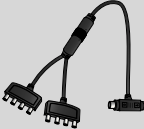
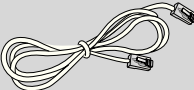

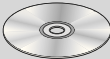
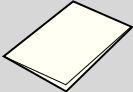
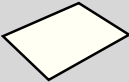
Please unwrap the product, and place the product on a flat place or in the place to be installed.  
Please check the following contents are included in addition to the main unit.

### ❖ SDS-P5101/P5100 Package

		
DVR (1SET)	Adapter (1EA) / Power Cable (1EA)	Mouse (1EA)
		
Remote Control (1EA) / Battery (2EA)	SDC-5340BC (10SET)	Camera Cable (10EA)
		
Camera Power Cable (1EA)	Network Cable (1EA)	HDMI Cable(1EA) * SDS-P5101 only
		
Expansion pipe and Screw (30EA)	Manual CD (1EA)	Quick Start Guide (1EA)
		
Warranty Card (1EA)		

# overview

## ❖ SDS-P4080 Package

		
DVR (1SET)	Adapter (1EA) / Power Cable (1EA)	Mouse (1EA)
		
Remote Control (1EA) / Battery (2EA)	SDC-5340BC (8SET)	Camera Cable (8EA)
		
Camera Power Cable (1EA)	Network Cable (1EA)	Expansion pipe and Screw (24EA)
		
Manual CD (1EA)	Quick Start Guide (1EA)	Warranty Card (1EA)

## PART NAMES AND FUNCTIONS (FRONT)

SDR-5100/4100



Part Names		Functions
<b>1</b>	USB Port	Connects the USB devices.
<b>2</b>	Remote Control Receiver	Input the remote control signal.
<b>3</b>	LED Indicator	<b>POWER</b> : Displays the power ON/OFF status.
		<b>ALARM</b> : Lights on when an event occurs.
		<b>REC</b> : Lights on when recording is in progress.

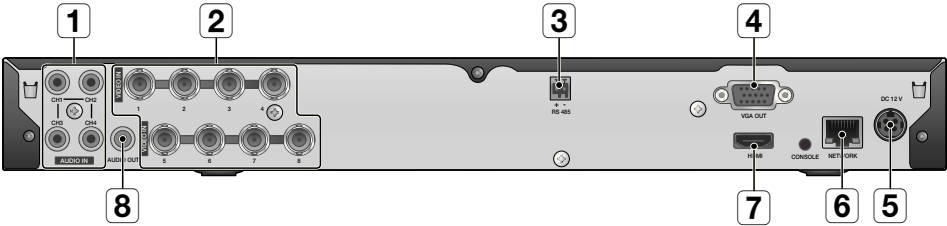


- All functions are operable with mouse control, since there are no front buttons.

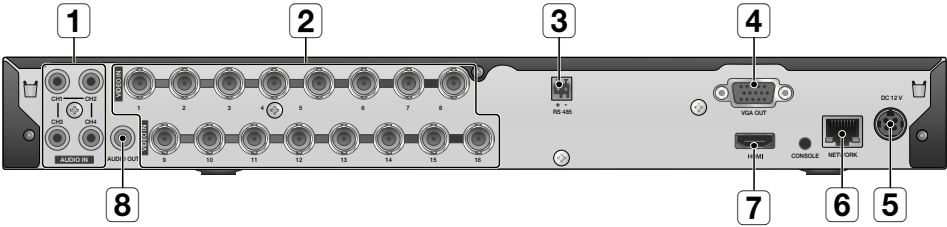
# overview

## PART NAMES AND FUNCTIONS (REAR)

SDR-4100



SDR-5100

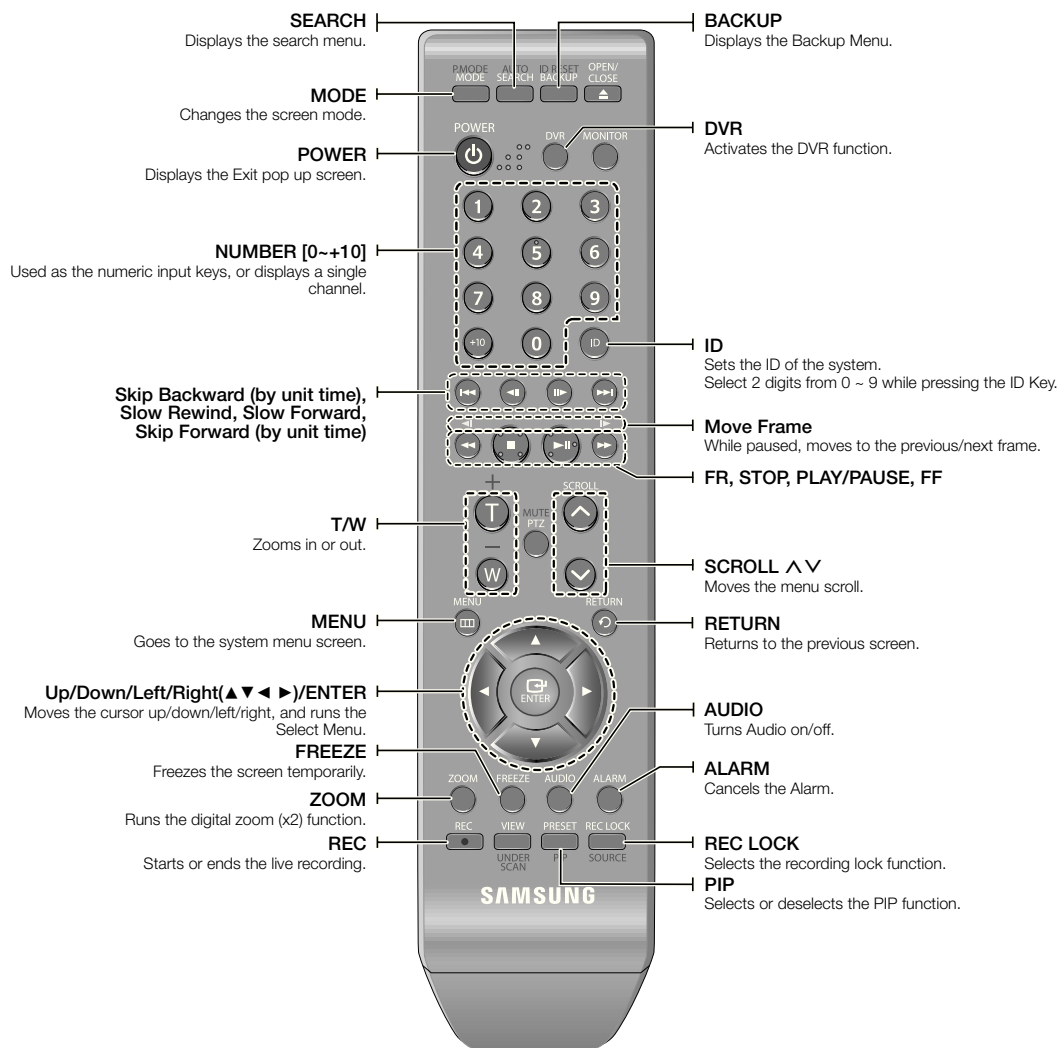


Part Names		Functions
1	AUDIO IN	Input ports (RCA jack) for the audio signal.
2	VIDEO IN	Input port for the composite video signal.
3	RS-485	Used to establish RS-485 communications.
4	VGA OUT	Output port for VGA video signal.
5	DC 12V	DVR power input port.
6	NETWORK	NETWORK connector port.
7	HDMI	HDMI connector port.
8	AUDIO OUT	Output port (RCA jack) for the audio signal.

 [CONSOLE] is designed for the service repair purpose only.



# REMOTE CONTROL




## Using the numeric buttons

CHANNEL 1-9	Press each button between 1 to 9. (8CH : 8)
CHANNEL 10	Press the [0/+10] button first, then press the [0/+10] within 1 second.
CHANNEL 11-16	Press the [0/+10] button first, then press any number between 1 to 6.

## Changing the Remote Control ID

---

1. Press the ID button of the remote control and check the ID displayed on the DVR screen.  
The factory default ID of the remote control is 00.
  2. Enter 2 digits of your selection in order, while pressing the system **[ID]** button.
  3. When ID input is done, press the system **[ID]** button again to check the setting.
-  ■ If you want to change the remote control ID to 08: Press 0 and 8 in order while the system **[ID]** button is pressed.  
Remote control's ID and DVR's ID should be matched for proper operation. Refer to "**Remote Devices**". (Page 49)

# connecting with other device

## INSTALLATION

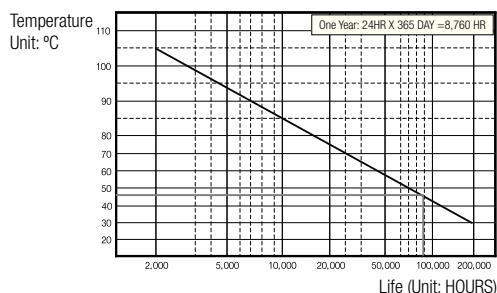
Please take note of the followings before using this product.

- Do not use the product outdoor.
- Do not spill water or liquid in the connection part of the product.
- Do not impose the system to excessive shock or force.
- Do not pull out the power plug forcefully.
- Do not disassemble the product on your own.
- Do not exceed the rated input/output range.
- Use a certified power cord only.
- For the product with an input ground, use a grounded power plug.

## CHECKING THE INSTALLATION ENVIRONMENT

Samsung Digital Video Recorder ("DVR" hereinafter) is a state-of-art security device, and contains mass storage hard disk(s) and critical circuits inside.

When the temperature rises inside the product, the product may breakdown and the product life be shortened. Please pay attention to the following recommendations before installation.



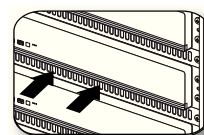
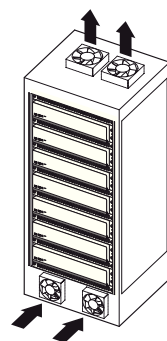
The followings are the recommendations when Samsung DVR is installed on a rack.

1. Please ensure that the rack inside is not sealed.
2. Please ensure the air is circulated through the inlet/outlet as shown in the picture.
3. If the DVR or other devices on a rack is to be stacked as in the picture, provide a suitable space or install a ventilating opening for air circulation.
4. For natural air convection, place the inlet at the bottom of the rack and the outlet on top.
5. It is strongly recommended that a fan motor is installed at the inlet and the outlet for air circulation. (Please fit a filter at the inlet to screen dust or foreign substances.)
6. Please maintain the temperature inside the rack or surrounding areas between 0°C ~ 40°C (32°F ~ 104°F) as shown in the figure 1.

Rack Mount Instructions - The following or similar rack-mount instructions are included with the installation instructions :

- A) Elevated Operating Ambient - If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than room ambient. Therefore, consideration should be given to installing the equipment in an environment compatible with the maximum ambient temperature specified by the manufacturer.
- B) Reduced Air Flow - Installation of the equipment in a rack should be such that the amount of air flow required for safe operation of the equipment is not compromised.
- C) Mechanical Loading - Mounting of the equipment in the rack should be such that a hazardous condition is not achieved due to uneven mechanical loading.
- D) Circuit Overloading - Consideration should be given to the connection of the equipment to the supply circuit and the effect that overloading of the circuits might have on overcurrent protection and supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.
- E) Reliable Earthing - Reliable earthing of rack-mounted equipment should be maintained. Particular attention should be given to supply connections other than direct connections to the branch circuit (e.g. use of power strips).

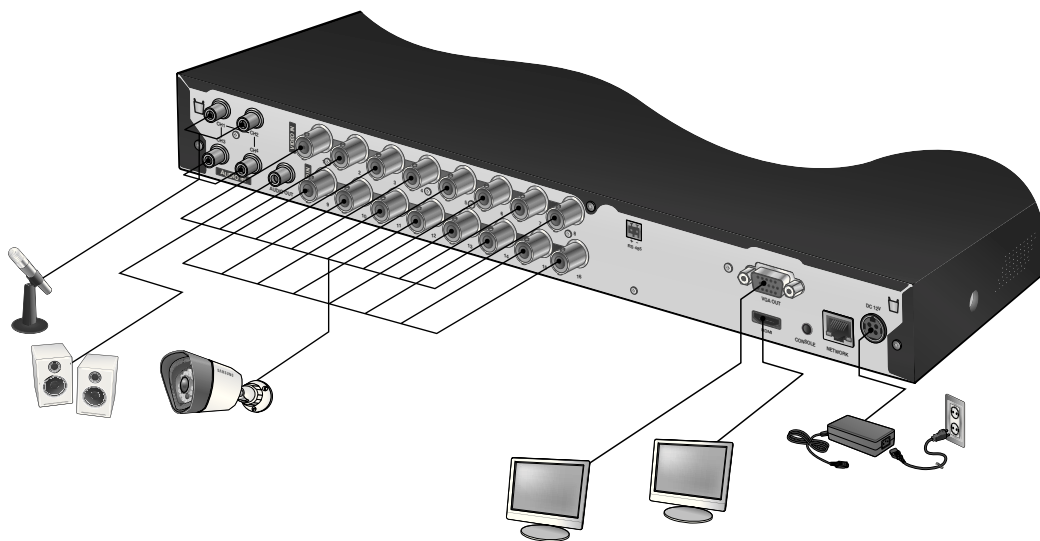
[Figure 1]



[Figure 2]

# connecting with other device

## CONNECTING THE VIDEO, AUDIO AND MONITOR



## CONNECTING THE USB

1. By factory default, a USB port is provided for external connection.
2. You can connect a USB HDD, USB memory or mouse to the USB port.
3. If a USB HDD is connected to the system, recognition and settings are available in **"Main Menu > Setting the Device > Storage Device"**. (Page 47)
4. This product supports hot-plugging, which connects/removes the USB device during the system operation.

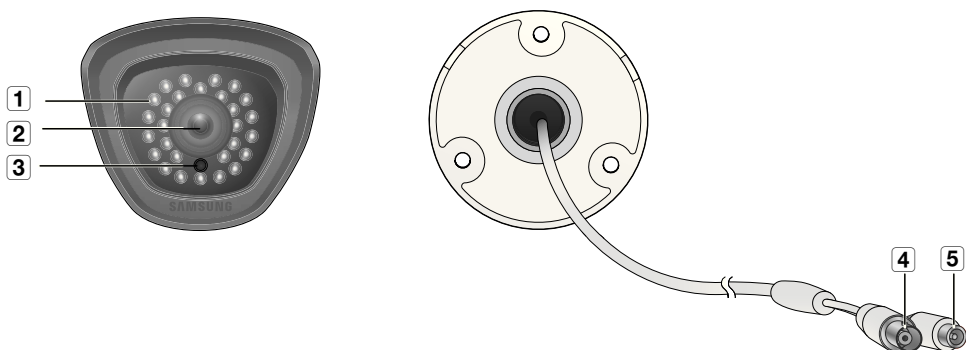


- If you use the USB device for Backup purposes, format it with FAT32 on PC if it is not formatted on the DVR.

## CONNECTING THE CAMERA (SDC-5340BC)

Equipped with the IR LED and the illumination sensor, enables you to monitor at night as well as in daytime. The camera is suitable for both internal and external use.

- Please make sure not to fully expose the camera to rain. The camera must be installed under a shelter to avoid exposure to excessive rain or moisture.

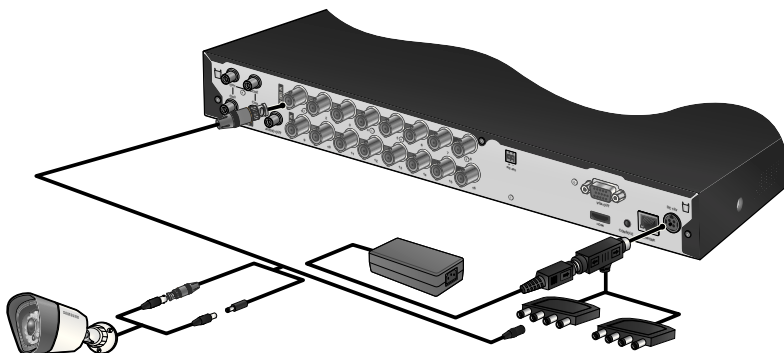


Name		Description
1	IR LED	These infrared LED's are controlled by the illumination sensor.
2	Lens	Focal length of 3.6mm enables you to cover relatively longer range of monitoring.
3	Illumination Sensor	Detects incoming light to control the IR LED.
4	BNC Cable	BNC terminal for video signal output.
5	Power Cable	Used to plug the power cable.

# connecting with other device

## Connecting with DVR

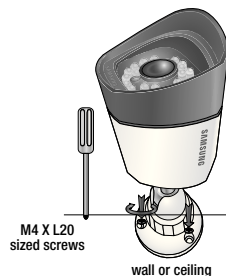
- The following figures are based on Model SDR-5100.



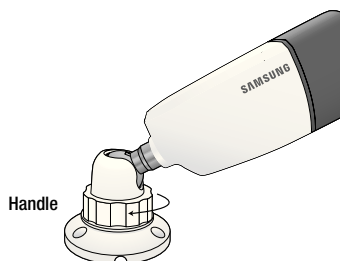
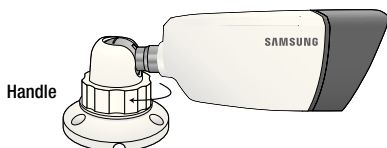
## Installing the camera

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

1. Select a position where you want to install the camera.
  - Make sure the selected position can sustain the weight of the camera.
2. Attach the camera bracket to the wall using the supplied screws.
  - SDC-5340BC : (M4 X L20).



3. Adjust the camera to target the video location and tighten the camera bracket handle on the camera bracket.



4. Connect the camera cable to the camera.



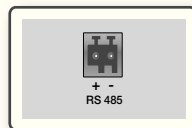
- You should be careful when installing the camera outdoors because the cable connectors may be wet with moisture or pile up with impurities.
- The camera satisfies the IP66 standard, and direct exposure to water or moisture may cause problem such as condensation.

## CONNECTING THE RS-485 DEVICE

Connect the rear [RS-485 +, -] port to the PTZ camera or system keyboard.



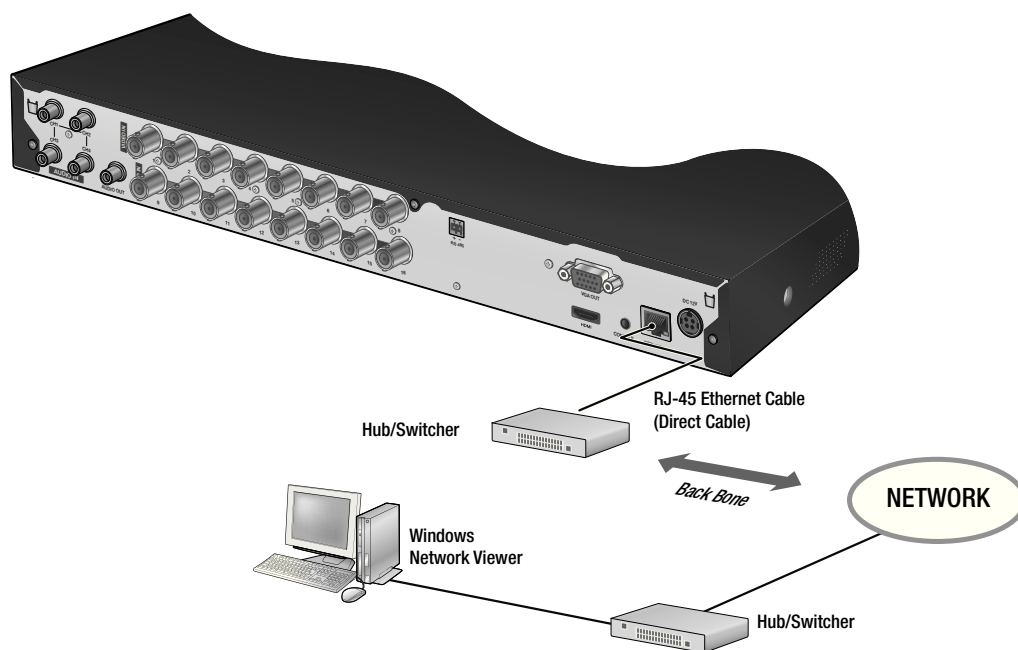
- You can connect and control the PTZ camera which supports the RS-485 communication.
- Check if the RS-485 device is compatible with the product first.
- Pay attention not to change the polarity (+/-) of the RS-485 device when connecting it.
- Depending on camera's type, connection polarity can be different. For further information, refer to the respective PTZ Camera's documentation.



## CONNECTING THE NETWORK

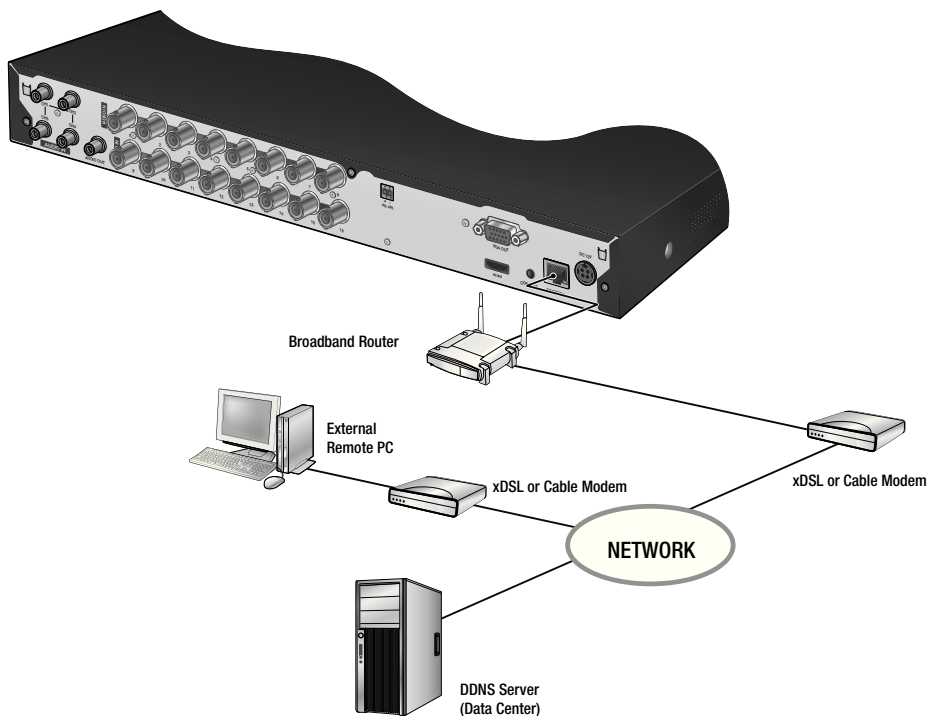
- The following figures are based on Model SDR-5100.

### Connecting to network through Ethernet (10/100BaseT)

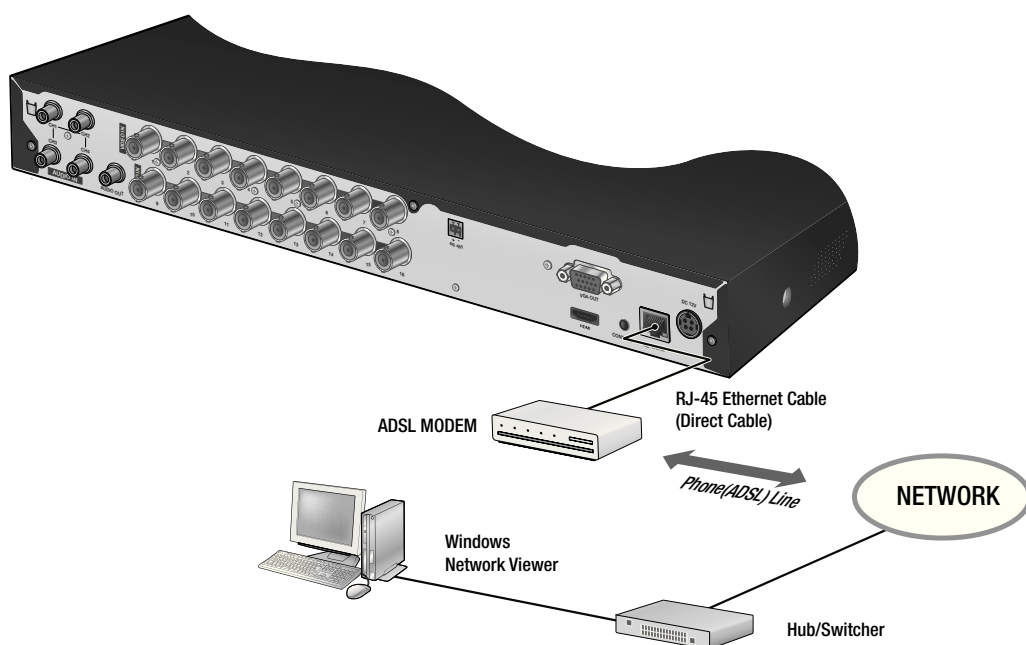


# connecting with other device

## Connecting to the Network using the router



## Connecting to Network through ADSL





## GETTING STARTED

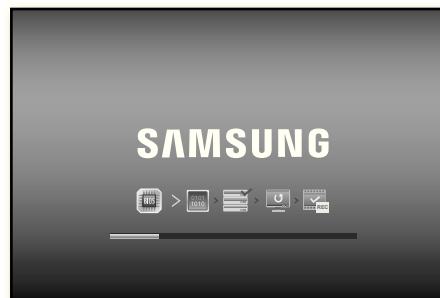
### Starting the system

1. Connect the power cable of the DVR to the wall outlet.



- It takes about 10 seconds to display the start screen after booting.

2. You will see the initialization screen.  
The initialization process will last about 1 minute.  
If a new HDD is installed, the initialization process may take longer.



3. The live screen appears with a beep.



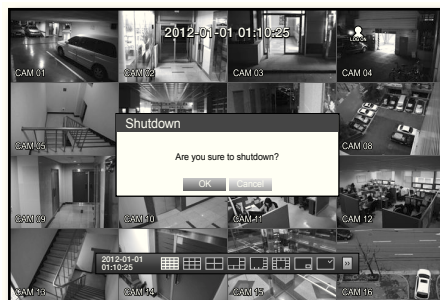
### Shutting Down the System

You can shut down the system only if you have logged in to the DVR.  
You require permission to shut down the system if you are not logged in as admin.

1. Press the **[POWER]** button on the remote control, or right-click to display the context sensitive menu and select **<Shutdown>**.
2. The **"Shutdown"** confirmation window appears.
3. Use the arrow keys on the remote control to move to **<OK>** and press the **[ENTER]** button or click **<OK>**. The system will shut down.



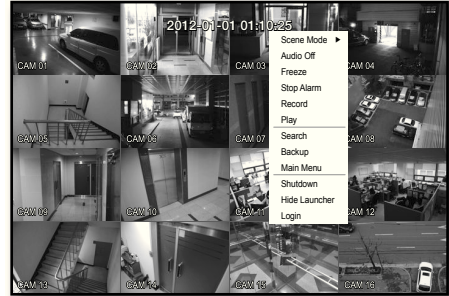
- For the permission management, refer to **"Permission Management > Setting Permissions"**. (Page 40)



## Login

To access a DVR or restricted menu, you should have logged in to the DVR.

1. In live mode, right-click any area of the screen.  
You will see the context sensitive menu as in the right figure.



2. Click <Login>.

The login dialog appears.

You can also see the login dialog to access a desired menu by pressing the [MENU] button on the remote control.

- The login dialog will also appear if you press a menu button on the remote control when the corresponding menu requires logging in.
- After logged in, press [RETURN] on the remote control to display the logout dialog.
- By default, initial ID and password are set to "admin", and "4321".



- The default password can be exposed to a hacking thread so it is recommended to change the password after installing the product.

Note that the security and other related issues caused by the unchanged password shall be responsible for the user.

