8/16 Channel DVR user manual

SAMSUNG

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

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

This marking shown on the product or its literature, indicates that it should not be disposed with other household wastes at the end of its working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources.

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

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

Code No. AB68-00686B-04

SAMSUNG

SHR-5080/5082
SHR-5160/5162

8/16 Channel DVR
user manual

imagine the possibilities

Thank you for purchasing a Samsung product.
To receive a more complete service, please register your product at

www.samsung.com/global/register

SAMSUNG

key features of your DVR

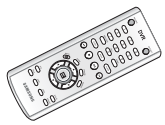
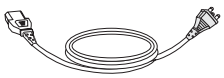
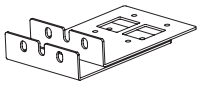
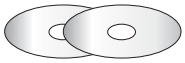
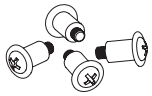
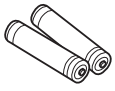
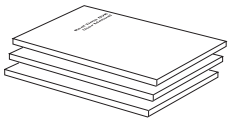
The Digital Video Recorder (DVR) compresses the acquired images of 8/16 video channels from cameras using MPEG-4 technologies, and compresses the 4 channel audio inputs into ADPCM audio file to record them on the hard disk or retrieve them from the hard disk simultaneously.

In addition, it transfers the video and audio data through a network and allows you to remotely monitor them using your PC.

- 8/16 channel Composite Input connectors
- NTSC/PAL video source compatible
- With Dual Codec, can change the FPS (frames per second) according to the bandwidth and send live pictures regardless of the recording condition
- Picture quality improvement by adopting the De-interlace chip
- Can display HDD information and status using the HDD SMART function
- Can convert the CIF (NTSC: 352*240, PAL: 352*288) images to 120 IPS images for NTSC or 100 IPS images for PAL
- 8/16 channel loop through video connectors
- Hard disk overwrite mode
- USB 2.0 hard disk backup capability for large quantities of data
- Backup function using USB 2.0 memory and external CD/DVD writer (SHR-5162 and SHR-5082 include built-in DVD writer)
- Can record, play, and transmit audio/video data to Windows Network Viewer (Smart Viewer/Web Viewer) simultaneously
- Can record or play 8/16 channel video data
- Various search modes (time/date, event, schedule)
- Various recording modes (time lapse, event, schedule)
- Extended hard disk connection (USB 2.0)
- Alarm interface function (Input: 8/16, Output: 4, Reset: 1)
- Remote monitoring function using Windows Network Viewer (Smart Viewer/Web Viewer)

WHAT'S INCLUDED WITH YOUR DVR

Upon delivery of this product, you shall unwrap and put it on the even floor or where you want to use it. Then you must check if the following items are in it.

			※ 
Remote control unit (RCU)	**One power cord**	**Two brackets** Brackets are used to attach the product to the rack	**Smart Viewer, Net I Software CD(PDF manual included)**
			※ 
Special screws **SHR-5162/5082: 4 ea** **SHR-5160/5080: 12 ea**	**2 EA of RS-485/ Alarm terminal block**	**2 EA of AAA batteries**	**User manual, POS manual, Quick Guide**

※ **Net I CD and POS manual supported only in SHR-5082N, 5162N/GVI.**

safety regulations

Please be sure to keep the following in mind for the right use of the product to prevent proprietary risk or damage.

- **Do not use multiple plugs at once.**
  This may cause abnormal heat generation or fire
- **Do not put a vase, flowerpot, cup, cosmetics, medicine, or vessel with water around you.**
  This may cause fire.
- **Do not bend the power cord forcibly nor put a heavy material on it.**
  This may cause fire.
- **Do not touch the power plug with wet hands.**
  This may cause electric shock.
- **Insert the power plug firmly enough not to shake.**
  This imperfect connection may cause fire.
- **Keep the product off humidity, dust, or soot.**
  This may cause fire or electric shock.
- **Do not put metals (coin, hair pin, metal piece, etc.) or inflammable materials (match, paper, etc.) in the ventilation hole.**
  This may cause fire.
- **Keep the surrounding temperature between 0°C to 40°C and keep the product off humidity.**
  This may cause breakdown.
- **Secure sufficient ventilation.**
  This may cause abnormal operation due to high temperature.
- **Keep the product off direct ray of light or heat from the heating device.**
  This may cause fire.
- **Do not disassemble, repair, or remodel the product.**
  This may cause fire, electric shock, or injury due to abnormal operation.
- **Do not pull out the power cord.**
  This may destroy the power cord, eventually, cause fire or electric shock.
- **Plug out in the event of thunder or lightning.**
  This may cause fire.



- **Keep your children off the battery after you take it out of the product. They tend to swallow it unconsciously.**
  If your children swallow it, please see the doctor immediately.
- **Install the product at a safe place or attach the product to the wall or ceiling with a stand firmly enough not to fall to the ground.**
  This may injure people.

before start

This user's manual provides Information for using DVR such as brief introduction, part names, functions, connection to other equipment, menu setup, and the like.
You have to keep in mind the following notices:

- SEC retains the copyright on this manual.
- This manual cannot be copied without SEC'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.
- If you want to open the case of your system for checking problems, please consult the expert from the shop where you bought the product.
- You may download open source codes from the following website: www.samsungsecurity.com.
- Before installing any external device such as external memory or HDD, please check the compatibility of the device with Samsung DVR. The list of the compatible devices with Samsung DVR can be obtained from your vendor.
- Apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the apparatus.
- The Mains plug is used as a disconnect device and shall stay readily operable at any time.

WARNING

Battery

Exchanging a wrong battery in your product may cause an explosion. Therefore you must use the same type of battery as the one being used in the product.
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."

System Shutdown

Turning off the power while the product is in operation, or taking not permitted actions may cause damage to the hard drive or the product. Also it can cause a dysfunction to the hard disk while using the product. Please turn off the power using the **Power** button on the front of your **DVR**.
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 USP 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.
When using the device after a long period of storage at low temperature, place the product at room temperature for a while and run it.
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.

STANDARDS APPROVALS

FC CE

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.

contents

continued next page

INTRODUCING YOUR 8/16 CHANNEL DVR 03

- 03 Controls on the DVR
- 05 Rear panel jacks
- 06 Remote control

INSTALLATION 08

- 08 Checking installation environment
- 08 Hdd addition

CONNECTING WITH OTHER DEVICES 14

- 14 Connecting video, audio, and monitor
- 14 Connecting the network
- 15 Connecting the USB
- 15 Connecting the alarm input/output
- 16 Connecting the RS-485 device

LIVE 17

- 17 Operating the system
- 17 Live screen mode
- 19 Setting audio on/off
- 20 Freezing and zooming
- 20 Event monitoring
- 21 Spot-out monitoring

MENU SETUP 22

- 22 Before use
- 22 System
- 27 Camera
- 28 Monitoring
- 29 Record mode
- 31 Event record mode
- 32 Schedule
- 33 Network
- 36 Configuring network

BACKUP 37

- 37 Backup

PTZ CAMERA CONTROL 38

- 38 PTZ camera control mode
- 38 Basic PTZ operations
- 39 Preset setup
- 39 Camera menu setup
- 40 Preset view
- 40 Other view

RECORDING 41

- 41 Rec (normal recording)
- 41 Record schedule

SEARCH AND PLAY 42
42 Before use
42 Calendar search
42 Event search
43 Date time search
43 Go to first search
44 Go to last search
44 Backup search
44 Playback

SMART VIEWER 46
46 Introduction
46 Main features
46 PC specification (recommended)
46 Smart Viewer installation
47 Smart Viewer program execution
48 Smart Viewer initial screen
48 Setup mode
59 Monitoring mode
66 Search mode

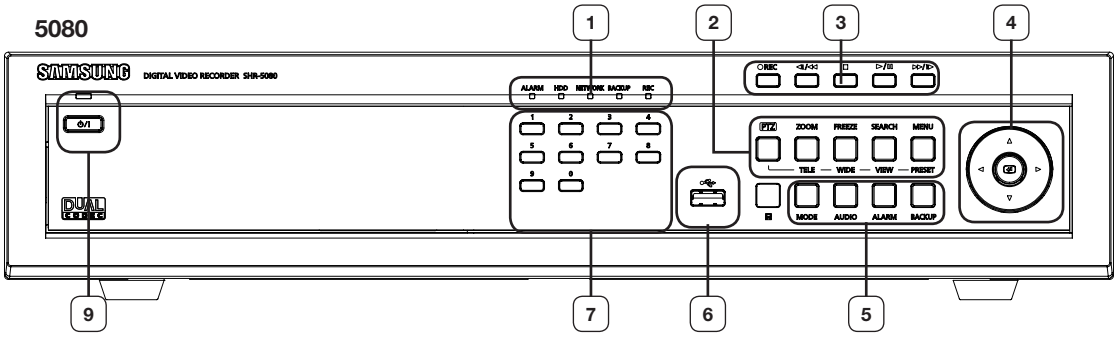
WEB VIEWER 70
70 Introducing Web Viewer
71 Connecting Web Viewer
72 Using Live Viewer
77 Using Search Viewer
81 About

APPENDIX 82
82 Product specification
85 Outline drawings
89 Factory default
92 Troubleshooting (FAQ)
95 Open source license report on the product

Introducing your 8/16 Channel DVR

CONTROLS ON THE DVR

5080



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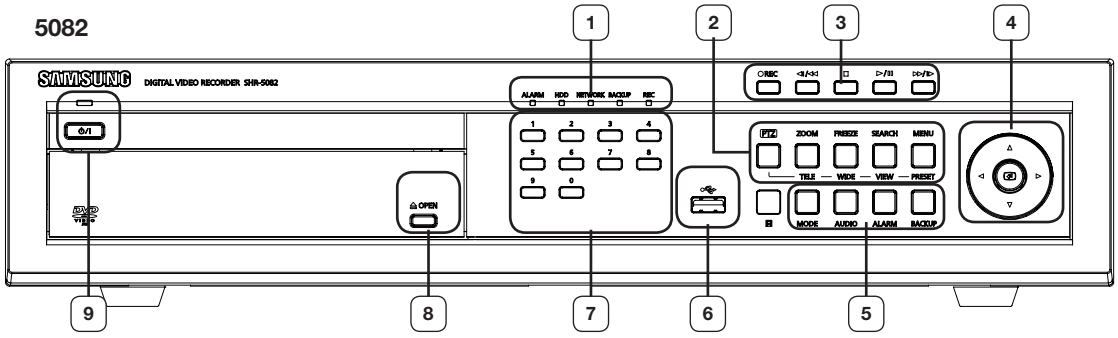

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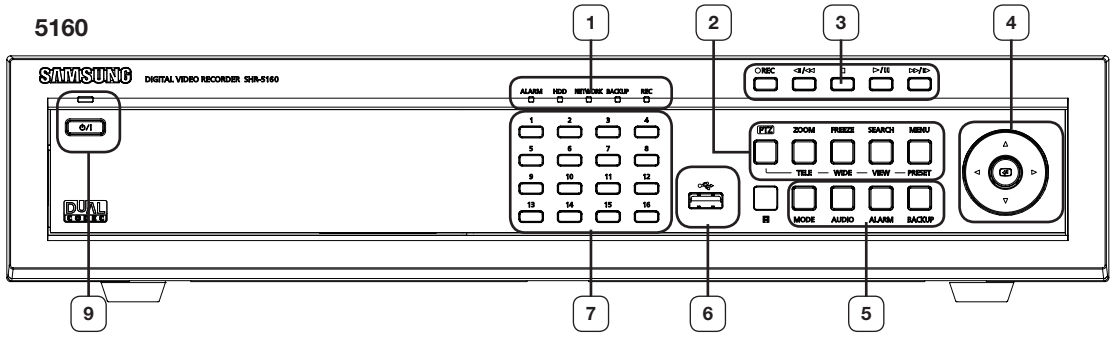

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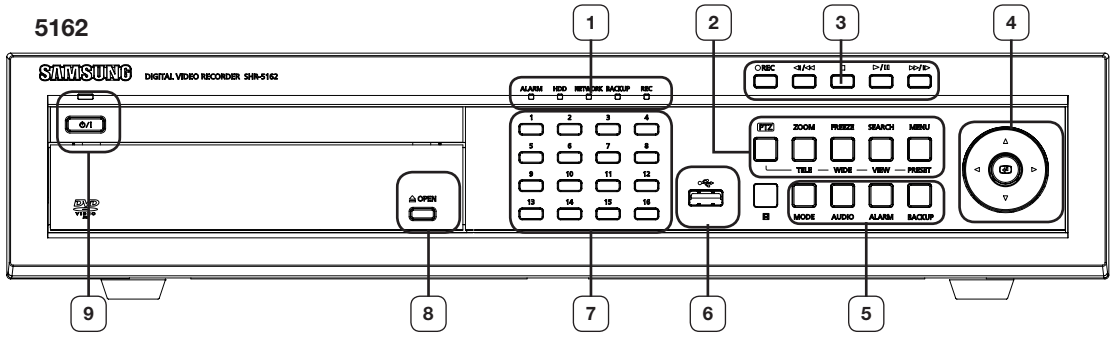


1. ALARM LED

Lights when an event occurs.

HDD LED

Lights when the hard disk is operating. When the HDD is accessed, LED repeatedly blinks.

NETWORK LED

Lights when the data is transferred through the network.

BACKUP LED

Lights when a backup is in progress.

REC LED

Lights when a recording is in progress.

2. PTZ Button

Toggles PTZ mode On and Off.

ZOOM(TELE) Button

Implements the digital zoom (x2). Performs the TELE function in PTZ mode.

FREEZE(WIDE) Button

Performs the FREEZE function in live mode. Performs the WIDE function in PTZ mode.

SEARCH(VIEW) Button

Goes to the Search function window. Performs the Preset View function in PTZ mode.

MENU(PRESET) Button

Goes to the system menu screen or moves to the upper menu. Performs the Preset Setup function in PTZ mode.

3. ● REC Button

Starts or ends the recording

◄I /◄◄ (Step Rewind/Fast) Button

- Step Rewind: Used for backward scene-by-scene search while at pause.

- Fast Rewind: Used for quick backward search while in play. (-x2, -x4, -x8, -x16, -x32, -x64)

■ (STOP) Button

Ends search while in play.

►/II (PLAY/PAUSE) Button

Pauses and resumes the screen play.

►►/I► (Fast/Step Forward) Button

- Fast Forward: Used for quick forward search while in play. (x2, x4, x8, x16, x32, x64)

- Step Forward: Used for forward scene-by-scene search while at pause.

4. Direction Buttons

Used for changing settings or for moving the cursor up/down/left/right.

5. MODE Button

When
and single sequence.

When pressed in playback mode for playback-exclusive channels (16, 9, 4), it sequentially displays single channel, 1 playback channel with 1 live channel, 1 playback channel with 8 live channels, 1 playback channel with 12 live channels, and 1 playback channel with 15 live channels.

AUDIO Button

Toggles Audio On and Off.

ALARM Button

Turns off the alarm LED and stops the sound when an alarm is issued.

Alarm icon disappears when the alarm button is used.

BACKUP Button

Press it for backup operation.

6. USB Port

Use it to connect USB type devices.

7. Channel Button

Select a single channel (1 to 16) while in live mode.

8. OPEN Button

Opens the DVD-RW tray (SHR-5162/5082 only).

9. Power LED

Displays power On/Off state.

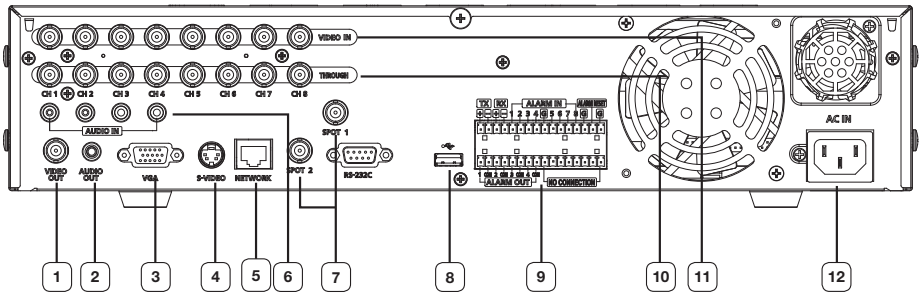
Power Button

Press to turn on the power or shut down your DVR in live mode.

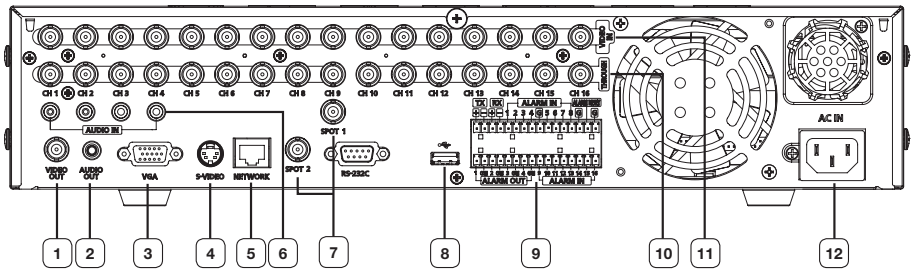
CAUTION Do not install DVR on the carpet or other soft material to prevent clogging of the air ventilator. To install DVR on the cabinet or rack, be sure to check the ventilation condition.

REAR PANEL JACKS

5080/5082 REAR



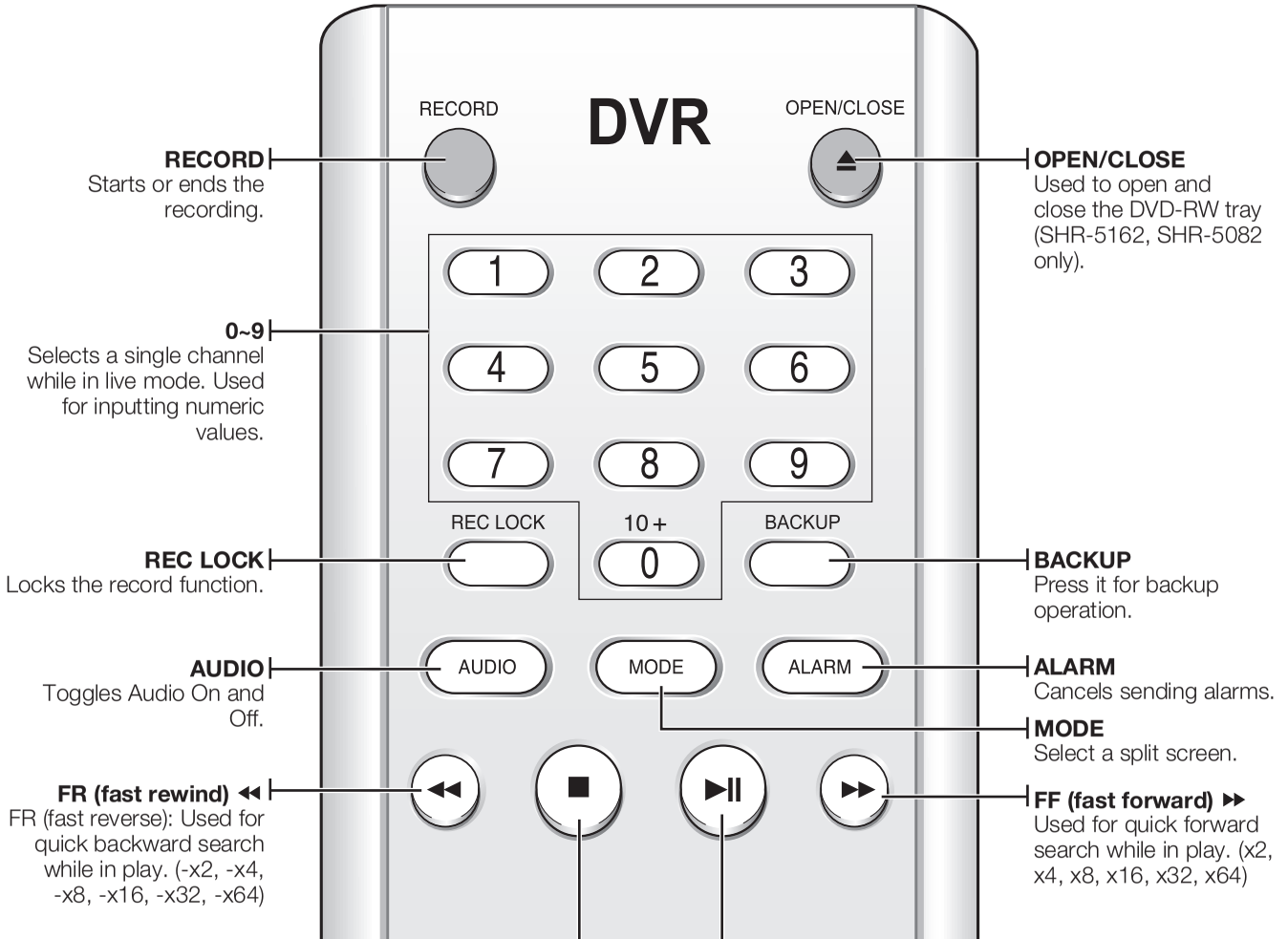
5160/5162 REAR

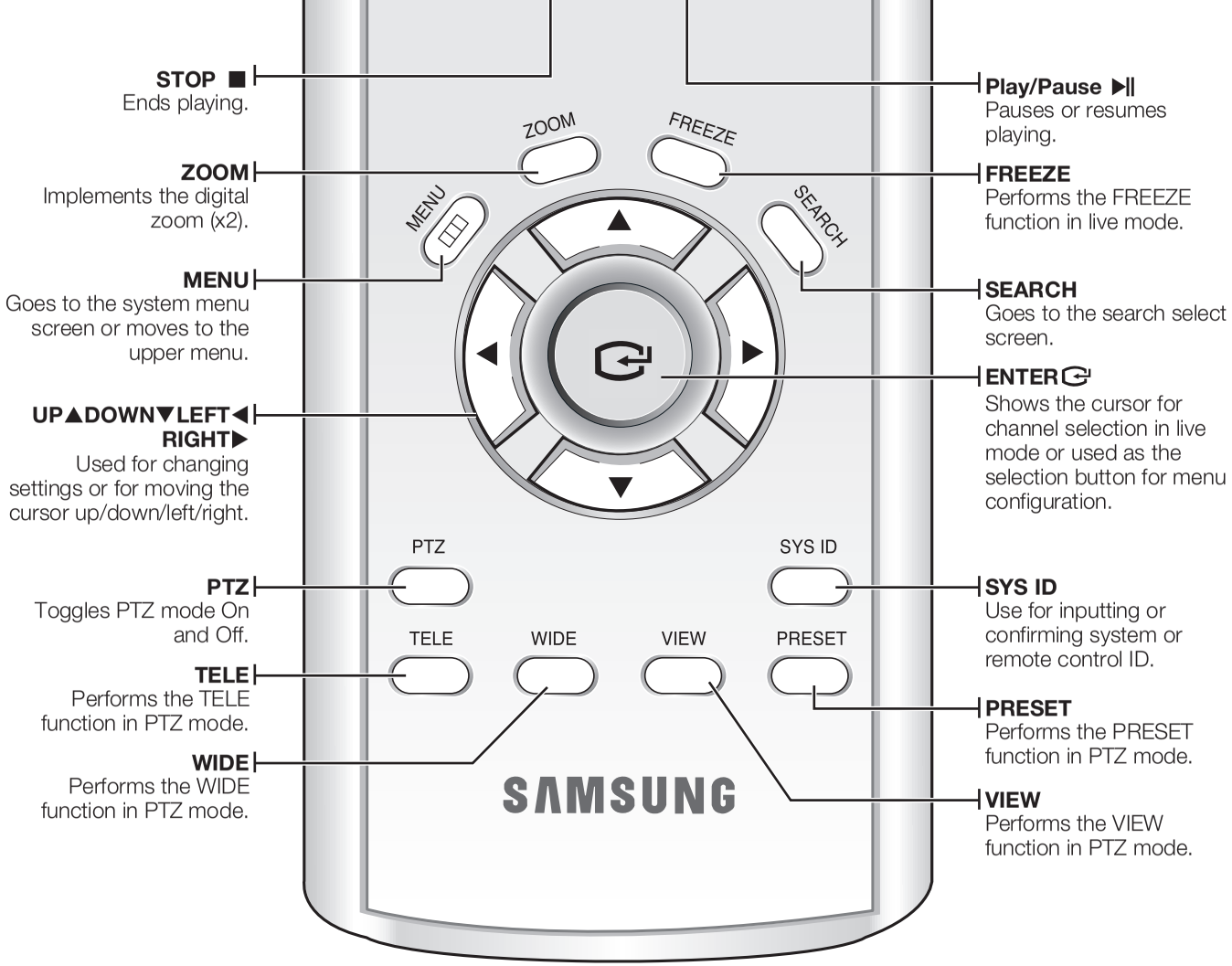


1 **VIDEO OUT**	Composite video output port (BNC type connector)
2 **AUDIO OUT**	Audio output port (RCA jack)
3 **VGA**	VGA video output port
4 **S-VIDEO**	S-VIDEO video output port
5 **NETWORK**	Network connection port
6 **AUDIO IN**	Audio input port (RCA jack)
7 **SPOT**	SPOT1: 1 channel exclusive SPOT output SPOT2: The same output as the Main VIDEO OUT (OSG is not displayed)
8 **USB**	USB connection port
9 **ALARM**	- ALARM IN 1~16(SHR-5160/5162): Alarm input port - ALARM IN 1~8(SHR-5080/5082): Alarm input port - ALARM RESET IN: Alarm reset port - ALARM OUT 1~4: Alarm output port - TX+, TX-, RX+, RX-: RS~485 communication
10 **THROUGH**	You may use THROUGH port to transmit a video signal to the other video equipment.
11 **VIDEO IN**	Composite video input port (BNC type connector)
12 **AC-IN**	AC 100 ~ 230V (PAL) AC 110 ~ 220V (NTSC)

Using the NUMERIC Buttons

CHANNEL 1–9	Press the 1 to 9 button respectively.
CHANNEL 10	Press the 0(10+) button, release, and press the 0 button again within 3 seconds.Or press the 0(10+) button, release, and wait 3 seconds.
CHANNEL 11–16	Press the 0(10+) button, release, and press the 1 (or 2, 3, 4, 5, 6) button again within 3 seconds.