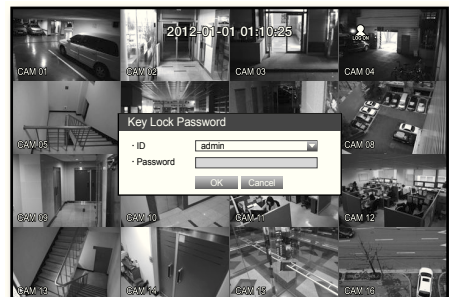


- For the restricted permission, refer to "Permission Management > Setting Permissions". (Page 40)

## Locking All Buttons

This will restrict access to all buttons available in the DVR.

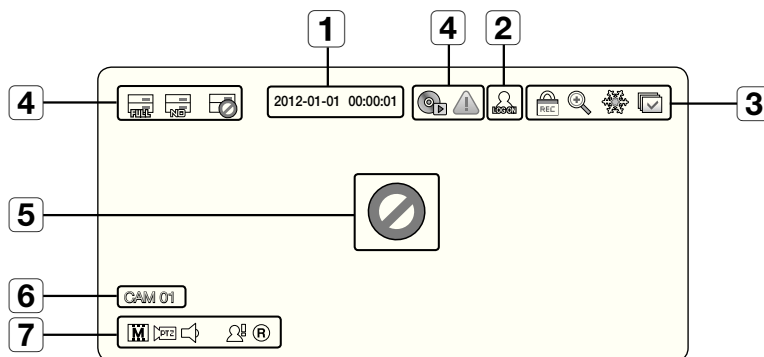
1. In Live mode, press buttons on the remote control in the order of [STOP (■)]→[FREEZE]→[STOP (■)]→[FREEZE]→[MENU].  
All buttons will be locked.
2. In the lock condition, press any button to display a dialog where you are prompted to enter the password for unlocking the buttons.  
The button lock will be released if you enter the admin password.




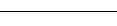








## LIVE SCREEN CONFIGURATION

### Icons on the Live Screen



You can check the status or operation of the DVR with the icons on the live screen.



Name		Description
<b>1</b>	<b>Current Date, Time</b>	Displays the current time and date.
<b>2</b>	<b>Login Information</b>	When you are logged in, the "LOG ON" icon will be displayed.
<b>3</b>	<b>Screen Mode</b>	Displayed if the zoom function is activated.
		Freezes the screen temporarily.
		Displayed in Auto Sequence mode where all channels are switched at the specific time interval.
		This icon is displayed if a user with restricted access to the Record button tries to make manual recording. ■ Only the user with the applicable permission can release (stop) the recording.
<b>4</b>	<b>System Operation</b>	Displayed if the HDD is full and the DVR has an insufficient space to record.
		Displayed if no HDD is installed or the existing HDD should be replaced.
		Displayed if the HDD needs a technical examination.
		This will be displayed if the backup operation is in process.
		Displayed if a new firmware is found from the network.
<b>5</b>	<b>Video Input Status</b>	Displayed if no input is entered in the condition that the camera is set to <ON>.
		Nothing will be displayed on the screen if the camera is set to <OFF>.

Name		Description
<b>6</b>	<b>Camera Name/ Channel</b>	Displays the camera name and the changed channel, if any.
<b>7</b>	<b>Camera Operation</b>	 /  /  Displays the resolution of the recording screen. (Page 53)
		 PTZ Displays in PTZ setting, and highlighted yellow if PTZ is in operation.
		 /  Displays AUDIO ON/MUTE. Not displayed in video mode if deactivated.
		 Displays if a motion detected in the condition that the motion detection is set to <ON>.
		 /  /  Displays the current record mode from Record/Event/Schedule.

## Error Information

- If the internal HDD is not connected, the “NO HDD”(  ) message will appear; if there occurs a problem, you will see the “HDD FAIL”(  ) message in the top left corner. In this case, make sure you contact the service center for assistance as this may cause a failure of recording, playback or backup.



- If you see NO HDD, HDD FAIL icons on the screen, contact the service center for more details.

## Live Screen Menu

In addition to the buttons on the remote control, you can access a desired menu by right-clicking the mouse any area in live mode.

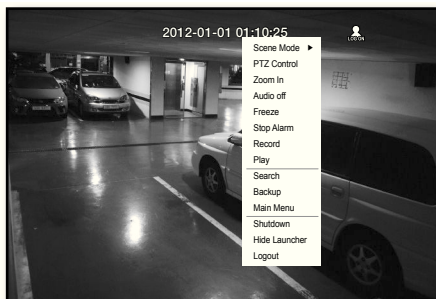
The context sensitive menu that appears by right-clicking the screen may differ, depending on the login/logout, screen split mode and DVR operation mode.



- Menu items of Search, Record, Backup and Shutdown can be deactivated, depending on the user permission.



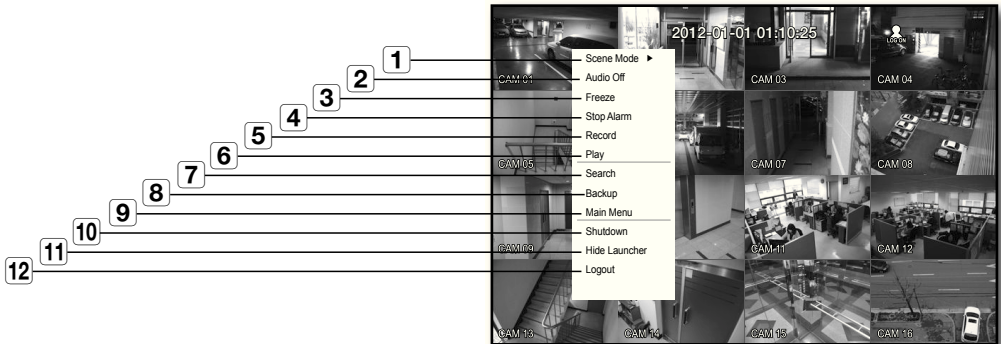
< Split Mode Menu >



< Single Mode Menu >

## Split Mode Menu

The context sensitive menu in split mode differs, depending on the login/logout status.



Menu		Description
1	Scene Mode	Refer to <b>"Live Mode"</b> . (Page 28)
2	Audio On/Off	Refer to <b>"Audio On/Off"</b> . (Page 31)
3	Freeze	Refer to <b>"Freeze"</b> . (Page 31)
4	Stop Alarm	Stops the alarm output and the event monitoring. Refer to <b>"Event Monitoring"</b> . (Page 32)
5	Record/Stop	Starts/stops the standard recording.
6	Play	Plays the search result (data). Refer to <b>"Search &amp; Play &gt; Play"</b> . (Page 78)
7	Search	Refer to <b>"Search &amp; Play &gt; Search"</b> . (Page 75)
8	Backup	Refer to <b>"Main Menu &gt; Setting the Backup"</b> . (Page 57)
9	Main Menu	Accesses the main menu. Refer to the Using the DVR section. (Page 33)
10	Shutdown	Turns down the DVR.
11	Show/Hide Launcher	Shows or hides the launcher. Refer to <b>"View the Launcher Menu"</b> . (Page 27)
12	Login/Logout	You can log in or out.

## Single Mode Menu

The single mode menu is available only in Single Mode.

The context sensitive menu for the One Channel mode, in Split mode is different from that of the Single mode.

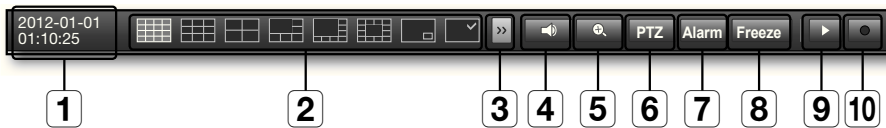


Menu		Description
1	Full Screen	Select and click a desired channel in Split mode to switch to the full screen of the selected channel.
2	Zoom In	Enlarges the selected image. (Page 31)

## View the Launcher Menu

The Launcher menu appears on the bottom of the live screen.

1. In Live mode, right-click to display the context menu and select **<Show Launcher>**.
  2. Move the cursor to the bottom and click a desired item in the Launcher menu.
- If no input is entered for 10 seconds, the menu will disappear.
  - The Launcher menu can be accessed only by using the mouse.
  - SDR-4100 does not support the 16-split screen mode.



Menu		Description
1	Date/Time	Displays the current time and date. The indication of AM/PM is displayed if you set 12 hours for the time format in "System > Date/Time/Language > Time". (Page 33)
2	Screen Mode	Press this button to switch the screen mode in sequence. The current mode is highlighted in white.
3	Menu Expansion Button	Click to display the hidden menu to the right.
4	Audio	Turns ON/OFF the sound of the selected channel.
5	Zoom	Enlarges the selected area. This is available only in Single Live mode.
6	PTZ	Runs the PTZ Control launcher. The PTZ control launcher will be active on the Live screen after you select a single channel.
7	Alarm	Stops the alarm if it's activated.
8	Freeze	Freezes the Live screen temporarily.
9	Play	Enters Play mode if a file to play exist, and if not, enters Search mode.
10	Record	Start/End recording the Live screen.

## LIVE MODE

SDR-5100 display Live images from 16 channels in a total of 8 layout of split screens.

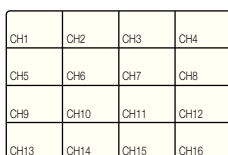
### Switching the screen mode

To switch the split mode, select a screen mode in the launcher menu, or right-click to select a screen mode in the context menu.

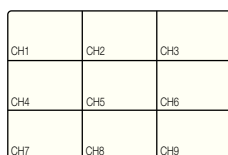
Press the **[MODE]** button on the remote control to switch the mode in the sequence of the launcher menu items.



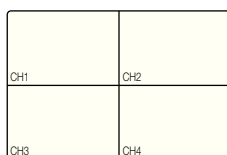
■ SDR-4100 does not support the 16-split screen mode.



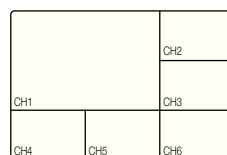
16-split mode



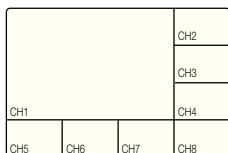
9-split mode



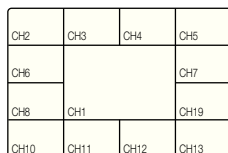
4-split mode



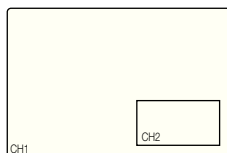
6-split mode



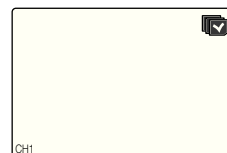
8-split mode



13-split mode



PIP

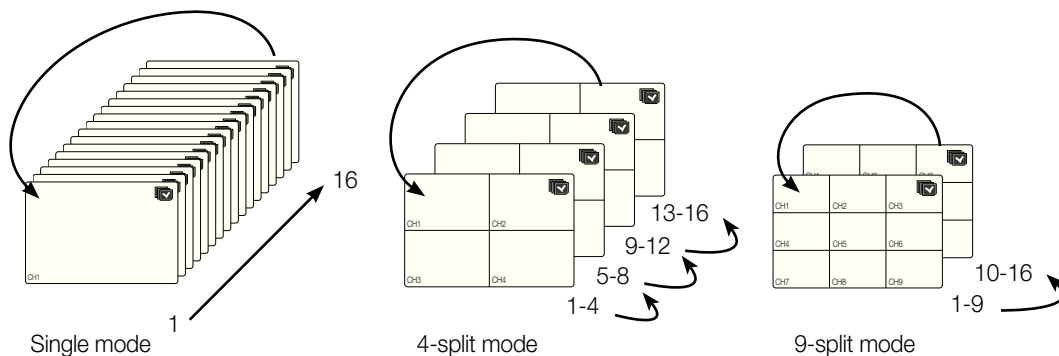


Auto Sequence

### Switching the split mode

SDR-5100 display 16 Live images in the sequence of Single, 4-split and 9-split modes.

#### Auto Sequence





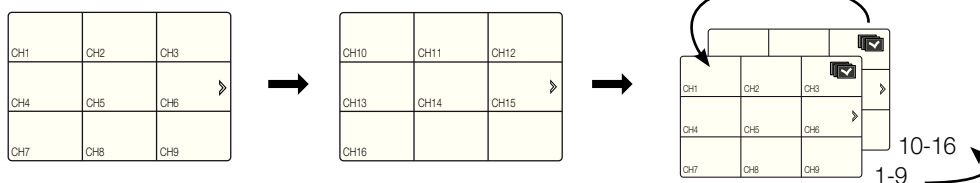


- In Single mode, If you have set <SEQ-Dwell Time> in "Setting the Device > Camera", Auto Sequence will be conducted at the set interval. (Page 45)
- In a split mode, If you have set <Multi CH SEQ Time> in "Setting the Device > Monitor", Auto Sequence will be conducted at the set interval. (Page 50)

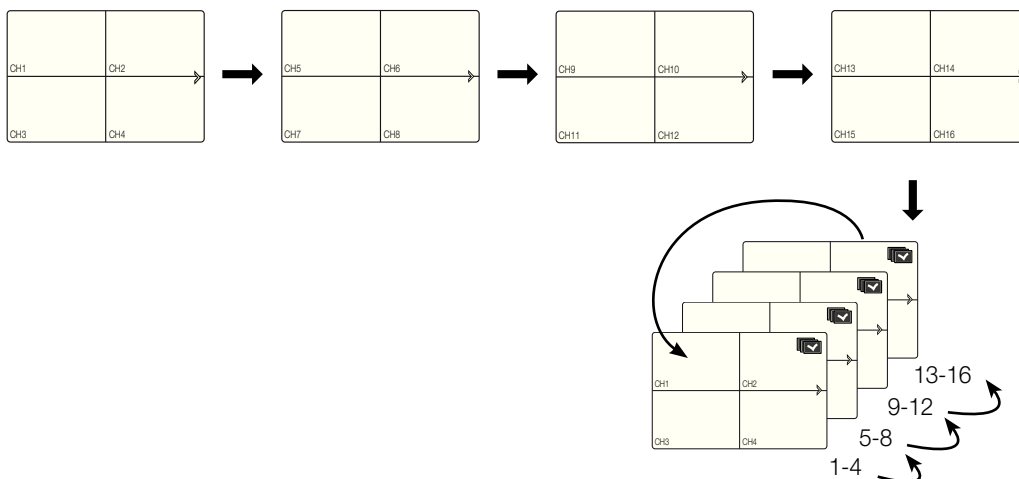
## Manual Switching

Press the left/right button on the remote control, or click the arrow <◀/▶> key to move to the next split mode.

- If pressing the right [▶] button in 9-split mode :  
9-split (CH 1~9) mode → 9-split (CH 10~16) mode → Auto Sequence



- If pressing the right [▶] button in 4-split mode :  
Channel (CH 1~4) → Channel (CH 5~8) → Channel (CH 9~12) → Channel (CH 13~16) → Auto Sequence



## Channel Setting

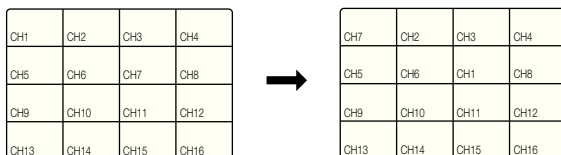
You can display the channel in a desired area of a split screen.

1. Place the cursor over the camera name of each channel to display the <▼> key to the right on the screen.
2. Click a camera name to display a channel list where you can select a different channel.
3. Select a desired channel and click it.

The current channel will be switched to the selected one.

Use the cursor to select a channel to move, and drag and drop it to a desired channel; this can also change the channel position.

- Ex : if switching CH 1 to CH 7



## Switching to Single Mode

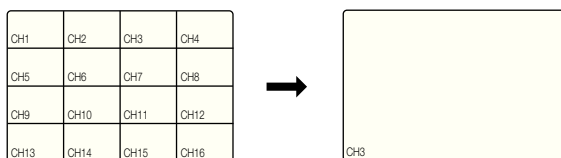
When in split mode, select and double-click a desired channel to switch to its Single mode.

Press the number corresponding to a desired channel on the remote control to switch to its Single mode.

- CHANNEL 1–9 : Press each button between 1 to 9. (8CH : 8)
- CHANNEL 10 : Press the [0/+10] button.
- CHANNEL 11–16 : Press the [0/+10] button first, then press any number between 1 to 6 within 1 second.

Refer to “**Remote Control > Using the numeric buttons**”. (Page 13)

- Ex : If double-clicking CH 3 or pressing the number “3” on the remote control.



## ZOOM

This is available only in Single Live mode. In Single mode, select a desired area and use the Zoom function to enlarge it twice.

1. Select **<Zoom In>** in the right-click menu.  
Press the **[ZOOM]** button on the remote control, or simply click **< [🔍] >** in the launcher menu. The zoom box appears.
2. Use the direction keys, or drag and drop to specify an area to enlarge.
3. Press the **[ENTER]** button, or double-click the selected area to enlarge it twice.
  - In the enlarged image, use the direction buttons (**▲▼◀▶**) on the remote control to move the enlarged area.
4. Press the **[ZOOM]** button on the remote control, or simply click **< [🔍] >** in the launcher menu to release the zoom.



## AUDIO ON/OFF

You can turn the sound on/off corresponding to the channel in Live mode.

### AUDIO On/Off in Single mode

Click the audio icon (  ) on the screen, or press the **[AUDIO]** button on the remote control to turn it on/off.



- Only the channel where **<Audio>** is set to **<ON>** in "Device > Camera" displays the audio icon (  ) in Live mode that you can use to turn the sound on/off.

## FREEZE

This is available only in Live mode, this pauses playing the Live image temporarily.

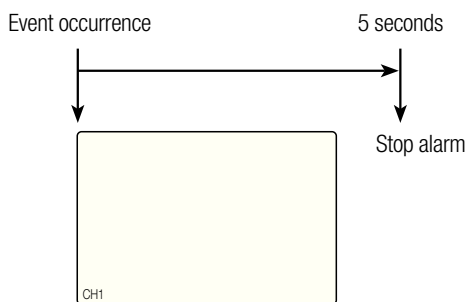
1. Press the **[FREEZE]** button on the remote control, or click **< Freeze >** in the launcher menu.  
The playback of the image is stopped temporarily.
2. Press the **[FREEZE]** button again, or click **< Freeze >**.  
This will release the freeze.

## EVENT MONITORING

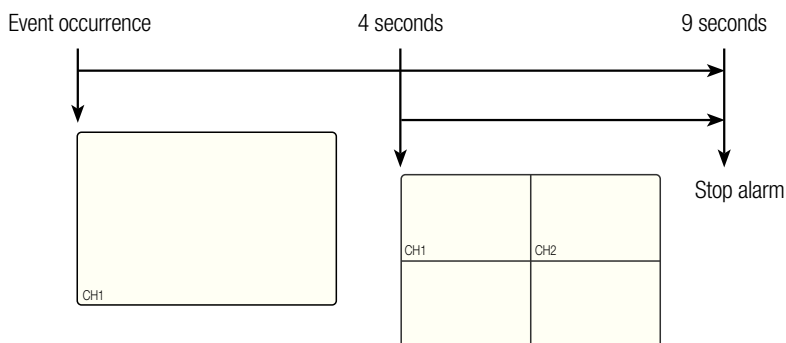
This will display the channel in sync with a specific event (Motion/Video Loss) if it occurs.

In "**Monitor > Event Display**", set the event monitoring to ON/OFF and specify the event display time. (Page 50)

- If multiple events occur simultaneously, the screen will switch to a split mode.
  - 2~4 events : 4-split mode
  - 5~9 events : 9-split mode
  - 10~16 events : 16-split mode
- If the second event occurs within the set time of **<Event Display>**, the first event will last until the second one is terminated. (Page 50)
  - Ex : If you set **<Event Display>** to 5 seconds, and only one event occurs in CH 1.



- Ex : If you set **<Event Display>** to 5 seconds, and the second event occurs in CH 2 within the set time after the first event occurred in CH 1.



- Press the **[ALARM]** button to reset the alarm settings and to release the event mode.
- If an alarm activates in the condition you have set the event record, and pre/post alarm times, the event record will be performed.

# main menu

You can setup the system properties, devices, and options for recording, event, backup and network.

## SYSTEM SETUP

You can setup Date/Time/Language, Permission, System Properties and Log.

### Date/Time/Language

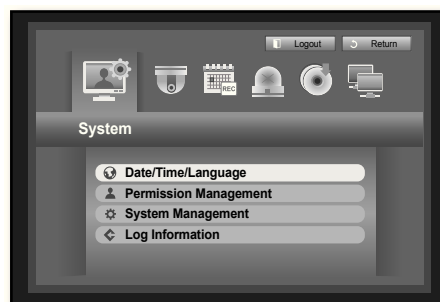
You can check and setup the current Date/Time and time related properties, as well as the language used for the interface on the screen.

### Setting the Date/Time/Language

Set the Date/Time/Language

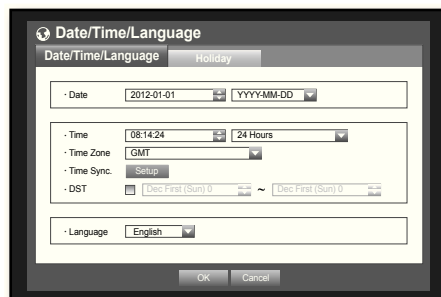
Using the mouse may help make setup easier.

1. Press the [MENU] button on the remote control.
  - If not logged in, it prompts with login window.  
Refer to "Login". (Page 22)
2. Use the left/right buttons (◀ ▶) to select the <System>. System property setup menu is selected.
3. Use the up/down buttons (▲ ▼) to select <Date/Time/ Language> and press the [ENTER] button.
4. Select <Date/Time/Language>.  
A dialog to setup Date, Time and Language.
5. Use direction buttons (▲ ▼ ◀ ▶) to select an item to set and make your changes.

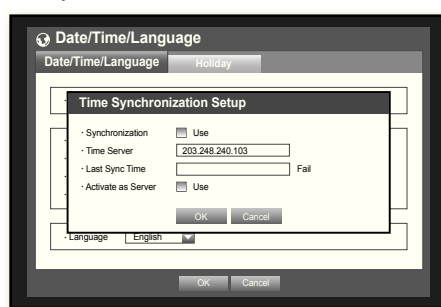


# main menu

- **Date** : Sets the date that will appear on the screen.  
You can select the date format.
- **Time** : Sets the time and its format that will appear on the screen.  
Select either one from **<24 Hours, 12 Hours (AM/PM)>**.
- **Time Zone** : Sets the time zone of your area based on the Greenwich Mean Time (GMT).
  - GMT (Greenwich Mean Time) is standard World Time and the basis of world time zone.
- **Time Sync.** : You can set the DVR's current time synchronized to a selected **<Time Server>** regularly if you select to use **<Time Server>**.  
In this case, **<Date/Time/Language>** setup does not allow time adjustment.



- **Time Server** : Enter an IP or URL address of the time server.
- **Last Sync Time** : Displays the most recent synchronization time from the selected time server.
- **Activate as Server** : Set to **<Use>** to allow the DVR to act as a Time Server for other DVRs.



- **DST** : Set up Daylight Saving Time with its period to make the time earlier than the GMT of its time zone by 1 hour during the set period.
  - **Language** : Select your language. Sets the language for the interface.  
English, French, German, Spanish, Italian, Chinese, Russian, Korean, Polish, Japanese, Dutch, Portuguese, Turkish, Czech, Danish, Swedish, Thai, Romanian, Serbian, Croatian, Hungarian and Greek are available.
6. When the Date/Time/Language setup is done, press **<OK>**.



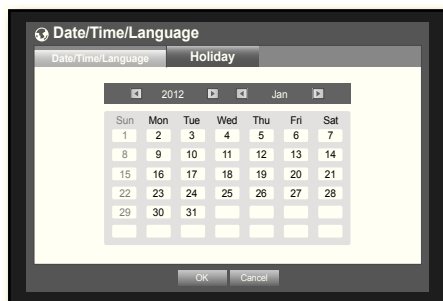
- You can also use numeric buttons on the remote control to enter values for Date, Time and other numeric fields.

## Setting Holiday

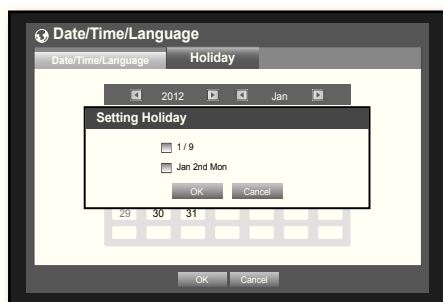
You can set specific dates to Holidays according to your preferences.  
Holidays are applied to <Recording Schedule> and <Alarm Schedule> too.

Using the mouse may help make setup easier.

1. Use the up/down buttons (▲▼) in <Date/Time/Language> window to select <Date/Time/Language>, and press the [ENTER] button.
2. Select <Holiday>.  
A calendar for Holiday setup appears.
3. Use the left/right <◀ ▶> buttons to select year or month, and press the [ENTER] button.



4. Use direction buttons (▲▼◀▶) to select a desired date, and press the [ENTER] button.  
You will see the "Setting Holiday" screen.
  - Ex : Select January 9th and check on <1/9> only to make every January 9th a holiday. Check both on <1/9> and <Jan 2nd Mon> to make every January 9th and 2nd Monday of January holidays.
5. When the Holiday setup is done, press <OK>.



## Using the Calendar

Using the mouse may help make setup easier.

- ① Select year and month.  
Select the left/right <◀ ▶> key on the left/right side of year/month and press [ENTER] button to adjust by 1 year/month.
- ② Use direction buttons to select a date and press [ENTER] button.
  - A date with recorded data to be searched will appear in yellow in the System Log, Event Log, Time Search and Event Search.

# main menu

## Permission Management

You can set permissions of each user over the DVR's specific function and settings.

### Setting the Administrator

You can set and change Administrator's ID and password.

The administrator can use and set all menu items and functions.

Using the mouse may help make setup easier.

1. Use the up/down buttons (▲▼) in <System> window to move to <Permission Management>, and press [ENTER] button.

2. Select <Admin>.

A dialog for Admin ID and Password input appears.

3. Use direction buttons (▲▼◀▶) to move to a desired item, and set the ID and password.

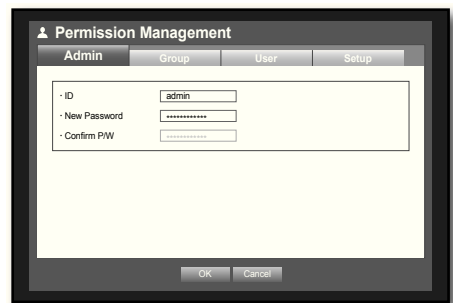


- By default, initial ID and password are set to "admin", and "4321".

- The default password can be exposed to a hacking thread so it is recommended to change the password after installing the product.

Note that the security and other related issues caused by the unchanged password shall be responsible for the user.

4. When the administrator setup is done, press <OK>.



### Using Virtual Keyboard

- ① For alphanumeric inputs, the virtual keyboard window appears.

- ② Use direction buttons (▲▼◀▶) to move to a desired character, and press the [ENTER] button.

- ③ In the upper text input box of the virtual keyboard, there displays a list of candidate words containing the selected character.

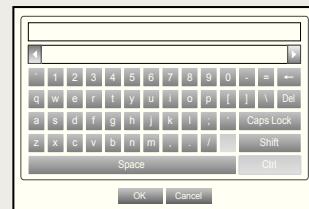
- ④ Select a word from the list, or use the keyboard to enter the whole word.

- If there are many of candidate words, use <◀, ▶> buttons to move between them forward and backward.

- ⑤ Select <OK>.

Entered word is applied.

- For upper case letters, use <Caps Lock> button.
- For special characters, use <Shift> button.
- Using the virtual keyboard is the same to a normal keyboard use in your region.
- You can enter only lower-case alphabets and numeric values for the user ID.
- For the password, use alphabets and special characters excluding <\> and <">.
- You can use number buttons on the remote control.





## Setting the Group

You can create user groups and setup permissions for those user groups.

You can register a user for each group in <User>.

Using the mouse may help make setup easier.

1. Use the up/down buttons (▲▼) in <System> window to move to <Permission Management>, and press [ENTER] button.

2. Select <Group>.

A window for <Add>, <Delete>, <Rename>, and <Group Authority> setup appears.