Changing the Remote Control ID

As you press the SYS ID button, input the desired 2-digit ID in order (Remote control default ID: 00).
For instance, to change the remote control ID to 08, press the SYS ID button, and then input 0 and 8 buttons in order.
After the input completes, press the SYS ID button again in order to confirm the setting.

installation

You should pay attention to the following before you use the product.
- Do not use it outdoor.
- Do not place water or liquid near the connection part or the product.
- Do not impose excessive shock or force.
- Do not pull out the power cord unreasonably.
- Do not disassemble the product on your own.
- Do not exceed the rated input or output voltage range.
- Use the certified power cord only.
- For the product with an input ground, use a power plug with a ground pin.

CHECKING INSTALLATION ENVIRONMENT

Samsung Digital Video Recorder (hereinafter referred to “DVR”) is a high-tech security equipment that contains a high-capacity HDD and top-notch circuits. High temperature inside or outside of the product may reduce the product life, deteriorate performance (see the graph below; it explains the correlation between temperature and product life), and lead to a malfunction.

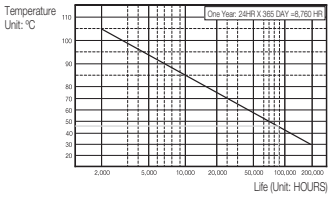


Figure 1

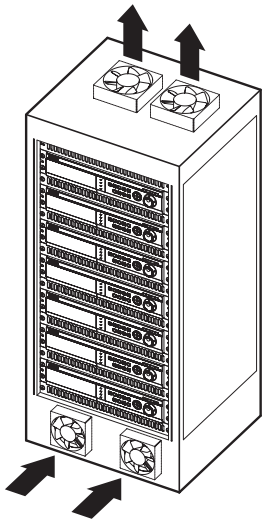


Figure 2

Please keep the following instructions for rack-mounting the Samsung DVRs to proceed with the installation.

1. The rack on which the DVR is mounted should not be sealed off.
2. And it also can allow air circulation through the vent.
3. As shown in the Figure 2, we recommend you to heap the product with other DVRs or use rack-mount devices at a certain space, or install a vent system to accommodate airflow.
4. For forming a natural convection, the air intake hole should be positioned at the bottom and the emission at the top.
5. We recommend you to install each of the air intake and emission holes with fan motors for sufficient airflow. (The air intake fan should be equipped with a filter to prevent possible inflow of dust and other impurities.
6. As shown in the Figure 1, the temperature inside the rack and around the DVR should maintain between 0°C ~ 40°C (32°F ~ 104°F).

HDD ADDITION

The user can add hard disks to this product. (SHR-5162/5082: up to 2 hard disks, SHR-5160/5080: up to 3 hard disks).
However, there are many factors that can cause electric shock, accidents, and malfunctioning of the device inside of the product.
When the user does not correctly install or apply the proper settings, the device may not recognize the hard disks or the device will not properly run. Therefore, before adding any hard disks, it is recommended that you consult the specialist from the site where you purchased the product.

CAUTION

[Checking HDD Data]
Please, pay attention to Following information to minimize the chance of losing HDD data.

- ***Remember that you should protect HDD from any impact or misuse as this may cause damaged.***
- ***The Manufacturer is not responsible for missing data or defects caused by the user's mishandling.***

Note: Adding Extra HDD. Check in advance that the HDD is compatible with the manufacturer's DVR.

Examples that can cause loss of data or damage HDD.

- ***Any outside Impact on the case which could happen whilst disassembling or setting up the DVR.***
- ***Power cut or incorrect shutdown whilst the DVR is operating.***
- ***Moving or causing any impact on the DVR during operation. Please, back up events as soon as possible to minimize disappointment should HDD data be lost.***

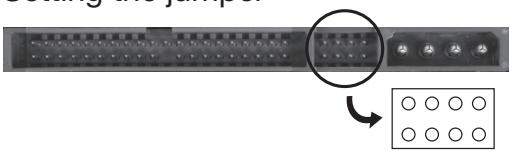
Things to consider when adding a hard disk

- When adding a hard disk, pay attention so that the cable doesn't get caught between unsuitable places or the cable's insulation is not damaged. (This may cause a malfunction or fire.)
- When adding a hard disk, be careful not to have any injury by the pointed edges inside the product.
- Pay attention not to lose screws or accessories.

If the screws or accessories are not put together, the product may malfunction or not properly operate.

- If you contact the RTC battery while adding hard disks, the battery failure may happen. In this case, you will encounter failures when setting the time and operating DVR.
- If you don't connect fan power cables after adding hard disks, the fan failure message appears on the screen. This can cause operation failures because it raises the temperature inside your DVR.
- Check the compatibility list of HDDs before installing additional HDDs. The list of the compatible devices with Samsung DVR can be obtained from your vendor.

Setting the jumper



The jumper setting method is illustrated on the surface of the purchased HDD.

Using SAMSUNG hard disk, the jumper setting method is as follows:

- HDD jumper for Primary Master and Primary Slave.



- Jumper setting for Secondary Master (DVD-RW) and Secondary Slave.



How to add hard disks SHR-5082, SHR-5162

Before starting this work, remove the power cord from the outlet.

1. Take out the screws on the left and right sides (5 spots for each side) and on the rear (1 spot).

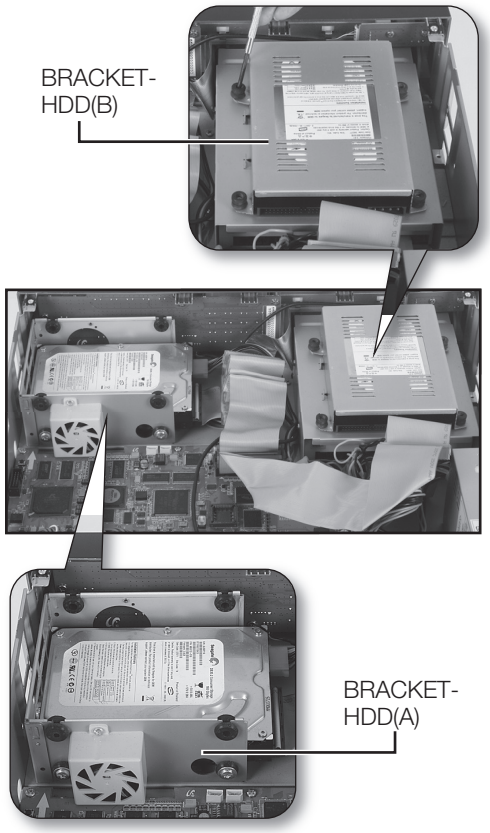




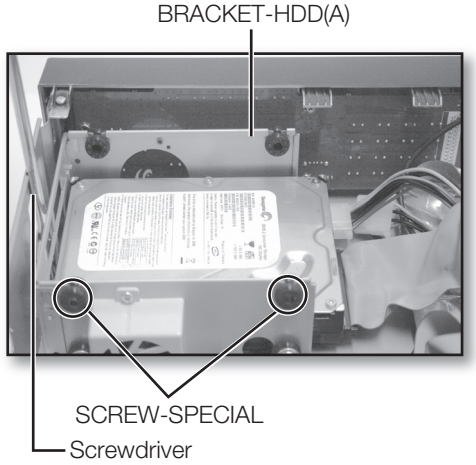
2. Remove the cover from the product. (Slide the cover slightly backward, lift it upward and remove it.)



3. There are brackets (Bracket-HDD) mounted on the right and left sides where you can mount HDDs. Remove the screws holding each bracket to mount an HDD onto.

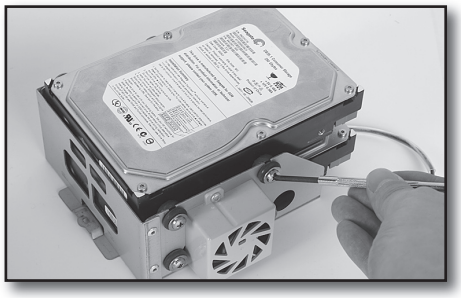


4. If you want to add a hard disk, remove Bracket-HDD(A), power supply cable, signal transmission cable (IDE Cable), and fan cable.





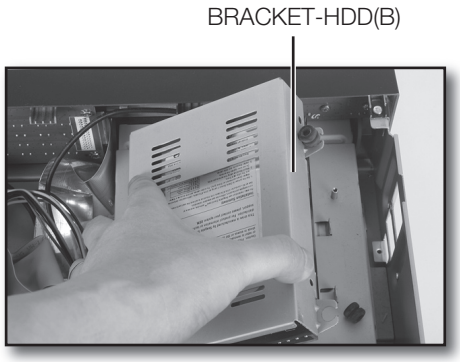
5. To add a hard disk, the built-in HDD (Primary Master) should have been installed. Basically a built-in HDD has been installed as the Primary Master and a DVD-RW driver as the Secondary Master. Before adding a hard disk, set the jumper for master and slave. The jumper setting method is illustrated on the surface of the purchased hard disk. Fix the hard disk to the Bracket using the (A)SCREW-SPECIAL (BWH, 6-32UNC, L10. 5). Align the 5 spots on the bottom and mounting holes of the Bracket, insert the HDD, and then fix it using the screws.





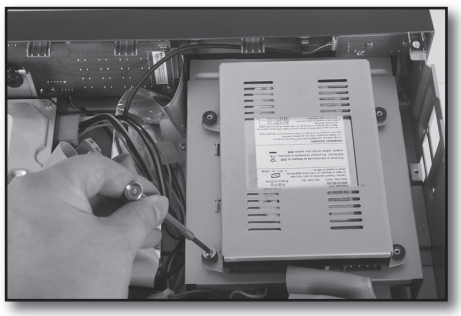


6. To add another hard disk after adding a hard disk completes, remove the Bracket-HDD(B) on the DVD-RW driver.



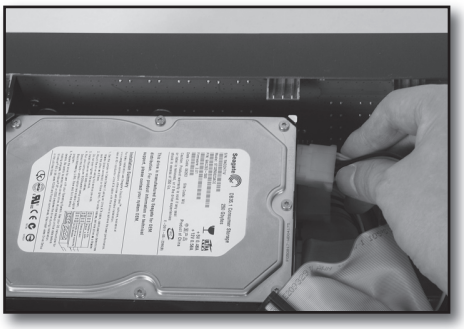
7. Fix the hard disk to the Bracket using 4 (B)SCREW-MACHINE (6-32UNC, L4. 2) provided when purchasing the HDD. The screws should be fastened not to come loose. Fix the Bracket-HDD(B) using screws after aligning 4 spots on the bottom and mounting holes.



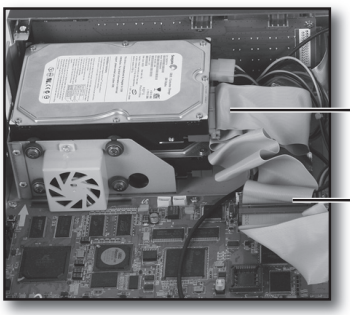


8. When adding hard disks completes, connect the power supply cable, signal transmission cable (IDE Cable), and fan cable to the hard disks.









9. After checking whether or not the connections have no problem, close the cover.

10. Fix the cover using screws. (Each of left and right sides has 5 spots and the back side has 1 spot.)

SHR-5080, SHR-5160

Before starting this work, remove the power cord from the outlet.

1. Take out the screws on the left and right sides (5 spots for each side) and on the rear (1 spot).

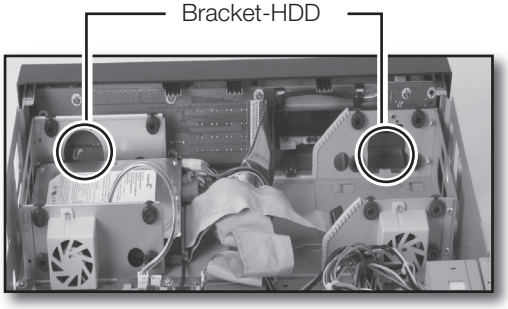


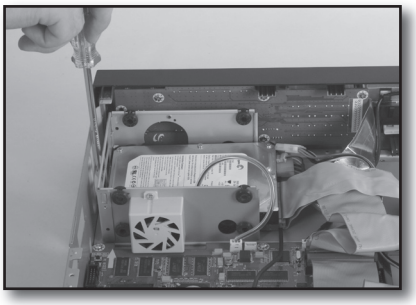


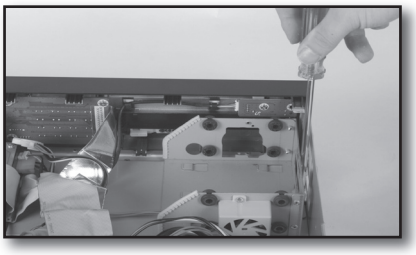
2. Remove the cover from the product. (Slide the cover slightly backward, lift it upward and remove it.)



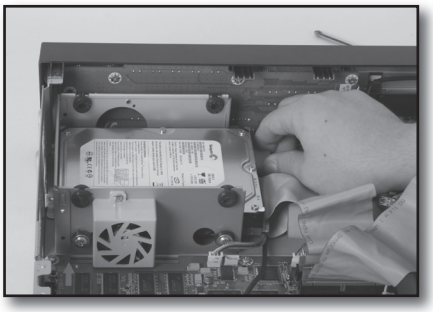
3. There are brackets (Bracket-HDD) mounted on the right and left sides where you can mount HDDs. Remove the screws holding each bracket to mount an HDD onto.

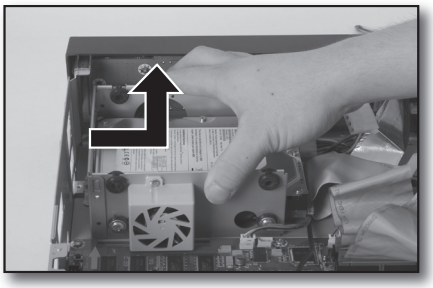


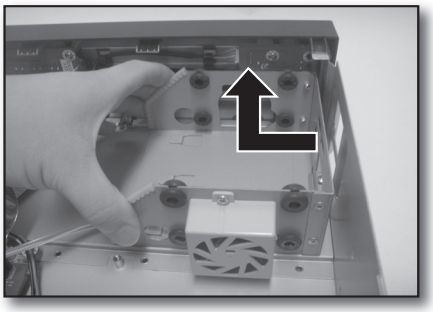




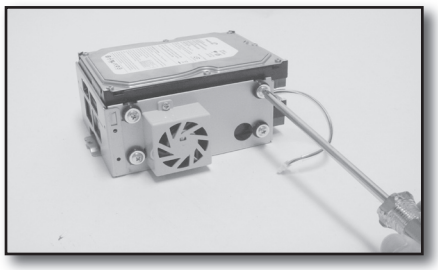
4. If you want to add a hard disk, remove Bracket-HDD, power supply cable, signal transmission cable (IDE Cable), and fan cable.

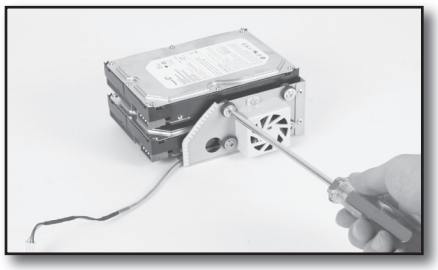






5. To add a hard disk, the built-in HDD (Primary Master) should have been installed. Basically a built-in HDD has been installed as the Primary Master. Before adding a hard disk, set the jumper for master and slave. The jumper setting method is illustrated on the surface of the purchased hard disk. Fix the hard disk to the Bracket using the (A)SCREW-SPECIAL (BWH, 6-32UNC, L10. 5).



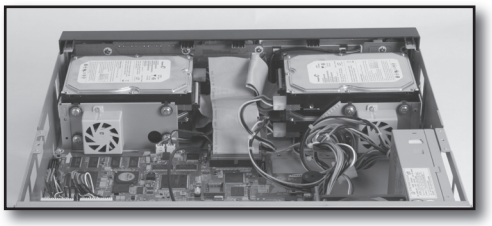


6. Re-mount the bracket-HDD mounted with the HDD's to the place where it was separated from. Place the bracket-HDD so that all five mounting spots on the bottom and the bracket-HDD's mounting holes are perfectly aligned, then slide it toward the outside of the product and tighten the screws.





7. When adding hard disks completes, connect the power supply cable, signal transmission cable (IDE Cable), and fan cable to the hard disks.



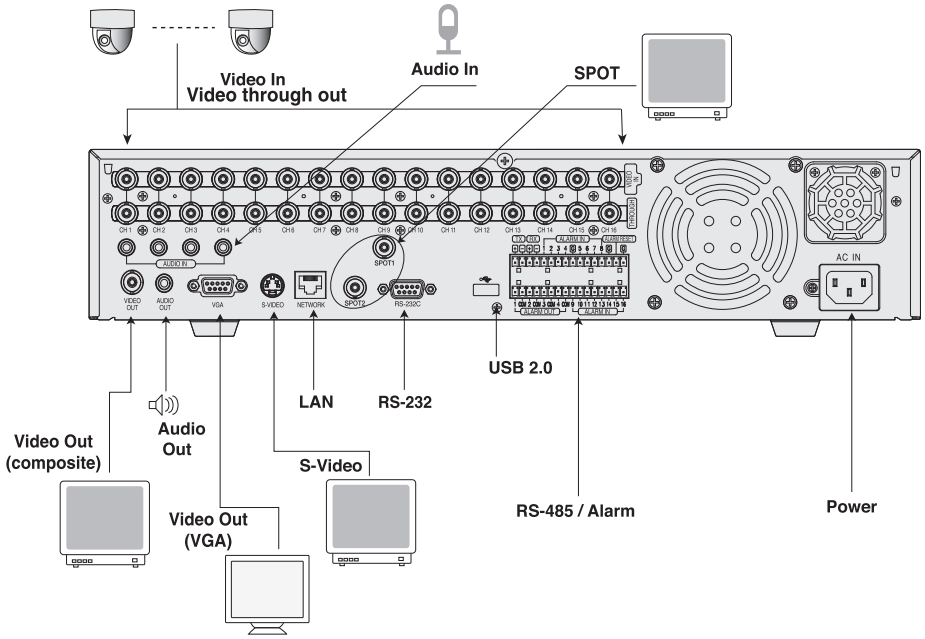
8. After checking whether or not the connections have no problem, close the cover.

9. Fix the cover using screws. (Each of left and right sides has 5 spots and the back side has 1 spot.)

connecting with other devices

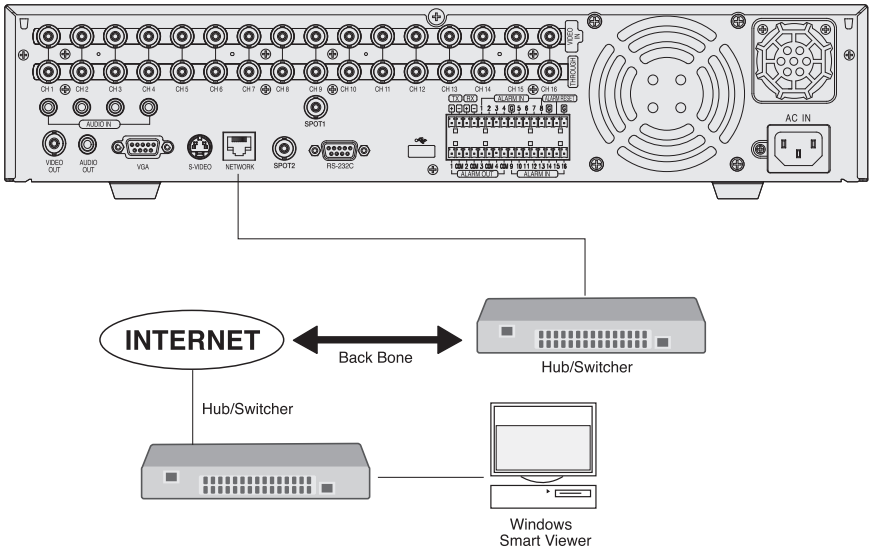
The illustrations are described based on SHR-5162.

CONNECTING VIDEO, AUDIO, AND MONITOR

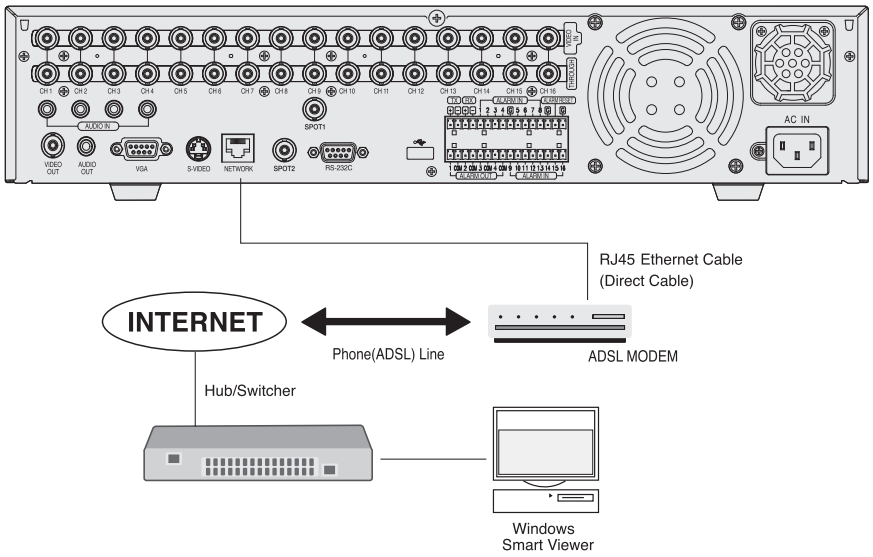


CONNECTING THE NETWORK

Connecting to Internet through Ethernet (10/100BaseT)



Connecting to Internet through ADSL



CONNECTING THE USB

1. There are two USB connecting ports on the front and rear panels of the product.
2. USB Hard Disk, USB CD/DVD, and USB Memory can be connected through any of those ports.
3. If the USB HDD is connected to the system, it should be detected and set through **Menu > System > Storage Setup** before operation.
4. The product provides the HOT PLUG feature that allows the connection/removal of USB devices during system operation.

CAUTION

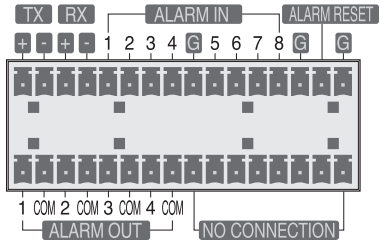
- ***The USB type of hard disk should be set to Master.***
- ***If the backup USB device cannot be formatted in the DVR, format it as FAT32 using your PC.***

For more details, refer to the System section in Chapter 5 Menu Setup.

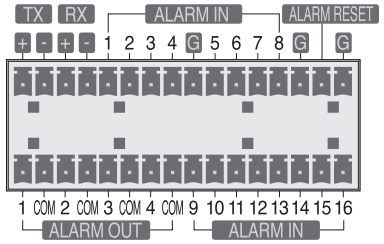
CONNECTING THE ALARM INPUT/OUTPUT

The Alarm IN/OUT ports on the rear of the product have the following elements:

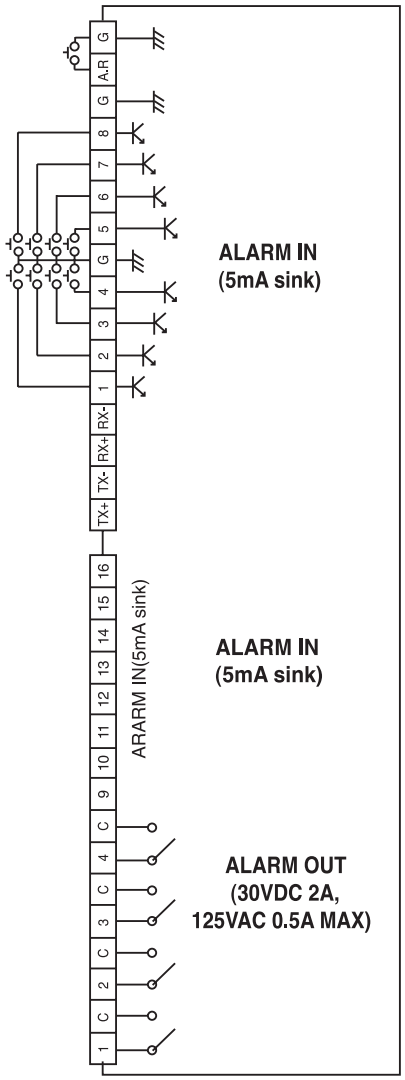
- **5080/5082 Alarm IN/OUT Ports**



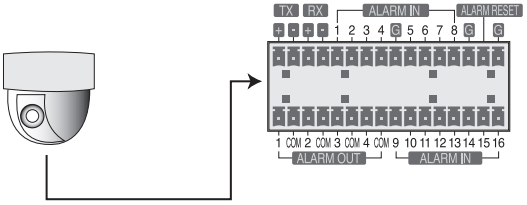
- **5160/5162 Alarm IN/OUT Ports**



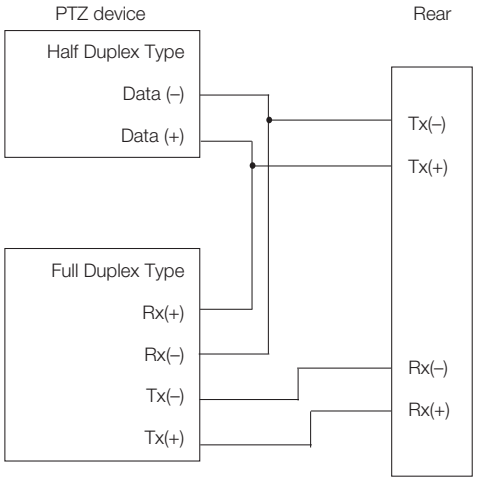
- ALARM IN 1 to 8 (SHR-5080/5082): Alarm input port
- ALARM IN 1 to 16 (SHR-5160/5162): Alarm input Port
- ALARM RESET: When receiving an ALARM RESET signal, the system clears the current ALARM input or output signal and resumes alarm sensing.
- ALARM OUT 1 to 4: Alarm output ports



CONNECTING THE RS-485 DEVICE



You can connect an RS-485 device through a rear port of the product. For example, you can connect and control PTZ cameras supporting the RS-485 communication.
You can also adopt either Half Duplex or Full Duplex method for exchanging data.