3. Use direction buttons (▲▼◀▶) to move to a desired item, and set the value.

- Add, Delete, Rename : You can add, delete, rename a group or modify the permissions given to the group.

The virtual keyboard appears when <Add> or <Rename> was selected.

You can add up to 10 groups.

- Add : When you first run the DVR with the admin account, only the admin account exists. Add has already been deactivated. Select <Add> to display the virtual keyboard. Enter a group name. You can add up to 10 groups.

- Delete : Deletes a user group that is already registered. Selecting Delete will delete all user accounts belonging to that group.

- Rename : Renames a group that is already registered. Select <Rename> to display the virtual keyboard.

- For entering a group name, refer to “Using Virtual Keyboard”. (Page 36)

- Group Authority : Sets permissions to access menu items of each group. Users of a group can access checked functions.

4. When the group setup is done, press <OK>.



## To set the group authority

You can set the permissions of the group users to access the menu according to the channel.

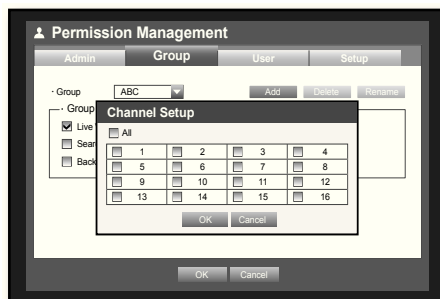
1. Select a menu to which the group permission is assigned. The menu where the group permission is assigned will be displayed in the Live menu when a group user logs in.

- Live View : You can set the permission to access the Live screen according to the channel.

- SDR-4100 shows a list of 8 channels in Channel Setup window.

- Search : You can set the permission to access the Search menu according to the channel.

- Backup : You can set the permission to access the Backup menu according to the channel.



2. Select <OK>.

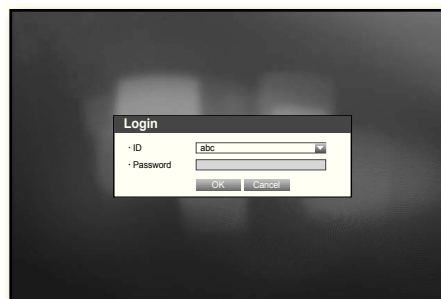
Select and assign a group user so that the user can access the specified menu.

# main menu

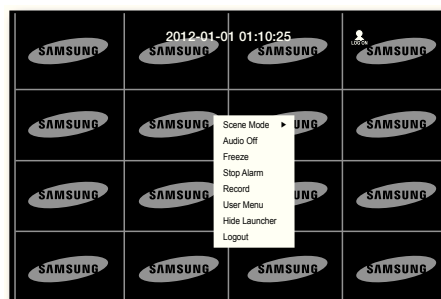
## To restrict the user permissions

If the admin restricts all permissions of an added group, the users belonging to that group can access only the default minimum menus and can change the user's own password only.

1. Start the DVR.  
If all permissions are restricted, only the Login dialog should appear.
2. Log in with a registered user ID.



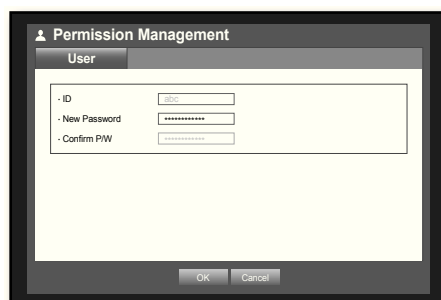
3. Right-click any area on the screen.  
If all permissions are restricted, only the accessible context menus should appear.



## To change the user password

If you log in with a user account that is restricted to access the menu, you can change your own password only.

1. Log in with your account.
2. Select <User Menu>.  
The Permission Management setup screen appears.
3. Select <Permission Management>.  
The Password setup dialog appears.
4. Enter a new password.
5. Select <OK>.  
You change to the password will be applied.

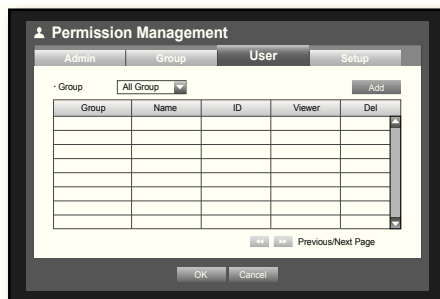


## Setting the User

Users can be added only if a group was created in <Group> menu.

Using the mouse may help make setup easier.

1. Use the up/down buttons (▲▼) in <System> window to move to <Permission Management>, and press [ENTER] button.
2. Select <User>.  
A window for Add User appears.
3. Use direction buttons (▲▼◀▶) to select <Add> from the window.  
A window for “Add User” appears.  
You can configure the Network Viewer settings including name, ID, viewer, Select Group and password.  
Result of the user setup appears in the <User> window.  
To change the user property, use “Edit User”.  
The “Edit User” window appears when you select a desired item to be changed in the <User> window.
- Viewer : If you select <Use>, you will be given access to the Web Viewer and Network Viewer.
  - Refer to “Connecting Web Viewer”. (Page 81)
  - For more information about use of SmartViewer, refer to the SmartViewer's user guide.
4. When the user setup is done, press <OK>.



# main menu

## Setting Permissions

You can set restricted access for all general users.  
Items with restrictions will require logging in for use.

Using the mouse may help make setup easier.

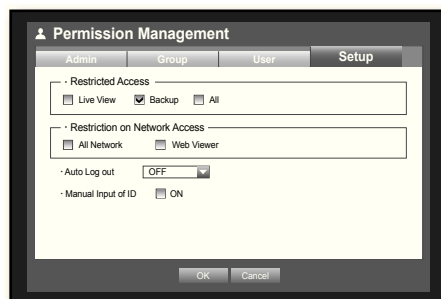
1. Use the up/down buttons (▲▼) in <System> window to move to <Permission Management>, and press [ENTER] button.

2. Select <Setup>.

The Restricted Access, Restriction on Network Access, Auto Log out, Manual Input of ID setup screen appear.

3. Use direction buttons (▲▼◀▶) to move to a desired item, and set the value.

- Restricted Access : All menu items allowed for a user can be set with restricted access.
    - Checked ( ☒ ) : Restricted
    - Not checked ( ☐ ) : Accessible
      - If it is not checked ( ☐ ) in <Restricted Access>, any user can access the item no matter what the <Group Authority> setting.
      - If it is checked ( ☒ ) in <Restricted Access>, a user can access the item only if the user has permission in <Group Authority> setting.
  - Restriction on Network Access : Restricts remote access from a <Restricted Access> network.
    - All Network : Restricts all access instances via Network Viewer and Web Viewer.
    - Web Viewer : Restricts access via the Web Viewer.
  - Auto Log out : A user will be automatically logged out if there is no operation on DVR for over set period of time.
  - Manual Input of ID : Prompts you to enter the user ID manually for the login process.
    - Checked ( ☒ ) : Encloses the registered user IDs with the [\*] symbols.Use the virtual keyboard to enter the user ID.
4. When the permission setup is done, press <OK>.



## System Management

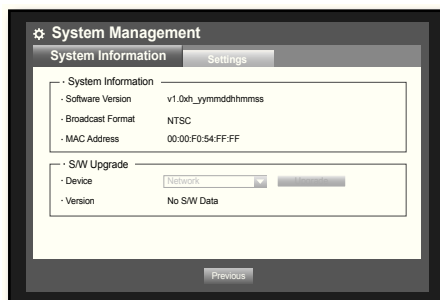
You can check the system version, update to a newer version, as well as data backup and initialization.

### Checking the System Information

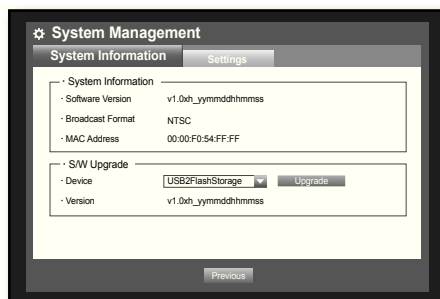
You can check the current system version, broadcasting system, MAC address. You can update the system.

Using the mouse may help make setup easier.

1. Use the up/down buttons (▲▼) in <System> window to move to <System Management>, and press [ENTER] button.
  2. Check the Software Version, Broadcast Format, and MAC Address.
- System Information : Shows the current system's information.  
The values can not be changed by a user.
  - S/W Upgrade : Updates the DVR's software up to date.

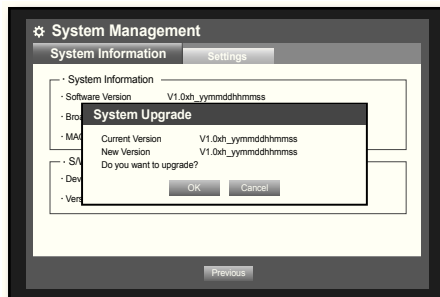


- Ex : If you connect to a storage device that has upgradable software installed, and return to the <System Management> menu, the current software version will be displayed.



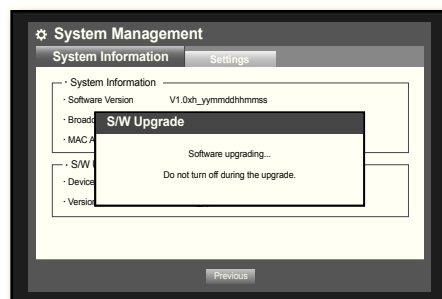
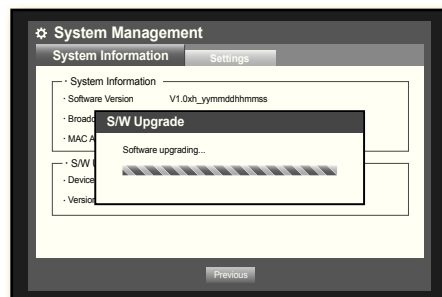
### Updating the Software


1. Connect a device storing the software to be updated.  
(It may take about 10 seconds to recognize the device.)
  - Upgradeable devices include USB memory and network device.
  - To update the network, the current DVR should have been connected to the network.  
Upgrade via the proxy server may not be enabled due to the restricted access.
2. Select <System Management> from <System> window.
3. Select <System Information>.
4. When the recognized device appears, select <Upgrade>.
  - The <Upgrade> button will be activated only if the current <Software Version> of the <System Information> is same to or older than that of <S/W Upgrade>.



# main menu

5. Press <OK> in the “System Upgrade” window.
  - While updating, it shows the progress.
- Updating progresses with 3 steps as shown in the figure.



6. When the updating is done, it automatically restarts.  
Do not turn the power off until it finishes restarting.
-  ■ If “Upgrade Failed” appears, retry from the step 4.  
When you experience continued failure, consult the service center for assistance.
- When you perform S/W update remotely using Smart Viewer, it may take a max of 3 minutes to complete the update since Smart Viewer popped up a confirmation message. This is to guarantee that the DVR set operates stably. For a faster update, use the USB cable to connect to the DVR set.

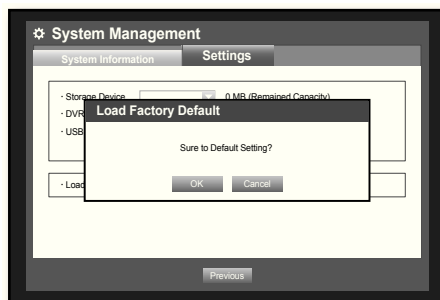
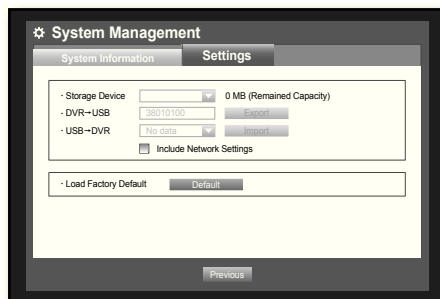


## Settings

You can copy and import the DVR settings by using a storage media.

Using the mouse may help make setup easier.

1. Use the up/down buttons (▲▼) in <System> window to move to <System Management>, and press [ENTER] button.
2. Select <Settings>.  
A window of storage device and load factory default appears.
3. Use direction buttons (▲▼◀▶) to move to a desired item, and export or import settings data to a storage device.
  - Storage Device : Shows the connected storage device.
  - DVR→USB : Exports DVR settings to the connected storage device.
  - USB→DVR : Imports DVR settings from the storage device and applies to the DVR.
    - If <Include Network Settings> is checked, the network settings will be imported too.
  - Load Factory Default : If <Default> is selected, a confirmation dialog for "Load Factory Default" prompts. Press <OK> to initialize the system to the factory default.
4. To move to the previous menu, press <Previous>.



## Log Information

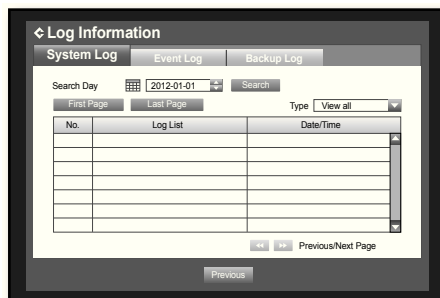
You can browse logs on the system and events.

### System Log

System Log shows log and timestamp on every system start up, system shutdown, and changes on system settings.

Using the mouse may help make setup easier.

1. Use the up/down buttons (▲▼) in <System> window to move to <Log Information>, and press [ENTER] button.
2. Select <System Log>.
  - Refer to "Using the Calendar". (Page 35)  
Click on the calendar <[Calendar Icon]> to display the calendar window.
- Type : When there are too many logs, you can display logs of the desired format by selecting the type.
3. Use direction buttons (▲▼◀▶) to move to a desired item, and press <Search>.



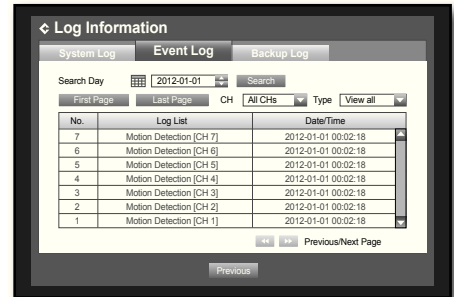
# main menu

## Event Log

Event log shows recorded events on alarms, motion detections and video loss. It also shows the log and its timestamp.

Using the mouse may help make setup easier.

1. Use the up/down buttons (▲▼) in <System> window to move to <Log Information>, and press [ENTER] button.
2. Select <Event Log>.
3. Use direction buttons (▲▼◀▶) to move to the desired item.
4. Set Search Day, Channel and Type and the press <Search>.
  - Refer to "Using the Calendar". (Page 35)  
Click on the calendar <📅> to display the calendar window.

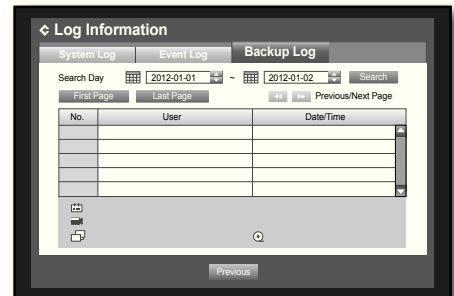


## Backup Log

You can find out who backed up and the details (backup time, channel, device to use, file format, etc.).

Using the mouse may help make setup easier.

1. In the <System> window, press the up/down (▲▼) button to move to <Log Information> and press the [ENTER] button.
2. Select <Backup Log>.
3. Use the four direction buttons (▲▼◀▶) to move to a desired item.
4. Specify a search term and select <Search> in the right corner.  
Backup details for the search term will be listed.





## SETTING THE DEVICE

You can configure the settings of: Camera, Storage Device, Remote Device and Monitor.

### Camera

#### Setting the Camera

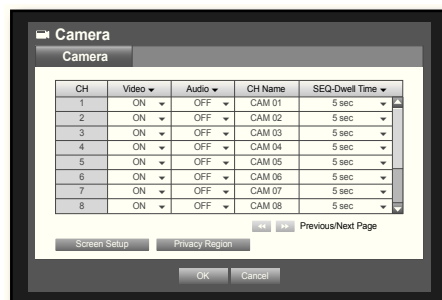
You can set Video, Audio, Channel Name and Dwell Time of a Camera.

Using the mouse may help make setup easier.

1. Press the [MENU] button on the remote control.
2. Use the left/right button (◀ ▶) to select <Device>. Device setting menu is selected.
3. Use the up/down buttons (▲ ▼) to move to <Camera>, and press [ENTER] button.



4. Select <Camera>. You will see a window where you can configure the camera settings including Video, Audio, Channel Name, SEQ-Dwell Time and Privacy Region.



5. Use direction buttons (▲ ▼ ◀ ▶) to move to a desired item, and set the value.
- Video
    - <ON/OFF> : You can turn ON/OFF the selected channel's camera.
    - <Covert1> : Shows information other than the video of the selected channel.
      - For privacy protection, it does not display the video while the recording continues.
    - <Covert2> : Shows nothing but an empty screen while the recording continues.
  - Audio
    - If set to <ON>, you can turn the audio of the channel ON on the Live screen.
    - If set to <OFF>, the channel's audio is off on the Live screen and not recorded.
  - CH Name : Up to 15 characters including blanks are allowed.
    - Refer to "Using Virtual Keyboard". (Page 36)
  - SEQ-Dwell Time : You can set the dwell time between channels for the Live screen.
    - If set to <OFF>, the channel is not listed in the Auto Sequence mode.

# main menu

- **Screen Setup** : The video appeared on the screen may vary depending on the channel's camera, configure the DVR display to your preferences.  
Select a channel and adjust the <☀ (Brightness)>, <⦿ (Contrast)>, and <🌈 (Color)> of the selected channel.
    - Press the <Init> to initialize settings back to the default 50.
  - **Privacy Region** : You can specify a certain area of the camera video to be protected for your privacy.
6. When the camera setup is done, press <OK>.



## To set the privacy region

- ① Select <Privacy Region>.
- ② When "**Privacy Region**" window appears, select a channel for detection and set the area of motion detection.
  - To set the area in "**Privacy Region**" window  
In the "**Privacy Region**" window, select desired region from <■ ■ ■ ■ ■ >.

### • Privacy Region

You can specify up to 4 privacy zones for each channel, which can be identified by the color.

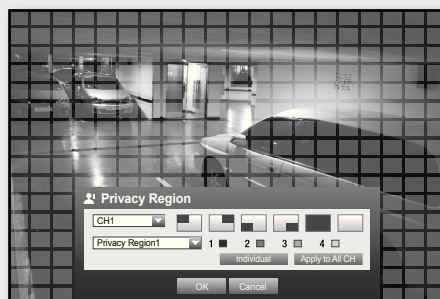
1 ■ Purple 2 ■ Green 3 ■ Blue 4 ■ Yellow

- To set the area using <Individual> selection

When selected <Individual>, "**Privacy Region**" window disappears and you can select cells one by one. When the motion area setup is done, Right-click to select <Menu> in the context menu or the [MENU] button on the remote control to display the "**Privacy Region**" window again.

- Clear All : Selected cell is removed from the Privacy Region.
- Menu : After selecting individual motion areas, move to the "**Privacy Region**" window.
  - If selected <Apply to All CH>, selected motion area is applied to all channels.

- ③ When completing the privacy zone settings, click <OK>.



Clear All

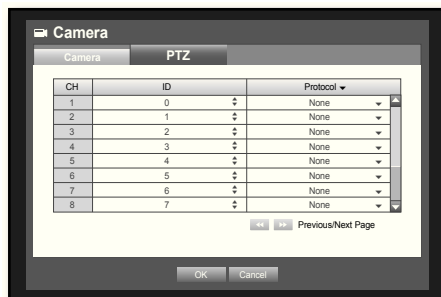
Menu

## Setting the PTZ

To use Camera's PTZ functions, ID and protocols of each camera and DVR should be matched. For other settings, refer to the "Remote Devices" settings. (Page 49)

Using the mouse may help make setup easier.

1. Use the up/down buttons (▲▼) in <Device> window to move to <Camera>, and press [ENTER] button.
2. Select <PTZ>.  
A window of PTZ settings appears.
3. Use direction buttons (▲▼◀▶) to move to a desired item, and select it.
  - ID : Set the ID of the connected camera of each channel. You can easily setup by using the numeric buttons on the remote control.
  - Protocol : Set the protocol of the connected camera of each channel.



■ You can check the camera's ID and protocol if you turn the camera off and on after connecting it to the DVR.

4. When the PTZ setup is done, press <OK>.

## Storage Device

You can check information on storage devices.

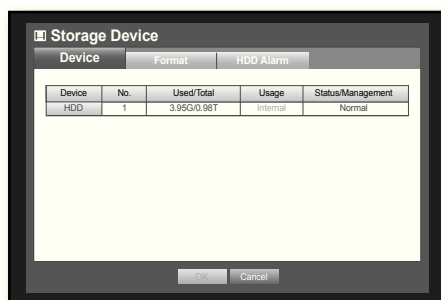
### Confirming Devices

You can check storage devices and their free space, usage as well as status.

Devices available are HDD, and USB devices (Memory, HDD).

Using the mouse may help make setup easier.

1. Use the up/down buttons (▲▼) in <Device> window to move to <Storage Device>, and press [ENTER] button.
2. Select <Device>.
  - No. : Shows the assigned number of the internal HDD.
  - Used/Total : Shows the used/total capacity of the storage device.
  - Usage : Sets the storage device's usage.
    - USB memory is used only for backups.
  - Status/Management : Shows the current status of the HDD, as in Normal/Check/Replace.
    - Normal : Available to use
    - Check : Available to use but recommended to replace
    - Replace : Requires immediate replacement.
3. To move to the previous menu, press <OK>.



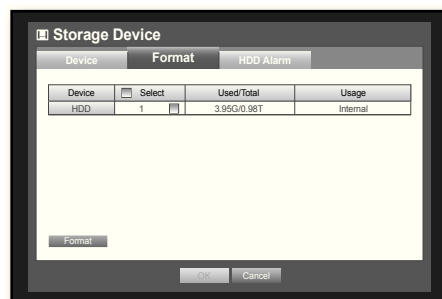
# main menu

## Formatting

You can format a storage device.

Using the mouse may help make setup easier.

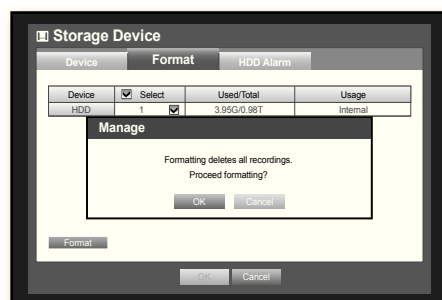
1. Use the up/down buttons (▲▼) in <Device> window to move to <Storage Device>, and press [ENTER] button.
2. Select <Format>.  
A window for selection of device for formatting appears.
3. Use direction buttons (▲▼◀▶) to select a device to be formatted.



4. Select <Format> on the bottom of the screen.  
Press <OK> on the "Manage" confirmation window will start formatting the selected device.
5. When the formatting is done, press <OK>.



- Even when formatted, used HDD space will not be 0 GB due to the space reserved by the system required for operating.



## HDD Alarm

You can set alarm settings for HDD defects such as Check Alarm Output Port, Replace Alarm Output Port, and its duration.

Using the mouse may help make setup easier.

1. Use the up/down buttons (▲▼) in <Device> window to move to <Storage Device>, and press [ENTER] button.

2. Select <HDD Alarm>.

A window for setting HDD check and replace output ports and their durations appears.

3. Use direction buttons (▲▼◀▶) to move to the desired item.

- Alarm

- If <BEEP> was selected, a beep will sound.

- Check Alarm Output Port : If HDD generates check alarm, the alarm signal will output to the specified alarm output port.

- Replace Alarm Output Port : If HDD generates replace alarm, the alarm signal will output to the specified alarm output port.

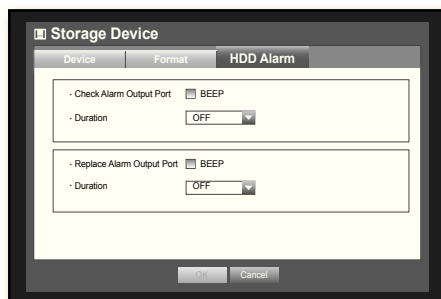
- Duration : Sets the alarm duration for the alarm signal and beep sound.



- <Check> status means that the HDD is operating but it has problems that require technical examination. (🔍) appears on the Live screen.

- <Replace> status means that the HDD has defect and requires immediate replacement. (🔧) appears on the Live screen.

4. When the HDD Alarm setup is done, press <OK>.



## Remote Devices

You can set the RS-485 communication for use of PTZ Camera and system keyboard with the DVR.

Using the mouse may help make setup easier.

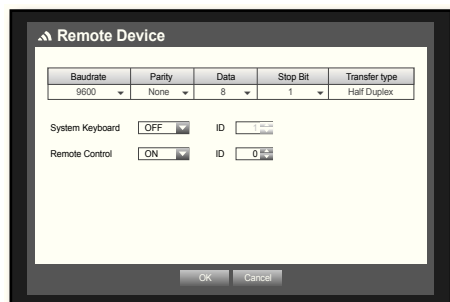
1. Use the up/down buttons (▲▼) in <Device> window to move to <Remote Device>, and press [ENTER] button.

2. Use direction buttons (▲▼◀▶) to move to the desired item, and press [ENTER] button.

3. Set the values of each communication setup of the remote device.

- Baudrate : Baud rate settings of the DVR, PTZ camera and system keyboard should be matched for proper operations.

4. Specify the system keyboard and remote control ID, and click <OK>.



- For changing the remote control's ID, refer to "Changing the Remote Control ID". (Page 14)

# main menu

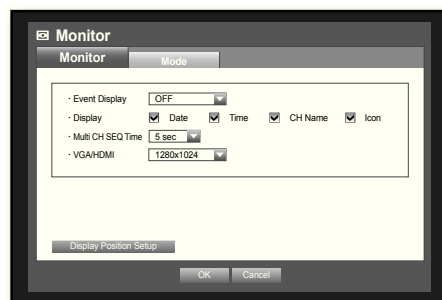
## Monitor

You can configure information to be displayed.

### Setting the Monitor

Using the mouse may help make setup easier.

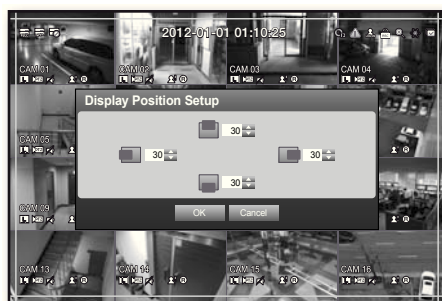
1. Use the up/down buttons (▲▼) in <Device> window to move to <Monitor>, and press [ENTER] button.
2. Select <Monitor>.
3. Use direction buttons (▲▼◀▶) to move to a desired item, and set the value.
  - Event Display : Sets the dwell time of the event channel display on the monitor when an event occurs.  
If selected <Continuous>, it displays the channel until you press [ALARM] button to release it.
  - Display : Displays only checked items on the monitor screen.
  - Multi CH SEQ Time : Sets the interval between automatic display switching in 4-split and 9-split mode of the Live screen.
  - VGA/HDMI : Set your preferred screen resolution to <VGA> or <HDMI>.  
If the monitor does not support selected resolution of <VGA> or <HDMI>, it may not display video properly.  
When the monitor setup is done, press <OK>.



### Setting Display position

Some monitors may not display information (camera name, icon, time information, etc.) about the DVR, depending on the condition. Then, you can change the display position of the data.

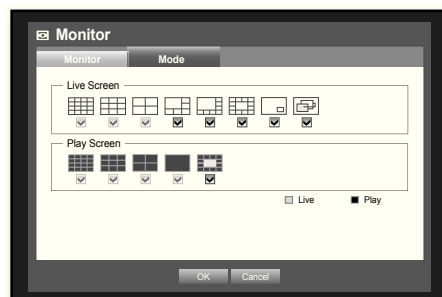
1. In the <Device> window, press the up/down (▲▼) button to move to <Monitor> and press the [ENTER] button.
2. Select the <Monitor> item.
3. Select <Display Position Setup> in the bottom.  
You will move to the <Display Position Setup> window.
4. Use the four direction buttons or the number buttons on the remote control to adjust the data position.