Supportable baud rates are 600, 1200, 2400, 4800, 9600, 19200, and 38400.

CAUTION

- Check if the RS-485 device is compatible with the product first.
- Then pay attention not to change the polarity (+/-) of RS-485 when connecting it.

OPERATING THE SYSTEM

Turn on the power and the following Samsung logo appears.



Upon completion of initializing procedure, the live screen appears with a beep sound. (It takes about one minute until a live screen comes up.)

- If a new HDD is installed, the initialization may take much more time because it includes a new HDD initialization.
- If the live screen does not appear or the LEDs on the front panel repeat flickering, please check the connections. If the system does not operate normally, contact the expert from the shop where you bought the product.

The live screen does not affect the earlier MENU settings. If you reboot the system when a recording is in progress, the recording will start again.

LIVE SCREEN MODE

Live screen icons

The live screen icons display the status of current setup or function.





◯/Ⓔ/Ⓢ : **Recording** icon

Each icon represents Normal/Event (Alarm+Motion)/Schedule Recording.

🄽/🄲: **Recording Video Size** icon

Each icon represents the recording size of Normal or CIF.

- Normal: Half D1—(NTSC) 720x240, (PAL) 720x288
- CIF: CIF— (NTSC) 352x240, (PAL) 352x288

- Half D1 is an MPEG-4 video encoding mode in which half the horizontal resolution is sampled.

: **Record Lock** icon

It indicates that the record lock is activated. This icon appears when you are recording video images while the record lock is set. To cancel the recording, enter the preset password.

: **PTZ** icon
This icon appears when setting the PTZ device and it changes to yellow when operating the PTZ.

: **Audio** icon
This icon represents the ON/OFF status of audio and it changes to yellow when the audio is set to ON. It does not appear in Video mode or when the audio is disabled.

: **Sensor Active** icon
This icon appears in the channel linked with the external sensor signal when the sensor is active.

: **Motion Event** icon
This icon appears in the Motion Event channel when the motion detection is set to ON.

: **Zoom** icon
This icon appears while the Zoom operation is active and disappears by canceling the operation.

: **Freeze** icon
This icon appears in Freeze mode and disappears by canceling the freeze operation.

: **Recording Hard Disk Full** icon
This icon appears when the hard disk space is not sufficient when recording.

: **Auto Sequence** icon
This icon appears in Auto Sequence mode.

: **Backup Play** icon
This icon appears when the backup data is now played.

: **Fan Error** icon
This icon appears when the fan does not work properly.

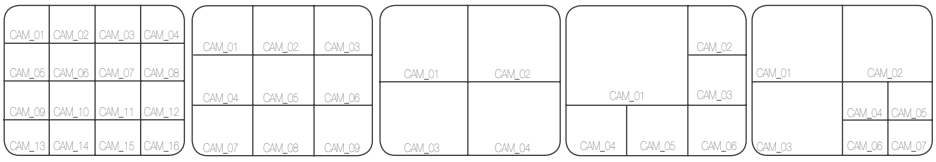
: **No HDD** icon
This icon appears when there is a dysfunctional hard disk.

When the Fan Error icon or No HDD icon appears, please contact the service center.

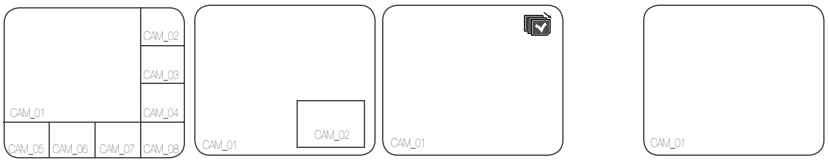
V.Loss/V.Off: Video input status
When there is no video data input while the video is active, V.Loss appears in the channel. When you set the Video On/Off to **OFF**, V.Off appears.

Live screen modes

The SHR-5162/5160 models receive 16 live images and displays them in the following 9 modes as shown in the picture. To see each mode in order, repeatedly press the **MODE** button on the front panel or remote control. But the SHR-5082/5080 models have no 16-split mode.



16 Split Mode → 9 Split Mode → 4 Split Mode → 6 Split Mode → 7 Split Mode

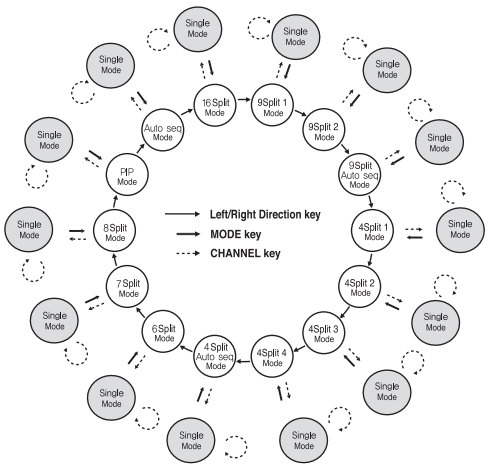


8 Split Mode → PIP Mode → Auto Sequence Mode Single Mode

- **Full Screen (Single)** mode:
  Displays the selected channel in full screen.
- **4, 6, 7, 8, and 9 Split** mode:
  Displays 4, 6, 7, 8, 9 channels in each split screen. You can select channel numbers on your own using the **MODE** button on the front panel or remote control. In 4-channel and 9-channel split modes, the screen page is changed using the **Direction** buttons.
- **16 Split** mode:
  Displays 16 live channels on a 16-split screen. The Auto Sequence is not available.
- **PIP (Picture in picture)** mode:
  Displays a small screen on a full screen. You can change the channel number on a full screen or small screen by pressing the **ENTER** button and inputting the **NUMERIC** button. To switch between main and sub screens, press the **ENTER** button and press the **LEFT** or **RIGHT** direction button. You can move the sub screen to 5 different stages using the **UP/DOWN** direction buttons.
- **Auto Sequence** mode:
  Sequentially displays all the channels at an interval of auto sequence time. The auto sequence time is set in Camera Configuration on the menu.

Selecting live screen mode

Available modes are switched using the **MODE** button and the **NUMERIC** buttons on the front panel or remote control. The following figure is the live modes transition diagram in the SHR-5162/5160 models.



- The initial live screen shows the 16-split screen mode at first. The SHR-5082/5080 models start from the 9-split mode.
- In the 9-split screen mode, the first screen shows 9 channels (CH 1 to CH 9) and the second screen shows the rest 7 channels (CH 10 to CH 16) after pressing the **RIGHT** direction button. If you press the **RIGHT** direction button again, it changes to the Auto Sequence mode.
- Likewise, in the 4-split screen mode, the first screen shows 4 channels (CH 1 to CH 4), the second screen shows CH 5 to CH 8, the third screen shows CH 9 to CH 12, the fourth screen shows CH 13 to CH 16. If you press the RIGHT direction button again, it changes to the Auto Sequence mode.
- Every time you press the **MODE** button, the modes change in the following sequence: 16-split mode ⇨ 9-split mode ⇨ 4-split mode ⇨ 6-split mode ⇨ 7-split mode ⇨ 8-split mode ⇨ PIP mode ⇨ Auto Sequence mode ⇨ 16-split mode.
- Press the CH 1 to CH 16 button to see a full screen of each channel after pressing the **ENTER** button.
- Press the **MODE** button after entering a full screen channel in a split screen mode to return to the previous split mode screen.

SETTING AUDIO ON/OFF

In other split modes except full screen mode, 16-split mode, and auto sequence mode, you can choose a channel to be displayed by pressing the **ENTER** and **NUMERIC** buttons. If you set the selected channel to Audio On, you can turn the Audio On and Off in live mode.

Audio On/Off setting in full screen mode

In full screen mode, the audio of the selected channel automatically turns on. You can turn the audio On and Off by toggling the **AUDIO** button. Depending on the audio On/Off setting condition, the **Audio** icon of the channel changes to yellow and white.

Audio On/Off setting in 16-split mode

When pressing the **ENTER** button in the 16-split mode, the selection cursor appears for you to select a channel. When you select a channel and press the **AUDIO** button on the front panel or remote control, the audio of the selected channel is changed to On or Off.
Depending on the audio On/Off setting condition, the **Audio** icon of the selected channel changes to yellow and white. You can have audio settings on channel 1 to 4 in 16-split mode.

Audio On/Off setting in 4, 6, 7, 8, and 9-split modes and PIP mode

As in 16-split mode, when pressing the **ENTER** button in 4, 6, 7, 8, and 9-split modes and PIP mode, the selection cursor appears for you to select a channel.
After selecting a channel, you can set the Audio to On or Off using the **AUDIO** button. According to the audio On/Off setting condition, the **Audio** icon of the selected channel changes to yellow and white.

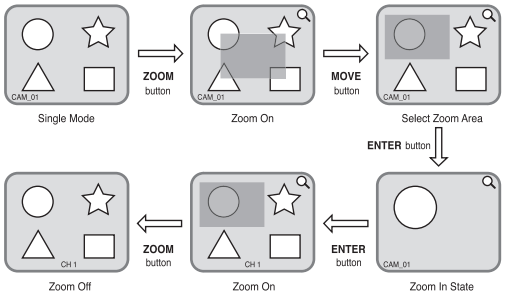
FREEZING AND ZOOMING

Freeze function

The freeze function pauses the video image on the live screen and it is only available in the live mode.
You can set this function to On or Off using the **FREEZE** button on the front panel or remote control.

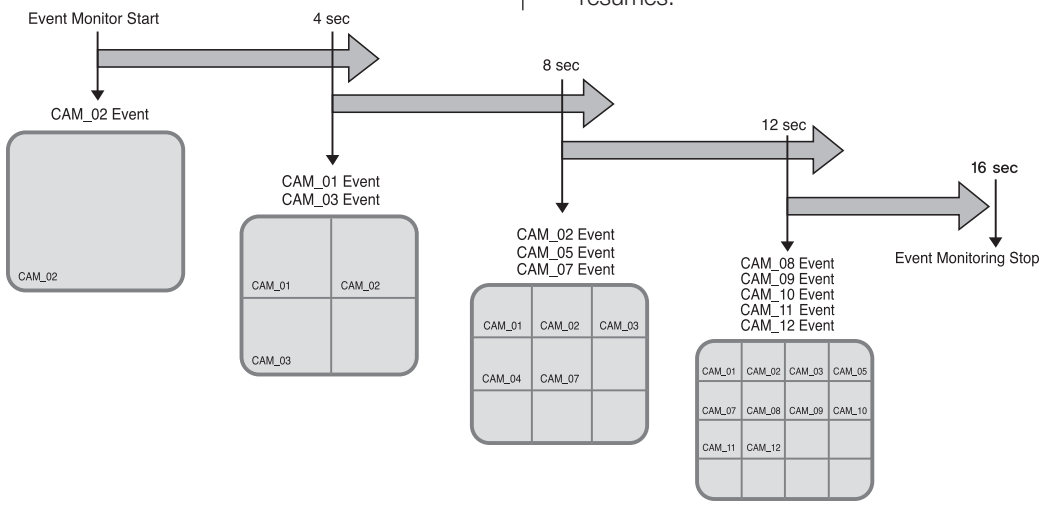
Zoom function

The zoom function enlarges the selected area to double size, and it is only available in the single screen mode.
When you press the **ZOOM** button on the front panel or remote control, the zooming area appears. Use the **UP/DOWN/LEFT/RIGHT** direction buttons to adjust the position for zooming. After selecting the Zoom area, press the **ENTER** button to enlarge the selected area in double size. To cancel the zooming function, press the **ZOOM** button again.



EVENT MONITORING

The event monitoring is used to display the channel that is synchronized with an event on the screen when a special event (Sensor/Motion/Video Loss) occurs. The settings for event monitoring activation and event duration setup are done in the Monitoring on the menu.
If you set the event monitoring interval to 5 seconds and an event occurs at CH 2 as shown in the picture, the system will display CH 2 in full screen for 5 seconds. If another event occurs within 5 seconds, it is also displayed together with the existing event.
As shown in the picture, if we assume that both CH 1 and CH 3 events occur within 5 seconds (for example, after 4 seconds), after CH 2 event, these three events are displayed with split into 4 screens.
If a new event does not occur during the event duration, the system will return to the previous live mode. Pressing the **ALARM** button during the event duration makes the event monitoring stop. When an event occurs, the ALARM LED is turned on. Press the **ALARM** button again to turn ALARM LED Off. At this time, the alarm setup is initialized, the event icon disappears, and the event monitoring is cancelled while in event monitoring. After alarming, the event recording resumes.



[Event-driven screen changes in Event Monitoring]

SPOT-OUT MONITORING

Spot-out monitoring has nothing to do with the live screen output. It monitors a specific channel in full screen. After selecting **Monitoring** on the MENU, you can select a channel for monitoring in **Spot Out Channel**. You can also monitor all the channels at an interval of auto sequence time.
In case of spot-out monitoring, the live screen icons do not appear.
If the Spot Out Event Monitor is set to On, you can see the event channels.
When the events occur sequentially, the channel of the camera that the last event has been issued is displayed. (In case of alarms, multiple channels are enabled.)
When multiple cameras are connected, the camera with the smallest number is output on Spot-out channel.

In the live screen, you can select a spot-out channel when using SPOT1 output as described below:

- Press the **STOP** button on the front panel or remote control and press a button out of 16 channels. The selected channel is set to a spot-out channel.
- When you press the **STOP** button and then the **MODE** button within 2 seconds, the spot-out channel mode is changed to the change screen mode.
- SPOT2 output is the same output as the main video out. (OSG is not displayed).

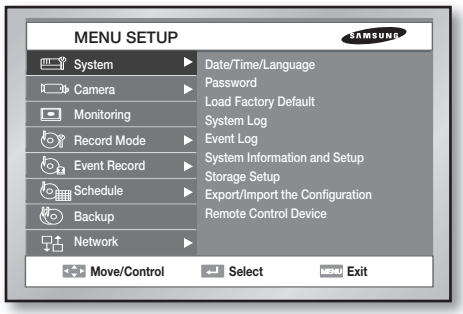
CAUTION

- If the built-in HDD is not connected or it is out of order, the system displays an error ( ) saying “built-in HDD error” at the top-left corner. In this case, you cannot perform recording, playback, and backup. So please contact the service personnel.
- If the fans in the product do not properly operate or have some problem, the fan error message appears on the live screen as shown in the following picture. In this case, check whether the fans normally run or not. When the fans are recovered, the **Failure** icon ( ) that is displayed at the top-left corner disappears. In case of a fan failure, it can shorten the life of the product so please contact the service personnel.

Fan Information
A error occurs in the fan. Refer to the manual.

BEFORE USE

• The menu structure is as follows:



• Selection
The yellow cursor is the selection bar. Use the **Direction** buttons on the front panel or remote control to move the cursor to a desired menu. If you press the **ENTER** button when the cursor is located in a desired menu, the screen displays the sub window.
To select an item from the menu, press the **ENTER** button. On a drop-down menu, use the **UP/DOWN** direction buttons to move the cursor on your desired item.

• **OK** and **Cancel** in each Setup window
Once any changes are made in a setup window, they can be applied by selecting **OK**. When Cancel is selected, the changed settings are not applied and it returns to the upper menu.

• **MENU** button
When the **MENU** button is pressed in any of the Setup menus, it changes to the upper menu. If you press the **MENU** button in Live mode, the password window appears for user validation.



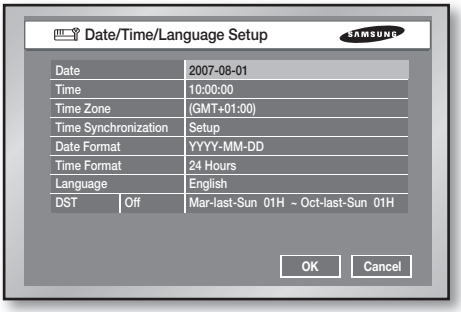
• SEARCH, BACKUP, PTZ, POWER buttons in Live mode
To perform the search, backup, PTZ controls, or shutdown function, press the following button in Live mode. Then the window asking for an ID and password appears for user validation.



• The direction sign (► or ▼) right next to the title of menu or item leads you to press the displayed button on the front panel or remote control to go for sub item.

SYSTEM

Date/Time/Language Setup

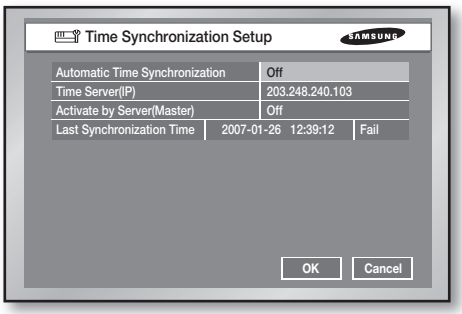


• **Date**
Press the **ENTER** button and use the **LEFT** or **RIGHT** direction button to move to year, month, and day. To change the value, use the UP or DOWN button. Press the **ENTER** button to confirm the setting.

• **Time**
Press the **ENTER** button and use the **LEFT** or **RIGHT** direction button to move to hour, minute, and second. To change the value, use the **UP** or **DOWN** button. Press the **ENTER** button to confirm the setting.

CAUTION [Date/Time Change]
After the date and time has been changed, the data recorded before the change can be removed. For example, if the current time is changed from 8 to 7, all the data recorded between 7 and 8 will be deleted.

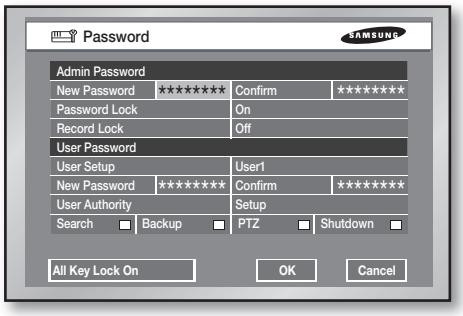
- **Time Zone**
  Set the local time zone based on the Greenwich Mean Time (GMT).
- **Time Synchronization**
  The time of your DVR can be synchronized by a specified server. For this purpose, enter the IP address of the time server and determine the initiator of this activity.
  - **Automatic Time Synchronization**
    Synchronizes while gathering time information from the **Time Server (IP)**
  - **Activate by Server(Master)**
    Time Synchronization is executed while more than two DVR devices are connected, and the operating DVR device connected to the server is set as standard.



- **Date Format**
  The system supports 3 types of formats: YYYY-MM-DD, DD-MM-YYYY, and MM-DD-YYYY.
- **Time Format**
  The system supports 2 type of formats: 24 Hours and 12 Hours(AM/PM).
- **Language**
  After selecting a language, on-screen display (OSD) menus are displayed in the selected language.
- **DST (Daylight Saving Time)**
  DST sets the clock one hour ahead the local standard time. This setting enables the system to display the time adjusted for DST. If the DST is set to **Off**, it does not apply. To set the DST, enter the start time and end time on the right. It allows you to set month, week (e.g. 1st, 2nd, 3rd, 4th, last), date, and time only.

Password

The factory default password for Admin and user privileges is "**4321**." The Menu Setup window cannot be accessed by user privileges but by the Admin privilege. The Admin user can give users (User1 to User5) access rights to the selected functions. If you press Setup in User Authority, all the access rights are selected.



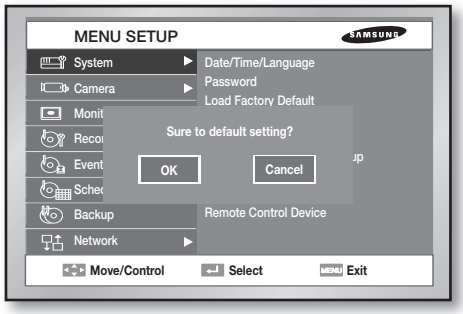
- **New Password**
  You can change the password by entering a new password value in this field. The input password is allowed up to 8 digits. Press the **ENTER** button and enter numbers using the **NUMERIC** buttons on the front panel or remote control. Press the **ENTER** button again for confirmation. Then the cursor moves to the **New Password Confirm** field.
- **Confirm**
  It confirms that the newly input password is correct. Enter the new password again in the field.
- **Password Lock**
  If it is set to **On**, a pop-up window for asking the password appears every time you select a menu. If it is set to **Off**, you can enter menus without entering the password.
- **Record Lock**
  If the **Record Lock** is set to **On**, a pop-up window, asking for the password appears while disabling the recording.
- **User Authority**
  You can select any of Search, Backup, PTZ, and Shutdown. If the user has no access right for Search, the user cannot enter the Search menu.
- **All Key Lock On**
  If you select this, the system will enter the live mode immediately. If you press any button on the front panel or remote control, the password input window appears. If the correct password is input, the lock function is deactivated.

[All Key Lock On]
If you select this, the system immediately switches to the live mode and all buttons are locked.

If the user enters the selected function, he or she has to input the password first.

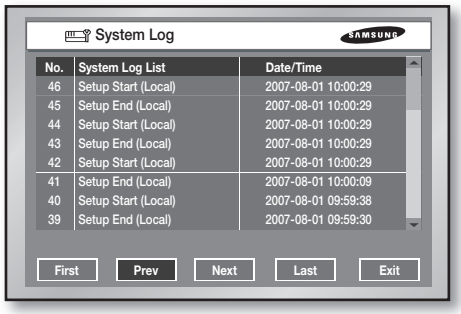
Load Factory Default

It is used to initialize all the settings to the factory default values. The recorded video data will not be removed. Select **OK** to start initialization.



System Log

The System Log is used to check the important history records by an administrator. The log data includes the system-related logs such as system start, system termination, menu setup change, and the like.



Available action buttons are:
- **First:** Moves to the first log page.
- **Prev:** Moves to the previous log page.
- **Next:** Moves to the next log page.
- **Last:** Moves to the recent log page.

The system logs are as follows:

System Start	Starts the system.
Login(Admin)	Viewer Login (Admin)
Logout(Admin)	Viewer Logout (Admin)
Login(User)	Viewer Login (User)
Logout(User)	Viewer Logout (User)
Setup Start (Local)	Enters into the menu.
Setup End (Local)	Comes out of menu.
Setup (Remote): Viewer	Sets the menu.
Play Back Start	Starts the playback.
Play Back End	Ends the playback.
Power Failure Recovery	Returns the system after power interruption.
Time Change	Changes the Date/Time.
Load Factory Default	Initializes the system.
System Upgrade	Changes the system S/W.
Disk Full	No Space in the HDD
Backup Start	Starts the backup.
Backup End	Ends the backup.
Backup Stop	Stops the backup.
Backup Fail	Backup Failure
ATA HDD Erase	Erases the ATA Data.
USB HDD Erase	Erases the USB HDD data.
USB MEMORY Erase	Erases the USB MEMORY data.
Overwrite Playback Stop	Stops the playback by overwrite.
Backup Stop(Overwrite)	Stops the backup by overwrite.

Event Log

It is used to check the recorded events like alarm, motion, video loss, and such.

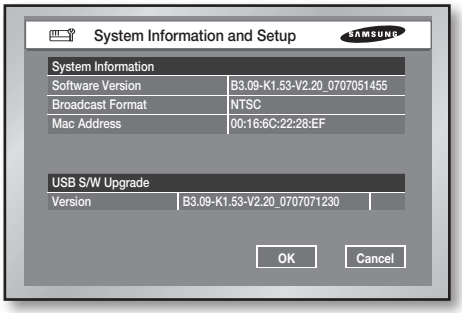


The log data contains the event execution data and time.
- **First:** Moves to the first log page.
- **Prev:** Moves to the previous log page.
- **Next:** Moves to the next log page.
- **Last:** Moves to the recent log page.

The event logs are as follows:

Video Loss CH[N]	Means the occurrence of Channel [N] Video Loss.
Alarm Detection CH[N]	Means the occurrence of Channel [N] alarm.
Motion Detection CH[N]	Means the occurrence of Channel [N] Motion.