### Setting the Screen Mode

You can configure the Live screen and Split Screens.

1. Use the up/down buttons (▲▼) in <Device> window to move to <Monitor>, and press [ENTER] button.
2. Select <Mode>.
3. Use direction buttons (▲▼◀▶) to move to a desired item, and set the value.
  - Live Screen : Select split modes for the Live screen.  
16-, 9-, and 4-split screens are included by default.  
SDR-4100 doesn't support 16-split screen mode.
  - Play Screen : Select split modes for the playback screen.  
Only the 13-split screen is optional.  
Black shows the playback while white shows the Live screen.
4. When the screen mode setup is done, press <OK>.



## SETTING THE RECORDING

You can setup scheduled recording, event recording and other recording related settings.

### Recording Schedule

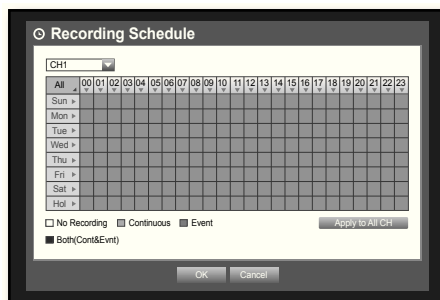
Make your reservation on a date and time to schedule the recording on specified time.

Using the mouse may help make setup easier.

1. Press the [MENU] button on the remote control.
2. Use the left/right button (◀ ▶) to select <Record>. Record menu is selected.
3. Use the up/down buttons (▲ ▼) to move to <Recording Schedule>, and press [ENTER] button.



4. Select <Recording Schedule>. A window of scheduled recording setup appears.
5. Use direction buttons (▲ ▼ ◀ ▶) to move to a desired item, and set the value.

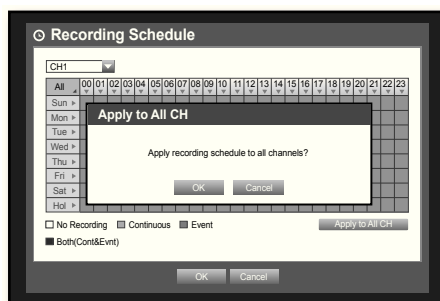


- Apply to All CH : If selected <Apply to All CH>, "Apply to All CH" window appears. Press <OK> to apply the setup to all channels.

6. When the recording schedule setup is done, press <OK>.



- Event recording and scheduled recording starts about 3 seconds prior to the event/schedule for guaranteed recording.



# main menu

## Recording Color Tags

Color	Function	Description
White	No Recording	No schedule / event recording
Orange	Continuous	Scheduled recording only
Blue	Event	Event recording only
Green	Both(Cont&Evt)	Both scheduled / event recordings

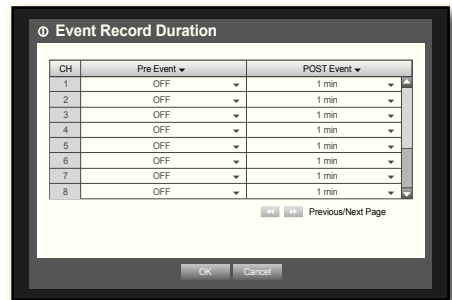
Each press of a selected cell will cycle through <No Recording>-<Continuous>-<Event>-<Both(Cont&Evt)>.

## Event Record Duration

You can set the beginning and ending point of a recording on an event.

Using the mouse may help make setup easier.

1. Use the up/down buttons (▲▼) in <Record> window to move to <Event Record Duration>, and press [ENTER] button.
2. Use direction buttons (▲▼◀▶) to move to a desired item, and set the value.
  - Pre Event : The recording of an event will start at a pre-determined time prior to the actual occurrence of the event. If it is set to 5 seconds, the recording begins from 5 seconds before the event.
  - POST Event : The recording will continue for a pre-determined time after the actual end of an event. If it is set to 5 seconds, the recording ends in 5 seconds after an event.
3. When the event recording duration setup is done, press <OK>.





## REC Quality & Resolution

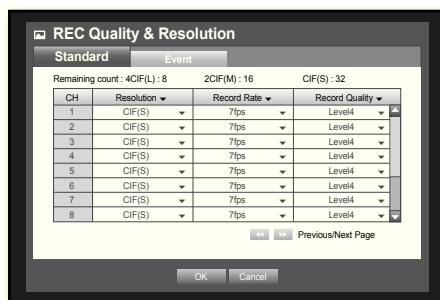
You can set resolution, FPS and quality of recordings by channel, and by recording type of standard / event.

### Setting Standard Recording Properties

You can set each channel's resolution, quality and fps for normal recordings.

Using the mouse may help make setup easier.

1. Use the up/down buttons (▲▼) in <Record> window to move to <REC Quality & Resolution>, and press [ENTER] button.
2. Select <Standard>.
3. When the recording setup is done, press <OK>.

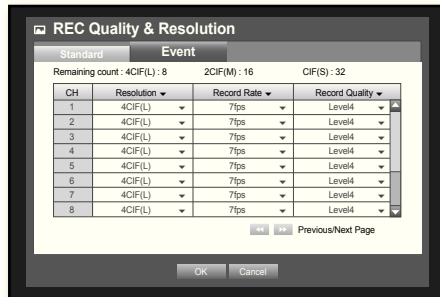


### Setting Event Recording Properties

You can set each channel's resolution, quality and fps for event recordings.

Using the mouse may help make setup easier.

1. Use the up/down buttons (▲▼) in <Record> window to move to <REC Quality & Resolution>, and press [ENTER] button.
2. Select <Event>.  
Event recording setup window appears.
3. Use direction buttons (▲▼◀▶) to move to a desired item, and select it.
  - Resolution : Sets the resolution of the recorded screen.
  - Record Rate : Frames recorded per second.
  - Record Quality : Sets the recording quality.



- The estimated total remaining count means the total number of remaining recordings for both standard and event recordings.
- You cannot increase the remaining count if the current remaining count has reached zero or there is no available remaining count from any other page. If this is the case, reduce the remaining count for the current page, or do so for the same channel on any other page.

4. When the Event recording setup is done, press <OK>.

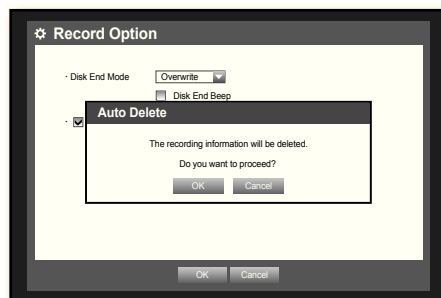
## Record Option

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You can set the recording to stop or overwrite when the HDD is full.

Using the mouse may help make setup easier.

1. Use the up/down buttons (▲▼) in <Record> window to move to <Record Option>, and press [ENTER] button.
2. Use direction buttons (▲▼◀▶) to move to a desired item, and set the value.
  - Disk End Mode : If selected <Overwrite>, recording will continue despite the HDD full while overwriting the oldest. If selected <Stop>, the recording will stop when the HDD is full.
  - Disk End Beep : If selected <Stop>, the button is activated. If you check it, the beep will sound on the disk full and the recording stops.
  - Auto Delete : If you check it, Record Period setup is activated. If you specify the auto deletion period, the recording data before the period will be deleted automatically.
    - This option will be enabled only if Disk End Mode is set to <Overwrite>.
3. When the recording option setup is done, press <OK>.



## SETTING THE EVENT

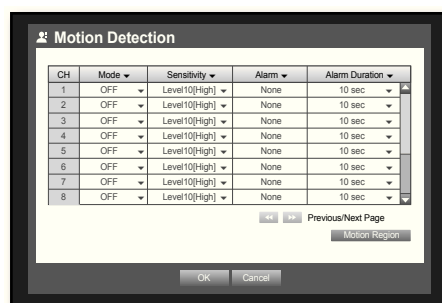
You can set recording options for motion, and video loss event.

## Motion Detection

You can set target detection region and motion, as well as the alarm signal output. When the motion detection region is set, it detects motion within the area.

Using the mouse may help make setup easier.

1. Press the **[MENU]** button on the remote control.
2. Use the left/right button (**◀ ▶**) to select **<Event>**. Event setting menu is selected.
3. Use the up/down buttons (**▲ ▼**) in **<Event>** window to move to **<Motion Detection>**, and press **[ENTER]** button.  
A window of motion detection area setup appears.
  - Mode : Sets whether to activate motion detection.
  - Sensitivity : Sets the sensitivity level of the motion detection.
  - Alarm : Sets the alarm output method.
    - For further information on alarm output, refer to “**HDD Alarm > Alarm**”. (Page 49)
  - Alarm Duration : Sets the duration of alarm signal and alarm sound. A window of scheduled recording setup appears.
4. When the motion detection setup is done, press **<OK>**.



## Setting the Motion Detection Area

- ① Select **<Motion Region>**.
- ② When **"Motion Region"** window appears, select a channel for detection and set the area of motion detection.

- To set the area in “**Motion Region**” window

In the “**Motion Region**” window, select desired region from <      >.

- To set the area using **<Individual>** selection

In the “**Motion Region**” window, you can select cells individually by using **<Individual>**.

When selected <Individual>, “Motion Region” window disappears and you can select cells one by one.

When the motion area setup is done, press the **<Menu>** on the screen or the **[MENU]** button on the remote control to display the **"Motion Region"** window again.

- Select : Selected cell is set to be a part of motion detection area.
- Unselect : Selected cell is removed from the motion detection area.
- Inverse : Unselected cells are set to be the motion detection area.
- Menu : After selecting individual motion areas, move to the **"Motion Region"** window.

- If selected **<Apply to All CH>**, selected motion area is applied to all channels.

- ③ When the motion detection setup is done, press **<OK>**.



- ✓ Select
- Unselect
- Inverse
- Menu

# main menu

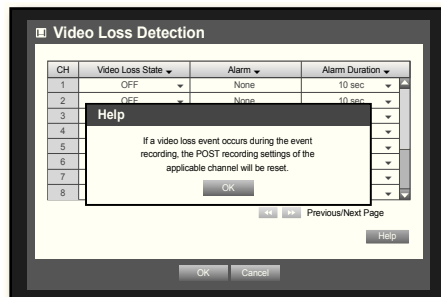
## Video Loss Detection

You can set the alarm to be generated on a camera disconnection, which causes a video loss. Using the mouse may help make setup easier.

1. Use the up/down buttons (▲▼) in <Event> window to move to <Video Loss Detection>, and press [ENTER] button.

A window of video loss detection area setup appears.

2. Use direction buttons (▲▼◀▶) to move to a desired item, and set the value.
  - Video Loss State : Sets whether to activate video loss detection.
  - Alarm : Sets the alarm output method.
    - For further information on alarm output, refer to "HDD Alarm > Alarm". (Page 49)
  - Alarm Duration : Sets the duration of alarm signal and alarm sound.
  - Help : Displays a help message that will appear if a video loss event occurs.
3. When the video loss detection setup is done, press <OK>.



## Alarm Schedule

You can set the conditions and operating hours for scheduled alarms. Using the mouse may help make setup easier.

1. Use the up/down buttons (▲▼) in <Event> window to move to <Alarm Schedule>, and press [ENTER] button.

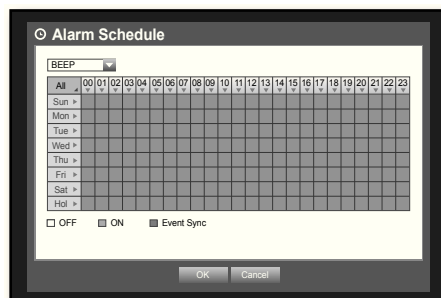
2. A window of <Alarm Schedule> settings appears.

- Alarm : Sets the alarm output method.
  - For further information on alarm output, refer to "HDD Alarm > Alarm". (Page 49)
- <ON> : Marked in orange, and always generates alarm on scheduled time.
- <OFF> : Marked in white, no alarm is generated even if an event occurs.
- Event Sync : Marked in Blue, generates alarm only when an event occurs.



- When the alarm is generated on the scheduled time, you can stop the alarm by canceling the schedule.

3. When the Alarm Schedule setup is done, press <OK>.



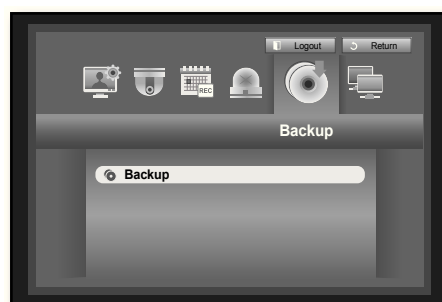
# BACKUP

You can check the backup device and set the backup schedule by channel or by time.  
The product only supports external HDD of USB memory and USB type. (Page 112)

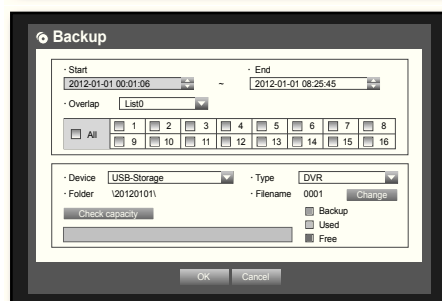
## Setting the Backup

You can backup the desired data to a connected device.  
Using the mouse may help make setup easier.

1. Press the [MENU] button on the remote control.
2. Use the left/right button (◀ ▶) to select <Backup>.  
Backup menu is selected.



3. Press the [ENTER] button.  
A backup window appears.  
You can directly access it from the “Live screen menu”.  
(Page 24)
4. Use direction buttons (▲▼◀▶) to move to a desired item, and set the value.
  - Backup Range : Sets the <Start> and <End> time for the backup.
  - Channel : Sets the channel to backup.  
You can select multiple channels.
  - Device : Select a backup device from the recognized devices.
  - Type : Sets the backup data format.
    - DVR : Saved data can be played back only by the DVR.
    - SEC : Saves data in the Samsung's proprietary format with built-in viewer, which supports immediate playback on a PC.
  - Filename : You can set the back file name.
    - Refer to “Using Virtual Keyboard”. (Page 36)
  - Check capacity : Shows the size of the selected backup data, used and available capacity of the selected backup device.
  - Overlap : Shows a list of overlapping data on a same time according to the number of data.  
It appears when one channel has multiple data on a certain time point due to changing of time or time zone settings, etc.
    - Refer to time and time zone of “Setting the Date/Time/Language”. (Page 33)



# main menu

---

5. When the backup setup is done, press **<OK>**.

- If no available device is recognized for backup, **<OK>** button is not activated.



- The application may slow down during the backup.
- You can switch to the menu screen during the backup in operation, but playback of data is not available.
- When a memory device is used for backup, it is not available to use the full capacity of the media because the system consumes a portion of its capacity.



- Pressing the **<Exit>** during the backup will return to the previous menu, while the backup progresses.

## NETWORK CONFIGURATION

---

It provides networked monitoring of Live screen from a remote place, and supports mail forwarding function with events. You can configure the network environment which enables such functions.

### Connection Mode

---

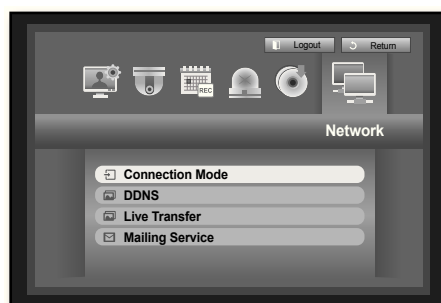
You can set the network connection route and protocol.

### Setting the Connection

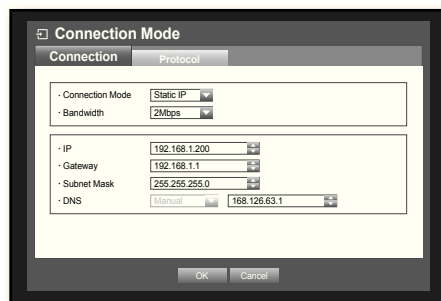
Sets the protocol and environment of the network.

Using the mouse may help make setup easier.

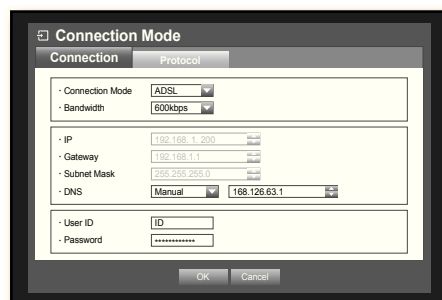
1. Press the **[MENU]** button on the remote control.
2. Use the left/right button (**◀ ▶**) to select **<Network>**.  
Network menu is selected.
3. Use the up/down buttons (**▲ ▼**) to move to **<Connection Mode>**, and press **[ENTER]** button.



4. Select **<Connection>**.  
A window of connection mode setup appears.
  5. Use direction buttons (**▲ ▼ ◀ ▶**) to move to a desired item, and set the value.
- **Connection Mode** : Sets the network connection mode.
  - **Bandwidth** : Sets the maximum data flow to be transferred. (Upload speed)  
Options will vary depending on the selected connection mode.
    - For **<Static IP>**, **<Dynamic IP>** : Select one from 50 kbps ~ 2Mbps, and Unlimited.
    - For **<ADSL>**, select one from 50 kbps ~ 600 kbps.



- IP, Gateway, Subnet Mask, and DNS
  - For <**Static IP**> : You can directly input IP address, Gateway, Subnet Mask and DNS.
  - For <**Dynamic IP**> : IP address, Gateway, and Subnet Mask are set automatically.
  - For <**ADSL**> : IP address, Gateway, and Subnet Mask are set automatically.
- User ID, Password : In case you selected ADSL, provide the "User ID" and its "Password".



- DNS server for <**Dynamic IP**> and <**ADSL**> can be set by user only if you selected <**Manual**>.

6. When the connection setup is done, press <**OK**>.

## Setting the Protocol

1. Use the up/down buttons (▲▼) in <**Network**> window to move to <**Connection Mode**>, and press [ENTER] button.

2. Select <**Protocol**>.

3. Use direction buttons (▲▼◀▶) to move to a desired item, and set the value.

- Protocol Type : Select the protocol type between TCP and UDP.

- If selected UDP, selections of Port (TCP), Port (UDP), and Unicast/Multicast are activated.

- Port (TCP) : Initially, <**4520~4524**> is set. It increases / decreases by 5.

- TCP : It has better stability and lower speed when compared to UDP, and recommended for internet environments.

- Port (UDP) : Initially, <**8000~8160**> is set. It increases / decreases by 160.

- UDP : It has less stability and faster speed when compared to TCP, and recommended for local area network (LAN) environments.

- Unicast/Multicast : Select one between Unicast and Multicast. If selected Multicast, Multicast IP and TTL are activated.

- Unicast : Transfers data (UDP, TCP) individually to each connecting client.

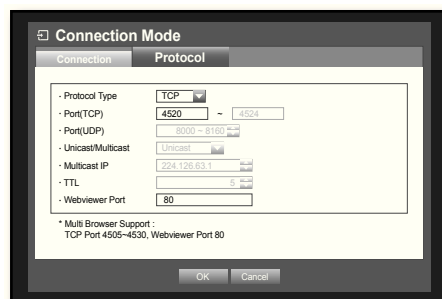
- Multicast : Multiple client can receive the data (only in UDP) without putting additional traffic load to the network.

- Multicast IP : User can directly input.

- TTL : Select from 0 ~ 255. Initial value for the TTL is set to <**5**>.

- Webviewer Port : Enter the port number for the Web Viewer. Initially, it is set to <**80**>.

- Multi Browser Support : You can use a Silverlight-compliant web browser to connect to the Web Viewer. Multi browsers are enabled only if the TCP port is set to between 4505 and 4530 with the Web Viewer port of 80. This is a security measure in order to enable Silverlight.



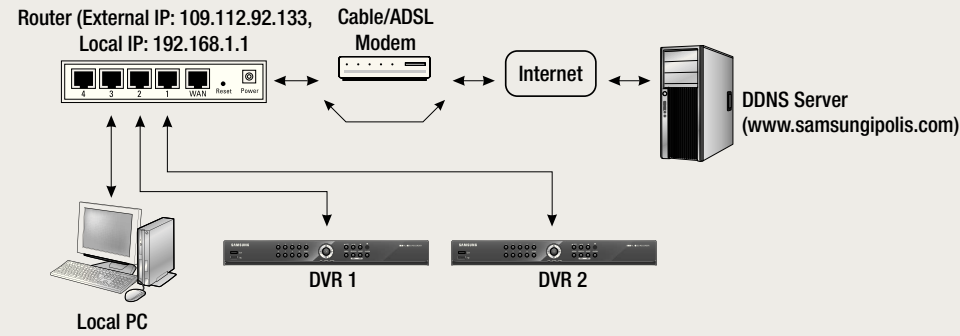
- As UDP protocol may cause a packet loss on the network, it is recommended to use TCP protocols.
- If you select UDP protocols and set port forwarding in the IP router, ending up with an unstable network connection, configure the DMZ settings in the IP router as necessary.

4. When the protocol setup is done, press <**OK**>.

Notification

- In a multi-browser environment, the web port should be set to 80 (private port).  
Select one between 4505 and 4530 for RTSP

• Network Overview



System	DVR 1		DVR 2	
	WEB	RTSP	WEB	RTSP
IP	192.168.1.200	192.168.1.200	192.168.1.202	192.168.1.202
Protocol	TCP	TCP	TCP	TCP
Private Port	80	4520~4524	81	4525~4529
Public Port	80	4520~4524	81	4525~4529

Connection Mode

Connection Protocol

Connection Mode: Static IP

Bandwidth: 2Mbps

IP: 192.168.1.200

Gateway: 192.168.1.1

Subnet Mask: 255.255.255.0

DNS: Manual 168.126.63.1

OK Cancel

Connection Mode

Connection Protocol

Connection Mode: Static IP

Bandwidth: 2Mbps

IP: 192.168.1.202

Gateway: 192.168.1.1

Subnet Mask: 255.255.255.0

DNS: Manual 168.126.63.1

OK Cancel

Connection Mode

Connection Protocol

Protocol Type: TCP

Port(TCP): 4520 ~ 4524

Port(UDP): 8000 ~ 8160

Unicast/Multicast: Unicast

Multicast IP: 224.126.63.1

TTL: 5

Webviewer Port: 80

\* Multi Browser Support:  
TCP Port 4505~4530, Webviewer Port 80

OK Cancel

Connection Mode

Connection Protocol

Protocol Type: TCP

Port(TCP): 4525 ~ 4529

Port(UDP): 8000 ~ 8160

Unicast/Multicast: Unicast

Multicast IP: 224.126.63.1

TTL: 5

Webviewer Port: 81

\* Multi Browser Support:  
TCP Port 4505~4530, Webviewer Port 80

OK Cancel



• 1st Set Port Forwarding Setting

Port Forwarding is 4520~4524  
(4520, 4521, 4522, 4523, 4524)

The screenshot shows the 'Virtual Server' configuration page for a D-Link router. The 'Enabled' radio button is selected. The 'Name' field is 'SRV-5100'. The 'Private IP' is '192.168.1.200'. The 'Protocol' is 'TCP'. The 'Private Port' is '4520' and the 'Public Port' is '4520'. The 'Schedule' is set to 'Always'. The 'Virtual Servers List' table is empty.

Name	Private IP	Protocol	Schedule
------	------------	----------	----------

Port Forwarding is 80

The screenshot shows the 'Virtual Server' configuration page for a D-Link router. The 'Enabled' radio button is selected. The 'Name' field is 'SRV-5100'. The 'Private IP' is '192.168.1.200'. The 'Protocol' is 'TCP'. The 'Private Port' is '80' and the 'Public Port' is '80'. The 'Schedule' is set to 'Always'. The 'Virtual Servers List' table is empty.

Name	Private IP	Protocol	Schedule
------	------------	----------	----------

• 2nd Set Port Forwarding Setting

Port Forwarding is 4525~4529  
(4525, 4526, 4527, 4528, 4529)

The screenshot shows the 'Virtual Server' configuration page for a D-Link router. The 'Enabled' radio button is selected. The 'Name' field is 'SRV-5100'. The 'Private IP' is '192.168.1.202'. The 'Protocol' is 'TCP'. The 'Private Port' is '4525' and the 'Public Port' is '4525'. The 'Schedule' is set to 'Always'. The 'Virtual Servers List' table is empty.

Name	Private IP	Protocol	Schedule
------	------------	----------	----------

Port Forwarding is 81

The screenshot shows the 'Virtual Server' configuration page for a D-Link router. The 'Enabled' radio button is selected. The 'Name' field is 'SRV-5100'. The 'Private IP' is '192.168.1.202'. The 'Protocol' is 'TCP'. The 'Private Port' is '81' and the 'Public Port' is '81'. The 'Schedule' is set to 'Always'. The 'Virtual Servers List' table is empty.

Name	Private IP	Protocol	Schedule
------	------------	----------	----------

The screenshot shows a Windows Internet Explorer browser window with the address bar displaying 'http://109.112.92.133:80'. The page title is 'Customize Your Settings'.

The screenshot shows a Windows Internet Explorer browser window with the address bar displaying 'http://109.112.92.133:81'. The page title is 'Customize Your Settings'.

# main menu

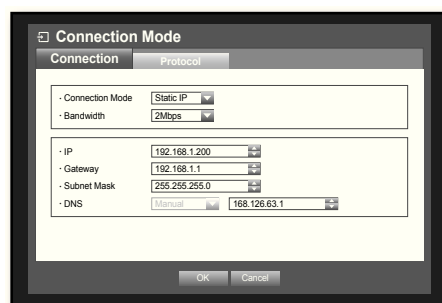
## Connecting and Setting the Network

Networking may differ from the connection method, check your environment before setting the connection mode.

### When no router is used

#### • Static IP mode

- Internet connection : Static IP ADSL, leased line, and LAN environments allows connection between the DVR and remote user.
- DVR Network Settings : Set the <Connection Mode> in <Connection> menu of the connected DVR to <Static IP>.
  - Consult your network manager for IP, Gateway and Subnet Mask.

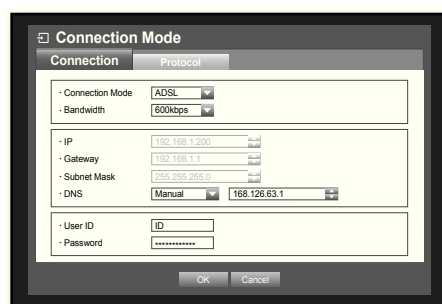


#### • Dynamic IP (DHCP) mode

- Internet connection : Connect the DVR directly to a cable modem, DHCP ADSL modem or FTTH network.
- DVR Network Settings : Set the <Connection Mode> in <Connection> menu of the connected DVR to <Dynamic IP>.

#### • ADSL (PPPoE: ID and password certification)

- Internet connection : An ADSL modem is directly connected to the DVR, where the ADSL connection requires user ID and password.
- DVR Network Settings : Set the <Connection Mode> in <Connection> menu of the connected DVR to <ADSL>.
  - <User ID> and <Password> should be the same to the ADSL user information.  
If you don't know the ID and password, consult your ADSL service provider.



## When a router is used



- To avoid IP address conflict with the DVR's static IP, check followings :

### • Setting the DVR with a static IP

- Internet connection : You can connect the DVR to a router which is connected to an ADSL/Cable modem or a router in a Local Area Network (LAN) environment.

### • Setting the DVR Network

1. Set the **<Connection Mode>** in **<Connection>** menu of the connected DVR to **<Static IP>**.
2. Check whether the set IP address is in the static IP range provided by the IP router.  
IP, Gateway, and Subnet Mask : Consult your network manager.
  - Check whether the set IP address is in the static IP range provided by the IP router.



- If a DHCP server is configured with starting address (192.168.0.100) and end address (192.168.0.200), you should set the IP address out of the configured DHCP range (192.168.0.2 ~ 192.168.0.99 and 192.168.0.201 ~ 192.168.0.254).