System Information and Setup

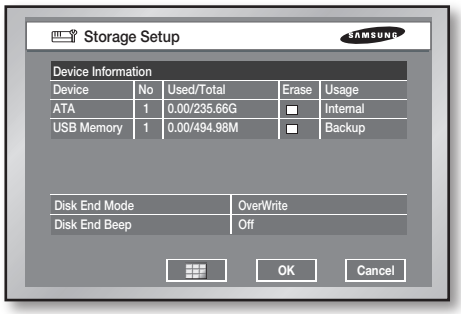


This setup window provides the following setting items:

- **Software Version:** Displays the current software version. The value cannot be changed.
- **Broadcast Format:** Displays the current broadcast format (NTSC/PAL). The value cannot be changed.
- **Mac Address:** 6-Byte hardware address. The value cannot be changed.
- **USB S/W Upgrade**
  You can update the software using a USB device. If there is no device, None is displayed. If the USB memory has an upgrade software, its version is displayed.
  To upgrade the software stored in the USB device, select the check box on the right and press OK.

Storage Setup

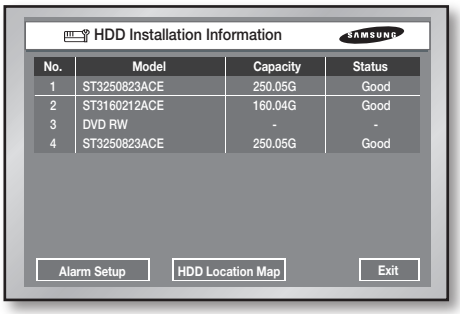
You can configure the storage device related settings.

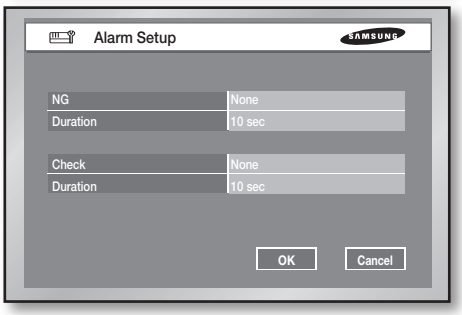


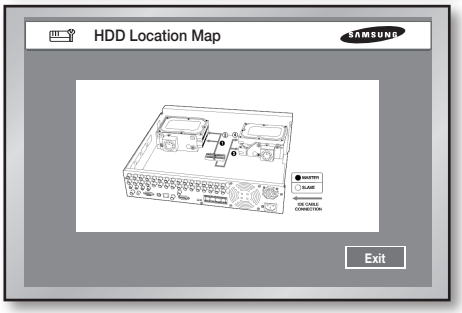
- **Device Information**
  Displays the number, capacity, and usage of ATA and USB devices. (The total capacity displayed may be lower than the actual capacity because the DVR uses some portion of it for internal purpose.) After selecting Erase for each device, you can remove the data on it. In case of USB device, you can set the usage for extension or backup. If you change the usage of the device, the stored data will be removed.

- **Disk End Mode**
  - Stop: Stops recording when the disk is full while recording is still in progress.
  - Overwrite: Deletes the previously recorded data to store new data when the disk is full during recording.
- **Disk End Beep**
  - On: Beeps when the disk is full while recording.
  - Off: Although the disk is full while recording, it doesn't make beep sound.
- **HDD Installation Information**
  When you click ( ), The HDD Installation Information displays on the screen. Then you can see the model name, the capacity, and the status of the HDD in your DVR. The status displays Good, Not good, and Check. In the status of Not good, you should replace the HDD. In the status of Check, you should replace the HDD or check periodically. After clicking the **Alarm Setup**, you can set the alarm and the duration while the status is Not good or Check. If you click the **HDD location map**, it displays the information about the HDD installation. When a problem occurs, you can see which HDD has a problem.

- The capacity of the HDD may differently appear in the Storage Setup menu and HDD Installation Information menu.
- In case of SHR-5160/5080, the model name of HDD appears instead of DVD RW.







CAUTION When the Disk end mode is set to **Overwrite** and the HDD overwrites the data that was previously backed up, the backup start time may be changed or the backup process may be cancelled.
[Disk Overwrite]
When Overwrite is selected, the previous event data is to be deleted and the mode is also changed.

[Built-in HDD]
This is a physical hard disk connected to the IDE cable inside the main body, and it stores data.

[External HDD]
This is a physical hard disk connected to the port and jack on the rear of the main body, and it also stores data. This can be used as an extended hard disk or backup hard disk.

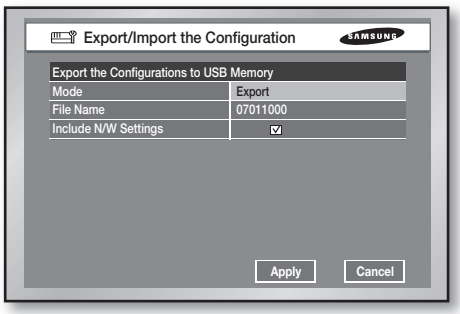
- Extended HDD: Supplements the built-in HDD. It is located on the top of the built-in HDD.
- Backup HDD: Used for backup of the data recorded on the HDD.

[ATA]: Built-in HDD
This is a disk drive implementation that integrates the controller on the HDD itself. It is a physical hard disk connected to the IDE cable inside the main body.

[USB]: External HDD
(Extension HDD or backup HDD)
This is used for external HDD connection. The external HDD is connected through this USB port on the front or rear panel.

Export/Import the Configuration

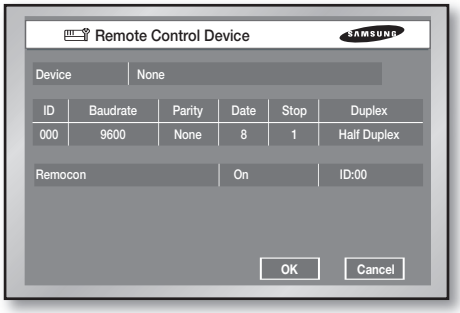
This menu is used to export or import the DVR-related settings to/from the USB memory.



The related settings are as the following:

- **Mode:** You can select any of Import and Export.
- **File Name:** In case of Export, the file name is displayed. The file naming convention is YYMMDD00. “00” is the serial number so it increases by 1. To change the file name, press the **ENTER** button. You can change the name using the virtual keyboard.
- **File Open:** In case of Import, you can select the file that you want to import from the USB memory after pressing the **ENTER** button. When the importing completes, your DVR automatically reboots.
- **Include N/W Settings:** In case of **Export**, this flag is selected by default. But with **Import**, you can decide whether or not to copy the network settings. Be careful when you select this because it will remove the previous network settings.

Remote Control Device



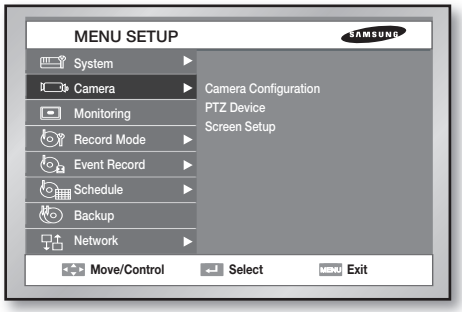
This menu enables you to use the Samsung system keyboard or remote control.

- **Device**
  It indicates a remote control device that is connected to the RS485 port.
- **ID**
  This is a unique ID of the device. This ID is necessary to control multiple DVRs.
- **Baudrate**
  Baud rate for communicating with cameras. It should be the same as the baud rate of cameras for communication.
- **Parity**
  Select one of None, Even, and Odd.
- **Data**
  Select one of 7 and 8.
- **Stop**
  Select 1 or 2 for stop bit.
- **Duplex**
  Select one of Half Duplex and Full Duplex. (Data exchanging method)
- **Remocon**
  Set the remote control to **On** or **Off**. You can set the ID of remote control to any of 0 to 99.

You cannot use the PTZ device and remote control device together at the same time due to communication problem. In PTZ control mode, the PTZ mode of DVR is canceled when the remote control is connected. On the contrary, the remote control is disconnected when the DVR switches to PTZ mode.
Refer to the user manual of remote control to learn how to handle the PTZ device using the remote control.

CAMERA

The detailed items for camera menu are as shown in the picture:



Camera Configuration



- **Video**
  - On: The camera image from the selected channel appears.
  - Off: The camera image from the selected channel disappears.
  - Covert1: Displays the information except for the video information on the selected channel.
  - Covert2: Does not display any information.

The settings for audio, camera name, and auto sequence are not allowed for the channel whose video is set to Off.

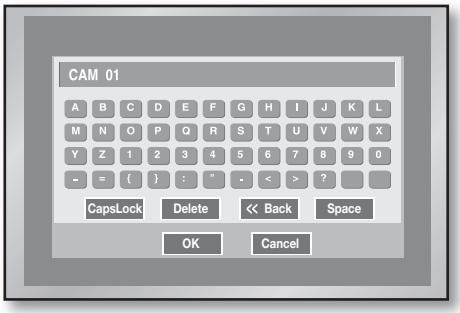
In case of SHR-5082/5080, only 8 channels are displayed.

- **Audio**
  - On: You can hear the sound in the selected channel.
  - Off: You cannot hear the sound in the selected channel.

You can select only the number 1 to 4 channels to hear sound.

- **Title**
  You can name the camera of the selected channel. If you press the **ENTER** button, the virtual keyboard appears.

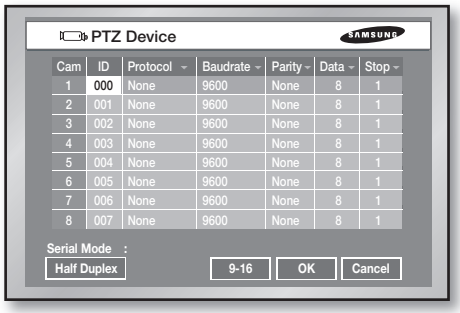
  ▶ Virtual keyboard
  Use the **Direction** buttons to select a character and use the **ENTER** button to type the selected character. You can type up to 15 characters. No space is allowed for input. If you select **CapsLock**, the virtual keyboard switches between upper case mode and lower case mode.



- **Auto Seq**
  You can set the auto sequencing interval for each channel. The setting applies in the live mode. When the value of a channel is set to **Off**, the channel is not displayed in the auto sequence mode.

PTZ Device

You can configure the PTZ device related settings.



- **ID**
  ID for PTZ camera. It can have any number among 0 to 255.
- **Protocol**
  Protocol that is supported by the PTZ device. Available protocols are Samsung, Vic., Pan., AD, Phi., Ern., Pel-D, Pel-P, Vcl., Dia., Kal., and Tech.
- **Baudrate**
  Available baud rates are 600, 1200, 2400, 4800, 9600, 19200, and 38400.
- **Parity**
  Select one of None, Even, and Odd.
- **Data**
  Select 7 or 8 for data bit.
- **Stop**
  Select 1 or 2 for stop bit.
- **Serial Mode**
  Select Half Duplex or Full Duplex for data exchanging method.

In case of SHR-5082/5080, only 8 channels are displayed.

CAUTION The above setting values must be the same as the ones of the PTZ device. For more details, please refer to the user manual for the PTZ device.

Screen Setup

It is used to set the brightness, contrast, and color for the camera image of each channel.

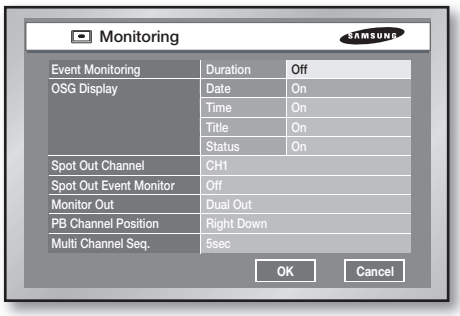


Place the cursor on the channel that you want to set the values for brightness, contrast, and color. When a channel is selected, its image appears on the right. For selection, press the **ENTER** button. Use the **UP/DOWN** direction buttons to change the value from 0 to 100.
When **Default** is selected, the value 50 is to be assigned for each item of the selected channel.

In case of SHR-5082/5080, only 8 channels are displayed.

MONITORING

You can configure the monitoring-related settings.



- **Event Monitoring**
  You can select any of Off, 3sec, 5sec, 10sec, 20sec, 30sec, and Continuous.
  - Off: Event monitoring does not work.
  - 3sec, 5sec, 10sec, 20sec, and 30sec: Sets the screen duration period in the Auto Sequence (or auto sequence) mode.
  - Continuous: The event monitoring screen remains alive until you press the **ALARM** button.

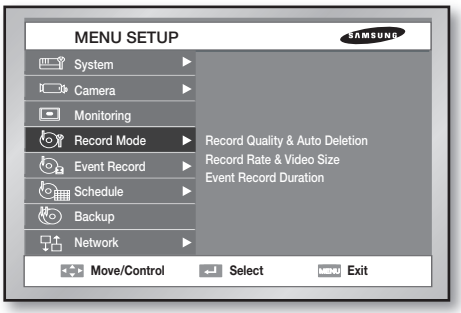
- **OSG Display**
  - Date: The date is displayed on the screen when it is set to **On**.
  - Time: The time is displayed on the screen when it is set to **On**.
  - Title: The camera name is displayed on the screen when it is set to **On**.
  - Status: Recording and event information, Audio sign, and PTZ sign are displayed on the screen when it is set to **On**.
- **Spot Out Channel**
  This is used to monitor a specific channel by connecting a monitor to the SPOT jack on the rear of the product. When you are using two monitors, one monitor can be set for spot out monitoring. This provides two kinds of functions: Displaying the spot out channel only and auto sequencing of all channels.
  - Auto sequence setup ranges from Ch 1 to Ch 16.
  - In the auto sequence mode, channels are changed in turn.
  - Duration period for auto sequence is the same as the one set in Camera Setup.
- **Spot Out Event Monitor**
  This is set for monitoring events from multiple channels.
  - Off: The event monitoring does not operate in the Spot Out channel.
  - 3sec, 5sec, 10sec, 20sec, and 30sec: Sets the screen duration period in the Auto Sequence mode.
  - Continuous: Once the event monitoring starts, the screen remains alive until you press the **ALARM** button.
- **Monitor Out**
  Video output methods can be selected from Composite, VGA, and Dual output modes. System restarts after changing the Video output methods.
  - Composite video output: transfers the composite output signal.
  - VGA video output: transfers VGA output signal.
  - Dual video output: both the Composite and VGA video outputs are available to use.
- **PB Channel Position**
  You can designate the playback (PB) channel location in 9-split mode.
  Right Down: The playback channel is displayed at the lower right side of the screen.
  Center: The playback channel is displayed in the center of the screen.
- **Multi Channel Seq.**
  You can set the Auto Sequence interval for split screens. Available intervals are 3, 5, 10, 20, and 30 seconds.

CAUTION

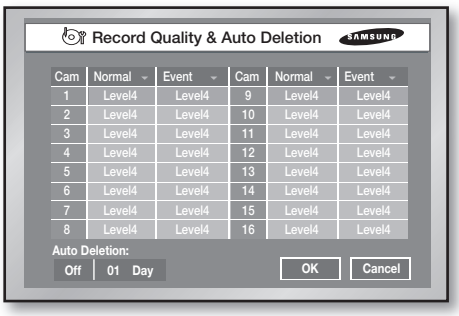
[Video Out]
You may experience low display quality while the dual video output is in use. In this case, please switch it to the composite or VGA video output. VGA video output port is not available while the composite video output is set to use and vice versa.
If the **MODE** and **ZOOM** buttons are pressed and hold for 5 seconds, the system restarts while alarming beep sound. The LED blinks while restarting and the video output mode is changed. (Composite output ◄► VGA output).
- VGA output: 640x480 (60Hz)

RECORD MODE

The detailed list for record mode settings is as follows:



Record Quality & Auto Deletion

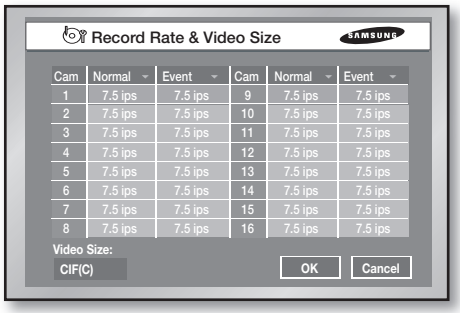


- **Record Quality**
  You can set the recording picture quality selecting of Level8(High) ~ Level1(Low).
- **Auto Deletion**
  If you select **On**, you can set the number of days for access restriction. If it is set to 3, you cannot search the data recorded at the time less than 3 days before.

In case of SHR-5082/5080, only 8 channels are displayed.

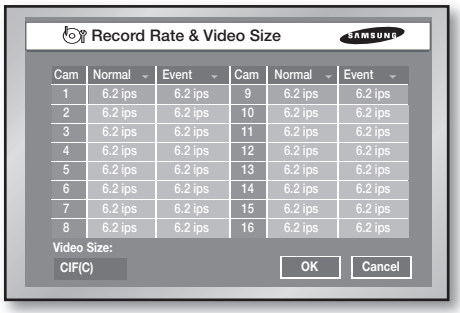
Record Rate & Video Size

NTSC



Cam	Normal	Event	Cam	Normal	Event
1	7.5 ips	7.5 ips	9	7.5 ips	7.5 ips
2	7.5 ips	7.5 ips	10	7.5 ips	7.5 ips
3	7.5 ips	7.5 ips	11	7.5 ips	7.5 ips
4	7.5 ips	7.5 ips	12	7.5 ips	7.5 ips
5	7.5 ips	7.5 ips	13	7.5 ips	7.5 ips
6	7.5 ips	7.5 ips	14	7.5 ips	7.5 ips
7	7.5 ips	7.5 ips	15	7.5 ips	7.5 ips
8	7.5 ips	7.5 ips	16	7.5 ips	7.5 ips

PAL



Cam	Normal	Event	Cam	Normal	Event
1	6.2 ips	6.2 ips	9	6.2 ips	6.2 ips
2	6.2 ips	6.2 ips	10	6.2 ips	6.2 ips
3	6.2 ips	6.2 ips	11	6.2 ips	6.2 ips
4	6.2 ips	6.2 ips	12	6.2 ips	6.2 ips
5	6.2 ips	6.2 ips	13	6.2 ips	6.2 ips
6	6.2 ips	6.2 ips	14	6.2 ips	6.2 ips
7	6.2 ips	6.2 ips	15	6.2 ips	6.2 ips
8	6.2 ips	6.2 ips	16	6.2 ips	6.2 ips

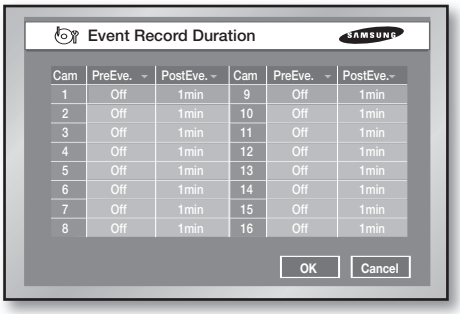
When you press the **RECORD** button, the record-related settings are applied.

- **IPS (Images per second)**
  You can set the image recording speed using this unit. This rate indicates how many images are recorded per second.
  With NTSC, you can select any of 30, 15, 7.5, 3.7, 1.8, 0.9 ips, and Off. In case of PAL, you can select any of 25, 12.5, 6.2, 3.1, 1.5, 0.7 ips, and Off.
- **Available IPS limits** vary depending on the number of Video On cameras.
  Video On/Off settings are enabled **in Camera Configuration**.
  - If the resolution is set to CIF (Common Intermediate Format) and the number of Video On cameras is 9 to 16, the IPS limit is 7.5 ips for NTSC and 6.2 ips for PAL.
  - If the resolution is set to CIF and the number of Video On cameras is 5 to 8, the IPS limit is 15 ips for NTSC and 12.5 ips for PAL.
  - If the resolution is set to CIF and the number of Video On cameras is 1 to 4, the IPS limit is 30 ips for NTSC and 25 ips for PAL.
  - If the resolution is set to Half D1 and the number of Video On cameras is 9 to 16, the IPS limit is 3.7 ips for NTSC and 3.1 ips for PAL.
  - If the resolution is set to Half D1 and the number of Video On cameras is 5 to 8, the IPS limit is 7.5 ips for NTSC) and 6.2 ips for PAL.
  - If the resolution is set to Half D1 and the number of Video On cameras is 1 to 4, the IPS limit is 15 ips for NTSC and 12.5 ips for PAL.
- **Video Size**
  Select any of CIF and Half D1
  (Half the horizontal resolution is sampled).

In case of SHR-5082/5080, only 8 channels are displayed.

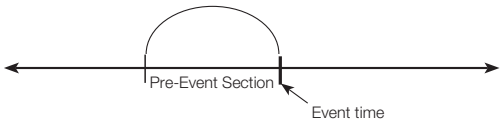
Event Record Duration

You can set the duration for event recording.



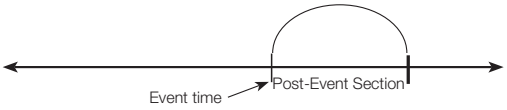
Cam	PreEve.	PostEve.	Cam	PreEve.	PostEve.
1	Off	1min	9	Off	1min
2	Off	1min	10	Off	1min
3	Off	1min	11	Off	1min
4	Off	1min	12	Off	1min
5	Off	1min	13	Off	1min
6	Off	1min	14	Off	1min
7	Off	1min	15	Off	1min
8	Off	1min	16	Off	1min

- **PreEve.**



If the time is set in this field, it records the image from the time before an alarm to the event time. Available values are Off, 5, 10, 20, and 30sec.

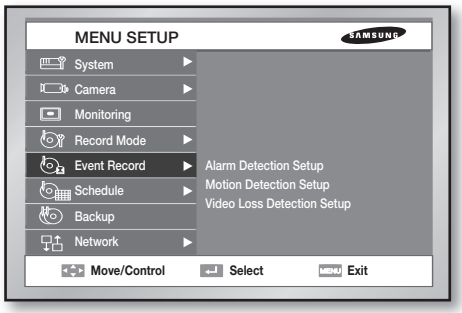
- **PostEve.**



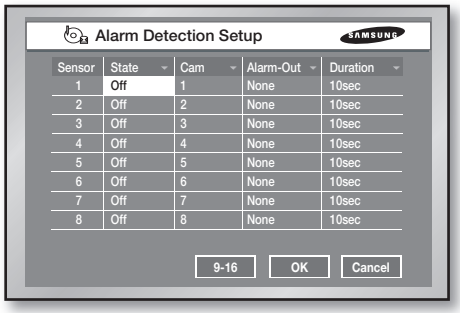
If the time is set in this field, it records the image from the event time to the time after an alarm. Available values are Off, 5, 10, 20, 30sec, 1min, 3min, 10min, and 20min.

EVENT RECORD MODE

The detailed list for event mode settings is as follows:



Alarm Detection Setup

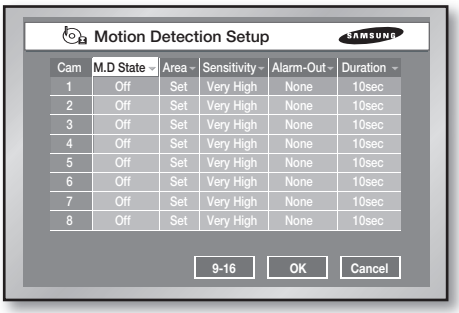


- **Sensor State**
  - Off: Sensor does not operate.
  - N.O (Normal Open): Sensor remains open all the time. But if it gets closed, an alarm is issued. (A Contact)
  - N.C (Normal Close): Sensor remains closed all the time. But if it gets open, an alarm is issued. (B Contact)
- **Cam**
  It is used to set a camera that synchronizes with the current sensor. The default setting follows the sensor number. A sensor can synchronize with multiple cameras so multiple values can be selected.
  You can set a preset for each camera to synchronize sensors with cameras. If a sensor triggers the corresponding camera, the camera can show you the preset location.
- **Alarm-Out**
  It is used to set the Alarm-Out location when any alarm occurs. Currently 5 Alarm Outs are available. Select an alarm-out to synchronize with the current sensor. But multiple values can be selected.
- **Duration**
  It is used to set the Alarm-Out duration. When an alarm occurs, the alarm is output for the preset time. You can select any of Off, 3sec, 5sec, 10sec, 20sec, 30sec, and Continuous.

In case of SHR-5082/5080, only 8 channels are displayed.

Motion Detection Setup

You can configure the motion detection related settings. When the detection area is set, the system detects any motion in that area.



- **M.D State**
  - Off: Motion detection does not operate.
  - On: Motion detection is active.
- **Area**
  This is used to set the motion detection area. It is not allowed to set 4 extreme rows (Up, Down, Left, Right) because the display boundary regions can vary according to the monitor specification.
  - Select All: Selects the whole area.
  - Select One: Selects a block unit for each time.
  - Select Quarter: Selects a quarter unit of the screen for each time.
  - Clear All: Clears the whole selection.
  - Save & Exit: Saves the setting and exits.
  - Exit: Exits without saving.

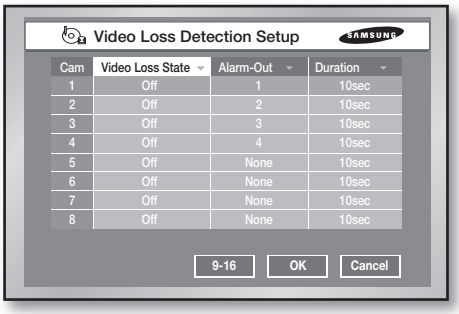


- **Sensitivity**
  This is used to set the sensitivity for motion detection. Available values are Low, Medium, and Very High.
- **Alarm-Out**
  It is used to set the Alarm-Out location when any alarm occurs. Currently 4 Alarm Outs are available. Select an alarm-out to synchronize with the current sensor. But multiple values can be selected.
- **Duration**
  It is used to set the Alarm-Out duration. When an alarm occurs, the alarm is output for the preset time. You can select any of Off, 3sec, 5sec, 10sec, 20sec, 30sec, and Continuous.