3. Check the Gateway address and subnet mask are equal to those set in the IP router.

### • Setting the DHCP IP Address of the IP router

1. To access the IP router's configurations, open a web browser on the local PC that is connected to the IP router and enter the router's address (ex : http://192.168.1.1).
2. At this stage, make the local PC's windows network configurations to the below example :  
Ex) IP : 192.168.1.2  
Subnet Mask : 255.255.255.0  
Gateway : 192.168.1.1
  - Once connected to the IP router, it prompts with password. While entering nothing to the User Name field, enter **"admin"** into the password field and press **<OK>** to access the router configurations.
  - Access the router's DHCP configuration menu and set its DHCP server activation, and provide the start and end address.  
Set the start address (192.168.0.100) and end address (192.168.0.200).

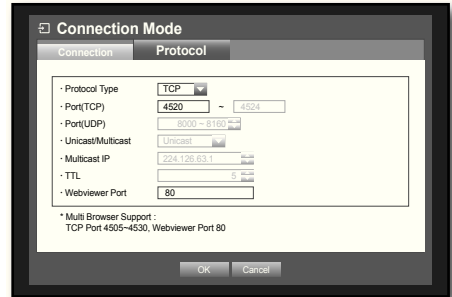


- Above steps may differ from the router devices depending on the manufacturer.

# main menu

## • Setting Router's Port Forwarding

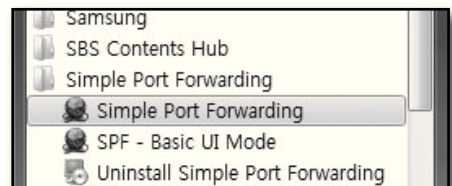
1. Set the protocol to <TCP>.
2. External Port Range : Enter the TCP Port set in the <Port(TCP)> in <Protocol> menu of the connected DVR. If more than one DVRs are connected to the router, the TCP port can be different.
3. Internal PC IP Address : Enter the IP address set to the <IP> in <Connection> menu of the connected DVR.
4. Internal Port Range : Set the same to the "External Port Range".



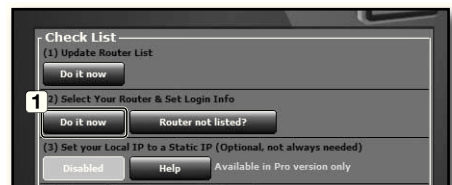
- Above steps may differ from the router devices depending on the manufacturer. Port forwarding is required when you want to access the DVR connected to the router from outside of the router's network.

## ❖ In case of Port Forwarding Setting

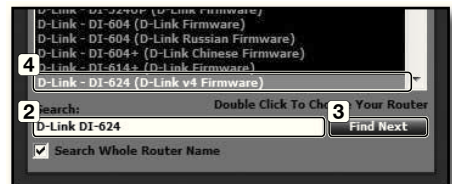
1. Download the program.  
Install it in your PC. Run <Simple Port Forwarding>.
  - To download visit <http://www.simpleportforwarding.com/> download



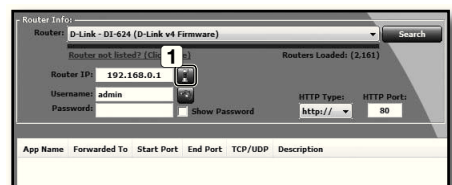
2. ① Click <(2)Do it now> in Check List.



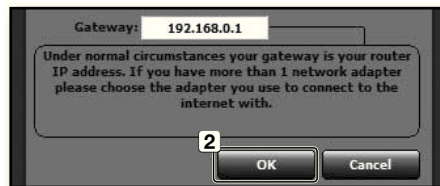
- ② Type your router information.  
If you can't find the exact router in the list, update the router list or choose a similar router in the same manufacturer.



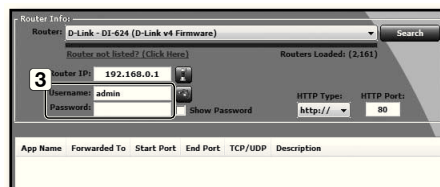
3. ① Click the icon for checking your router IP address.



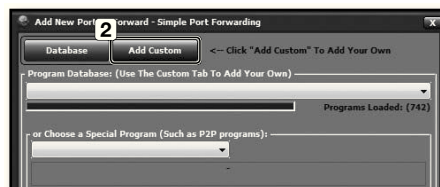
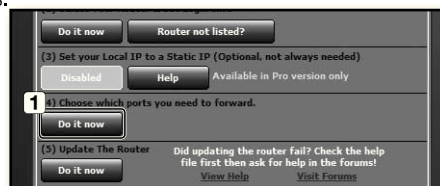
- ② Click <OK> for updating your router IP address.



- ③ Type your router Username & Password.  
If you haven't changed them, skip this procedure, for it provides default value.

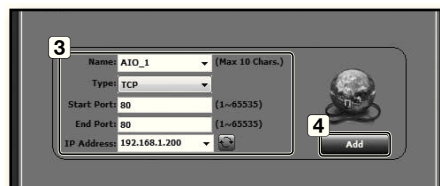


4. ① Click <(4)Do it now> in Check List for choosing the ports.

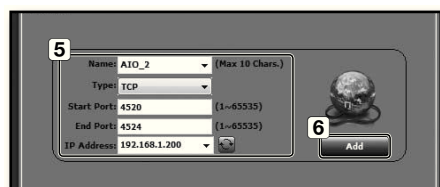


- ② Click <OK> for updating your router IP address.

IP Address : 192.168.1.200  
Type : TCP  
Start Port : 80  
End Port : 80

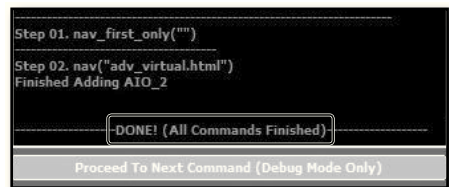
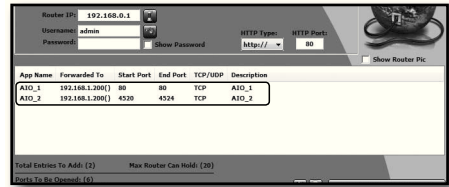


IP Address : 192.168.1.200  
Type : TCP  
Start Port : 4520~4524  
End Port : 4520~4524



# main menu

5. After checking if the list is right, click **<(5)Do it now>** for updating your router.

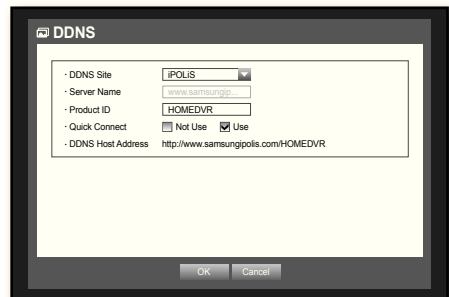


## DDNS

You can set the DDNS site for a remote user's network connection.

Using the mouse may help make setup easier.

1. Use the up/down buttons (▲▼) in **<Network>** window to move to **<DDNS>**, and press **[ENTER]** button.
2. Use virtual keyboard to enter user inputs.
  - Refer to **"Using Virtual Keyboard"**. (Page 36)
- If selected **<OFF>** or **<iPOLiS>**, input fields are deactivated.
- If you select **<iPOLiS>**, the "DDNS Host Address" item will be displayed.
  - Type your set ID in **<Product ID>** field.  
More specific information is in **"iPOLiS DDNS Setting"**.
  - Select **<Use>** in **<Quick Connect>** menu. After finishing **"iPOLiS DDNS Setting"**, you can connect your DVR set with the address **<http://www.samsungipolis.com/HOMEDVR>**.
    - The router used should support uPNP Port Forwarding function.
    - Note that uPNP Port Forwarding does not support UDP protocol.
    - If the program fails to read uPNP Port Forwarding List, try again after restarting the computer and router.
3. When the DDNS setup is done, press **<OK>**.



## DDNS Setting

DDNS is a short form of Dynamic Domain Naming System.

DNS (Domain Name System) is a service that routes a domain name consisting of user friendly characters (ex : www.google.com) to an IP address consisting of numbers (64.233.189.104).

DDNS (Dynamic DNS) is a service that registers a domain name and the floating IP address with the DDNS server so that the domain name can be routed to the IP address even if the IP is changed in a dynamic IP system.

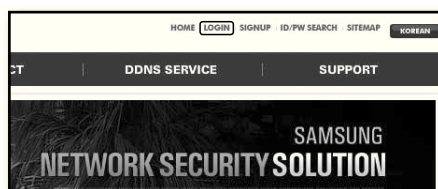
### • Setting DDNS in the DVR

Set <Protocol Type> in the <Protocol> menu of the connected DVR to the following :

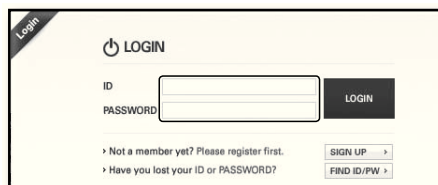
Ex) Protocol Type : TCP  
Port (TCP) : 4520~4524  
DDNS Site : iPOLiS

### ❖ iPOLiS DDNS Setting

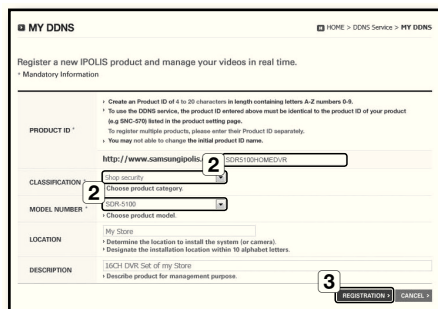
1. Visit <http://www.samsungipolis.com> or <http://www.samsungipolis.co.kr> and click <LOGIN>.



2. If you have ID & PASSWORD, insert them.  
Otherwise, click <SIGN UP> for a new account.



3. After log in, register your set with your information.



# main menu

4. After registration, you can see the list as below.

Current product list is displayed.  
If wanted product is not in the list, click 'Product Registration' at the bottom.

NO	Product ID	MODEL	LOCATION	STATUS	VIEW	MANAGEMENT	VIDEO TAG
1	SDR5100HOME	SDR5100	My Store	OFF		edit delete	LOGIN

PRODUCT REGISTRATION

5. Select <iPOLiS> and fill Server Name out with your registration information.

DDNS

DDNS Site:

Server Name:

Product ID:

Quick Connect: ☐ Not Use ☒ Use

DDNS Host Address:

OK Cancel

6. You can see <STATUS> changed to <ON> in 10 minutes, if all the network settings are right.

Current product list is displayed.  
If wanted product is not in the list, click 'Product Registration' at the bottom.

NO	Product ID	MODEL	LOCATION	STATUS	VIEW	MANAGEMENT	VIDEO TAG
1	SDR5100HOME	SDR5100	My Store	ON		edit delete	LOGIN

PRODUCT REGISTRATION

## Live Transfer

Sets the quality of the image that is transferred from the DVR to the network.

Using the mouse may help make setup easier.

1. In the <Network> setting window, press the up/down (▲▼) button to move to <Live Transfer> and press the [ENTER] button.  
The Live Transfer window appears.
2. Use the direction buttons (▲▼◀▶) to move to a desired item and set the value.
3. When the live transfer is done, press <OK>.
  - The resolution for real-time (live) transfer will be set to CIF(S).

Live Transfer

Resolution:

Quality:

OK Cancel



## Mailing Service

You can send an e-mail to a DVR-registered user at a specific time interval, or if an event occurs.



- If an event occurs with a channel where the camera's video is set to <OFF> or the remaining recording count is set to <OFF>, only the text notification will be sent to the applicable email address.
- The e-mail receivers are not able to adjust the attached image quality.

## SMTP Setting

Sets the SMTP mail server.

Using the mouse may help make setup easier.

1. In the <Network> setting window, press the up/down (▲▼) button to move to <Mailing Service> and press the [ENTER] button.

2. Select <SMTP>.  
You will see the SMTP setting window.

3. Use direction buttons (▲▼◀▶) to move to a desired item and set the value.

- ServerType : Displays the connected server type.
  - Server : Enter a server to connect to.
  - Port : Sets the communication port.
  - Use Authentication : Check this if the SMTP server uses user authentication.  
The account input box will be activated.
  - User : Enter a user to use authentication when connecting to the SMTP server.
  - Password : Enter the password of the SMTP server user.
  - Secure Transfer : Select one from <Never> and <TLS (if available)>.
  - Sender : Use the virtual keyboard to enter the sender's e-mail address.
    - Refer to "Using Virtual Keyboard". (Page 36)
  - TEST : Conducts the test on the server settings.
4. When the SMTP setting is done, press <OK>.



# main menu

## Event Setting

You can set the interval and type of the event that will be sent to the user.

Using the mouse may help make setup easier.

1. In the <Network> setting window, press the up/down (▲▼) button to move to <Mailing Service> and press the [ENTER] button.

2. Select <Event>.

3. Use direction buttons (▲▼◀▶) to move to a desired item and set the value.

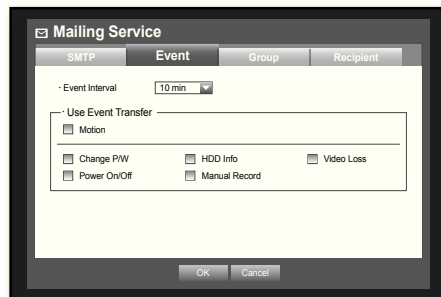
- Event Interval : Set the event interval.

- If a series of events occurs, the e-mail will be sent at the specified interval, not on each event.

- Use Event Transfer : Select an event type to send if an event occurs.

If the selected event occurs, the e-mail will be sent to the group that has the recipient authority.

4. When the event setting is done, press <OK>.



## Group Setting

You can set the group to whom the e-mail is sent, and specify the permission for each group.

You can add recipients for each group in the <Recipient> menu item.

The recipient is set separately from the DVR user group.

Using the mouse may help make setup easier.

1. In the <Network> setting window, press the up/down (▲▼) button to move to <Mailing Service> and press the [ENTER] button.

2. Select <Group>.

3. Use direction buttons (▲▼◀▶) to move to a desired item and set the value.

- Add : Select <Add> and use the virtual keyboard to add a group.

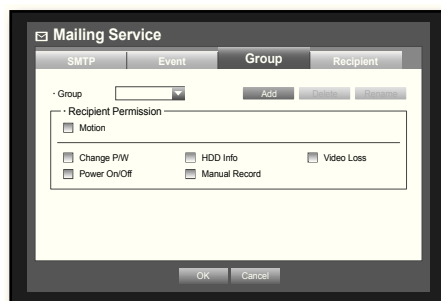
- Refer to "Using Virtual Keyboard". (Page 36)

- Delete : Deletes the selected group.

- Rename : You can reset the recipient permission of an existing group.

- Recipient Permission : Set the permission of the recipient group.

4. When the group setting is done, press <OK>.

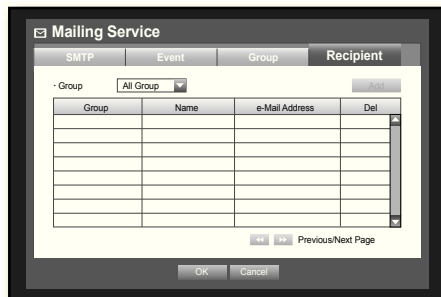


## Recipient Setting

You can add/remove a recipient(s) to/from the specified group and edit the group if necessary.

Using the mouse may help make setup easier.

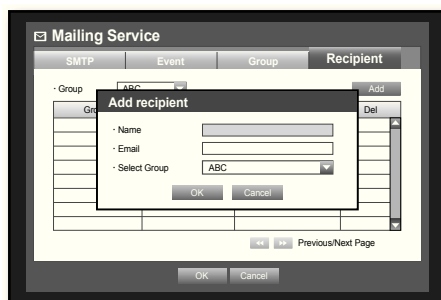
1. In the <Network> setting window, press the up/down (▲▼) button to move to <Mailing Service> and press the [ENTER] button.
2. Select <Recipient>.
3. Use direction buttons (▲▼◀▶) to move to a desired item and set the value.



- Add : You can select a recipient name, e-mail address or group.  
You should have created a group in the <Group> menu item before you can add a user to the group.

- For inputting the recipient name and email address, refer to "Using Virtual Keyboard". (Page 36)

4. When the recipient setting is done, press <OK>.



# main menu

## CONTROLLING A PTZ DEVICE



The DVR enables you to adjust the settings of a PTZ camera as well as an ordinary one to your preference.

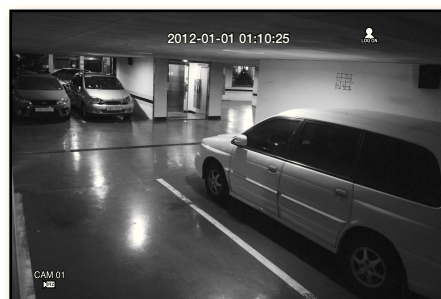
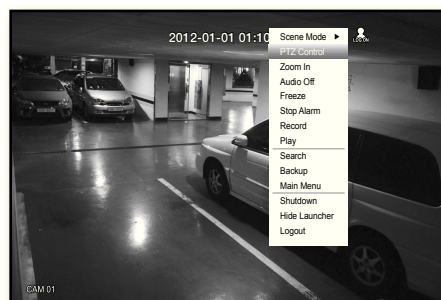
### PTZ Device

The PTZ device can be activated only if a channel in connection with the PTZ camera is selected.

#### Getting started with PTZ

The PTZ camera is available, only if a channel is selected, in the following way :

- Using the remote control buttons  
Press the **[PTZ]** button on the remote control.
  - Using the launcher menu  
Click PTZ < **PTZ** > to display the live launcher.
  - Using the right-click menu in Live mode  
Right-click any area on the screen to display the context menu, and select <PTZ Control>.
- 
- Using icons on the live screen  
Click the PTZ <  > icon on the live screen.
- 
-  The PTZ function is available only if the PTZ camera is connected so that the PTZ icon is displayed on the screen.



## Using the PTZ camera

You can use one camera to perform all functions of PAN, TILT and ZOOM for monitoring multiple places and set the preset to your preference in a desired mode.

### 1. Launch the <PTZ Control> menu.

As the PTZ <PTZ> icon on the bottom right corner turns yellow, you access the “PTZ Control” mode to display the “PTZ Control” menu.



- Be sure to configure PTZ working environments before operation, since the PTZ Working(Active) mark can be appeared to be activated even when PTZ is not operative.




### 2. Use the PTZ wheel in the launcher menu to adjust the monitoring area, or use the direction buttons (▲▼◀▶) on the remote control to move the camera to a desired place.

- PTZ Wheel : Clicking a nearer point to the center will move in that direction slowly; clicking a farther point from the center will move fast.
  - Keep clicking left to rotate the lens counter clockwise; keep clicking right to rotate the lens clockwise.
- Zoom ( 🔍 🔍 ) : You can use the Zoom function of the PTZ camera.
- IRIS ( 📷 📷 ) : Adjusts the intensity of radiation incoming to the iris.
- Focus ( 🔍 🔍 ) : Enables you to adjust the focus manually.
- Auto Pan : The camera automatically runs between the two points that you selected.
- Scan : The camera moves to the preset points in the specified sequence. If multiple presets are specified, the PTZ camera will automatically move to all of the preset points one at a time.
- Pattern : Makes the PTZ camera remember and follow the past route.
  - The functions of Auto Pan, Scan and Pattern are supported in the protocols of Samsung, Panasonic and Pelco, and are different in terms of the name and setting, depending on the protocols of Samsung, Panasonic and Pelco. (Panasonic : Auto Pan, Sequence, Sort / Pelco : Auto Pan, Frame Scan (Scan), Pattern)
- Before entering the PTZ device control mode, set the values of the PTZ device in the <Setting the PTZ> menu. (Page 47)

# main menu

## Preset Setting

A preset is a set of specific target points of a PTZ camera, and up to 127 presets per a camera can be stored.

1. In PTZ Control mode, use the direction buttons to adjust the camera in a desired direction.
2. Select the **<Save>** key.  
The virtual keyboard for inputting the preset will appear.
  - Refer to **"Using Virtual Keyboard"**. (Page 36)
  - Save : You can save the preset settings.
  - Rename : You can change the settings of the existing presets.
  - Delete : Deletes the selected preset.
  - Delete All : Deletes all existing presets.
  - If you replace the camera of the channel that stores the preset list with a new one, you should reset the preset accordingly.
3. Press **<OK>**.  
The preset will be saved as a name that you entered.

## Camera Setting

A PTZ camera has its own menu system. Optimize the PTZ camera according to the DVR.

1. Connect the PTZ camera to the DVR and run the PTZ camera again to display the camera's protocol setting window.
2. Check the protocol ID of the camera.
  - In **"Device > Setting the PTZ"**, enter the PTZ camera ID in the ID input box of the channel that is connected to the PTZ camera. (Page 47)
3. Select **<Camera Setup>** in the PTZ Control menu.  
The camera-specific menu appears.
  - You can configure the settings of only those cameras that support the protocols of Samsung, Pelco D/P, AD and Panasonic.
  - If you are setting Auto Pan or Pattern in the camera menu, press and hold the appropriate button for a certain time so that the button operation can be different from that in normal PTZ setting.

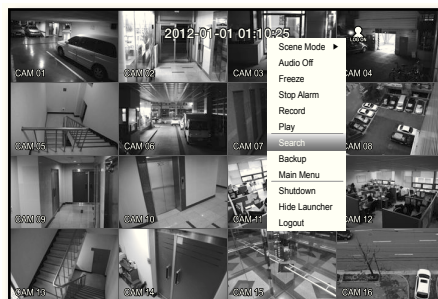


# search & play

## SEARCH

You can perform the search for recorded data by the time or by the search criteria such as an event. You can access the <Search> menu directly in Live mode.

1. In Live mode, right-click any area of the screen.  
The Live menu appears.
2. Select <Search>.  
Or, press the [SEARCH] button on the remote control.



3. The Search menu appears.
4. The search can be restricted by the Auto Delete function. Refer to “Setting the Recording > Record Option”. (Page 54)



- Overlapped data : It only appears if there exists overlapped data on a certain time, produced due to the change of DVR's time setup. The latest data comes first, from <List0>. It does not appear in <Backup Search>.



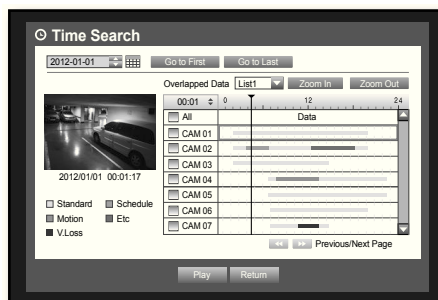
## Time Search

You can search for recorded data of a desired time.

As the time to display may be different depending on the time zone and the DST standard time, the time of data recorded in the same time can be displayed differently depending on time zone and DST settings.

Using the mouse may help make setup easier.

1. Select <Time Search> in the <Search> menu.
2. Select a date to search.
  - Refer to “Using the Calendar”. (Page 35)
3. The record data on the specific date will be listed.  
The display bar is different according to the data type.  
So check the data type for the color in the left pane.
4. Use direction buttons (▲▼◀▶) to set the search criteria and press the [ENTER] button.
  - Go to First : Moves to the earliest date.
  - Go to Last : Moves to the most recent date.
  - Time : Enter a time to perform the search or use the up/down button <◆> to select one.



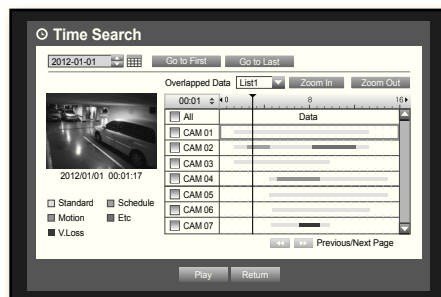
# search & play

- **Zoom In** : The map enlarges in detail.  
It will switch in the sequence of 24 hours - 16 hours - 8 hours - 4 hours.
- **Zoom Out** : The map will switch in the reverse order of the detailed mode above.  
It will switch in the sequence of 4 hours - 8 hours - 16 hours - 24 hours.



- Double-click a desired time to zoom it in/out.

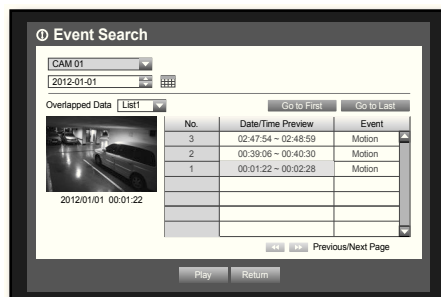
- **Preview** : Click **<Channel>** and select (click, drag) a time in **<Duration>** to display a still image for the portion.  
- If the selected channel does not contain any recorded data, it will be marked black.
- 5. Select a data item and click **<Play>**.  
The screen switches to the data playback mode.



## Event Search

You can search for events by the channel and play them.  
Using the mouse may help make setup easier.

1. Select **<Event Search>** in the **<Search>** menu.
2. Use direction buttons (▲▼◀▶) to set the search criteria and press the **[ENTER]** button.
  - All record events on a specific date will be found. (Normal/ Schedule recording included)
- **Date/Time Preview** : If you select a data item in the list, the still image of the selected data will be displayed in the left preview pane.
- **Event** : Displays the type of the event that occurred.
3. Select a data item and click **<Play>**.  
The screen switches to the event data playback mode.



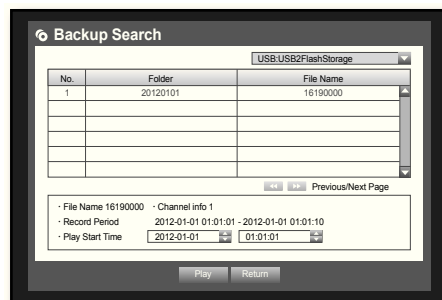


## Backup Search

Searches for backup data in the connected backup device.  
Only data in the format of DVR is included in the search.  
Refer to <Type> in “**Backup > Setting the Backup**”. (Page 57)

Using the mouse may help make setup easier.

1. Select <Backup Search> in the <Search> menu.
2. Use direction buttons (▲▼◀▶) to set the search criteria and press the [ENTER] button.
  - Record Period : Displays the record period.
  - Channel info : Displays the recorded channel.
  - Play Start Time : Select a time that you start playing.
3. Select a data item and click <Play>.  
The screen switches to the backup data playback mode.

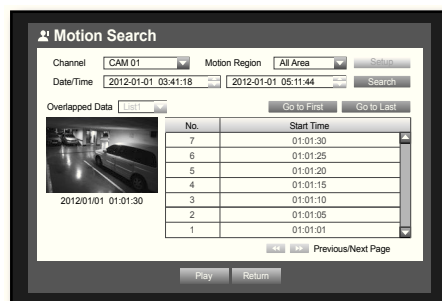


## Motion Search

If a motion is detected in each channel, you can set a desired area to perform the search.

You can use the mouse to select the related items.

1. Select <Motion Search> in the <Search> menu.
2. Use direction buttons (▲▼◀▶) to set the search criteria and press the [ENTER] button.
  - If you set the motion area to <Manual Area>, the <Setup> button will be activated.
- Motion Region : Select an area to perform the search.
  - All Area : Searches for all areas of the selected channel.
  - Current Area : Searches for the motion area for each channel specified in “**Motion Detection > Setting the Motion Detection Area**”. (Page 55)
  - Manual Area : You can set the motion area manually.
- Setup : The Setup button will be activated only if you have set the motion area to Manual. Press this button to display the area setting window.
- Date/Time : The Date/Time will be automatically set by the hour, and the end time will be automatically set to one hour later than the start time if it is set.
- Preview : Select a data item in the list to display the still image of the item.
3. Select a data item and click <Play>.  
The screen switches to the motion data playback mode.






# search & play

## PLAYBACK

### Play

You can play data stored in the HDD and backup a desired portion of the data.

Using the mouse may help make setup easier.

1. In Live mode, click **<Play>** in the right-click menu or  in the launcher menu, or press the Play button on the remote control.
2. Use the up/down button ( ) to select a menu.
  - For data search, refer to **<Search>**. (Page 75)





3. Select a data item and click **<Play>** in the Search menu. The selected data is played and the play launcher appears on the screen.

- If there is an existing data, **<Play>** will start immediately without performing the search.

- Playback Information : Displays the date and time of the current data in the top corner.