In case of SHR-5082/5080, only 8 channels are displayed.

Video Loss Detection Setup

You can configure the video loss related settings. If any video loss is detected, the corresponding alarm will be issued.



- **Video Loss State**
  - Off: Video loss detection does not operate.
  - On: Video loss detection is active.
- **Alarm-Out**
  It is used to set the Alarm-Out location when any video loss is detected. Currently 4 Alarm Outs are available.
- **Duration**
  It is used to set the Alarm-Out duration. When an alarm occurs, the alarm is output for the preset time. You can select any of Off, 3sec, 5sec, 10sec, 20sec, 30sec, and Continuous.

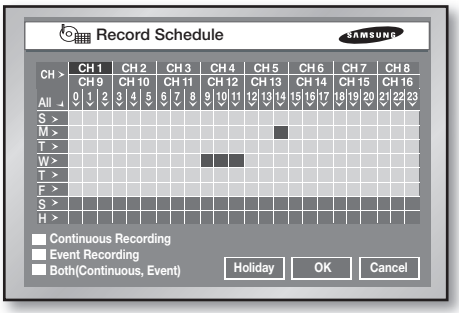
In case of SHR-5082/5080, only 8 channels are displayed.

SCHEDULE

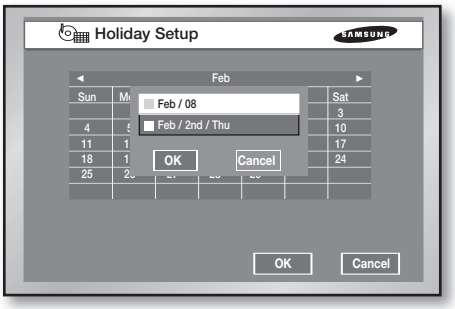
You can configure the scheduling-related settings here.

Record Schedule

The scheduling is enabled by selecting days and time blocks. The default setting is **Event Recording**. Recording automatically starts according to the schedule.



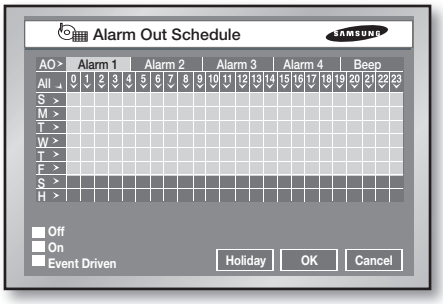
- **CH >**: Copies the value of Channel 1 to all the channels after this is pressed.
- **0 to 23**: Time values for horizontal row.
- **S to H**: Days (Sunday to Saturday) and Holiday (H).
- **ALL**: Press this and it changes the overall settings in the current window to Continuous, Event Record, and Both in order.
- **Continuous Recording**
  Recording follows the settings configured in **Record Mode**. For furthermore information, see “Schedule Recording” in Chapter 7. It is displayed in yellow, while the event recording is displayed in blue and both recording in red. When nothing is assigned, it is displayed in gray.
- **Event Recording**
  Recording automatically starts when an event (alarm, motion detection, and video loss) occurs within a setup time. Recording follows the settings configured in **Event Record.** For more information, see “Event Recording” in Chapter 7.
- **Both(Continuous, Event)**
  Both recordings are applied at the same time.
- **Holiday**
  If you press **Holiday**, a calendar window appears for you to designate holidays. Place the cursor to a date and press the **ENTER** button, then you can set the date or Nth day of the month as a holiday. (You can also set both options as holidays



In case of SHR-5082/5080, only 8 channels are displayed.

Alarm Out Schedule

You can schedule the automatic output for alarms.



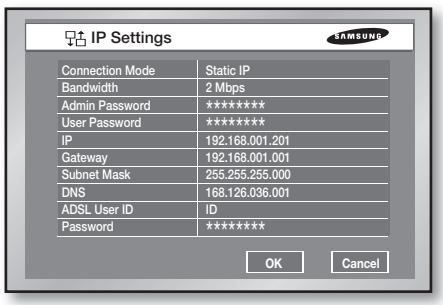
The scheduling is enabled by selecting alarms, days and time blocks. The default setting is Event Driven. For each alarm or beep, you can activate or deactivate alarming. In case of **Event Driven**, the alarm can be sent only when an event is issued.

- **AO >**: It indicates **Alarm Out**. All alarms are changed according to **Alarm1** when it pressed.
- **0 to 23**: Time values for horizontal row.
- **S to H**: Days (Sunday to Saturday) and Holiday (H).
- **ALL**: Press this and it changes the overall settings in the current window to Off, On, and Event Driven.
- **Off**: Sets not to issue an alarm during the setting time.
- **On**: Sets to issue an alarm during the setting time.
- **Event Driven**: Sets to issue an alarm when an event occurs during the setting time.
- **Holiday**
  If you press **Holiday**, a calendar window appears for you to designate holidays. Place the cursor to a date and press the **ENTER** button to complete designation. (When pressing the **ENTER** button again, the setting is cancelled.)

NETWORK

You can configure the network related settings for network connection.

IP Settings



- **Connection Mode**
  Select a network type that is connected to the main body of the product.
  - Static IP: When the main body is connected to the network using the static IPs.
  - Dynamic IP: When the main body is connected to the network using the dynamic IPs supplied by DHCP.
  - ADSL(PPPoE): When the main body is connected to the ADSL network using Point-to-Point Protocol over Ethernet (PPPoE).
- **Bandwidth**
  Select a network speed among Unlimited, 2 Mbps, 1.5 Mbps, 1 Mbps, 800 Kbps, 600 Kbps, 500 Kbps, 400 Kbps, 300 Kbps, and 128 Kbps. If the connection is made via ADSL, you can only select the bandwidth of 600 kbps or less.
- **Admin Password**
  It is used for connection between Smart Viewer and this product using the Admin privilege. The password can be input up to 8 digits. Press the **ENTER** button and type the numbers you want using the **NUMERIC** buttons. The default Admin password is "**4321**."
- **User Password**
  It is used for connection between Smart Viewer and this product using the user privilege. The password can be input up to 8 digits. Press the **ENTER** button and type the numbers you want using the **NUMERIC** buttons. The default user password is "**4321**."
  With the user privilege, you cannot access to both Menu Setup window in DVR and DVR Setup screen in Smart Viewer.

CAUTION

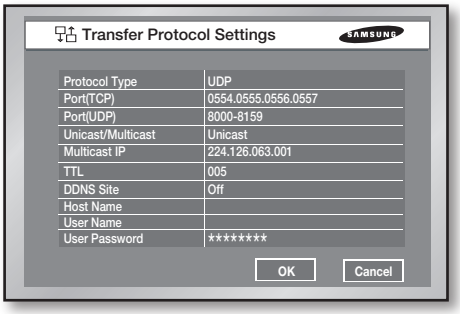
1. If the main body of the product is connected to a high-speed network like LAN, it is recommended to set the higher bandwidth than 1 Mbps.
2. If the device is connected to a network using ADSL or low bandwidth, set the bandwidth not to exceed 600Kbps, and set the recording mode not to exceed CIF (standard). Setting up to a higher bandwidth or higher recording mode for the network environment supporting a low bandwidth may cause a network overload, therefore the connection to Smart Viewer or image monitoring may not operate properly.
3. When the connection mode is set to ADSL, the bandwidth is fixed to 300Kbps.

- **IP**
  Set the IP address for the main body of the product for connecting to the network. If the connection mode is set to Static IP, type the IP address. If the connection mode is Dynamic IP or ADSL(PPPoE), the IP address allocated by the DHCP server or ADSL company automatically appears. In case of DHCP or ADSL connection failure, the value "000.000.000.000" is displayed. Then, press **OK** to retry connection for getting the IP address. If the connection failure continues, turn off the power for a while and reboot the system for retry.
- **Gateway**
  In case of Static IP, set the gateway address assigned. With Dynamic IP or ADSL, the address is automatically allocated.
- **Subnet Mask**
  Set the subnet mask address assigned.
- **DNS**
  Set the DNS address. The default value is "168.126.63.1." If you have hard time to connect to the network when you are using DHCP or ADSL, contact the network manager or ADSL company personnel to set up a new DNS address.
- **ADSL User ID**
  If the product is connected to the ADSL network, input the user ID subscribed to the ADSL company. You can input the user ID using the virtual keyboard up to 40 letters irrespective of alphabets, numbers, and symbols.
- **Password**
  If the product is connected to the ADSL network, input the user password subscribed to the ADSL company. You can input the password using the virtual keyboard up to 40 letters irrespective of alphabets, numbers, and symbols.

CAUTION In case of ADSL, the audio is not played on Smart Viewer. Be sure to set the IP, port, Subnet mask, gateway, and DNS to make Smart Viewer connected to the product. Wrong settings may result in not being connected to the product. Please contact the network manager or ADSL company personnel to get the correct setting values.

Transfer Protocol Settings

You have to configure the data transfer protocol related settings to use network for transferring data.

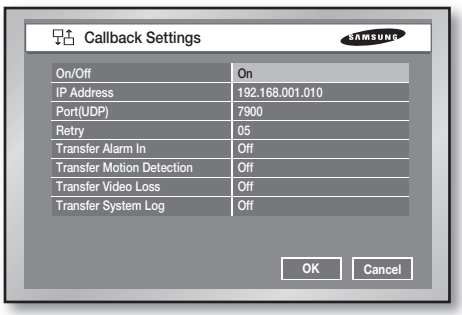


- **Protocol type.**
  Select any of TCP and UDP. If you have selected ADSL in IP Setup, only TCP is available. In this case, audio transmission is not available.
- **Port(TCP)**
  Select a number ranging from 554 to 2046 using the **UP/DOWN** direction buttons and the port number will change by 4. Once the first port number is determined, the following 3 numbers will change.
- **Port(UDP)**
  Select a number ranging from 8000 to 9760 using the **UP/DOWN** direction buttons and the port number will change by 160. Once the first number is determined, the following number will change.
- **Unicast/Multicast**
  Select any of Unicast and Multicast. Unicast is set by default. When you select **Multicast**, the multicast IP is activated and you can input the address ranging from 224.0.0.0 to 239.255.255.255 using the **UP/DOWN** direction buttons.
- **TTL**
  Enter a number ranging from 0 to 255. You can input it only when Multicast is selected. The default value is "5."
- **DDNS Site**
  Select a DDNS site. This DDNS setup is necessary to see the monitoring screens from the remote computer that is running Smart Viewer. Available values are Off, Samsung DDNS, dyndns.com, no-ip.com, and changeip.com. If you select **Off**, the IP will not be registered in DDNS.
  - If you select **Samsung DDNS**, register the TCP IP in DDNS that is operated by Samsung. To configure the DDNS-related settings in Smart Viewer, select **Setup > Site Setup > DVR Registration** and set the address type with MAC Address, and then register the MAC address that is displayed in the System Information and Setup menu. (or you can get the Ethernet address on the side label attached on the product.)
  - Using the free public DDNS web sites such as dyndns.com, no-ip.com, and changeip.com, you can acquire an URL by registering a dynamic IP. After this action completes, enter the host name, user name, and password in this window.

- If you set up the public DDNS (dyndns.com, no-ip.com, or changeip.com), it will take approximately 30 to 60 seconds to get the IP address for the host name (URL) to be updated in the DNS.
- To connect this product to an IP router, you have to designate a port for this product in the setup menu of the router. This product has 4 ports for TCP communication. To use the DHCP function provided by the IP router to allocate the dynamic IP to the product, designate a port for the IP that has been allocated by the IP router setup menu. When using the IP router, it is recommended to use the fixed IP. For that purpose, set the IP address and port number to be allocated to the product, select **Static IP** in the connection mode and enter the IP address assigned to the IP router. For more information about using the IP router, see the user manual of the IP router or contact the manufacturer.

Callback Settings

This configuration is used to forward the callback messages to the IP where Smart Viewer is running. When any alarm, motion, or video loss events occur, the system automatically connects to the corresponding DVR to show the callback messages.

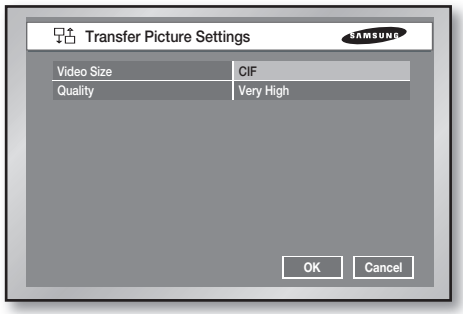


- **On/Off:** Off is default. To use the callback function, choose **On**.
- **IP Address:** Use the **UP/DOWN** direction buttons to set the TCP IP address of the PC where Smart Viewer is running.
- **Port(UDP):** Use the **UP/DOWN** direction buttons to set a port number ranging from 7900 to 7999. The number changes by 1. You have to also set the port value in the Callback Connection menu for Smart Viewer setup.
- **Retry:** Select a number ranging from 1 to 20. The number changes by 1.
- **Transfer Alarm In:** Set it to **On** to display alarms on Smart Viewer.
- **Transfer Motion Detection**: Set it to **On** to display motion detection events on Smart Viewer.
- **Transfer Video Loss**: Set it to **On** to display video loss events on Smart Viewer.
- **Transfer System Log**: Set it to **On** to display system logs such as critical system failures.

CAUTION Even if this function is set to **On**, any callback message will not be created unless the settings for alarm, motion detection, and video loss are set in Event Record.
To get the callback messages from Smart Viewer, click **Callback**.

Transfer Picture Settings

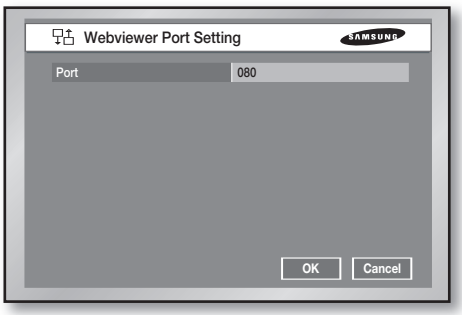
You can configure the video size and quality for transferring pictures.



- **Video Size**: Select any of CIF and Half D1.
- **Quality**: Select any of Very High, High, Standard, and Low.

Web Viewer Port Setting

You can configure the port number for Web Viewer.



- The available ports are those from 80 through 60080.
- If you set the port number instead of 80(default), it is needed to type the port number into the address bar of the Web browser. (e.g. http://218.209.27.130:500)

CONFIGURING NETWORK

Port configuration for connecting Smart Viewer

- To set the TCP port for DVR registration into Smart Viewer, the value should be the same as that of this product.
- To use the IP router, you must forward the activated ports.
  - For TCP, set the assigned 4 ports in the IP Router.
  - For UDP, set the assigned 4 TCP ports and 160 UDP ports that is set in the IP Router.

In case of TCP transfer protocol

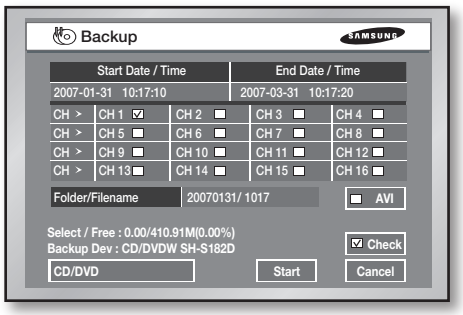
The ports allocated to the TCP will be used for connection control and stream transfer of Smart Viewer.

In case of UDP transfer protocol

- The TCP ports will be used for Smart Viewer connection and the UDP ports will be used for stream transfer.
- When **Multicast** is set
  - Both MultiCast IP and TTL fields are activated.
  - MultiCast IP is the group address (D-Class IP Address: 224.0.0.0 to 239.255.255.255) for multicast transfer.
  - TTL(Time To Live) indicates how many routers will pass for multicast transfer.
  - When you are not allowed to use multicast through the Network (LAN or ADSL) as both Set and Smart Viewer are installed, the message, “Not Connected” will be displayed on the Smart Viewer screen. Please change it to the setting for TCP or UDP.
- Poor image problem in Smart Viewer
  - When the bandwidth of the network is smaller than the quantity of transfer stream packets, the displayed image is sometimes poor. Set the bandwidth in IP Settings to the value lower than the current setting. (In case of ADSL, it is recommended to set 300Kbps or 600Kbps for the bandwidth.)
  - If this effort is of no use, change the protocol type to TCP.

backup

If there is a predefined device connected, the window displays the device information like the free space and such. You can also use the **BACKUP** button on the front of your DVR.



To configure the related settings

1. Set the start date and time using the **Direction** buttons and the **ENTER** button.
2. Set the end date and time using the **Direction** buttons and the **ENTER** button.
3. Select a channel for backup using the **Direction** buttons and the **ENTER** button.
4. Optional: If you want to change the current file name, use the virtual keyboard. The file name format is HHMM (maximum 4 digits) and the format of folder is YYYYMMDD.
5. When multiple devices are connected, press **USB Memory** at the bottom-left corner to select a backup device. If you select the built-in CD or USB CD/DVD, the recording format is fixed to AVI. When **Check** is selected, the file size of the selected time and channel, and residual memory size of the device are displayed.

6. When all settings are complete, press **Start** to begin the backup process. When the backup starts, the backup progress is displayed. If you select Stop on the progress window, the backup stops. If you select Exit, the screen changes to the upper menu without stopping the backup.

In case of SHR-5160 and SHR-5080, they do not include the built-in DVD writer so that backup function is not available for built-in CD/DVD.

CAUTION

[In Backup Process]
If you press **Exit** while the backup is in progress, the screen goes to the upper menu but it does not affect the backup process. The running speed of the product may be lowered while the backup is in progress.
When performing backup on USB CD/DVD or memory, you cannot use the actual capacity of the device because a part of the capacity is used for the system.
This device doesn't support the backup for memory cards, flash cards, and memory sticks such as SD, CF, MMC, etc. The virtual keyboard does not support the input of special characters or space.
When the CD or DVD is malfunctioning, its tray frequently opens and closes, and then the backup fails. In this case, retry the backup after exchanging the media.

WARNING

The backup data could be damaged by the surface state of the disk when using CD or DVD.
The DVR may restart if you attempt to eject the backup device while the backup is in progress.

The file name is created with the start time of backup data.
(YYYYMMDD)/(HHMM+ four digits of the serial number)
The backup file can be separated in the following conditions:
- Different units in file size (1GB for DVD, 2GB for others)
- Change in recording conditions
- Discontinuous recording data

Codec is required to play an AVI backup file, which is also copied along with the installation file in the AVI backup process. Run a codec setup file, "MP4Codec.exe", to install the codec on the PC. "INDEX.xml" is included in the AVI backup file, which enables you to check and enjoy a desired file at your convenient time. In case of USB external HDD and USB Flash Memory, the backup is available only with formatting FAT32 partition. To format FAT32, Format the device as FAT32 in the PC or erase the device in the Storage Setup menu, which enable to backup files.

In case of back-up devices, please check the compatibility list of the storage devices. The list of the compatible devices with Samsung DVR can be obtained from your vendor.

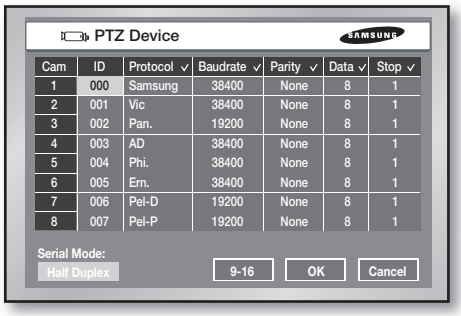
The backup of the AVI format may take longer depend on a number of the channel and the DVR operation environment (e.g. recording, network)

In case of SHR-5082/5080, only 8 channels are displayed.

PTZ camera control

PTZ CAMERA CONTROL MODE

You have to check that proper PTZ camera settings are allocated for PTZ device setup in the Camera menu.



In case of SHR-5082/5080, only 8 channels are displayed.

When the PTZ configuration is complete, the PTZ sign (PTZ) appears on the live screen.

- If you press the **ENTER** button in the split screen, a blue bar appears for selection handling. Use the **Direction** buttons to move this bar until you reach the channel having the PTZ sign, and press the **PTZ** button on the front panel or remote control to enter the PTZ Camera Control Mode. In PTZ Camera Control Mode, the color of the PTZ sign changes to yellow from white. In this mode, you can pan and tilt the camera, and zoom in the screen.





- Another PTZ camera control is executed in a single screen. Press the channel number button on the front panel or remote control to select the PTZ-enabled channel and press the **PTZ** button. In Single Screen PTZ Camera Control Mode, the PTZ sign changes to yellow from white. You can pan and tilt the camera, and zoom in the screen. It also supports the miscellaneous functions like Preset, Camera Menu, and etc.



- Press the **PTZ** button in the live mode to cancel the PTZ camera control function. After cancellation, the PTZ sign on the Auto Sequences to white from yellow.

- You cannot use the PTZ device and remote control device at the same time due to communication problems.
- In PTZ control mode, the PTZ mode of DVR is canceled when the remote control is connected. When the remote control is disconnected, it changes to PTZ mode. Refer to the user manual for the remote control to control the PTZ device using the remote control.
- When using the remote control that is run by Samsung protocol, the direct camera control is enabled.
- If there is no PTZ control activity within maximum 5 minutes, the PTZ mode is automatically cancelled. Then it is controlled by the Smart Viewer.

BASIC PTZ OPERATIONS

When using a remote control, it is possible to control the camera with the remote control run by Samsung protocol. If there is no PTZ control for 5 minutes from the DVR, this mode is automatically cancelled. Then it is controlled by the Smart Viewer.



- **PAN**
  Use the **LEFT/RIGHT** buttons on the front panel or remote control in PTZ Camera Control Mode to control the camera horizontally.
- **TILT**
  Use the **UP/DOWN** buttons on the front panel or remote control in PTZ Camera Control Mode to control the camera vertically.
- **ZOOM**
  Press the **TELE/WIDE** buttons on the front panel or remote control in PTZ Camera Control Mode to zoom in or out the image displayed.

PRESET SETUP

A preset is a specific position of the PTZ camera and you can store the positions up to 20.

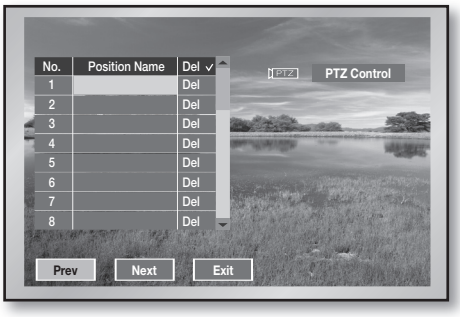
For AD Protocol PTZ camera, you can store up to 7 presets only.

To set a preset

1. Press the **PRESET** button on the front panel or remote control in Single Screen PTZ Camera Control Mode ad select **Preset**.



2. Press the **ENTER** button.



3. Press the **RIGHT** direction button to move the cursor rightward and press the **ENTER** button. Now perform the PTZ operations to get the wanted position screen and press the **ENTER** button again to exit from the PTZ motion mode.

4. Press the **ENTER** button in the **Position Name** field to open the virtual keyboard. Now enter the position name using the virtual keyboard and press **OK** to confirm the input.

If you want to delete both position and position name, select **Del** that is located in the same row. If you press **Del**✓, all positions and position names are removed.

CAMERA MENU SETUP

The PTZ camera provides its own menu. This menu enables you to define several conditions for PTZ control.

Only the Pan. and Samsung protocol cameras are authorized for this setup.

To move to the menu screen, press the **PRESET** button on the front panel or remote control in Single Screen PTZ Camera Control Mode.







To return to the upper menu, press the **PRESET** button.

PRESET VIEW

The preset setup allows you to move to a preset position using the PTZ camera.
Press the **VIEW** button on the front panel or remote control in Single Screen PTZ Camera Control Mode to select **Preset**.



(Example: Samsung Protocol)

Scroll down the cursor until it reaches the preset position that you want and you can check it from the screen to the right.

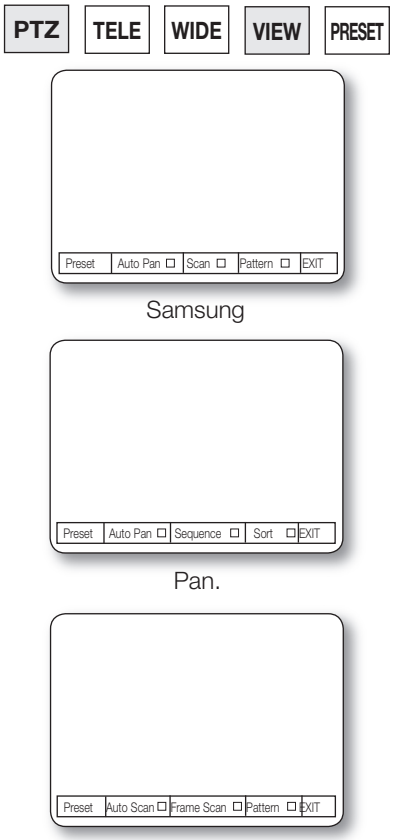


OTHER VIEW

Press the **VIEW** button on the front panel or remote control in Single Screen PTZ Camera Control Mode to use other viewing controls.

Samsung, Pan., Pel.-P, and Pel.-D protocol PTZ cameras support the following operations:

- **Samsung:** Auto Pan/Scan/Pattern
- **Pan.:** Auto Pan/Sequence/Sort
- **Pel.(P,D):** Auto Scan/Frame Scan/ Pattern



After you select an operation, press the **ENTER** button. Then the selected operation is marked and starts moving. If you select the other operation during operation, the previous operation is unchecked and the selected operation is marked.