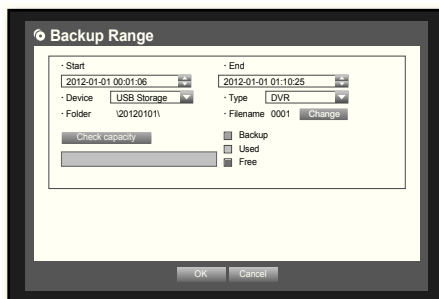
- Backup : Click  to set the current time to the start time of backup; you can specify a backup area using the mouse (yellow triangle).


Click  again to set the current time to the end time of the backup and the **"Backup Range"** window appears.

- Type : Supports formats of DVR and SEC.  
Refer to a list of formats in **"Setting the Backup"**. (Page 57)

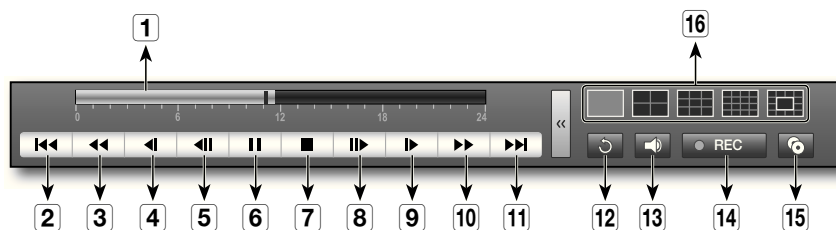
- Device : Select a backup device.

- Check Capacity : Enables you to check the capacity of the selected storage device.



4. If you want to return to the Live screen in Play mode, click  in the launcher menu or press the  button on the remote control.

## Using the Playback Button



Part Names		Functions
<b>1</b>	<b>Play Timeline</b>	Indicates the current playback point, and can be used to move.
<b>2</b>	<b>Skip Backward</b>	Moves backward by unit time.
<b>3</b>	<b>Backward Fast Play</b>	Used for quick backward playback.
<b>4</b>	<b>Backward Slow Play</b>	Used for backward frame-by-frame search while in PAUSE.
<b>5</b>	<b>Step Backward</b>	Moves backward by one frame at a time.
<b>6</b>	<b>Pause</b>	Stops playing the current video temporarily.
<b>7</b>	<b>Stop</b>	Stops playback and moves to the live screen.
<b>8</b>	<b>Step Forward</b>	Moves forward by one frame at a time.
<b>9</b>	<b>Forward Slow Play</b>	Play forward up to 4 channels simultaneously at a low speed. <ul style="list-style-type: none"> <li>■ In a split mode, the real time playback may not be supported, depending on the record quality, resolution and number of channels. And some frame rates may be supported.</li> </ul>
<b>10</b>	<b>Forward Fast Play</b>	Used for quick forward playback.
<b>11</b>	<b>Skip Forward</b>	Moves forward by unit time.
<b>12</b>	<b>Return</b>	Return to the search setup screen.
<b>13</b>	<b>Audio</b>	Sets Audio ON/OFF. <ul style="list-style-type: none"> <li>■ If using both web view and DVR set simultaneously, the audio signal will be output from the DVR set.</li> </ul>
<b>14</b>	<b>REC</b>	Records all channels in Live mode.
<b>15</b>	<b>Partial Backup</b>	Begins backup of the selected section of the video being played, with the specified starting/ending point.
<b>16</b>	<b>Mode Switch</b>	Click a desired playback mode or press <b>[MODE]</b> to switch the screen mode in sequence. <ul style="list-style-type: none"> <li>■ The gray area in the center of the 13-split mode plays the Live channel. The default channel of the Live mode is CH1, which can be changed later.</li> </ul>

# Web Viewer

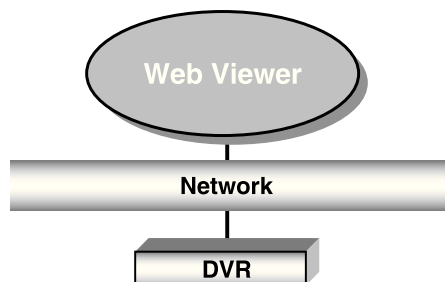
## INTRODUCING WEB VIEWER

### What is Web Viewer?

Web Viewer allows remote access to your DVRs. You have access to live video, archived video etc.

### Product Features

- Remote access from a standard browser
- Supports 1, 4, 9, 16 camera viewing formats (maximum of 16 cameras in the list).
- Gets JPEG, BMP format images to print and save to "Print or Save JPEG, BMP format images".
- Record video in AVI format-compatible with popular media players. (needed the H.264 codec)



### System Requirements

The following lists the minimum suggested hardware and operating system requirements needed to run the Web Viewer.

<b>OS</b>	Windows XP Professional Windows 2000 Windows Vista Home Basic /Premium Windows 7 Safari 5.1.1 or later version
<b>Web Browser</b>	Internet Explorer 6.0.2900.2180 or later
<b>CPU</b>	Intel Pentium 4, 2GHz
<b>Memory</b>	512 MB
<b>Monitor</b>	High Color 16-bit 1024 x 768
<b>HDD</b>	50 MB(Installation space required) * Additional HDD space required for recording. Recorded file size will vary depending on recording quality settings.



- Even for computers of higher performance than recommended, you may experience frame skipping with the Web Viewer if the computer is overloaded showing more than 80% of CPU usage.

## CONNECTING WEB VIEWER (MAC)

### ❖ Safari on MAC.

If you want to use DVR Web Viewer with Safari Browser on a Mac, please refer to this user guide and install Multi Viewer with firmware upgrade if necessary.

- Brower versions available: Safari 5.1.1 or later version
- Silverlight: 4.0.60831.0 or later

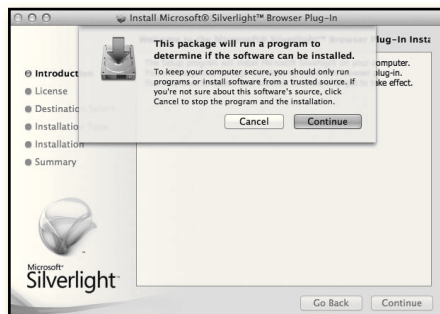
1. Click **[Click now to Install]** to display the installation screen as shown.



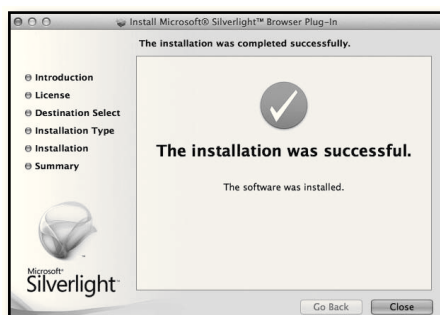
2. Double-click the **[Silverlight.pkg]** icon to display the Silverlight plug-in installation screen as shown.



3. Click **[Continue]** to start installing Silverlight plug-in. When done, you will see the screen as below.



4. Click **[Close]** to exit from the Silverlight plug-in installation screen.



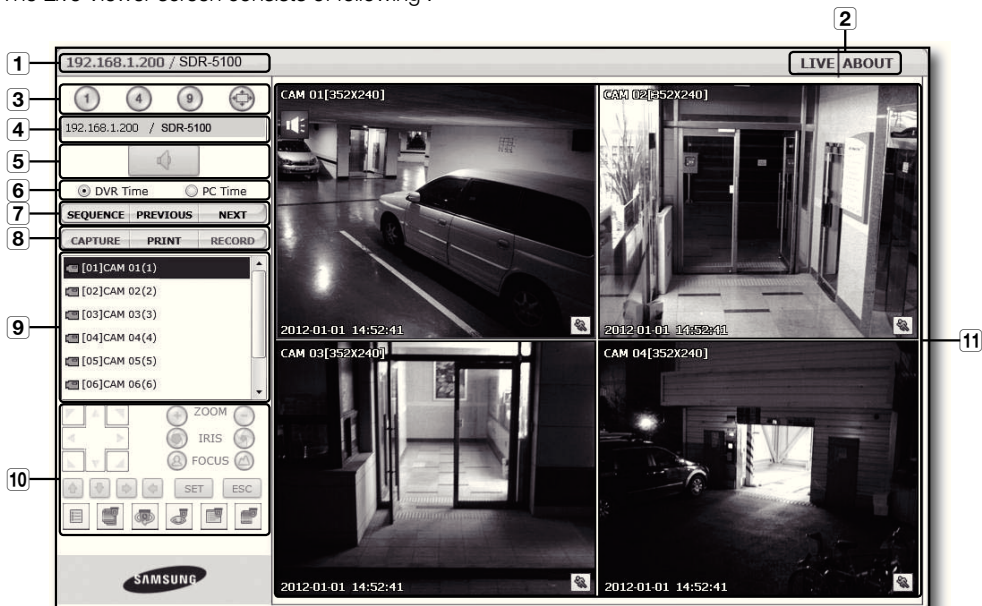
# Web Viewer

- If Microsoft Silverlight plug-in is already installed

1. Use a web browser to connect to the DVR.
2. If Silverlight plug-in is already installed, you will see the screen as shown.
3. If this is the case, perform Step 3 [TCP port & Web Viewer port settings] below.
4. If the screen above does not appear, check if the DVR set is connected properly with a valid IP address.

## USING LIVE VIEWER (MAC)

The Live Viewer screen consists of following :



- 1 This displays the IP address and the model name of the connected DVR.
- 2 These menus consist of <LIVE>, <ABOUT>.
- 3 These buttons are used for the screen split and full screen mode. (Max. : 9CH)
- 4 Shows the IP address and model name of the connected DVR.
- 5 Select to turn the sound on/off.
- 6 Select <DVR Time> or <PC Time> for the OSD time information display setting of the Live Viewer.
- 7 These buttons are used for sequence and changing the screen channel.
- 8 These buttons are used for capture, print, and save the image.  
When you can't play the file recorded in web, install the H.264 CODEC  
ex) MAC: perian\_1.2.3.dmg (<http://perian.org>)
- 9 Shows the channel of the connected DVR.
- 10 These buttons are used for PTZ related functions.
- 11 This displays the screen for connected camera with DVR.

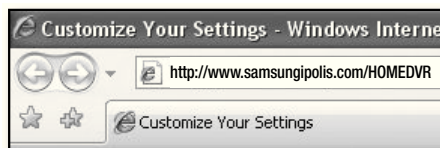
## CONNECTING WEB VIEWER (WINDOWS)

1. Open your web browser and type the IP address or URL of DVR into the URL address box.



The basic URL of the DVR is as following in case of MAC address :

- <http://www.samsungipolis.com/User ID>
- You can also use registered URL which setups up in the Setup menu of your DVR.



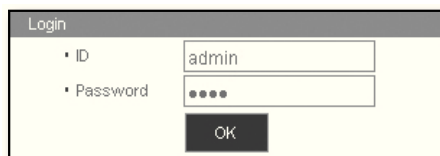
2. Set the Admin ID and password same to those of the DVR Admin.

For general users, enter the DVR user ID and password.



- The default password can be exposed to a hacking thread so it is recommended to change the password after installing the product.

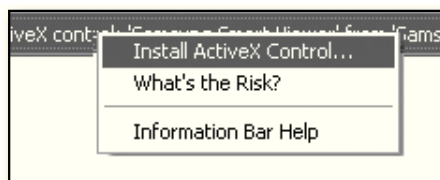
Note that the security and other related issues caused by the unchanged password shall be responsible for the user.



- It allows up to 10 simultaneous access including the Admin and general users.
- It does not allow multiple login of the Admin user.
- Initial password of the Admin user is set to "4321".
- Password of the Admin and general users can be changed in <Permission Management> menu of the DVR.
- Normal users should have set <Viewer> under <Permission Management> to "Use" before connecting to the Web Viewer. (Page 36)
- All settings are applied by the DVR's settings.

3. Click <Install ActiveX Control...>.

Downloading Active-X control may take several minutes according to the security settings on your PC.



4. Click <Install>.



5. You may have "Windows Security Alert" that attempts to block this with the Windows Firewall. In that case, click <Unblock> to start Web Viewer.

6. Installation is complete.  
Now you can see the main screen of Live Viewer.

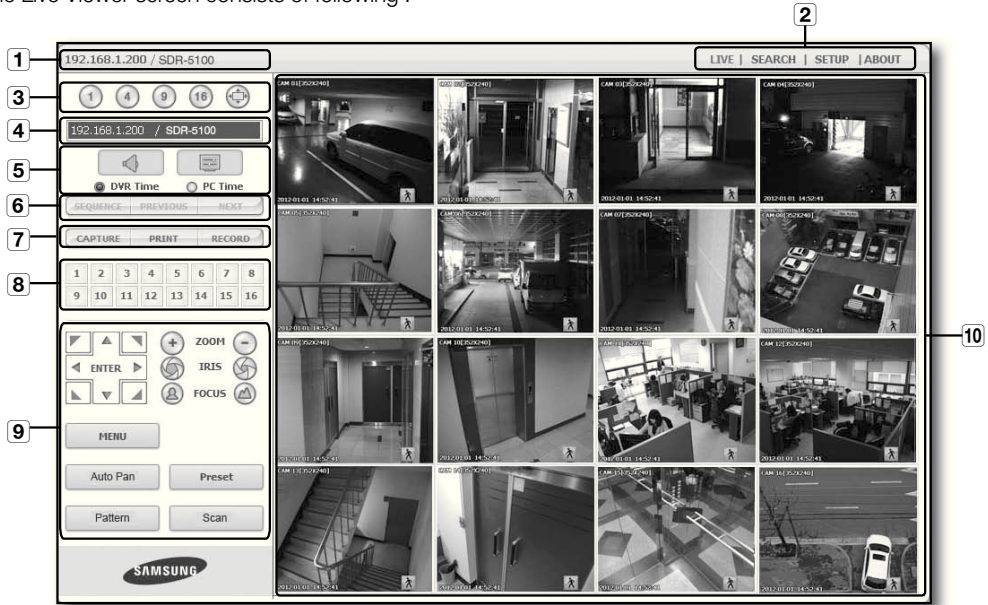




# Web Viewer

## USING LIVE VIEWER (WINDOWS)

The Live Viewer screen consists of following :



The Live Viewer screen consists of following :

- 1 This displays the IP address and the model name of the connected DVR.
  - 2 These menus consist of <LIVE>, <SEARCH>, <SETUP>, <ABOUT>.
  - 3 These buttons are used for the screen split and full screen mode.
  - 4 Shows the IP address and model name of the connected DVR.
  - 5 Select to turn the sound on/off.  
Select <DVR Time> or <PC Time> for the OSD time information display setting of the Live Viewer.
  - 6 These buttons are used for sequence and changing the screen channel.
  - 7 These buttons are used for capture, print, and save the image.
  - 8 Shows the channel of the connected DVR.
  - 9 These buttons are used for PTZ related functions.
  - 10 This displays the screen for connected camera with DVR.
- The initial split-screen mode is set according to the number of channels connected to DVR.  
You can change the split-screen mode by clicking buttons for split-screen modes.



## OSD Information Display

- 1 The channel number, video size, and IP address of the connected DVR are displayed.
- 2 This icon will appear if the audio signal is currently being output.
- 3 The current date and time will be displayed according to the selected time information display setting <DVR Time> or <PC Time>.
- 4 Motion icon appears when motion is detected. It disappears when pressed the [ALARM] button of the DVR.
- 5 It displays whether the PTZ controls are active.



- If you have set PTZ cameras for the DVR, "PTZ" is displayed on the screen. Select a PTZ camera channel and use the [PTZ] button for camera control.

## Split-Screen

You can change the split mode by clicking each number icon.



SINGLE MODE



QUAD MODE

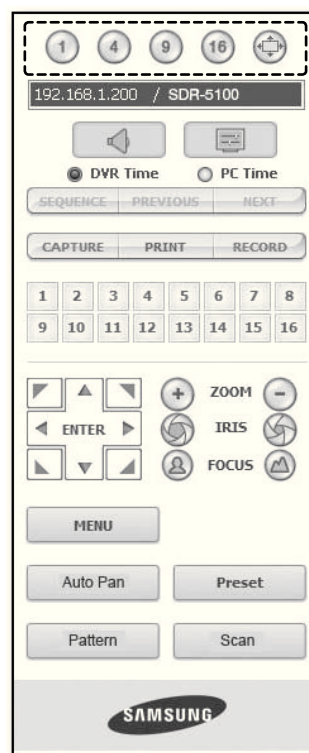


NINE MODE



SIXTEEN MODE

- Click <1> button.  
The screen displays the selected camera connected to the DVR in "SINGLE MODE".
- Click <4> button.  
The screen displays the selected camera connected to the DVR in "QUAD MODE".
- Click <9> button.  
The screen displays the selected camera connected to the DVR in "NINE MODE".
- Click <16> button.  
The screen displays the selected camera connected to the DVR in "SIXTEEN MODE".  
SDR-4100 doesn't support 16-split screen mode.
- Click <Full Screen> button.  
The screen displays the selected camera connected to the DVR in "FULL SCREEN MODE".  
Double clicking on the screen or pressing any button of the keyboard returns to the previous mode.



# Web Viewer

## Connected DVR

This displays the IP address and the status of the connecting DVR.



- Connection failure message

**No Response** : Appears when the DVR does not respond.

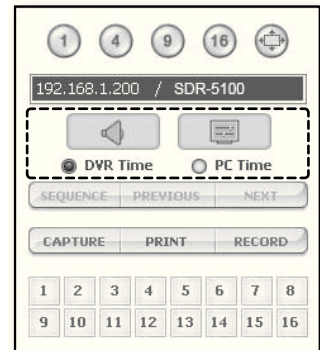
**Access Denied** : Appears when the maximum number of users is exceeded.

- The number of simultaneous connections is limited to 10.

## Setting the display of the OSD time information

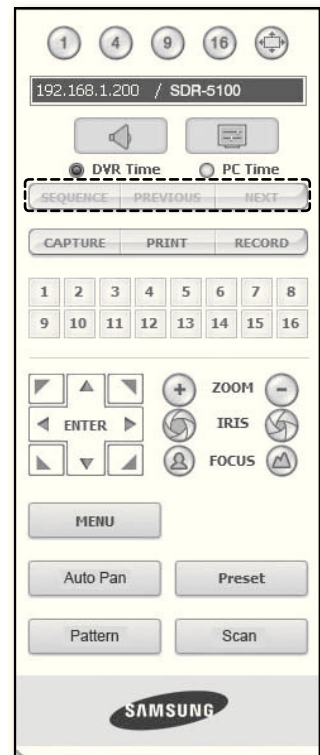
Select <**DVR Time**> or <**PC Time**> for the OSD time information display setting.

- **DVR Time** : Based on the time of the connected DVR
- **PC Time** : Based on the time of the PC currently running the Web Viewer.
- **Audio** : Sound On/Off

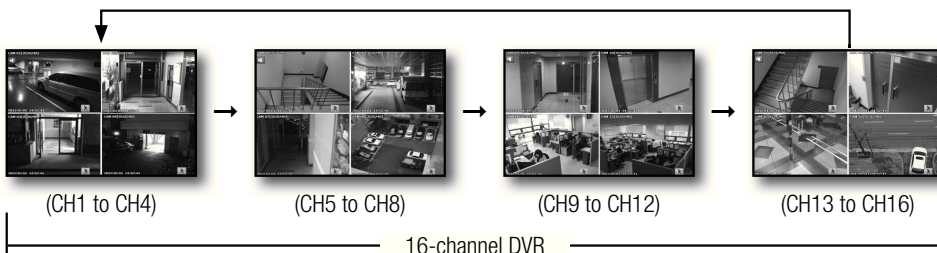


## Changing The Live Screen Mode

- 16-split mode does not support "SEQUENCE", "PREVIOUS" and "NEXT".
- **SEQUENCE** : When this button is clicked, screens are switched at a preset interval.  
In SINGLE MODE, the channel numbers are sequentially switched from 1 to 16.  
In QUAD MODE, the screens are changed like 1st 4 channels (1~4) → 2nd 4 channels (5~8) → 3rd 4 channels (9~12) → 4th 4 channels (13~16).  
In NINE MODE, the screens are changed from 9 channels (1~9) to 7 channels (10~16).
  - Preset interval (10 seconds)
- **PREVIOUS** : When this button is clicked, the previous screen appears.  
In SINGLE MODE, the channel numbers are switched in reverse order.  
In QUAD MODE, the screens are changed like 1st 4 channels (1~4) → 2nd 4 channels (13~16) → 3rd 4 channels (9~12) → 4th 4 channels (5~8).  
In NINE MODE, the screens are changed from 9 channels (1~9) to 7 channels (10~16).



- **NEXT** : When this button is clicked, the next screen appears.  
In SINGLE MODE, the channel numbers are sequentially switched from 1 to 16.  
In QUAD MODE, the screens are changed like 1st 4 channels (1~4) → 2nd 4 channels (5~8)  
→ 3rd 4 channels (9~12) → 4th 4 channels (13~16).  
In NINE MODE, the screens are changed from 9 channels (1~9) to 7 channels (10~16).  
▪ If 16-channel DVR is connected, clicking "NEXT" in QUAD MODE is to change the screen as shown in the picture.



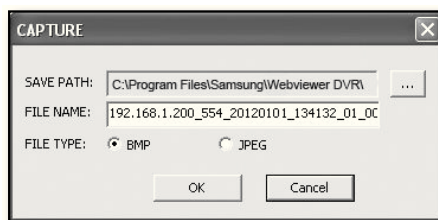
## Saving The Live Screen On The PC

- **CAPTURE** : Saves the current screen into a BMP or JPEG file.

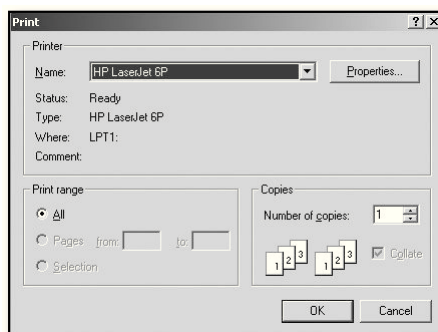


- The default saving path is "C:\Program Files\Samsung\DVR Web Viewer\SnapShot\Live". To change the saving path, click <SAVE PATH (...)> button and then select the path you want. For Windows Vista or 7, the saving path is "C:\users\ (user ID)\AppData\LocalLow\Samsung\Web Viewer DVR \ Snapshot\" by default.

- The file is automatically named as following : "IP address\_Port number\_YYYYMMDD\_camera number\_index"  
Ex) 192.168.1.200\_554\_20120101\_134132\_01\_00



- **PRINT** : Prints out the selected screen out of the currently displayed live screens. It also prints the IP address, time, camera number and the current event status together.

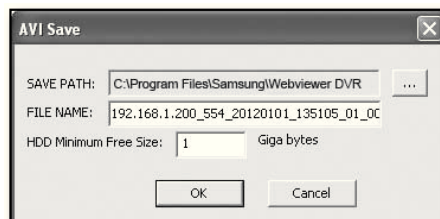


# Web Viewer

- **RECORD** : Saves the current image on the screen and saves it as a avi video file.



- To record it, it is required at least 1GB of available space.
- The default saving path is "C:\Program Files\Samsung\DVR Web Viewer\VideoClip\Live". To change the saving path, click **<SAVE PATH (...)>** button and then select the path you want. For Windows Vista or 7, the saving path is "C:\users\ (user ID)\AppData\Local-Low\Samsung\Web Viewer DVR\VideoClip\".
- The file is automatically named as following : "IP address\_Port number\_YYYYMMDD\_camera number\_index"  
Ex) 192.168.1.200\_554\_20120101\_135105\_01\_00
- For AVI Save, you need the Xvid codec for playing saved files.
- HDD Minimum Free Size : During the recording, if there is no more capacity available in the HDD than set free space will prompt with a popup message : **"Cannot record due to insufficient disc space in the HDD"**.



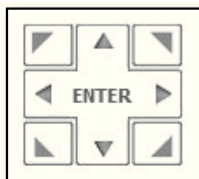
## Changing The Live Screen Channel

- Blue numbers : The channel connected to the current live screen
- Gray numbers : The channel not connected to the current live screen



## Using PTZ Camera

Click the direction buttons to control the camera.



- **< (+) ZOOM (-) >**

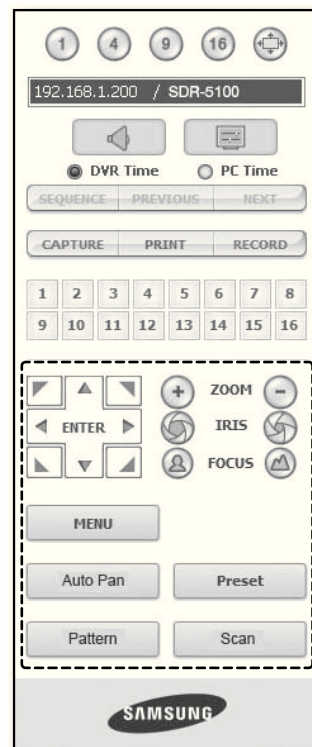
You can zoom in or out an image by using the ZOOM button.

- **< (IRIS) >**

You can adjust the entering light amount by using the IRIS button.

- **< (FOCUS) >**

You can adjust the focus by using the FOCUS button.



- **MENU** : Appears the camera menu screen.



- **Preset** : Moves the lens direction to a preset direction.

1. If you click a preset, the camera moves to the selected preset's position.
2. You can delete the selected preset or all presets.
3. You can save a new preset number and name.

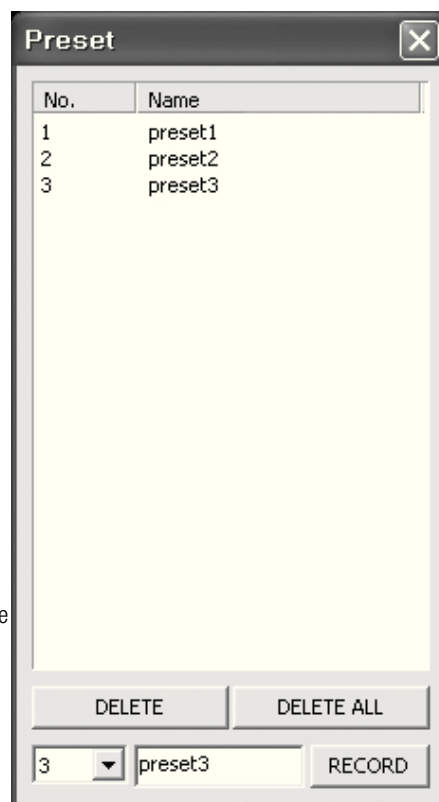


- You can save presets up to 127.

- **Auto Pan** : Moves the camera lens direction between 2 points set for the camera.
- **Scan** : Moves the camera lens direction between 2 preset points of the camera.
- **Pattern** : You can set camera various movement patterns such as zoom, move, etc. so that a camera automatically moves according to the pattern.



- While the DVR controls a PTZ camera, Web Viewer cannot control the camera.
- Camera menu setup is only available for camera supporting the function.
- Each function of PTZ is same to that of the DVR.
- Pan/Tilt of the Smart dome camera is manipulated automatically to center the camera to the mouse clicked point.
- If you drag the mouse using the left button on a certain point, Pan/Tilt of the Smart dome camera is manipulated automatically to center the camera to the middle point between the dragging start and end position.  
Upward dragging will zoom out, while downward dragging will zoom in.
- Tilt of Power PTZ operates properly within 45°.
- Power and Pan Tilt functions are only available for camera supporting the functions.  
Ex : Samsung SCC-C6475



# Web Viewer

## USING SEARCH VIEWER

The Search Viewer screen consists of following :



- 1 This displays the IP address and the model name of the connected DVR.
- 2 These menus consist of <LIVE>, <SEARCH>, <SETUP>, <ABOUT>.
- 3 These buttons are used for the screen split and full screen mode.
- 4 Shows the IP address and model name of the connected DVR.
- 5 Select the format of OSD information that will be displayed on Live Viewer.
- 6 These buttons are used for capture, print, and save the image.
- 7 This displays a calendar at which you can search the recorded video.
- 8 The duplicate check list will appear If there are found duplicates in the same timeline. The duplicated items will be listed in latest-first order.
- 9 This displays a timeline at which you can search the recorded video by the time.
- 10 These buttons are used for controlling playback.
- 11 This displays the screen for playback of recorded video.



- <SEQUENCE>, <PREVIOUS>, <NEXT> buttons are not available in SEARCH menu.
- During the DVR backup, you may have a trouble accessing CMS & Web Search.
- Web Viewer on only Internet Explorer can support "Search" function.



## Split-Screen

You can change the split mode by clicking each number icon.



SINGLE MODE

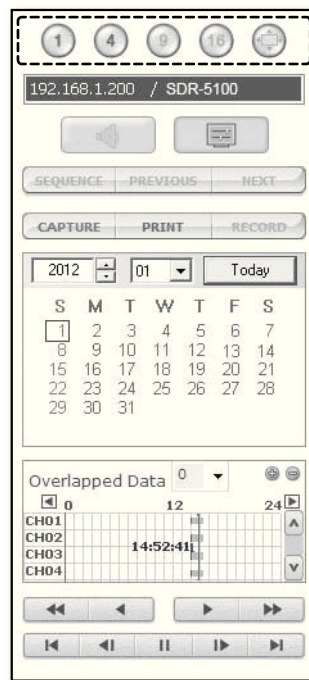


QUAD MODE

- Click <1> button.  
The screen displays the selected camera connected to the DVR in "SINGLE MODE".
- Click <4> button.  
The screen displays the selected camera connected to the DVR in "QUAD MODE".



- Only SINGLE and QUAD MODE are available in SEARCH menu.

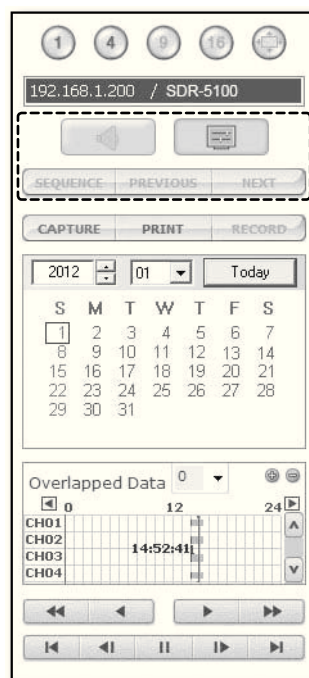


## Connected DVR

This displays the IP address and the status of the connecting DVR.



- Connection failure message  
**No Response** : Appears when the DVR does not respond.  
**Access Denied** : Appears when the maximum number of users is exceeded.
- The number of simultaneous connection is limited to 3.



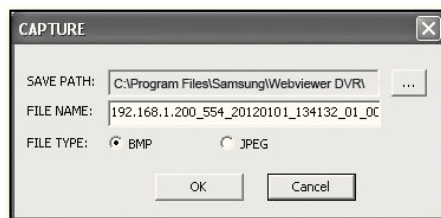
# Web Viewer

## Saving The Live Screen On The PC

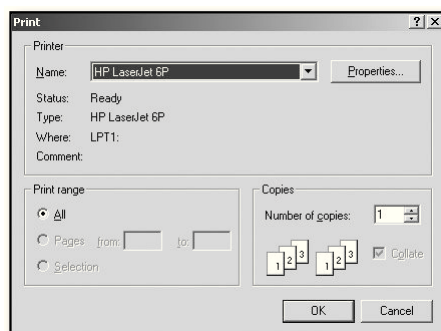
- **CAPTURE** : Saves the current screen into a BMP or JPEG file.



- The default saving path is "C:\Program Files\Samsung\DVR Web Viewer\SnapShot\Search". To change the saving path, click <SAVE PATH ( ... )> button and then select the path you want. For Windows Vista or 7, the saving path is "C:\users\user ID\AppData\LocalLow\Samsung\DVR Web Viewer\SnapShot".
- The file is automatically named as following : "IP address\_Port number\_YYYYMMDD\_camera number\_index"  
Ex) 192.168.1.200\_554\_20120101\_134132\_01\_00



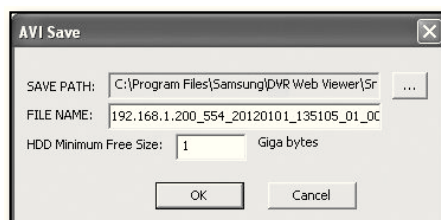
- **PRINT** : Print out the current screen. It also prints IP address, time, camera number and current event state.



- **RECORD** : While in playback, press this button saves the video data of the selected channel as an AVI file. (It is saved in the designated folder on your PC.)  
To stop recording, click this button again.



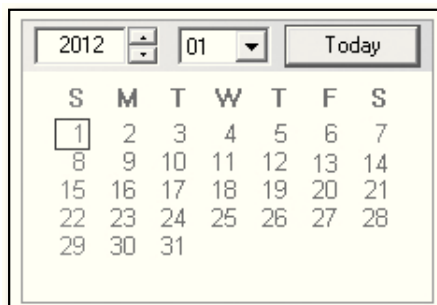
- To record it, it is required at least 1GB of available space.
- The default saving path is "C:\Program Files\Samsung\DVR Web Viewer\VideoClip\Search". To change the saving path, click <SAVE PATH ( ... )> button and then select the path you want. For Windows Vista or 7, the saving path is "C:\users\user ID\AppData\LocalLow\Samsung\DVR Web Viewer\VideoClip".
- The file is automatically named as following : "IP address\_Port number\_YYYYMMDD\_camera number\_index"  
Ex) 192.168.1.200\_554\_20120101\_135105\_01\_00
- For AVI save, you need the Xvid codec for playing saved files.





## Searching The Recorded Video In The Calendar

If the video data has been recorded on a date, the date is distinguished in green. If you click the date, the recorded video information is displayed in the time line. When you click <Today>, it will be synchronized with the system time (date) of the current PC.



## Check duplicates

If there are found duplicates in the same timeline after you changed the DVR time, those duplicates will be listed in the <0> order with the latest one on top.

## Searching The Recorded Video In The Timeline

It displays the recorded video data status on the DVR after a date is selected. The normal mode displays the time ranging from 0 to 24 Hours while the extension mode displays the time every 2 hours.

[Normal Mode]

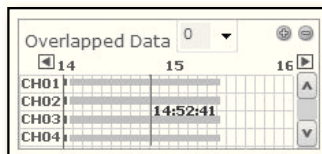
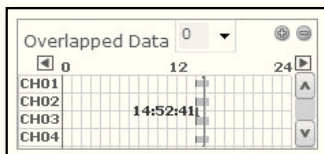
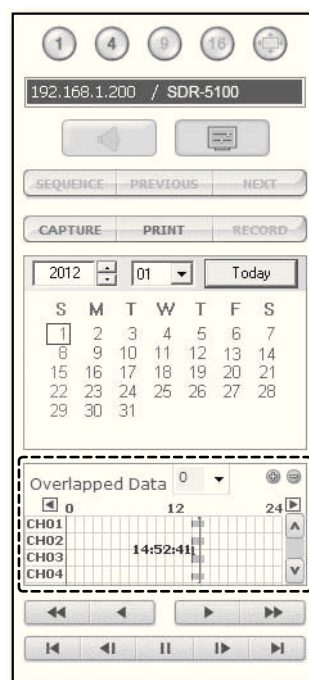
- If you click <+> button, it changes to the extension mode.
- Each time line represents 1 hour.

[Extension Mode]

- If you click <-> button, it changes to the normal mode.
- Each time line represents 5 minutes.

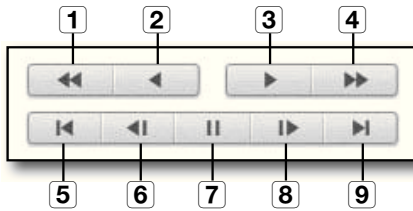


- For SDR-5100, channels are ranging from CH01 to CH16.
- For SDR-4100, channels are ranging from CH01 to CH08.



# Web Viewer

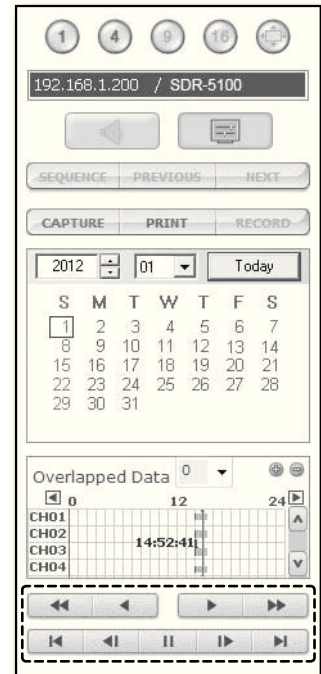
## Controlling Playback



- 1 **Fast Backward** : Reverse-plays faster(2x~64x).
- 2 **Reverse Play** : Performs Reverse Play.
- 3 **Play** : Performs playback.
- 4 **Fast Forward** : Plays faster(2x~64x).
- 5 **Go to First** : Moves the beginning time of recorded video in the time line.
- 6 **Step Backward** : Performs one step reverseplay by one frame.
- 7 **Pause** : Stops the playback temporarily.
- 8 **Step Forward** : Performs one step forward by one frame.
- 9 **Go to Last** : Moves the last time of recorded video in the time line.



- Only the admin account can play the audio signal during the playback.  
If using both web view and DVR set simultaneously, the audio signal will be output from the DVR set.



## VIEWER SETUP

You can configure the DVR settings remotely on the network.

To configure the DVR settings, click <Setup>.

### System

You can configure the various settings of the DVR system.

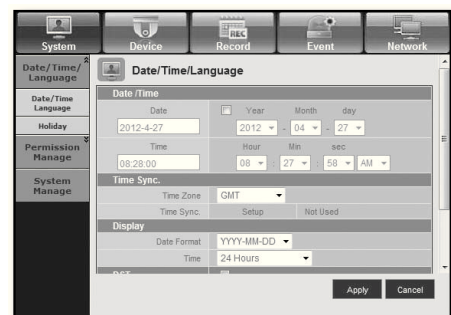
### Date/Time/Language

For more information, refer to <Date/Time/Language> in the <System Setup> menu. (Page 33)

1. Select <Date/Time/Language> in the System menu.
2. Configure the DVR settings according to your system environment.

#### • Date/Time

Set the date and time.



- **Time Synchronization Setup**

Set the time synchronization.

- **Display**

Date Format : Set the date type.

Time : Select a time format to display on the screen.

- **DST (Daylight Saving Time)**

DST is displayed an hour ahead of the standard time of the time zone.

- **Language**

Select a preferred language for the DVR.

## Holiday

You can set specific dates to Holidays according to your preferences.

For more information, refer to <Setting Holiday> in the <System Setup> menu. (Page 35)

## Permission Management

For more information, refer to <Permission Management> in the <System Setup> menu. (Page 36)

- **Admin**

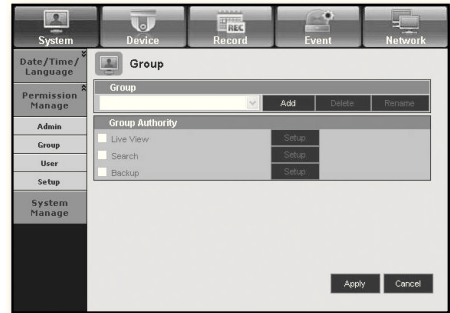
You can change the admin ID or the password.

# Web Viewer

- **Group**

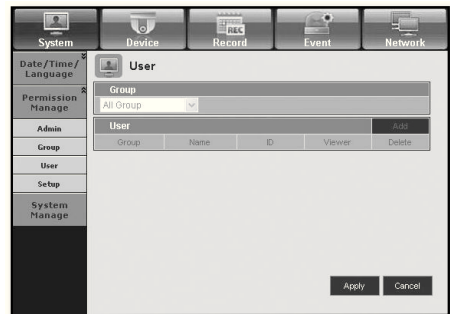
Users are classified into groups and the permission can be set according to the group.

- First of all, add a group.



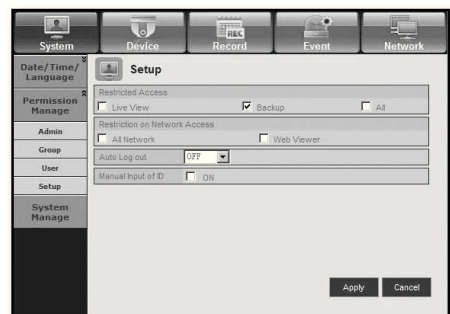
- **User**

You can add, change or remove a user or users.



- **Setup**

You can set the user permission.



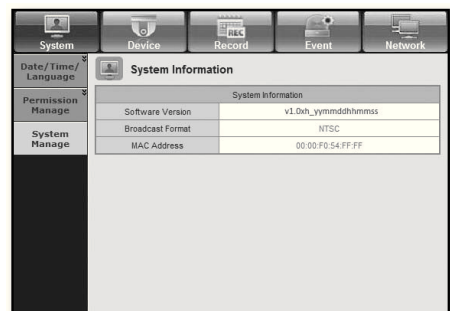
## System Management

For more information, refer to <System Management> in the <System Setup> menu. (Page 41)

- **System Information**

You can see information of the current system.

Check the Software Version, Broadcast Format and MAC Address.



## Device

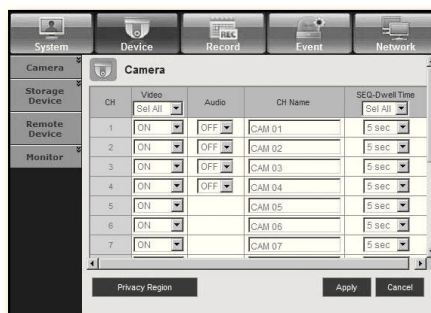
You can check a list of devices that are connected to the DVR and configure the necessary settings. Click <Device> in the menu screen.

For more information, refer to “Setting the Device”. (Page 45)

### Camera

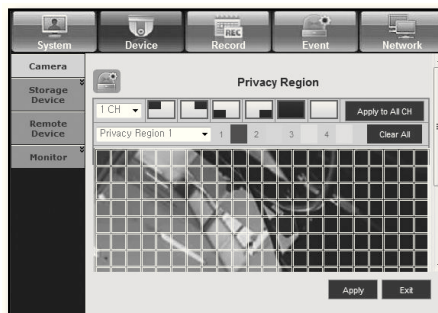
#### • Camera

You can configure the settings of the camera that is connected to the DVR.



#### • Privacy Region

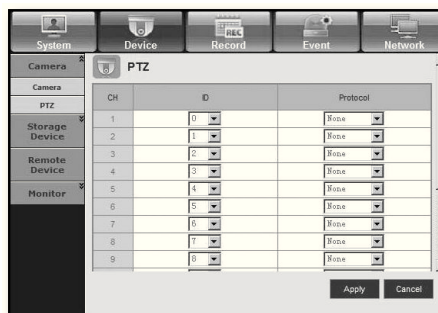
You can specify a certain area of the camera video to be protected for your privacy.



#### • PTZ

You can configure the settings of the PTZ camera that is connected to the DVR.

Set the ID and protocol.



# Web Viewer

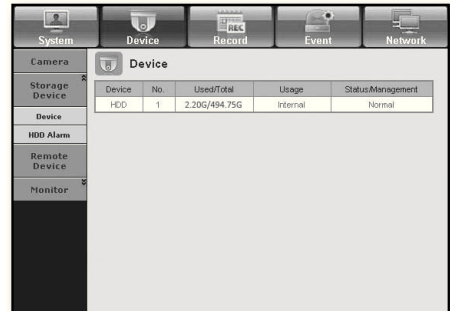
## Storage Device

You can check and change the settings of the storage device.

- **Device**

You will see a list of storage devices that are connected to the DVR.

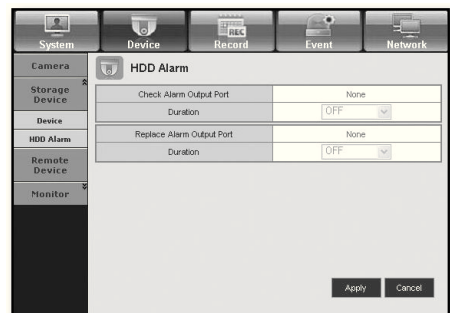
You can check the type, used/total, usage and status of the device.



Device	No.	Used/Total	Usage	Status/Management
HDD	1	2.20G/494.75G	Internal	Normal

- **HDD Alarm**

You can set the alarm output channel and the alarm duration for an error.

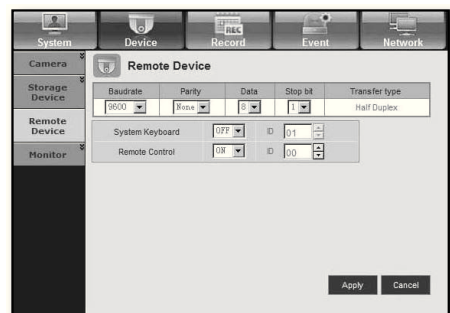


HDD Alarm	
Check Alarm Output Port	None
Duration	OFF
Replace Alarm Output Port	None
Duration	OFF

Apply Cancel

## Remote Device

You can see a list of remote devices including PTZ cameras and system keyboards that are connected to the RS-485 port of the DVR and configure the necessary settings.



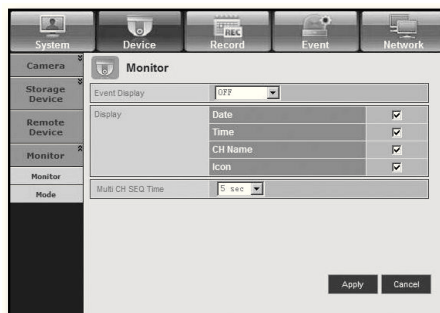
Remote Device					
Baudrate	Parity	Data	Stop bit	Transfer type	
9600	None	8	1	Half Duplex	
System Keyboard					
OFF	ID	01			
Remote Control					
ON	ID	00			

Apply Cancel

## Monitor

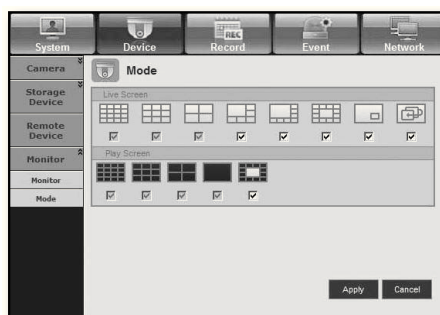
- Monitor

You can configure the monitoring screen settings and set the output system.



- Mode

You can switch between live mode and play mode.



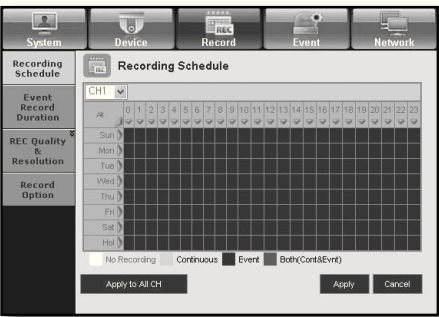
# Web Viewer

## Record

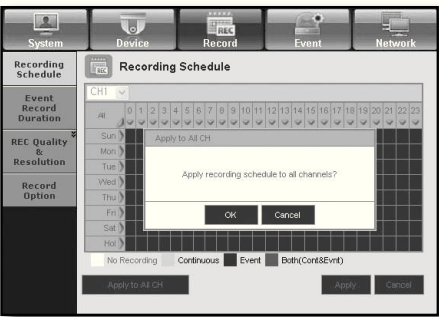
For more information, refer to “**Setting the Recording**”. (Page 51)

### Recording Schedule

If you set a recording schedule for a specific date and time, the recording will start at that specific time.

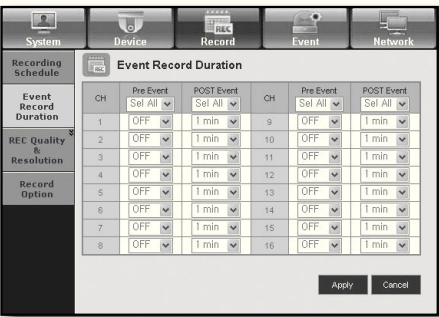


- Apply to All CH : Click <Apply to All CH> to display the confirmation window.



### Event Record Duration

You can set the start and end times of recording that will be activated if an event occurs.

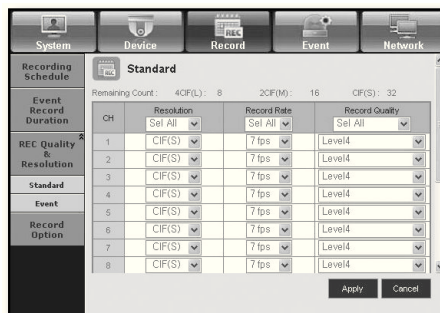




## REC Quality & Resolution

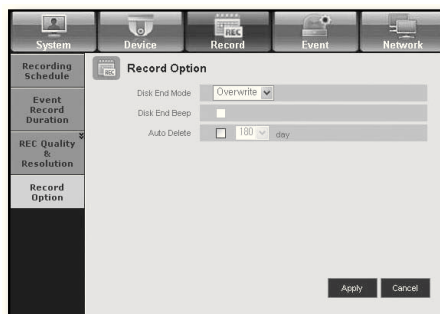
- **Standard/Event**

You can set the resolution, frame rate and recording quality for each channel.



## Record Option

You can set the Disk End Mode.

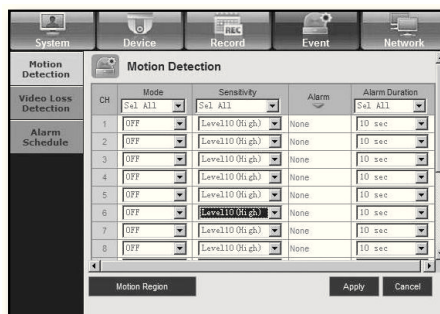


## Event

For more information, refer to “Setting the Event”. (Page 55)

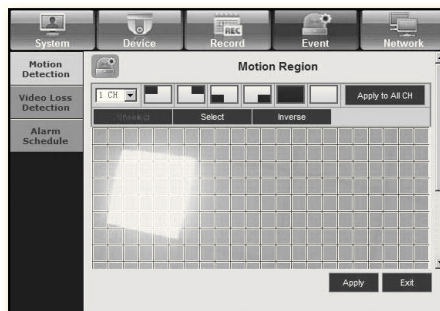
## Motion Detection

You can set the motion detection mode and the sensitivity as well as the alarm output type and the duration.



- **Motion Region**

Set the target motion detection area



# Web Viewer

## Video Loss Detection

You can set the alarm output time if a video loss occurs.

The screenshot shows the 'Video Loss Detection' configuration window. It has a sidebar with 'Motion Detection', 'Video Loss Detection', and 'Alarm Schedule'. The main area is titled 'Video Loss Detection' and contains a table with columns: CH, Video Loss State, Alarm, and Alarm Duration. The table has 9 rows, all with 'OFF' in the Video Loss State column and 'None' in the Alarm column. The Alarm Duration is set to '10 sec' for all channels. At the bottom right are 'Apply' and 'Cancel' buttons.

CH	Video Loss State	Alarm	Alarm Duration
1	OFF	None	10 sec
2	OFF	None	10 sec
3	OFF	None	10 sec
4	OFF	None	10 sec
5	OFF	None	10 sec
6	OFF	None	10 sec
7	OFF	None	10 sec
8	OFF	None	10 sec
9	OFF	None	10 sec

## Alarm Schedule

You can schedule the alarm output according to the day of the week and the time.

The default setting is Event Sync, which activates the alarm only if an event occurs.

The screenshot shows the 'Alarm Schedule' configuration window. It has a sidebar with 'Motion Detection', 'Video Loss Detection', and 'Alarm Schedule'. The main area is titled 'Alarm Schedule' and contains a grid for scheduling. The grid has columns for days of the week (Sun, Mon, Tue, Wed, Thu, Fri, Sat, Hol) and rows for hours (0 to 23). The 'Event Sync' checkbox is checked. At the bottom right are 'Apply' and 'Cancel' buttons.

Day	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Sun																								
Mon																								
Tue																								
Wed																								
Thu																								
Fri																								
Sat																								
Hol																								

## Network

For more information, refer to “Network Configuration”. (Page 58)

### Connection

A remote user can access the DVR via the network to check the current mode and the IP address.

- **Connection**

You can set the network connection route.

The screenshot shows the 'Connection' tab in the Network Configuration window. The left sidebar has tabs for System, Device, Record, Event, and Network. The 'Connection' tab is selected. The main area contains the following settings:

- Connection Mode: Static IP
- Bandwidth: 2Mbps
- IP: 192.168.1.200
- Gateway: 192.168.0.1
- Subnet Mask: 255.255.255.0
- DNS: Manual
- DNS: 168.126.63.1
- User ID: ID

Buttons for 'Apply' and 'Cancel' are at the bottom right.

- **Protocol**

You can configure the protocol related settings.

The screenshot shows the 'Protocol' tab in the Network Configuration window. The left sidebar has tabs for System, Device, Record, Event, and Network. The 'Protocol' tab is selected. The main area contains the following settings:

- Protocol Type: TCP
- Port(TCP): 4520
- Port(UOP): 8000-8160
- Unicast/Multicast: Unicast
- Multicast IP: 224.126.63.1
- TTL: 5
- Webviewer Port: 80

Below the settings, there is a note: '\* Multi Browser Support: TCP Port 4505-4530, Webviewer Port 80'. Buttons for 'Apply' and 'Cancel' are at the bottom right.

### DDNS

You can check the DDNS settings.

- If you select <iPOLiS>, the “DDNS Host Address” item will be displayed.

The screenshot shows the 'DDNS' tab in the Network Configuration window. The left sidebar has tabs for System, Device, Record, Event, and Network. The 'DDNS' tab is selected. The main area contains the following settings:

- DDNS Site: IPOLIS
- Server name: www.samsungipolis.com
- Product ID:
- Quick Connect: ☒ Not Used ☐ Use
- DDNS Host Address: http://www.samsungipolis.com/

Buttons for 'Apply' and 'Cancel' are at the bottom right.

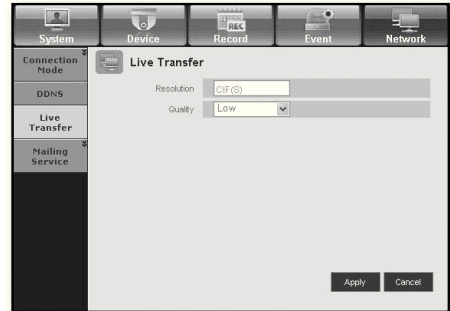
# Web Viewer

## Live Transfer

A remote user can set the images of the DVR.

- **Live Transfer**

A remote user can set the image resolution of the transferred data.

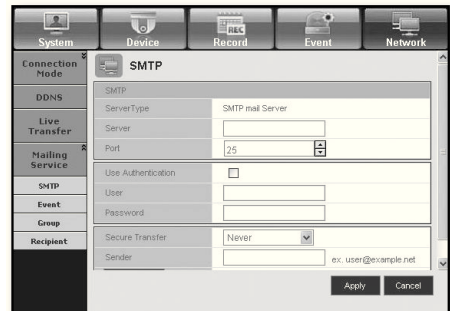


## Mailing Service

You can specify the SMTP server that sends a mail if an event occurs and set the recipient group and users.

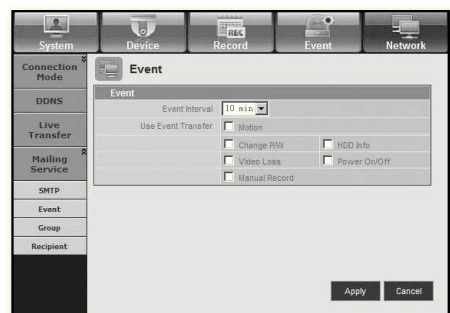
- **SMTP**

You can set the server that sends mails and specify if you use the authentication process.