(For example, Samsung Protocol)

If you perform PTZ operations while an operation is in progress, or enter the Preset Setup or Camera Menu Setup mode, the current operation is stopped and unchecked.
Even though the system is restarted during operation, the set operation starts and remains marked.

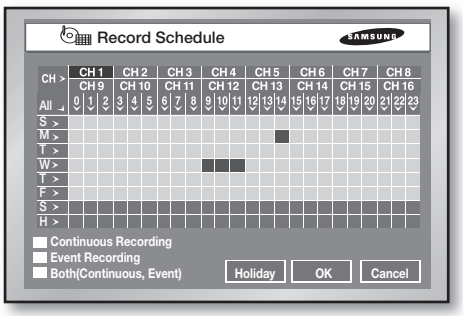
REC (NORMAL RECORDING)

Pressing the **RECORD** button starts recording as set in the Record Mode. Then the **REC** LED lights and the Recording icon appears on the screen. While recording on **HDD** is in progress, the **HDD LED** blinks.
During recording, you can stop it by pressing the **RECORD** button again. If the recording stops, the **REC** LED goes out.

WARNING If the work that needs to stop the recording (time change, file deletion, HDD connection/disconnection, etc.) is executed during recording, the current recording process stops.

RECORD SCHEDULE

While the Schedule Recording or Schedule/Event Recording is active, the schedule recording automatically starts. When a schedule recording is in progress, the **Recording** icon appears on the screen.



If **Event Recording** is active, the recording starts at each event. In this case, the recording is executed according to the settings (video size, recording quality, frame rate, pre-alarm, and post-alarm).

Even in case of an event, the event recording does not start when the event recording or schedule/event recording is set together with the schedule recording.

In case of SHR-5082/5080, only 8 channels are displayed.

EVENT RECORDING

The followings are event recording cases:

- **Alarm Detection**
  Recording starts when the sensor state is set to N.O or N.C (**MENU SETUP > Event Record > Alarm Detection Setup**).
- **Motion Detection**
  Recording starts when the motion detection state is set to **On** (**MENU SETUP > Event Record > Motion Detection Setup**).
- **Video Loss Detection**
  Recording starts when the video loss state is set to **On** (**MENU SETUP > Event Record > Video Loss Detection Setup**).
- **Event Recording Mode**
  When an event occurs, this configures the recording pattern. When the Pre event is set to **On**, the system records images before any event. Likewise, when the Post-event is set to **On**, images are recorded after any event. For more information, refer to page 30, “Event Record Duration”

BEFORE USE

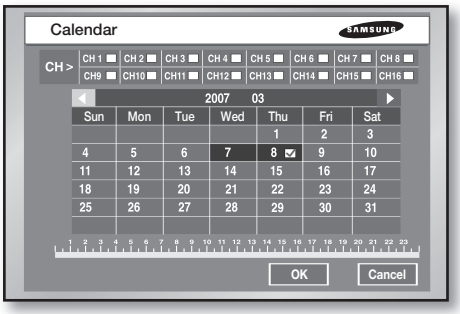


When you press the **SEARCH** button, the Search window appears after user validation checkup. Available menus are like the following:

- **Calendar:** Searches the recorded video images using the calendar to select the wanted time.
- **Event:** Searches the recorded video images using events.
- **Date/Time:** Searches the recorded video images using the input date and time.
- **Go To First:** Searches the first recorded video image.
- **Go To Last:** Searches the latest video image.
- **Backup:** Searches the backup video images. It searches the images recorded on the USB HDD or USB memory. The AVI format backup files recorded on USB CD/DVD or built-in CD can be played on PC.

CALENDAR SEARCH

You can search the recorded video images using the calendar as shown in the picture.



In case of SHR-5082/5080, only 8 channels are displayed.

To perform a calendar search

1. Use the **Direction** buttons to select each channel, then press the **ENTER** button.

   If you press **CH >**, all channels are selected.

2. Use the **Direction** buttons and **ENTER** button to select the wanted year and month. If any recordings are stored for the selected month, the corresponding dates are highlighted in the calendar.

   If you press ◄ or ► , the year value changes.

3. Use the **Direction** buttons and **ENTER** button to mark the wanted dates.

4. Use the **DOWN** direction button to move to the time bar, and use the **LEFT** and **RIGHT** direction buttons to place the cursor to the wanted time block. Then press the **ENTER** button for selection.

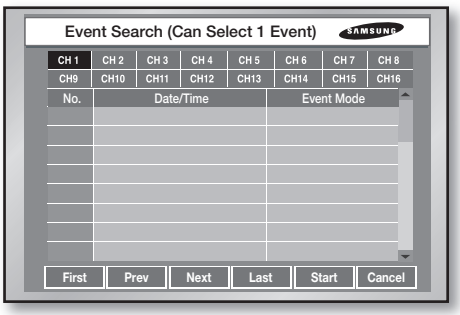
   The scales of time bar are displayed at 30 minutes each.

5. Press **OK** to search the wanted image data.

   If the selected time block has no images, the system displays no picture.

EVENT SEARCH

This function searches recorded results such as normal recording, schedule recording, alarm recording, motion recording, and video loss recording on the channel and time basis.



In case of SHR-5082/5080, only 8 channels are displayed.

To perform an event search

1. Use the **UP/DOWN** direction buttons to place the cursor to the wanted channel and press the **ENTER** button. Then the recorded events are displayed below. Each event contains the date/time and event mode (normal recording, schedule recording, etc.).

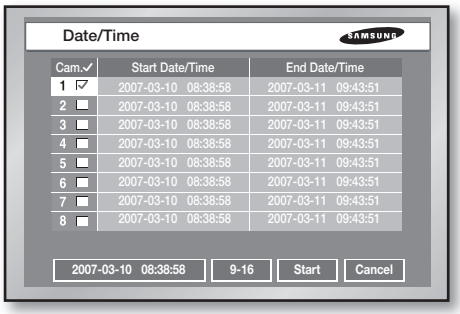
Only one channel can be selected.

2. Use the **DOWN** direction button to move to the event table and press the **ENTER** button to select an event. The selected event is marked. Selection of multiple items is not allowed.
3. Use the **Direction** buttons to select Start then press the **ENTER** button. Then the recorded images are played on the screen.

- To cancel the search, select **Cancel** and press the **ENTER** button. If events are listed in multiple pages, select **First, Prev, Next**, and **Last** to move to the corresponding page.
- If you press the **SEARCH** button while an event recording is played. It returns to the Event Search menu. This lets you search other events easier and faster.

DATE TIME SEARCH

This function is used to search the video images for the specific time you want. Up to 16 channels can be searched at once.



In case of SHR-5082/5080, only 8 channels are displayed.

To perform a date/time search

1. Use the **UP/DOWN** direction buttons to place the cursor to the wanted camera and press the **ENTER** button. The selected camera is marked. Selection of multiple items is possible.
2. Use the **DOWN** direction button to move to the time box. To set the time you want, press the **ENTER** button. Then the year value is highlighted for change. To change the value, use the **UP/DOWN** direction buttons. You can also change values for month, date, hour, minute, and second using the **UP/DOWN** direction buttons. To move between items, use the **LEFT/RIGHT** buttons.
3. Now use the **RIGHT** direction button to move to **Start** and press the **ENTER** button. If the designated time has any recorded images, they are played on the screen. If multiple cameras are selected, they are played on 4, 9, or 16-split screen.

If you want to cancel the search, select **Cancel** and press the **ENTER** button.

GO TO FIRST SEARCH

This function is used to search the oldest recorded files for cameras. Up to 16 channels can be searched at once.



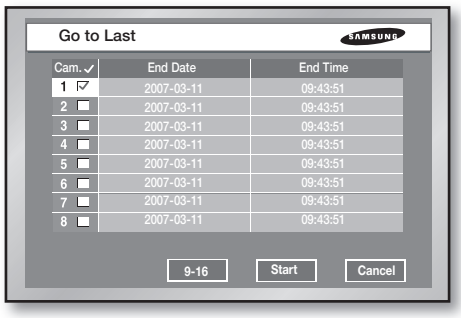
In case of SHR-5082/5080, only 8 channels are displayed.

To perform this function

1. Use the **UP/DOWN** direction buttons to place the cursor to the wanted camera and press the **ENTER** button. The selected camera is marked. Selection of multiple items is possible. If you want to move to the next page for selecting the other cameras, press **9-16.**
2. Now press **Start** to play the oldest images. If multiple cameras are selected, they are played on 4, 9, or 16-split screen.

If you want to cancel the search, select **Cancel** and press the **ENTER** button.

GO TO LAST SEARCH



In case of SHR-5082/5080, only 8 channels are displayed.

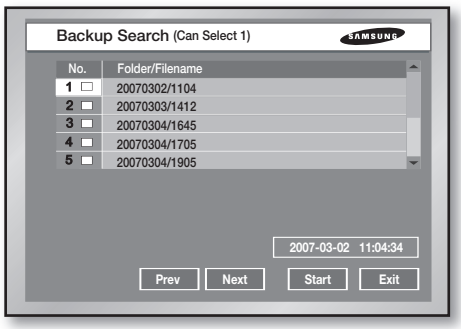
To perform this function

1. Use the **UP/DOWN** direction buttons to place the cursor to the wanted camera and press the **ENTER** button. The selected camera is marked. Selection of multiple items is possible. If you want to move to the next page for selecting the other cameras, press **9-16**.
2. Now press **Start** to play the latest images. If multiple cameras are selected, they are played on 4, 9, or 16-split screen.

If you want to cancel the search, select **Cancel** and press the **ENTER** button.

BACKUP SEARCH

This function is used to search the backup files on the backup devices. First of all, you have to select a back device from the pop-up menu.



To perform this function

1. Use the **UP/DOWN** direction buttons to place the cursor to the wanted backup file and press the **ENTER** button. The selected backup file is marked. Selection of multiple items is possible.
2. After selections are made, use the **DOWN** direction button to select **Start**.

- If multiple pages are available, select **Prev** or **Next** to move to the corresponding page.
- In case of SHR-5160 and SHR-5080, they do not include the built-in DVD writer so that backup function is not available for built-in CD/DVD.

CAUTION AVI-format backup files cannot be played back on this DVR but only the PC Media Player can play the files.

PLAYBACK

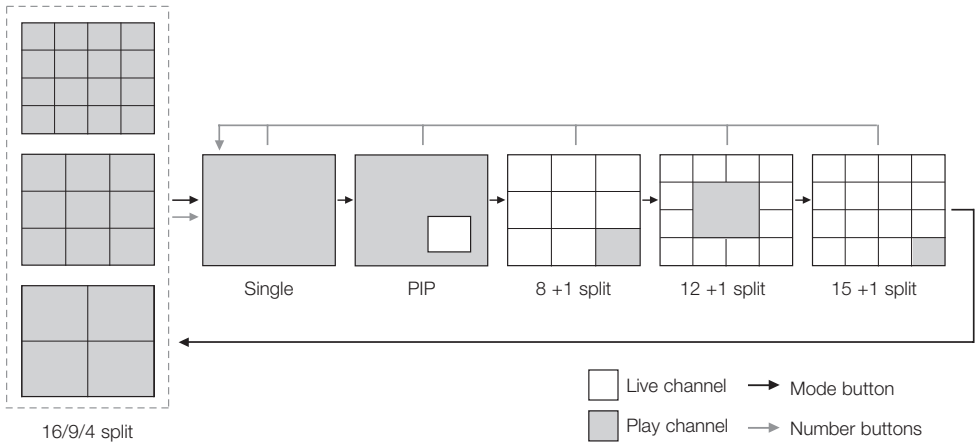
In order to play the recorded file stored on the HDD, press the **PLAY/PAUSE** button. If you have played back a file by using the **SEARCH** button just before, the system would keep the playback information. Press the **PLAY/PAUSE** button again, the channel kept in memory is played.
If you press the **PLAY/PAUSE** button when no playback is tried, the Search menu appears.

When the MENU SETUP window is displayed, pressing the PLAY/PAUSE button does not bring any operation. For playback operation, exit from the MENU first.

To stop playing a recorded file, press the **STOP** button. If you press the **PLAY/PAUSE** button again, the playback will resume from the point where the previous playback has stopped. When the data position reaches the end of HDD during playback, the playback will pause.



- **Playback mode**
  You can change the screen display method using the **MODE** button and **NUMERIC** buttons as shown in the figure. The 16-split, 12+1 split, and 15+1 split screens are shown only in SHR-5162/5160.
  - **Single screen:** Comes up when you select and play only 1 channel using the Search menu.
  - **4-split screen:** Comes up when you select and play 2 to 4 channels using the Search menu.
  - **9-split screen:** Comes up when you select and play 5 to 9 channels using the Search menu.
  - **16-split screen:** Comes up when you select and play 16 channels using the Search menu.
  - **PIP screen:** Comes up when you press the **MODE** button while playing on a single screen. (The main screen displays the playback channel, and the sub screen displays the live channel.) You can move the sub screen up or down using the **UP/DOWN** direction buttons. When you press the **ENTER** button, a blue bar appears on the live screen. To change the channel in the sub screen, press the desired channel number using the **NUMERIC** buttons on the front panel or remote control.
  - **N+1 split screen:** Shows x number of (N) live channels and 1 play channel on the screen. In the case of 9+1 split screen, you can set the location of the play channel from the menu.
- **Speed play**
  To play the recorded images at a faster speed, press the **Fast Forward** (⏩) or **Fast Rewind** (⏪) button during playback to see the screen at x2, x4, x8, x16, x32, and x64 speed forwardly or reversely.
- **Viewing still images**
  If you press the **Fast Forward** (⏩) or **Fast Rewind** (⏪) button while the screen is paused, you can see still images forwardly or reversely. During reverse search, the interval between cuts may vary depending on the recording specification.
- **Audio playback**
  Audio data can be played or recorded only in 4 channels (CH1, CH2, CH3, and CH4). So to hear the sound of the recorded file, change the channel to any of CH1, CH2, CH3, and CH4. In a split screen (5, 9, or 16-split screen), to select an audio channel, press the **ENTER** button and move the displayed blue bar to any of four channels.
  Using the **AUDIO** button, you can activate or deactivate the audio playback. When the audio function is active, the audio sign on the screen turns yellow. When the audio function is disabled, the audio sign on the screen turns white.



Smart Viewer

INTRODUCTION

Smart Viewer is a program to be installed on your PC. Using this program, you can monitor the video and audio data through the network environment without accessing the site where the product is installed.

MAIN FEATURES

- **MPEG-4 Video Compression:** It provides good video quality.
- **G.711 Voice Compression:** It provides good audio quality and use of directional MIC can improve the quality of remote voice.
- **Transmission of video/audio streams through RTP (Real-Time Transport Protocol):** The video playback feature is excellent and the transmission speed is not lowered abruptly even in multi-user connection.
- **Commands & controls by RTSP (Real-Time Streaming Protocol):** It enables safety control through the network.
- **Multiple transport protocols** are supported (TCP/IP and UDP (Unicast, Multicast)).
- **Access to video and audio data** by entering IP address only.
- **Local recording** (*.dvr format) on PC and recorded **video data conversion into frame** unit (JPEG format).
- **Up to 3 users can connect** to the DVR simultaneously. (If the multicast is used, up to 6 users can connect.)
- A Smart Viewer **can connect to 16 DVRs** simultaneously.
- The Smart Viewer is optimized for the resolution of 1024x768.

PC SPECIFICATION (RECOMMENDED)

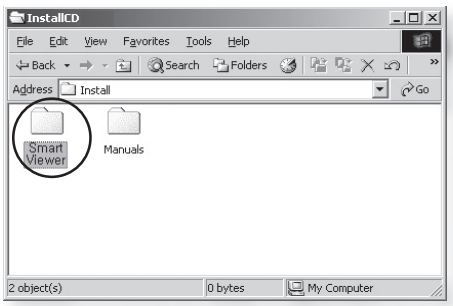
- OS: Win2000 and WinXP

- **Recommendation**
  - CPU Pentium 3, 1GHz or higher
  - RAM 256 MB or higher
  - VGA RAM 32Mb or higher
  - DirectX 8.1 or higher

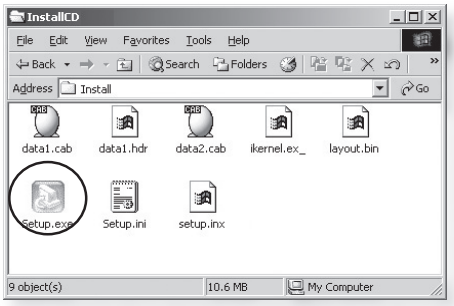
The number of playback frames may vary depending on the recording rate, video size, and PC specification. For the detailed specification, refer to Appendix 5.

Smart Viewer INSTALLATION

1. Insert the Smart Viewer program CD into the CD ROM drive.
2. Open the Smart Viewer folder.



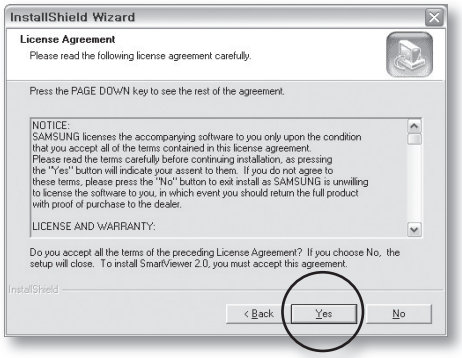
3. Execute the “Setup.exe” file.



4. Click **Next >**.



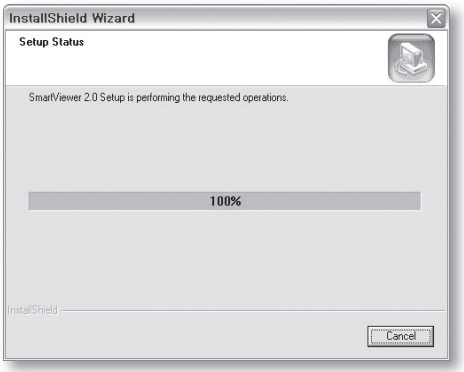
5. After reading the license agreement, click **Yes** to proceed to next step.



6. Set the destination folder to install the Smart Viewer program and click **Next**.



7. The installation process proceeds with setup file installation and system setup.



8. When installation is complete, click **Finish** to exit from the process.

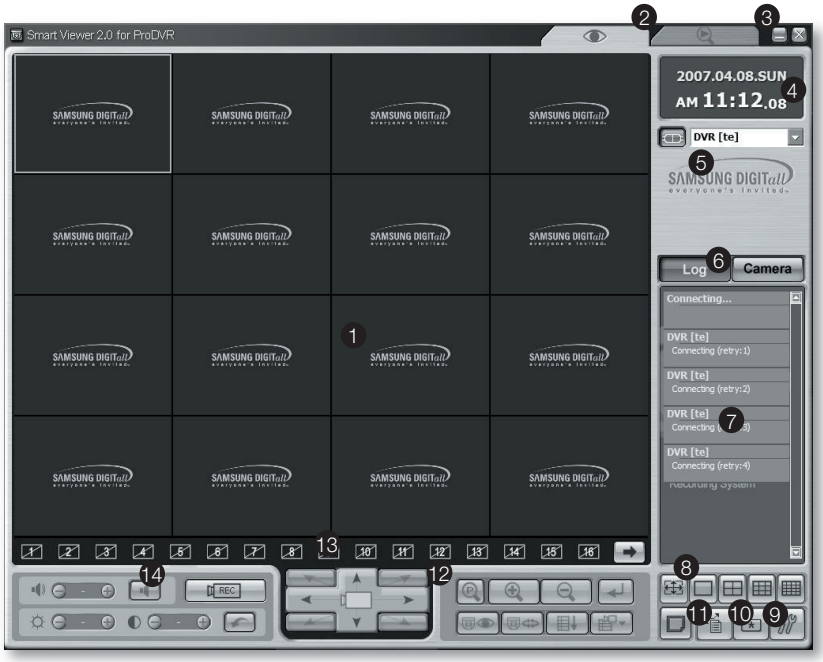


Smart Viewer PROGRAM EXECUTION

Double-click the Smart Viewer icon on the Desktop to execute the program.



Smart Viewer INITIAL SCREEN



1. This screen shows the monitoring sites.
2. Using these buttons, you can enter the Search mode in which you can search and play the remote video file that has been recorded on your DVR and enter the Monitoring mode for monitoring.
3. These buttons minimize and exit the program.
4. It displays the current date, day, and time.
5. This button is used for connection to the preset DVR or site.
6. These buttons let you select the event message display window and camera connection state display window.
7. This window displays the event messages from the DVR.
8. These buttons let you select the wanted split screen or auto sequencing screen.
9. This button opens the Setup Mode window to change the Smart Viewer settings. (Refer to “Setup Mode.”)
10. This button lets you choose a favorite function when connecting to a site.
11. This button is used for connecting to Callback.
12. These buttons enable you to perform the PTZ-related operations.
13. These buttons display the status of the current channels.
14. These buttons let you adjust the audio volume and video brightness/contrast, and save the video images.

SETUP MODE



1. These buttons enable you to select setup items for DVR Setup, Viewer Setup, Site Setup, and S/W Version.
2. In this box, you can set the details on each setup item.
3. Using this button, you can exit from the current window.
4. You can use buttons for saving the modified data, returning the previous settings, and exiting from the setup window.

• Setup Item Selection buttons



- **DVR Setup:** Allows you to modify the settings of the DVR.
- **Viewer Setup:** Allows you to configure the settings of Smart Viewer.
- **Site Setup:** Allows you to set the DVR information which includes the name, IP address, ID, and password for connection. It can also allow you to register DVRs into a site.
- **S/W Version:** Shows the software information such as Smart Viewer version, system requirement, and the DVR system S/W version. You can remotely upgrade the system software.

• Save/Cancellation of Revised Information

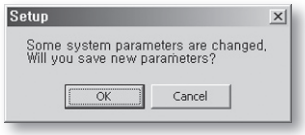


Click **Apply** to save the revised information and click **Cancel** to return the previous settings.

• Closing the setup window



- Click **X** or **Close** to exit from the setup window.
- If any setting is revised, the following message box appears. If you press **OK**, the revised information is saved and the setup window exits. If you press **CANCEL**, the revised information is lost and the setup window exits.

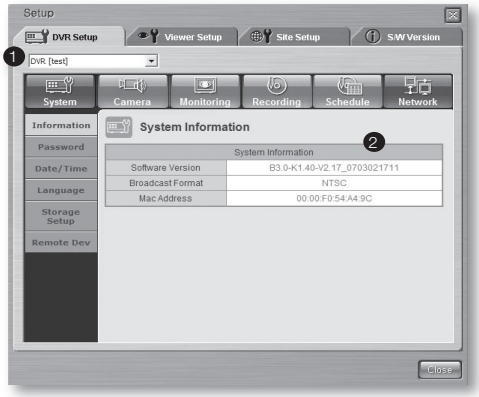


DVR Setup

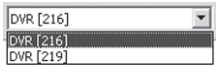


Click **DVR Setup** for configuring DVR-related settings. It means that you can remotely configure the settings of DVR using Smart Viewer. The DVR setup items are System, Camera/Audio, Monitoring, Recording, and Network.

You can access to DVR Setup with the Admin privilege. The button will not be activated when you are connected to the DVR with a user privilege.



1. The DVR names connected with the Admin privilege will be listed here. When connected to a DVR, the DVR name is displayed. When connected to a site, the names of DVRs with the Admin privilege are displayed. You can select a DVR to configure the settings of it.

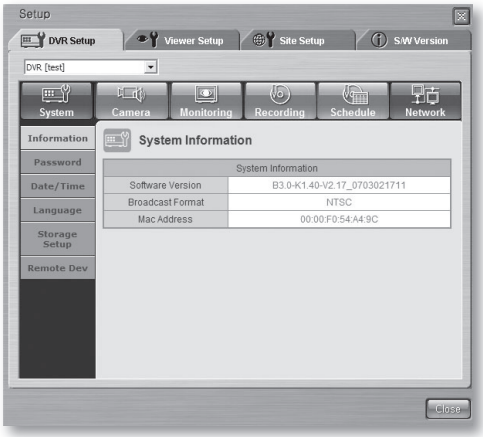


2. It displays the setup menu for the selected DVR.

• System

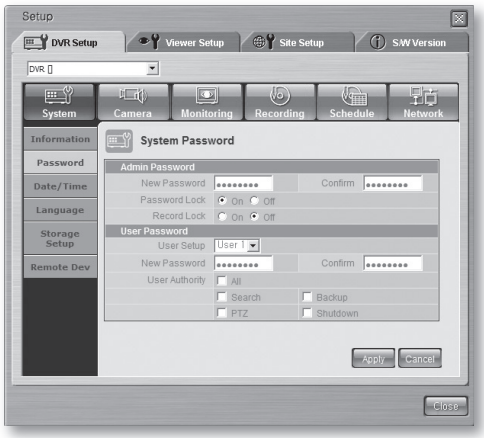
You can configure the system-related settings. For more details, see Chapter 5, “Menu Setup.”

- System Information
  It shows the information of the selected DVR.



For more details, see Chapter 5, “Menu Setup.”

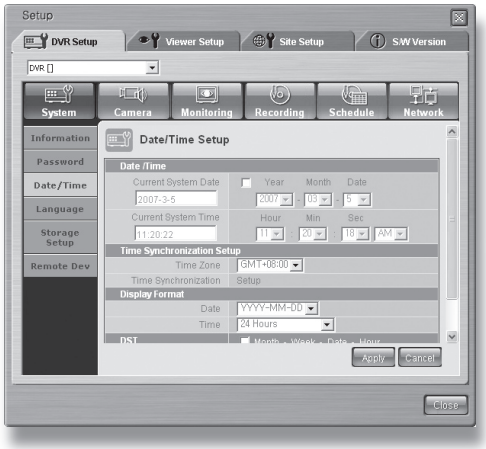
- Admin Password
  You can change the Admin password related settings for control of DVR.
- User Password
  You can change the user password related settings for control of DVR.



CAUTION For the system password, you can input numeric values only up to 8 digits.

- The **Delete** key and key combinations like **CTRL+C** and **CTRL+V** in the keyboard are not supported for input of system password.
- For deletion of any input value, use the **BACKSPACE** key.
- The default system password is “4321.”

- Date/Time Setup
  Date/Time is used to set the information of DVR such as date, time, format, and DST.



- If you change the values for date and time, the DVR automatically disconnects the communication with Smart Viewer to apply the settings.
- When updating the date and time for the DVR completes, you can connect Smart Viewer.
- But, the values for display format and DST can be set without disconnection.

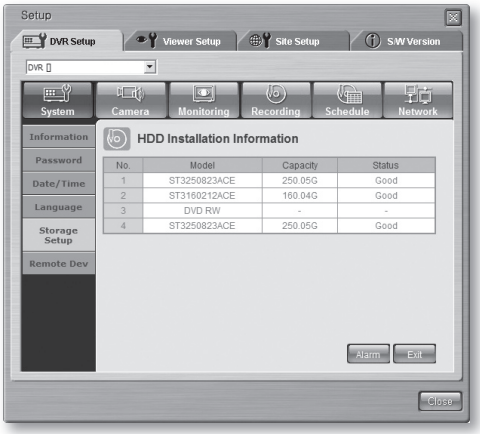
- System Language
  You can set the display language for the DVR.



- This change results in modification of display language on the DVR. The language of Smart Viewer is not changed.
- Language specification is subject to change.

- Storage Setup
  It displays the information of the HDD that is contained in your DVR. Also you can determine whether or not to repeat recording and make a beep sound when any disk failure happens.





In case of SHR-5160/5080, the model name of HDD appears instead of DVD RW.



- Remote Control Device
  You can configure the settings for the remote control that is installed in the DVR system. You can toggle between On and Off. The remote control ID can be set among 0 to 99.



If you have directly installed the remote control in the DVR system and activated the setup, PTZ controls are not enabled using Smart Viewer.

• Camera

You can configure the camera-related settings. For more details, see Chapter 5, “Menu Setup.”

- Camera Configuration.
  This configures the camera-related settings such as video/audio availability, camera title, and auto sequencing interval for the DVR.

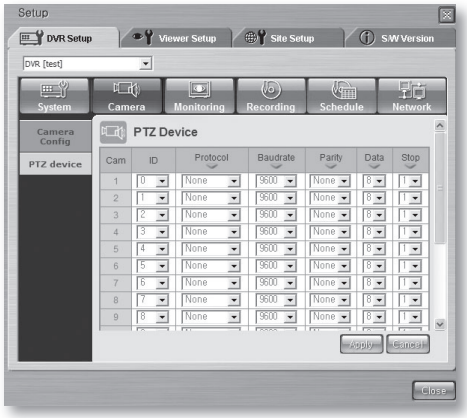


CAUTION

- Only English is available for the title. If you enter the title in your local language and apply it, a warning message appears to ask you to retype it.
- You can input the title up to 15 digits.
- If you leave the title blank, a warning message appears to ask you to retype it.

- The **Delete** key and key combinations like **CTRL+C** and **CTRL+V** in the keyboard are not supported for input of camera title.
- For deletion of any input value, use the **BACKSPACE** key.

- PTZ Device
  You can configure the settings for PTZ cameras, which include camera ID, protocol, baud rate, parity, data bit, and stop bit.



• Monitoring Setup

You can configure the monitoring-related settings. For more details, see Chapter 5, “Menu Setup.”



• Recording

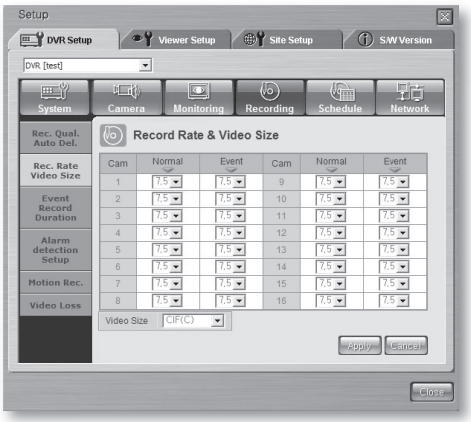
You can configure the recording-related settings. For more details, see Chapter 5, “Menu Setup.”

- Record Quality and Auto Deletion
  You can configure the settings for recording quality and auto deletion.

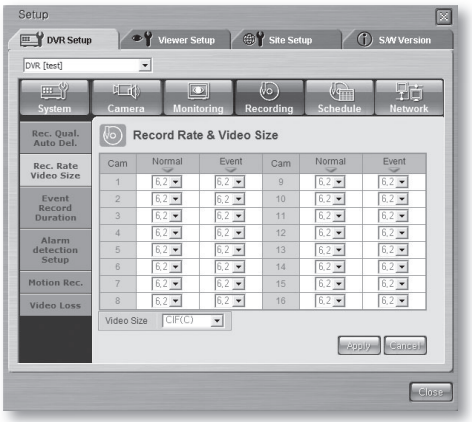


- Record Rate & Video Size
  You can configure the settings for record rate (recording speed) and video size (resolution).

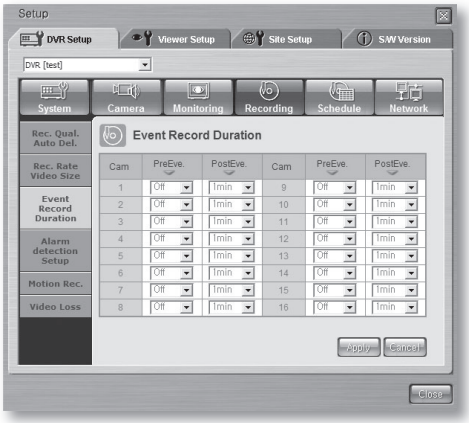
NTSC



PAL



- Event Record Duration
  You can configure the pre-event and post-event settings for event recording.



- Alarm Detection Setup
  It configures the settings for alarm recording.



More than one camera should be selected to apply the alarm.

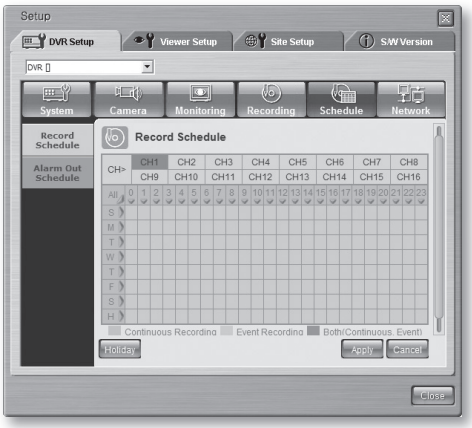
- Motion Detection Setup
  It configures the settings for recording through motion detection.



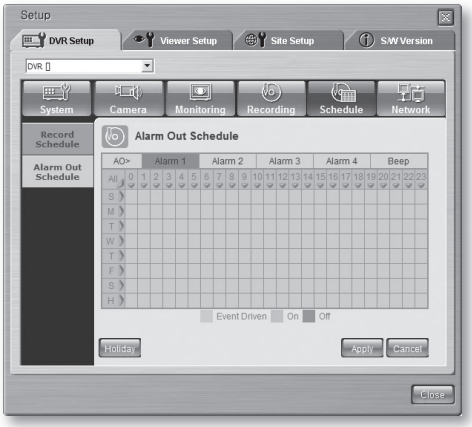
- Video Loss Setup
  It configures the video loss related settings.



- **Schedule**
  You can configure schedule-related settings. For more details, see Chapter 5, “Menu Setup.”
  - Record Schedule
    You can change the schedule recording-related settings.



  - Alarm Out Schedule
    You can change the alarming schedule-related settings.



• **Network**

You can configure the network-related settings. For more details, see Chapter 5, “Menu Setup.”

- Network Password
  You can set both Admin password and user password for connecting to the DVR system through the network using Smart Viewer.



CAUTION

- For the network password, you can input numeric values only up to 8 digits.
- If you leave the password blank and apply it, a warning message appears to ask you to retype it.

- The **Delete** key and key combinations like **CTRL+C** and **CTRL+V** in the keyboard are not supported for input of password.
- For deletion of any input value, use the **BACKSPACE** key.
- The default Admin password is “4321.”
- The default user password is also “4321.”

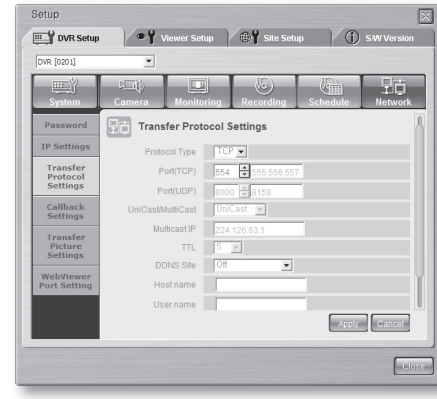
- IP Settings
  It configures the network IP settings for the DVR.



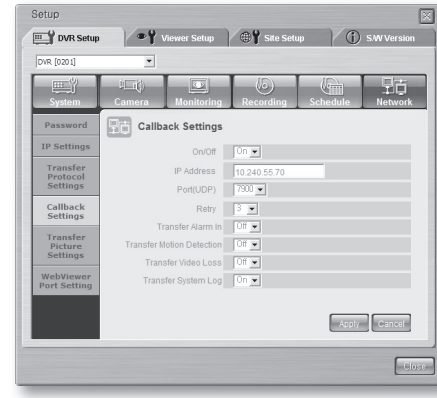
CAUTION

- Be sure to inquire of the network manager about the settings.
- Both ADSL ID and password can be input up to 40 letters including alphabets, numbers, and special characters.

- Transfer Protocol Settings
  You can change the transfer protocol-related settings



- Callback Settings
  You can configure the callback-related settings for DVR.



- Picture Settings
  This configuration is used to set the video size and quality for transferring pictures.



- Web Viewer Port Setting
  You can configure the port number for Web Viewer.



Viewer Setup



Click **Viewer Setup** for configuring the Smart Viewer related settings. This Viewer Setup consists of 5 different items: Video Recording, File Converting, Sequence Time, OSD Display, and Auto Connection.



1. The currently displayed video data can be saved in a DVR format (*.dvr) file. The related settings are made here.
2. A DVR file can be converted into a JPEG or AVI file. The destination folders are determined here.
3. You can set the sequence time (or screen change time) interval for the auto sequence mode.
4. The OSD display on Smart Viewer can be decided here.
5. You can decide whether Smart Viewer automatically connects to the designated DVR or site when it starts running.
6. You can enable/disable alarming and set the alarming duration.
7. You can set the port for callback connection.
8. You can set the language for display.

- **Video Recording**
  - Naming convention



When recording the currently displayed video data into DVR files, you can assign the file naming rule to DVR files.

  - Location



Set the directory for saving the DVR files.

  - Recording Time



You can set the maximum recording time when saving the video data. You can set the time ranging from 1 to 10 minutes. If the recording time exceeds the preset value, the program stops recording.

- **File Converting**



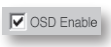
You can convert a DVR file saved on your PC into JPEG or AVI. The default destination folder for file conversion is < Smart Viewer directory>\ frame." You can change it on your own.

- **Sequence Time**



In monitoring mode, when the screen change (auto sequence) mode is active, the camera channels change at an interval of this time. You can set the time ranging from 5 to 30 seconds.

- **OSD Display**



You can set if OSD shall be displayed on each channel of Smart Viewer. However, Audio icon will not be affected by the OSD condition.

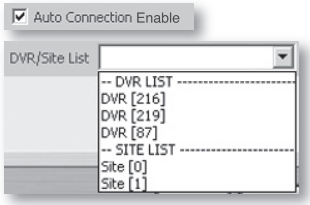
- **Callback Connection**



Set the port for callback connection.

• **Auto Connection**

You can set if Smart Viewer is automatically connected to the selected DVR or site when starting the program. If you check **Auto Connection Enable**, available DVRs and sites are displayed in the pull-down list. After selecting one from the list, Smart Viewer connects to the selected DVR or site whenever it is started.



• **Language**

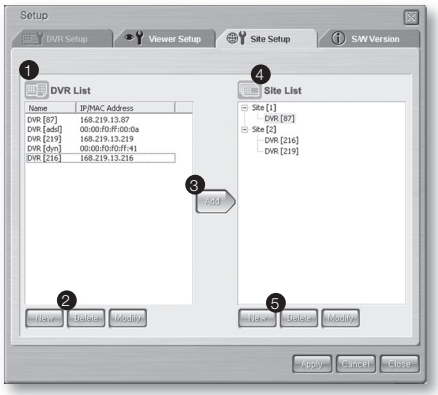


You can set the language to be displayed on Smart Viewer.

Site Setup

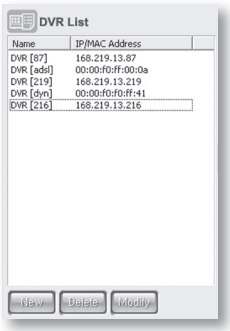


Click **Site Setup** for configuring the site-related settings. Smart Viewer connects to the DVR or site that has been registered here. A site can have multiple DVRs.



1. The registered DVRs are displayed.
2. You can use the buttons for adding/deleting/editing DVRs.
3. Use the button to move the selected DVR to the selected site. But, if the selected DVR is set to ADSL Network, it cannot be moved to the site.
4. The registered sites are displayed.
5. You can use the buttons for adding/deleting/editing sites.

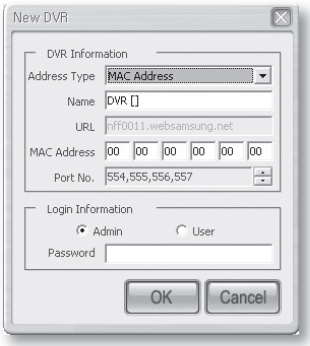
• **DVR List**



The DVRs that you want to connect using Smart Viewer are listed in **DVR List**. You can register a new DVR, or delete/edit the selected DVR. The name and IP/MAC address of the registered DVR are displayed. If the DVR uses a static IP, select **Static IP** in **Address Type**, enter the name of DVR in **Name**, and the IP address in **IP Address**.
Set the port number in **Port No**. so that it matches the port number that you've set in the network menu of DVR. For connecting to the DVR, you need to set both Admin password and user password.



If your DVR uses a dynamic IP such as in a cable modem, VDSL, and PPPoE for ADSL, set the address in **MAC Address.**
Set the port number in **Port No**. so that it matches the port number that you've set in the network menu of DVR.



If you have selected **Use DDNS** in the

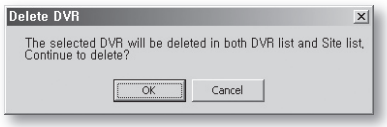
Network Settings menu of DVR or used an IP splitter to register a URL using DDNS, you can connect through the designated URL.
If you want to connect through the URL, select **URL** in **Address Type** and enter the URL set in **URL**.
Set the port number in **Port No**. so that it matches the port number that you've set in the network menu of DVR.

- The MAC address of DVR is written on the side label of the product. It is also found in the system information on the DVR setup menu.
- If the DVR is connected to ADSL, a low network bandwidth is available. Accordingly, the transfer rate becomes low and Smart Viewer limitedly operates.
- Smart Viewer can monitor up to 16 channels at the same time.
- Smart Viewer can search or play one channel only.
- The audio does not play.
- The playback frame speed is 0.5 ips in average and it may vary depending on the number of channels and video size.

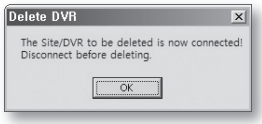
To delete an existing DVR, click **Delete**.



To delete a DVR from the list, click **Delete**. Then the following message appears. Click **OK** to confirm it.



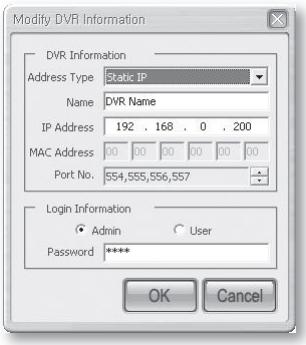
When the DVR to be deleted is connected to Smart Viewer, the following message also appears. If you really want to delete the DVR, disconnect the DVR and retry to delete it.



To edit the existing DVR, click **Modify**.



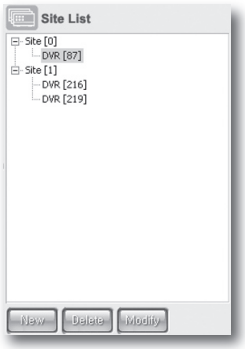
After modifying the settings, click **OK**.



When the DVR to be modified is connected to Smart Viewer, the following message appears. If you really want to modify the DVR, disconnect the DVR and retry to modify it.



- **Site List**

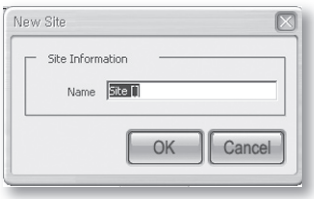


You can assign multiple DVRs (up to 16) to a site for control. You can register a new site and delete or edit the selected site in the registered list. After sites are correctly constructed, you can add or delete DVRs for the selected site.

To add a new site, click **New**.



After pressing **New**, the following window appears. You can enter the name of site and click **OK**.

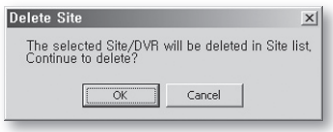


The site name can be input up to 15 characters in English or number and 7 characters in Korean.

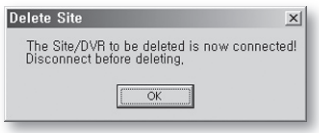
To delete an existing site or DVR, use **Delete**.



After selecting a site or DVR and click **Delete**, the following message appears. Click **OK** to confirm it. After this action, the DVR name is deleted but the information of DVR is not removed.



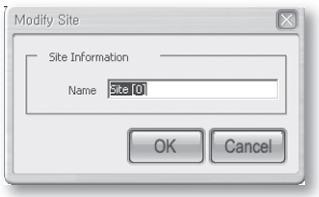
When the site to be deleted is connected to Smart Viewer, the following message appears. If you really want to delete the site, disconnect the site and retry to delete it.



To edit an existing site, click **Modify**.



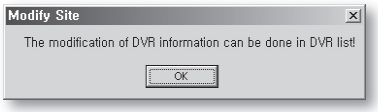
Change the site name.



When the site is connected to Smart Viewer, the following message appears. If you really want to modify the name of site, disconnect the site and retry to modify it.



When you select a DVR in the site list and click **Modify**, the following message appears.
To edit the DVR, go to the DVR list.



To add a DVR to the site, select a DVR and click **Add**.



If you click **Add**, the selected DVR is added to the selected site. But the ADSL-enabled DVR cannot be added to the site. If you click **Add** to add a DVR while any site is not selected, a new site named “Site [0]” is created by default and the selected DVR is added in it. When you select the connected DVR and click **Add**, the following message appears. If you really want to add the DVR, disconnect the DVR and retry to add it.

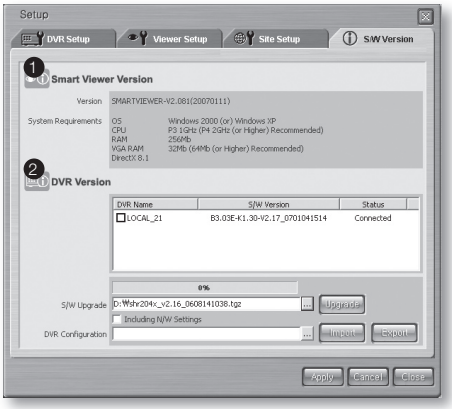


S/W Version



When you click **S/W Version**, the program displays the software-related information such as Smart Viewer version, system requirements, and the version information on the connected DVRs.

You can also upgrade the DVR system software remotely, and import and export the DVR-related settings. Only the Admin user can perform these functions.



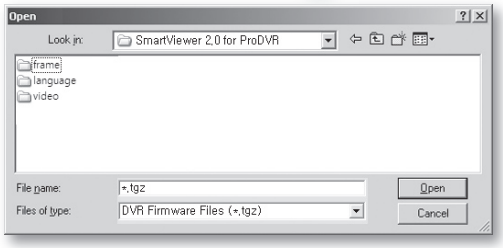
1. Displays the version and system requirements of Smart Viewer.Depending on the software version, screen images shown here may be different from the actual product.
2. Displays the version and name of DVR if any DRV is connected to Smart Viewer. This area can also provide functions for remotely upgrading the DVR software, extracting, and recovering the DVR settings.

• If a DVR is not connected to Smart Viewer, it is displayed in gray and “Not Connected” appears in the Status column.



For software upgrade, click the following button to open the DVR firmware file.





After selecting a firmware file, click **Open** and select **Upgrade**.



The progress of the upgrade is displayed at the bottom of the screen.



Smart Viewer enables you to extract the menu settings for the connected DVR. After selecting a DVR, click **Export**.



The DVR settings are stored into a data file (*.dat).

By clicking **Import**, the stored data file can be copied to your DVR to recover the settings.



If you want to recover the network settings also, check the following check box.



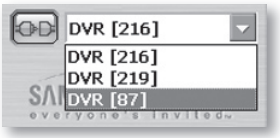
CAUTION

- Be sure to stop all the DVR operations such as recording, Menu setup, backup, and playback before upgrading the DVR software.
- During the software upgrade, don’t turn off the power of DVR. The software upgrade takes about 5 minutes.
- If the software upgrade is accidentally suspended, the previous software is left intact.

You can download the upgraded DVR firmware from the CCTV part at www.samsung.com.

MONITORING MODE

To connect a DVR or site, select a DVR or site from the list and click the connection button as shown in the picture.



For this connection, you should have set the DVR information such as name, IP, and password in the Setup Mode. If you select a site, it enables connection to multiple DVRs contained in the site.

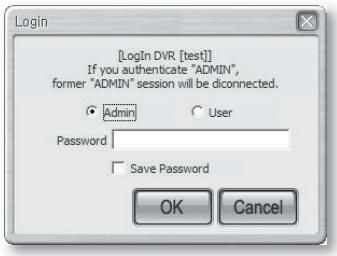
Connection Failure Cases

1. Password certification failure



If the network password of a DVR differs from the connection password set in Smart Viewer, a login message appears to let you input the correct password manually.

2. Duplicate Admin user connection



When the DVR that you want to connect to has been already occupied by an Admin user but you retry connection with the Admin privilege, the previously connected session is automatically disconnected.

The system allows simultaneous access to DVR by up to 3 users, which include one Admin privilege user and 2 user privilege users. (But in case of Multicast, up to 5 users are allowed.)

CAUTION Once occupied by 3 users, the DVR does not permit more connection.

Connection Screen



CAUTION If you change the settings such as video size and color quality while Smart Viewer is running, Smart Viewer may fall into an unexpected state. In this case, you must terminate Smart Viewer.

Mode Conversion Button



These buttons enables you to switch between Monitoring mode and Search mode.

Time Information



When Smart Viewer is connected to a DVR, the current date, day, and time of the DVR are displayed. Otherwise, the current date, day, and time of your PC are displayed.

Connection Information



When Smart Viewer is connected to DVR, the connection button will display the connection status.
If you click the connection button again, the DVR is disconnected.

OSD Information Display

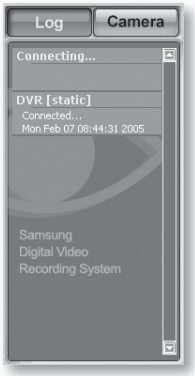


1. The channel number, camera name, and video size are displayed. Available video sizes are (C)CIF, (N)Normal, and (L)Large.
2. If the video data of the current channel is being recorded on your PC, **REC** appears on the screen.

3. When audio signal is available, the audio mark appears.
4. It displays whether the PTZ controls are active.
5. The current channel alarm status is displayed.
6. The name and IP address of the connected DVR are displayed.

- Clicking the speaker icon changes the audio On and Off.
  : Audio Off : Audio On
- When the audio function is disabled, the following icon is displayed.
  : Audio Disabled
- When the alarm or motion is detected, its status is displayed on the screen in real time with the corresponding icon.
  : Motion Detection : Alarm Event
- If you have set PTZ cameras for the DVR, the PTZ icon is displayed on the screen. Select a PTZ camera channel and use the PTZ buttons for control. (For more information, refer to Chapter 5, "PTZ Camera Control.")

Event Log Display Window

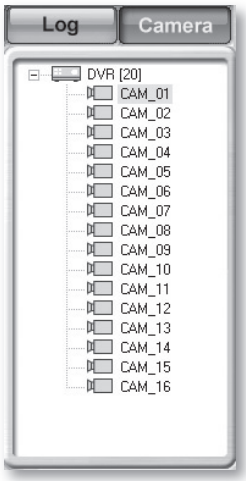


Click **Log** to activate the log display window. It displays the events such as alarms, connection events, and setup change events in real time.