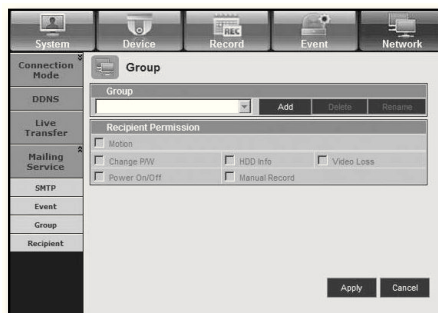
- **Event**

You can set the event interval and specify which events the server sends mails for.



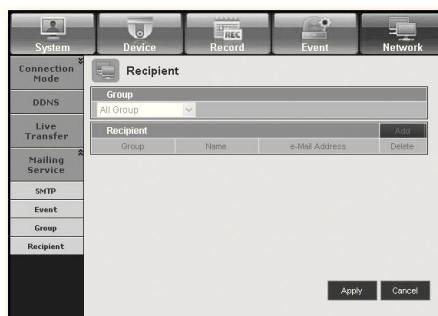
- **Group**

You can add a group to receive the mail if an event occurs and set the permission to receive the event mail for each group.



- **Recipient**

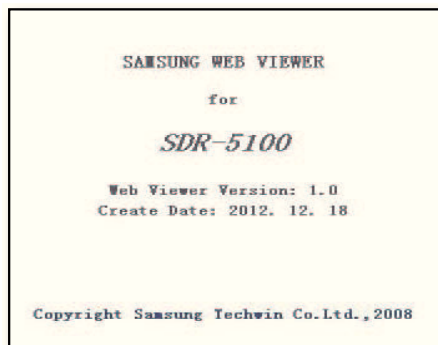
You can add a user or users who will receive the mail.



## ABOUT

Click <ABOUT>.

Displays the model name of connected DVR and the version of Web Viewer.



# Web Viewer

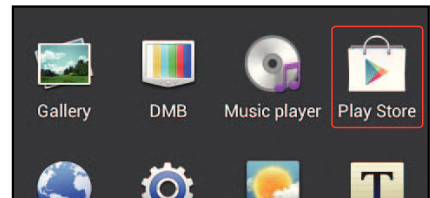
## MOBILE VIEWER

### What is Mobile Viewer?

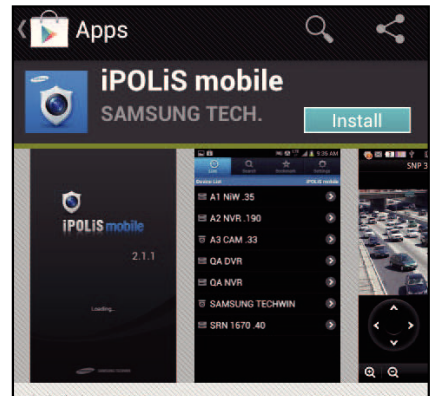
iPOLiS mobile is smartphone application that enables you to connect to DVR (Digital Video Recorder) remotely and control the video playback and PTZ operations (if configured) in real time.

### Using a Smartphone

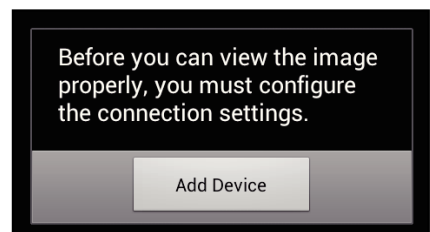
1. Download the Samsung iPOLiS mobile app.  
On an Android phone, visit Play Store.  
On an iPhone, visit App Store.



2. Search for Samsung iPOLiS.



3. Launch the iPolis mobile app add the DVR.  
On an Android phone, tap on the menu icon and tap <Add Device>.  
On an iPhone, at the Add Device pop-up tap <OK>.



4. Register the DVR to the iPOLiS mobile.

**Name** : Create a name for the DVR you are adding

**Model** : Select the DVR model

**Host** : If you are using Samsung iPolis DDNS, enter the host DDNS Host Address you wrote down earlier.

It should be [www.samsungipolis.com/Product ID](http://www.samsungipolis.com/Product ID)

**HTTP Port** : If you are using iPolis DDNS, you do not need to enter this information

**RTSP Port** : Enter the Port (TCP) you wrote down earlier.

**Camera** : Select the cameras you want to view.

5. Enter the User ID and Password for the DVR.

**Default user login info is ID : admin and Password : 4321**

The screenshot shows the 'Add Device' screen of the iPOLiS mobile app. The screen has a dark background with white text. At the top, there's a status bar with icons for signal, battery, and time (12:06 PM). Below the status bar, the title 'Add Device' is on the left and 'iPOLiS mobile' is on the right. The main content area has several input fields: 'Name' with the value 'SDR-5100', 'Model' with a dropdown showing 'DVR', 'Host' with the value 'www.samsungipolis.com/sdr-5100', 'RTSP Port' with the value '4524', and 'ID' with the value 'admin'. There are 'Save' and 'Cancel' buttons at the bottom. A 'TIP' button is located next to the 'Name' field. On the right side of the screen, there's a vertical label 'WEB VIEWER'.

## Key Features

- Remote access via Smartphone
- 1-split and 4-split modes supported in Live Viewer (However, search is not available).
- Switch channels using the touch-sensitive LCD panel
- Up to 4 channels supported
- Audio (wifi : O, 3G : X)
- PTZ camera operations supported (complies with the protocol of the connected DVR)

## Compatible Smartphone

This application is optimized for

- iPhone OS v4.3.5, v6.0.1
- Android v2.2/2.3 or later(Galaxy S/S2 recommended)



- Refer to your DVR Setting for HTTP and RTSP Port Setting.

Mobile Viewer uses the last value of the RTSP port numbers you registered in your DVR.

Ex) HTTP: 80, RTSP 4520-4524

For more information refer to "Setting the Protocol". (Page 59)

# backup viewer

## SEC BACKUP VIEWER

You can play a file that is backed up in the format of SEC.

Backup in the format of SEC will involve in generating two files: one for the backup data and one for the viewer.

If you run the backup file viewer, the backup data file will be automatically played.













### Recommended System Requirements




PCs with a lower specification than the recommended below may not fully support forward/backward and high-speed playback.

- OS : Windows XP professional, Windows Vista, Windows 7 (It is not supported by MAC OS.)
- CPU : Intel Core2-Duo 2.4GHz or higher
- RAM : DDR PC-3200 1G or more
- VGA : Geforce 6200 or higher



Name			Description
1	Audio		A toggle button. Each time you press this button, the audio output will toggle between activated and deactivated.
			You can adjust the volume level from 0 to 100.
2	Screen Printout		Saves the current screen as an image file. Supported file formats include BMP and JPEG.
			Prints out the current screen. You should have installed the appropriate printer driver before you can print out the screen.
3	File Tamper Detection		<p>A toggle button. Each time you press this button, it will toggle between activated and deactivated. The closed lock icon indicates activation of the file tamper detection, which will blink the screen three times and stop playing if an unauthorized manipulation of a data file is detected.</p> <ul style="list-style-type: none"> <li>■ A message of "The file is forged" will display in the menu bar.</li> </ul>
4	Deinterlace		You can enable the De-interlace function.
5	Zoom In/Out		Collapses the time range that is displayed on the range bar of the storage time. You can collapse the range bar until the overall range is shortened to 24 hours.
			Enlarges the time range that is displayed on the range bar of the storage time. You can enlarge the range bar until the overall range is extended to 1 minute.
6	Display of storage time range		Displays the time range of a stored video file. You can move the gridline of the range bar to select a time point to play.
7	Speed		A toggle button; each time you press this button, the "Slow Playback" icon changes its color to display it's activated/deactivated. If it is activated, you can use the play speed control to adjust the play speed up to x1/16 forward and backward respectively, whereas if deactivated, you can adjust up to x16 forward and backward.
			<p>A toggle button; each time you press this button, the "Lock Speed" icon changes its color to display it's activated/deactivated.</p> <p>If activated, the adjusted speed will be kept even if you release the mouse on the speed bar. If deactivated, the adjusted speed will be applied only while you use the mouse to hold the adjusted speed, and if you release the mouse, the speed will restore to x1.</p>
			<p>You can adjust the play speed up to x16 forward and backward respectively, which varies according to the frame rate per second of the source.</p> <p>Fast playback maximum is limited to x2 for footages recorded at 20 ~ 30 fps (frames per second), x4 for 11 ~ 19 fps, x8 for 6 ~ 10 fps, and x16 for footages recorded at slower than 6 fps.</p>

# backup viewer

Name			Description
8	Play		Displays the next frame. This is available only if the playback is stopped.
			A toggle button. Press it once to start playing the video and switch the button mode to 'Pause', and press it again to switch the button mode to Play and stop playing temporarily.
			Displays the previous frame. This is available only if the playback is stopped.

## PRODUCT SPECIFICATION (CAMERA)

### ❖ SDC-5340BC

Item	Details	
	SDC-5340BCN	SDC-5340BCP
Electrical		
Input Voltage	DC 12V	
Power Consumption	3W	
Video		
Imaging Device	1/3" CMOS	
Total Pixels	720 x 480	
Scanning System	Interlace	
Synchronization	Internal	
Frequency	H: 15,734 Hz, V: 59.94 Hz	H: 15,625 Hz, V: 50 Hz
Horizontal Resolution	600TVL	
Min. Illumination	0Lux (IR-LED)	
S/N Ratio (Y Signal)	46dB	
Lens		
Focus Length	3.6mm	
Max.Aperture Ratio	2	
Angular Field of View	D: 72°	
	H: 60°	
	V: 48°	
Operational		
Shutter Mode	Auto (Rolling Shutter)	
Gain Control	Auto	
White Balance	Auto (3200°K~6500°K)	
Digital Noise Reduction	Auto	
Day & Night	MECHA IR CUT FILTER	
IR Distance	25m	
Environmental		
Operating Temperature/ Humidity	-10°C ~ +50°C (+14°F ~ +122°F) / 20% ~ 85% RH	
IP Grade	IP66	
Mechanical		
Dimension (W X H X D)	W70.5 X H61 X D196.7 mm (2.77 X 2.4 X 7.74 inch)	
Weight	241g	

## PRODUCT SPECIFICATION(DVR)

### ❖ SDR-4100

Item		Details
		SDR-4100
Video	Inputs	8 composite video 0.5-1 Vpp, 75 ohm
	Resolution	704x480 NTSC, 704x576 PAL
Live	Frame rate	240fps NTSC, 200fps PAL
	Resolution	704x480 NTSC, 704x576 PAL
	Multi Screen display	1, 4, 6, 8, 9, PIP, Sequence
<b>Performance</b>		
Operating System	Embedded	Linux
Recording	Compression	H.264
	Record Rate	NTSC: Up to 60fps @ 704x480 / PAL: Up to 50fps @ 704x576
		NTSC: Up to 120fps @ 704x240 / PAL: Up to 100fps @ 704x288
		NTSC: Up to 240fps @ 352x240 / PAL: Up to 200fps @ 352x288
	Mode	Manual, Schedule, Event, Time Laps
	Overwrite modes	Continuous
	Pre-event	Off/5sec
Search & Playback	Post-event	- Off/5/10/20/30sec - 1/3/5/10/20min, 1/2/3/4/5/6 hour
	Search mode	Date/time, Event, Backup, Motion
Network	Playback function	Fast Forward/Backward, Slow Forward/Backward, Step Forward/Backward
	Transmission speed	CIF 100/120fps
	Stream	H.264(CIF)
	Maximum No. of remote users	Search(2) / Live Unicast(10) / Live Multicast(10)
	Protocol support	TCP/IP, DHCP, PPPoE, SMTP, NTP, HTTP, DDNS, RTP, RTSP
Smart phone	Monitoring	Smart viewer, Webviewer, Mobile Viewer
	Smart phone	Android, i-phone (iPad included)
	Protocol support	RTP, RTSP, HTTP, CGI
	Transmission speed	CIF Max 15fps(Single Channel)/ CIF Max 2fps(Quad Channel)
	Remote users Maximum	Live(1)

Item		Details
		SDR-4100
Storage	Internal HDD	500GB SATA HDD
	External HDD	—
	DVD Writer (Back-up)	—
	USB (Back-up)	2 USB Ports
	File Format (Back-up)	BU(DVR Player), SEC(Include Player)
Security	Password Protection	1Admin, 10 Group, 10 User per 1 Group, User can be assigned authority for function
	Data Authentication	Watermark (Only supports in SEC backup viewer)
<b>Interface</b>		
Monitors	VGA	1 VGA (1280x720, 1280x1024, 1920x1080, 1024x768)
	HDMI	1 HDMI (1280x720, 1280x1024, 1920x1080, 1024x768)
	Spot Composite	—
	Loop Outputs	—
Audio	Inputs/Output	4 line in / 1 line out
	Compression	G.711
	Sampling rate	8KHz
Alarm	Inputs/Outputs	-
	Remote notification	Notification via e-mail
Connections	Ethernet	1 RJ-45 10/100 Base-T
	Serial interface	—
	USB	USB 2.0, 2 ports (Front x 2, 1A)
	e-SATA	—
	Application Support	Mouse, Remote Controller
	Protocol support	RS485 (SAMSUNG-T, VICON, PANASONIC, AD, PHILIPS, Pelco D, Pelco P, SAMSUNG-E)
	PTZ	Supported
<b>General</b>		
Electrical	Input Voltage/Current	100 ~ 240 VAC ±10%; 50/60 Hz, Autoranging
	Power consumption	ADP-4812 Adaptor (1EA), 12V, 48W
Environmental	Operating Temperature/ Humidity	0°C ~ +40°C (+32°F ~ +104°F) / 20% ~ 85%RH

# appendix

Item		Details
		SDR-4100
Mechanical	Dimension (W X H X D)	W360 X H44 X D160mm (14.17 X 1.73 X 6.3 inch)
	Weight (With hard disks)	1.6Kg
	Gross weight	SDS-P4080: 8Kg
	Box Size (Outer)	NTSC: W455 X H303 X D299mm (17.91 x 11.77 x 11.93 inch)
Lauguage		English, Spanish, French, German, Italian, Polish, Portuguese, Russian, Turkish, Japanese, Czech, Swedish, Danish, Korean, Chinese, Netherland, Thai, Romanian, Serbian, Croatian, Hungarian, Greek

❖ SDR-5100

Item		Details
		SDR-5100
Video	Inputs	16 composite video 0.5-1 Vpp, 75 ohm
	Resolution	704x480 NTSC, 704x576 PAL
Live	Frame rate	480fps NTSC, 400fps PAL
	Resolution	704x480 NTSC, 704x576 PAL
	Multi Screen display	1, 4, 6, 8, 9, 13, 16, PIP, Sequence
Performance		
OS	Embedded	Linux
Recording	Compression	H.264
	Record Rate	NTSC: Up to 120fps @ 704x480 / PAL: Up to 100fps @ 704x576
		NTSC: Up to 240fps @ 704x240 / PAL: Up to 200fps @ 704x288
		NTSC: Up to 480fps @ 352x240 / PAL: Up to 400fps @ 352x288
	Mode	Manual, Schedule, Event
	Overwrite modes	Continuous
	Pre-alarm	Off/5sec
Search mode	Post-Alarm	Up to 6 hour. (5, 10, 20, 30 sec, 1, 3, 5, 10, 20 min, 1, 2, 3, 4, 5, 6 hour)
	Search mode	Date/time, Event, Back up, Motion
Network	Playback function	Fast Forward / Backward, Slow Forward / Backward, Step Forward / Backward
	Transmission speed	CIF 100/120fps
	Bandwidth	Up to (4)Mbps, Unlimited(4M)/2/1.5/1 Mbps/800/600/500/400/300/200/100/50 kbps
	Bandwidth control	Automatic
	Stream	H.264(CIF)
	Maximum No. of remote users	Search(2) / Live Unicast(10) / Live Multicast(10)
	Protocol support	TCP/IP, DHCP, PPPoE, SMTP, NTP, HTTP, DDNS, RTP, RTSP
Monitoring		Smart Viewer, WebViewer, Mobile Viewer

# appendix

Item		Details
		SDR-5100
Smart phone	Smart phone	Android, i-phone (iPad included)
	Protocol support	RTP, RTSP, HTTP, CGI
	Transmission speed	CIF Max 15fps(Single Channel)/ CIF Max 2fps(Quad Channel)
	Remote users Maximum	Live(1)
Storage	Internal HDD	SDS-P5101: 1TB SATA HDD, SDS-P5100: 2TB SATA HDD
	External HDD	—
	DVD Writer (Back-up)	—
	USB (Back-up)	2 USB Ports
	File Format (Back-up)	BU (DVR Player), SEC (Include Player)
Security	Password Protection	1 Admin, 10 Group , 10 User per 1 Group
	Data Authentication	Watermark
Interface		
Monitors	VGA	1 VGA (1280x720, 1280x1024, 1920x1080, 1024x768)
	HDMI	1 HDMI (1280x720, 1280x1024, 1920x1080, 1024x768)
	Spot Composite	—
	Loop Outputs	—
Audio	Inputs / Output	4 line in / 1 line out
	Compression	G.711
	Sampling rate	8KHz
Alarm	Inputs / Outputs	—
	Remote notification	Notification via e-mail



Item		Details
		SDR-5100
Connections	Ethernet	1 RJ45 10/100 Base-T
	Serial interface	—
	USB	USB 2.0, 2 ports (Front x 2, 1A)
	e-SATA	—
	Application Support	Mouse, Remote Controller
	PTZ Protocol support	RS485 (SAMSUNG-T, VICON, PANASONIC, AD, PHILIPS, Pelco D, Pelco P, SAMSUNG-E)
General		
Electrical	Input Voltage /Current	100 ~ 240 VAC $\pm$ 10%; 50/60 Hz, Autoranging
	Power consumption	ADP-4812 Adaptor (1EA), 12V, 48W
Environmental	Operating Temperature /Humidity	0°C ~ +40°C (+32°F ~ +104°F) / 20% ~ 85%RH
Mechanical	Dimension (W X H X D)	W360 X H44 X D160 mm (14.17 X 1.73 X 6.30 inches)
	Weight (With hard disks)	SDS-P5100: 1.75kg, SDS-P5101: 1.68Kg
	Gross weight	SDS-P5100: 9.9kg, SDS-P5101: 9.91Kg
	Box Size (Outer)	W455 X H303 X D299mm (17.91 x 11.77 x 11.93 inch)
Language		Korean, Japanese, Chinese, English, French, German, Spanish, Italian, Russian, Polish, Czech, Turkish, Netherlands, Portuguese, Swedish, Danish, Thai, Rumania, Serbia, Croatia, Hungary, Greek

# appendix

## DEFAULT SETTING

This returns the factory default settings.

The settings are made as follows;

- Use System/Load Factory Default in MENU
- The default settings are based on SDR-5100.
- The default password can be exposed to a hacking thread so it is recommended to change the password after installing the product. Note that the security and other related issues caused by the unchanged password shall be responsible for the user.

Category	Details			Factory Default
System Settings	Date/Time/Language	Date/Time/Language	Date	YYYY-MM-DD
			Time Format	24 hours
			Time Zone	GMT
			Time Synchronize	OFF
			DST	OFF
			Language	English
	Permission Management	Admin	ID	admin
			New Password	4321
		Setting	Restricted Access	Backup
			Auto Logout	OFF
	System Management	System Information	Broadcast Format	NTSC/PAL
Device	Camera	Camera	Video	ON
			Audio	OFF
			CH Name	CAM 01 ~ CAM 16
			SEQ-Dwell Time	5sec
		Screen Setup	Brightness	50
			Contrast	50
			Color	50
	Storage Device	HDD Alarm	Check Alarm Output Port	OFF
			Duration	OFF
			Replace Alarm Output Port	OFF
			Duration	OFF
	Remote Device	Remote Control		ON(00)

Category	Details			Factory Default
Device	Monitor	Monitor	Event Display	OFF
			Display	All
			Multi CH SEQ Time	5sec
			VGA/HDMI	1280 x 1024
			Display Position Setup	30
		Mode	Live Mode	ALL
			Play Mode	ALL
Recording	Recording Schedule	CH1		Both(Cont&Evt)
	Event Record Duration	PRE Event		OFF
		POST Event		1 min
	REC Quality/Resolution	Standard	Resolution	CIF(S)
			Frame Rate	NTSC: 7 fps PAL: 5 fps
			Record Quality	Level 4
		Event	Resolution	4CIF(L)
			Frame Rate	NTSC: 7 fps PAL: 5 fps
			Record Quality	Level 4
	Record Option	Disk End Mode	Setup	Overwrite
			Disk End Beep	OFF
		Auto Delete		OFF
Event	Motion Detection	Mode		OFF
		Sensitivity		Level 10 High
		Alarm		None
		Alarm Duration		10 sec
		Motion Region		All Area
	Video Loss Detection	Video Loss State		OFF
		Alarm		None
		Alarm Duration		10 sec
	Alarm Schedule	BEEP		Event Sync

# appendix

Category	Details			Factory Default
Network	Connection Mode	Connection	Connection Mode	Static IP
			Bandwidth	2Mbps
			IP	192.168.1.200
			Gateway	192.168.1.1
			Subnet Mask	255.255.255.0
			DNS	168.126.63.1
		Protocol	Protocol Type	TCP
			Port (TCP)	4520~4524
			Webviewer Port	80
	DDNS	DDNS Site		OFF
	Live Transfer	Resolution		CIF(S)
		Quality		Low
	Mailing Service	SMTP	Server	OFF
			Port	25
			Use Authentication	OFF
			Secure Transfer	Never
		Event	Event Interval	10 min
			Use Event Transfer	OFF
		Group	Group	OFF
			Recipient Permission	OFF
		Recipient	Group	All Group

## TROUBLESHOOTING

Symptom	Countermeasures
The system does not turn on and the indicator on the front panel does not work at all.	<ul style="list-style-type: none"> <li>• Check if the power supply system is properly connected.</li> <li>• Check the system for the input voltage from the power source.</li> <li>• If the problem persists even after you have taken the above actions, check the power supplier and replace it with a new one if necessary.</li> </ul>
Some channels display just a black screen even if they receive video sources.	<ul style="list-style-type: none"> <li>• Check if the camera connected to the system properly displays the image. Sometimes, this problem may occur on a camera that is not properly connected to the video source.</li> <li>• Check if the camera is properly supplied with power.</li> <li>• Sometimes, this problem may occur on a channel with weak video signal from a video distributor that is connected to multiple systems. In this case, input the video source of the camera directly into the DVR. This may find the cause and solve the problem.</li> </ul>
If I press the <b>[REC]</b> button on the remote control, nor the player start recording.	<ul style="list-style-type: none"> <li>• Check if there is a free space on the HDD for the recording.</li> <li>• Check if the record mode is set to <b>ON</b> in the record mode setting.</li> </ul>
The screen displays the logo image repeatedly.	<ul style="list-style-type: none"> <li>• This may occur from a problem with the main board, or the related software is corrupt. Contact the nearest service center for more information.</li> </ul>
The Channel button does not work on the Live screen.	<ul style="list-style-type: none"> <li>• The Channel button does not work if the current screen is in the event monitoring mode. In the event monitoring screen, press the <b>[ALARM]</b> button to exit the screen and select a channel.</li> </ul>
The cursor will not move to the Start button when I start the calendar search.	<ul style="list-style-type: none"> <li>• Check if the channel and the date that you want to play are marked with the V symbol. Both channel and date should be checked before you can start playing with the Start button.</li> </ul>
When the alarm sounds, I press the <b>[ALARM]</b> button on the remote control to release the alarm but it does not work. The alarm persists and I could not set it off in any way.	<ul style="list-style-type: none"> <li>• Press the <b>[MENU]</b> button on the remote control to release the alarm in the following way: <ol style="list-style-type: none"> <li>1) To release the event monitoring mode : Monitoring Mode – set the duration of the event monitoring to Off.</li> <li>2) To release the alarm sound : Event Record Mode - Alarm (Motion Detection/Video Loss) – deactivate the alarm sound.</li> <li>3) To release the event : Event Record Mode - Alarm (Motion Detection/Video Loss) – set the mode to Off.</li> </ol> </li> </ul>

# appendix

Symptom	Countermeasures
A message of "Need to reset date/time." is displayed on the screen.	<ul style="list-style-type: none"> <li>This message is displayed if there occurs a problem with the time setting of the internal clock or an error in the clock itself. Contact the retailer or the service center for more information.</li> </ul>
The time bar is not displayed in Search mode.	<ul style="list-style-type: none"> <li>The timeline can switch between normal and extension mode. In extension mode, the time bar may not be displayed in the current timeline. Switch to normal mode or use the left or right button to navigate through the time bar.</li> </ul>
The "NO HDD" icon and an error message are displayed.	<ul style="list-style-type: none"> <li>Check the HDD for connection. If the problem persists in a normal condition, contact the nearest service center to have the HDD checked by the service personnel.</li> </ul>
I have installed an additional HDD on the DVR but it does not recognize the HDD.	<ul style="list-style-type: none"> <li>See the compatibility list to check if the additional HDD is supported by the DVR. For the compatibility list, contact the retailer where you purchased the DVR.</li> </ul>
I have connected an external storage device to the DVR but the DVR seems not to recognize it.	<ul style="list-style-type: none"> <li>See the compatibility list of external storage devices to check if the connected device is supported by the DVR. For the compatibility list, contact the retailer where you purchased the DVR.</li> </ul>
If I press the ESC key in full screen mode of the WebViewer, the system does not switch to a normal split mode.	<ul style="list-style-type: none"> <li>Press the ALT+TAB keys to select 'ACTIVE MOVIE' and press the ESC key again. The system will switch to a normal split mode.</li> </ul>
I found it difficult to configure the network settings if using the default search, backup and router settings.	<ul style="list-style-type: none"> <li>For more information, refer to the user manual.</li> <li>If you want to check the basics of the product for a quick start, refer to the quick start guide (backup, search).</li> <li>If you use the router for network connection, refer to the <b>"Connecting to the Internet using the router"</b> section in this manual.</li> </ul>
I forgot the password.	<ul style="list-style-type: none"> <li>Contact the DVR administrator for help.</li> </ul>
Backup data is just not played by the PC or DVR.	<ul style="list-style-type: none"> <li>When you are backing up data, you have choices about the player either: PC or DVR. Make your selection before proceeding.</li> <li>If you are using the PC to play the data, the format of the backup file should be SEC.</li> <li>If you are using the DVR for this purpose, formatting backup files should be done by the DVR.</li> </ul>
My player does not switch to Live mode while in playback.	<ul style="list-style-type: none"> <li>Press the Stop [■] button on the remote control, or click the [■] icon on the launcher to switch to Live mode.</li> </ul>

Symptom	Countermeasures
Recording does not work.	<ul style="list-style-type: none"> <li>If your player does not display a Live image at all, that indicates recording does not work so first check if you see an image on the screen.</li> <li>Recording does not work if the recording settings are not properly configured.               <ol style="list-style-type: none"> <li>1) Manual Record: Press the <b>[REC]</b> button on the remote control to start recording.</li> <li>2) Scheduled Record: Specify a desired time in Menu – Record - Recording Schedule. Recording will start at the specified time.                   <ul style="list-style-type: none"> <li>- <b>&lt;Continuous&gt;</b> Record: Recording will proceed in any conditions at the specified time.</li> <li>- <b>&lt;Event&gt;</b> Record: When an event occurs, recording will perform only if the event is of alarm, motion detection and video loss. If there is no event found, recording will not perform.</li> <li>- <b>&lt;Continuous / Event&gt;</b> Record: If there is no event found, Continuous recording will perform. Whereas, if an event occurs, Event recording will perform.</li> </ul> </li> </ol> </li> </ul>
The image quality of the recording data is not good.	<ul style="list-style-type: none"> <li>Increase the resolution and quality level in Menu – Record – Quality / Resolution.               <ol style="list-style-type: none"> <li>1) Resolution: Select a bigger size when specifying the recording size. (4CIF&gt;2CIF&gt;CIF) The recording image in the CIF format shows a deteriorated quality as it is enlarged from a small-sized image.</li> <li>2) Record Quality: Specify a bigger level for the recording quality.</li> </ol> </li> <li>If you increase the resolution and the recording quality, the data size increases accordingly. So the HDD will be filled faster. Overwriting will overwrite the existing data so recording will proceed at a shorter interval.</li> </ul>

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Version 2.1, February 1999

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