The displayed events are:
- **Connecting..:** When trying to connect to a DVR is in progress.
- **Connected..:** When connection is made to a DVR.
- **Connection Failed:** When connection to a DVR fails.
- **Disconnected..:** When the DVR is disconnected.
- **Setup (Remote):** When any DVR settings are changed by Smart Viewer.
- **Setup Start/End (Local):** When the Menu Setup window for the DVR is started or ended.
- **Video Loss CH[N]:** When a video loss in a channel is detected.
- **Time Change:** When the date and time of the DVR are changed.
- **Load Factory Default:** When the DVR system is initialized.
- **Network Change:** When the DVR network setup is changed.
- **System Shutdown:** When the DVR system is terminated.
- **HDD Format:** When the HDD formatting is initialized.
- **Disk Full:** When there is no more space in the HDD of DVR.
- **Power Failure Recovery:** When the DVR resumes after power failure.
- **Backup Start/End/Fail/Stop:** Backup for the DVR is started, finished, failed, or stopped.
- **Network Traffic Busy:** Data transport through the network is not smoothly going.
- **Access Denied (Limit Over):** No more access is allowed because the connection limit is over.

CAUTION When specific events such as time change, load factory default, network change, system shutdown, or HDD format are detected, Smart Viewer automatically terminates the connection.

Camera Connection Indication Window



The window displays the connection state of DVR and the connected cameras.

- **Yellow:** When Smart Viewer is successfully connected to a DVR. When the camera is connected for monitoring.
- **Black:** When Smart Viewer cannot be connected to a DVR.
- **Blue:** When Smart Viewer can connect to a DVR but it is disconnected now.

Screen Split Selection Buttons



The buttons present modes like full screen, single, 4-split, 9-split, and 16-split modes. You can change to any of them under monitoring.

Sequence Mode Button



When this button is selected, screens are switched at a preset interval. The interval can be set in **Monitoring** of Setup Menu. In Single Mode, the channel numbers are sequentially switched from 1 to 16. In Quad (4-split) Mode, the screens are changed like 1st 4 channels (1,2,3,4) --> 2nd 4 channels (5,6,7,8) --> 3rd 4 channels (9,10,11,12) --> 4th 4 channels (13,14,15,16). In 9-split Mode, the screens are changed from 9 channels (1,2,3,4,5,6,7,8,9) to 7 channels (10,11,12,13,14,15,16). In 16-split Mode, the screen refreshes at the preset interval.

Monitoring State Display

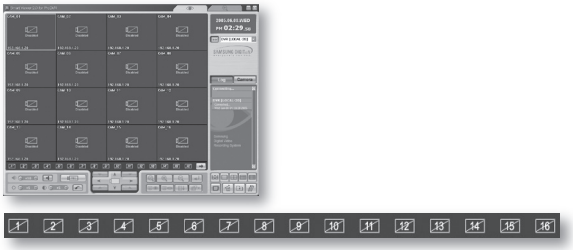
The screen split status and playing status are displayed on the screen.



: When monitoring in Quad Mode



: When monitoring in Single Mode



: Cameras are turned Off

The numbers in the screen icons indicate the screen positions in Smart Viewer.



: The orange icon indicates that the current channel is connected to a specific camera.



: The gray icon indicates that the current channel is connected to a camera but not displayed in the screen.



: The black icon with a slash indicates that the current channel is not connected to any camera.

NEXT Button

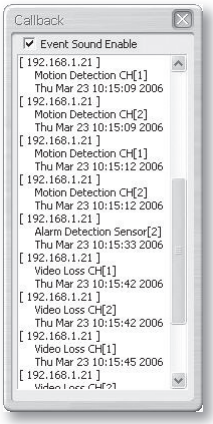


When this button is clicked, next screen follows. In Single Mode, the channel numbers are sequentially switched from 1 to 16. In Quad (4-split) Mode, the screens are changed like 1st 4 channels (1,2,3,4) --> 2nd 4 channels (5,6,7,8) --> 3rd 4 channels (9,10,11,12) --> 4th 4 channels (13,14,15,16). In 9-split Mode, the screens are changed from 9 channels (1,2,3,4,5,6,7,8,9) to 7 channels (10,11,12,13,14,15,16). In 16-split Mode, the screen is refreshed.

CALLBACK Button



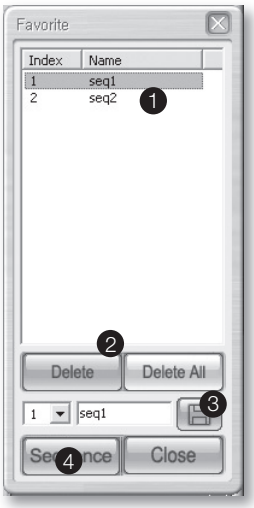
If you press this button, the callback window is activated to receive event messages. When receiving a message, Smart Viewer automatically connects to the corresponding DVR. The messages are video loss events, alarm events, and motion detection events. You can decide whether the received event will bring up alarming sound or not.



FAVORITE Button



If you press this button, the favorite window is activated.



1. The cameras set for Favorite are displayed on the screen.
2. Clicking **Delete** removes a favorite setting. Clicking **Delete All** removes all the favorite settings.
3. Click this button to save the new favorite number and name.
4. Change favorites at the preset interval.

- The FAVORITE button is available only when you connect to a site.
- The FAVORITE settings are saved in the Config file even after you disconnect the site.
- When you change the DVR list that makes the site in Setup, the FAVORITE settings are initialized.

Video Recording Button



If you select a channel and click **REC**, the video data will be saved in a DVR file on your PC. The directory, file naming convention, and recording time can be configured in Viewer Setup for Setup Mode. The saved video file can be played in Search mode. To stop recording, click this button again. But this action is possible in 10 seconds after the recording starts.

Audio Volume Control Button



You can adjust the audio volume level (0 to 10) of a channel or mute it.

Video Brightness/Contrast Control Button



After selecting a channel, you can adjust the brightness and contrast levels (0 to 10) of video image using the control buttons (+,-). The default value is 5. To return the default settings, press the button on the right.

- The adjusted audio volume, brightness, and contrast values are saved on your PC and remain unchanged even if Smart Viewer restarts.
- The brightness and contrast adjustment may not work depending on the model.

PTZ Camera Control Buttons



You can handle the following PTZ operations after selecting a PTZ-enabled channel.
- Panning Left/Right
- Tilting Up/Down
- Diagonal controls

The channel number is displayed at the center of PTZ control buttons.



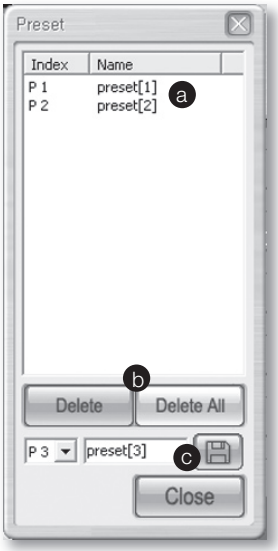
❶ Power Zoom
After the **Power Zoom** button is clicked, you can use the Zoom In and Out functions.

❷❸ Zoom In/Out

The PTZ (Pan/Tilt/Zoom) controls are available in all cameras. But, this Power Zoom controls are supported by Samsung smart dome cameras only, and they support the tilting operation below 45°.



❶ **PRESET**
If you press this button, the Preset setup window appears.



a. If you select a preset, the camera moves to the preset position.
b. You can delete the selected preset or all presets.
c. You can save the new preset number and name.

❷ **AUTOPAN:** The camera moves between starting and ending points.

❸ **SCAN:** The camera moves circulating the preset positions.

❹ **PATTERN:** The camera moves following the route that you have defined.

The preset function is supported by all cameras. You can set up to 20 presets. But an active directory (AD) protocol camera can have 7 presets.
The names of ❷,❸, and ❹ may vary depending on the camera vendor. And those functions may not be supported by some product.

- Samsung cameras support those functions.
- In case of Panasonic cameras, the names of AUTOPAN, SCAN, and PATTERN are as following:
  ❷ SEQUENCE ❸ AUTOPAN ❹ SORT.
- In case of PELCO cameras, the names of AUTOPAN, SCAN, and PATTERN are as following:
  ❷ FRAME SCAN ❸ AUTO SCAN
  ❹ PATTERN.
- The other cameras do not support those functions.

Self Menu Setup of PTZ device



1. You can configure the camera-related settings using the PTZ camera menu.



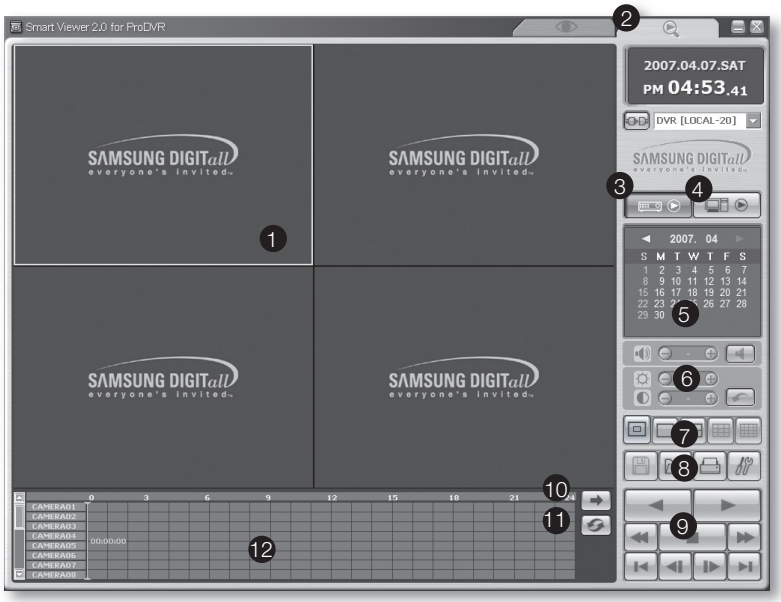
1. This is the camera self menu screen.
   The screen can be shown on Smart Viewer.
2. Use the **Direction** buttons for movement between menus.
3. The button operates the same as the **ENTER** button.

The Camera Menu Setup function is supported for Samsung and Panasonic cameras only.

CAUTION When a DVR is using the PTZ camera controls, Smart Viewer cannot control the PTZ camera. The PTZ camera controls can be used by the Admin user.

SEARCH MODE

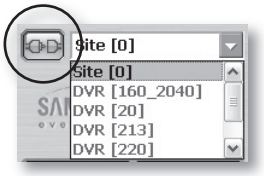
The Search mode has two separate modes such as Remote mode to search/play the DVR video data, and Local mode to play the DVR files that have been saved in the designated directory on your PC.



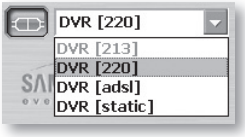
1. The screen shows the playback channels.
2. Click this to move to the Search mode for searching and playing the video files recorded.
3. Click this to move to the Remote mode for playing back the recorded DVR video images remotely.
4. Click this to move to the Local mode for playing back the DVR files recorded on your PC.
5. Use this calendar to select year, month, and date for search.
6. Use buttons for adjusting the audio volume and video brightness/contrast.
7. Click any of screen display modes.
8. Use buttons for recording, converting, printing, and setup.
9. Use buttons for playback of searched video file.
10. Use the button to display the next screens in order.
11. Use this button to renew the information about changing to channel/DVR, calendar, and time line.
12. It shows the time line for displaying the time information for search of the recorded video data.

- When connecting to a site, select a DVR for search.
- With a user privilege, you cannot access the Search mode.

Select a site or DVR first and click the connection button.



You can also select a DVR.



Remote Mode

This mode transfers the video data recorded on DVR through the network for playback. Up to 4 channels are allowed for simultaneous search and playback. The video data is played at the position where the time bar is located.



When clicking this button, it changes to the Remote mode.



Calendar Window



If the video data has been recorded on a date, the date is distinguished in red. If you click the date, the recorded video information is displayed in the time line. If you select a date, it turns in red. Clicking ◀ changes to the previous month and clicking ▶ changes to the next month.

Audio Volume, Video Brightness/ Contrast Buttons



Those buttons operate the same as the controls in Monitoring Mode. The brightness and contrast adjustment may not work depending on the model.

Screen Split Selection Buttons

You can use any of full screen, single, quad (4-split), 9-split, and 16-split modes.

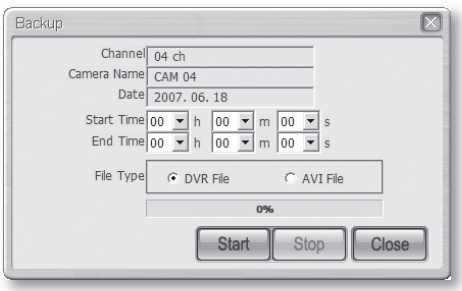


In the Remote mode, 9-split mode is not available while in the Local mode, quad and 9-split modes are not available.

Video Save (Backup)/Video Conversion/Print/Setup



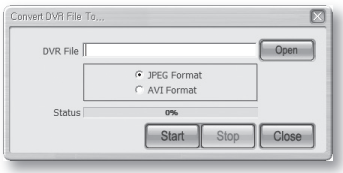
1. **Video Save** button
   During playback (play/reverse play/fast forward/fast backward), if you select a channel and click this button, the video data is saved in a DVR file. (It is saved in the designated folder on your PC.)
   The directory, file naming convention, and recording time can be configured in Viewer Setup for Setup Mode. You can set the recording duration ranging from one minute to 10 minutes. To stop recording, click this button again. But this action is possible in 10 seconds after the recording starts.
   If the video file is not playing, this button enables you to perform backup, which brings up the following window.



   You can set the starting and ending times for backup and select a file format for saving. Clicking **Start** begins the backup process. The backup file is saved in the folder which was defined by **Setup > Viewer Setup > Video Recording > Video Location**.
   To stop the backup process, click **Stop**.

This function is enabled only when the playback actions are in progress.

2. File Conversion button
When this button is clicked, the system converts a DVR file into JPEG or AVI format.



To perform this function

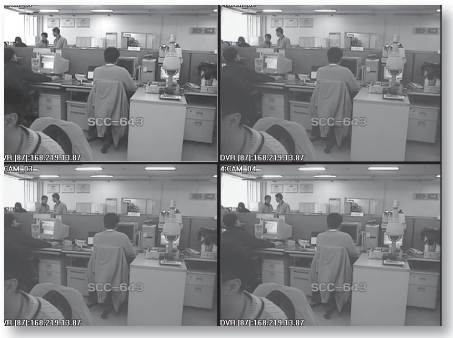
a. Click **Open** to select a DVR file to be converted.

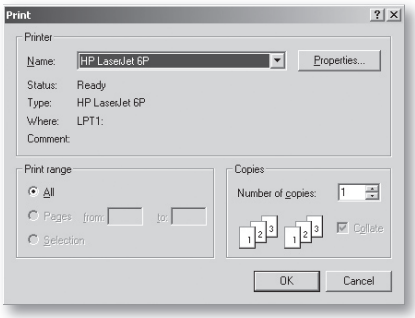
b. Select JPEG Frame or AVI Video.

c. Click **Start** to convert the file. To stop conversion, click **Stop**.

- If **JPEG Frame** is selected, the file is converted to "*.jpg" file after clicking **Start**. The converted JPG file is saved according to the preset route: **Setup > Viewer Setup > File Converting > Jpeg Location**.
- If **AVI Video** is selected, the file is converted to the "*.avi" file after clicking **Start**. The converted AVI file is saved according to the preset route: **Setup > Viewer Setup > File Converting > AVI Location**.
- In case of AVI backup, you need the divX codec for playing saved files. The divX codec can be found at www.divx.com.

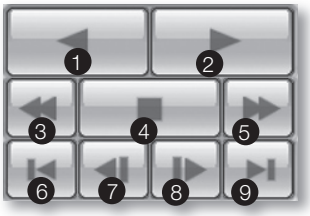
3. Print button
This button prints the playback screen that is now being displayed.





4. Setup Mode button
This button brings up the Setup Mode window.

5. Play buttons

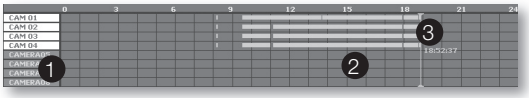


1. Reverse Play: Performs Reverse Play
2. Play: Performs playback
3. Fast Backward: Reverse-plays faster
4. Stop: Stops playing
5. Fast Forward: Plays faster
6. Go to Last: Plays the latest (last) image in the time line
7. Step Backward: Performs one step reverse-play by one second
8. Step Forward: Performs one step forward by one second
9. Go to First: Plays the first image in the time line

During play (Play/RevPlay/FF/FB), disconnection or change to both Monitoring and Local modes is not permitted. Click **Stop** first before any change.

6. Time Line

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



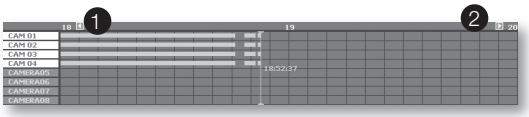
[Normal mode]

❶ The channels that are being displayed on the playback screen are distinguished on white background.

❷ The highlighted time bar displays the time range of the video image.

❸ The time lines display the time division.

- If you double-click an area of a time bar, it changes to the extension mode.
- One column of time line represents one hour.
- The colors of time lines change depending on the recording state: Green (normal), Red (Panic), Orange (Alarm), Blue (Motion), Yellow (Schedule), and Purple (Video Loss).



[Extension Mode]

❶ Displays the time line of one hour before

❷ Displays the time line of one hour after

- If you double-click an area of a time bar, it changes to the normal mode.
- Each time line represents 5 minutes.
- The colors of time line change depending on the recording state: Green (normal), Red (Panic), Orange (Alarm), Blue (Motion), Yellow (Schedule), and Purple (Video Loss).

7. Next button



It operates the same as the Next button in the Monitoring mode.

You cannot change the channel while playing an image (Play/Reverse Play/Fast Forward/Fast Backward).

8. Reload button



It renews the recording time information in both the calendar and time line.

9. Local Mode

This mode is used to play the DVR file recorded in the directory on your PC. You can search and play only one channel. You can access the recorded files regardless of connection to DVR. Other functions than Calendar are the same as those of the Remote mode. The time information of local files is displayed at the first channel position in the time line together with the file name.


: Click this button to change to the Local mode.

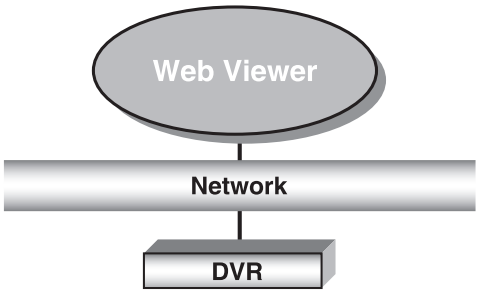


Only the DVR files saved with the audio being activated can be played with audio sound in the Local mode.

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, PTZ control (if configured), etc.

PRODUCT FEATURES

- **Remote access from a standard browser**
- **Supports PTZ camera controls**
- **Supports 1, 4, 8, 16 camera viewing formats (maximum of 16 cameras in the list).**
- **Gets JPEG format images to print and save to "Print or Save JPEG format images".**
- **Record video in AVI format—compatible with popular media players. (needed the Divx codec)**

SYSTEM REQUIREMENTS

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

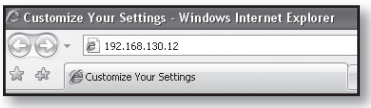
OS	Windows XP Professional Windows 2000 Windows Vista Home Basic / Premium
Web Browser	Internet Explorer 6.0.2900.2180 or higher
CPU	Intel Pentium 4 with 2 GHz processor
MEMORY	512 MB
Monitor	High Color 16-bit 1024 x 768
HDD	50 MB(Installation space required) * Additional HDD space required for recording. Recorded file size will vary depending on recording quality settings.

CONNECTING Web Viewer

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 :
- 00-00-F0-ab-cd-ef : nabcdef.websamsung.net
- 00-16-6c-ab-cd-ef : mabcdef.websamsung.net
- 00-68-36-ab-cd-ef : pabcdef.websamsung.net

You can also use registered URL which setups up in the Setup menu of your DVR.

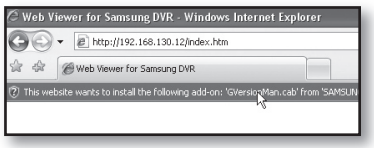


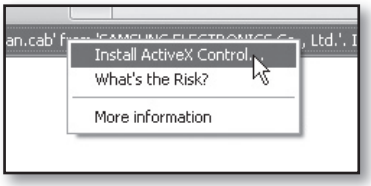
2. For Administrator, type "**ADMIN**", and then type the password that DVR is set up to. Non-admin users type "**USER**" and password.

- The DVR allows simultaneous access to DVR by up to 3 users, which include one Admin privilege user and 2 user privilege users.
- The factory default password for Administrator privileges is "4321."
- Non-admin user can not access to SEARCH and SETUP menu.
- You can change the password for Administrator and user privileges in IP Settings menu of the DVR.



3. Click "**Install ActiveX Control…**"





4. Click "**Install**".



5. Click "**Install**".



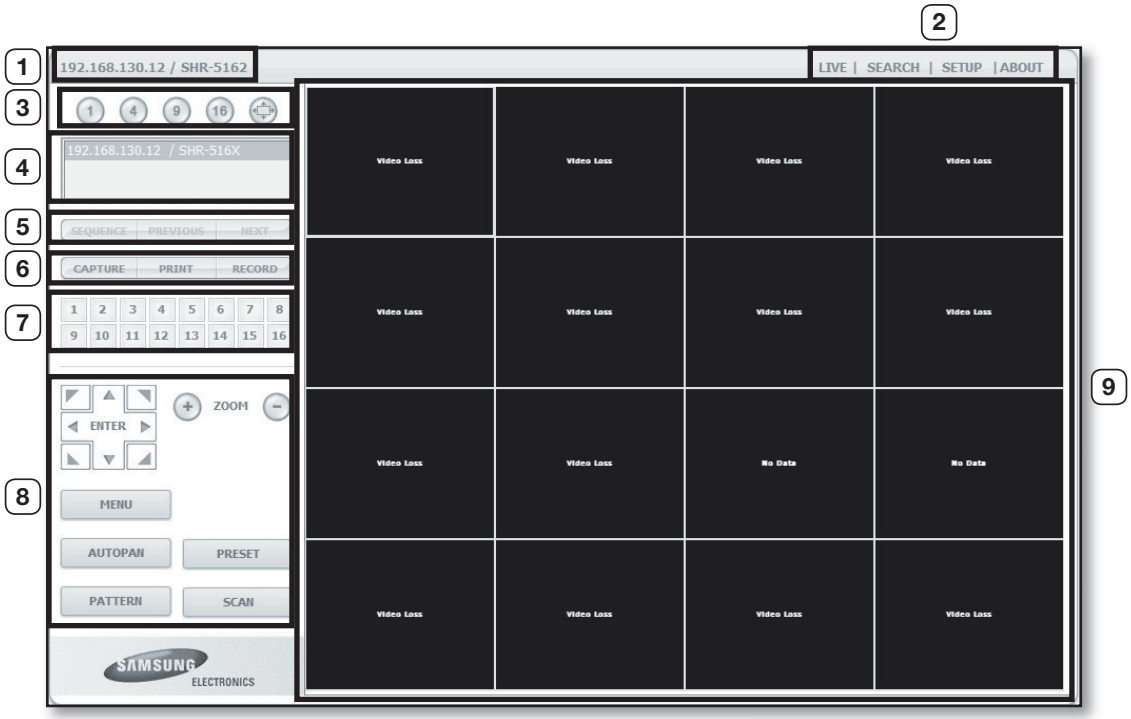
6. You may have "**Windows Security Alert**" that attempts to block this with the Windows Firewall. In that case, click "**Unblock**" to start Web Viewer.



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



USING Live Viewer

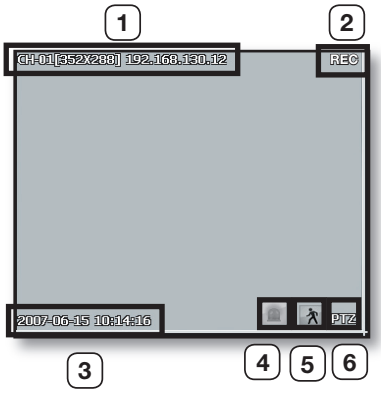


The Live Viewer screen consists of following :

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. This displays the IP address and the status of the connecting DVR.
5. These buttons are used for sequence and changing the screen channel.
6. These buttons are used for capture, print, and save the image.
7. These buttons display the current channel.
8. These buttons are used for PTZ related functions.
9. This displays the screen for connected camera with DVR.

- The resolution is at 1024 x 768 pixels.
- The initial screen split mode is according to the channel numbers of the connected DVR. You can change the screen split mode by clicking buttons for splitting screen.
- Non-admin users do not have access to **SEARCH** and **SETUP** menu.

OSD INFORMATION DISPLAY



1. The channel number, video size, and IP address of the connected DVR are displayed.
2. If the video data of the current channel is being recorded on your PC, "**REC**" appears on the screen.
3. The current date and time of the DVR are displayed.
4. Alarm icon appears when alarm is issued. It disappears when pressed the **ALRAM** button of the DVR.
5. Motion icon appears when motion is detected. It disappears when pressed the **ALRAM** button of the DVR.

⑥ 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**”.

FULL SCREEN MODE

- Click button.
  The screen displays the selected camera connected to the DVR in “**FULL SCREEN MODE**”. To back to the previous mode, press the ESC key.

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.
  Wrong ID : Appears when the input ID is wrong.
  Wrong Password : Appears when the input password is wrong.
  Wrong Port Number : Appears when the port number is wrong.
  Collision : Appears when Admin mode is already in use or simultaneous access to the same DVR from the PC.
  User Full : Appears when the maximum number of users is exceeded.
- The numbers of simultaneous connection are 3 which includes the users for SmartViewer.

CHANGING THE LIVE SCREEN MODE



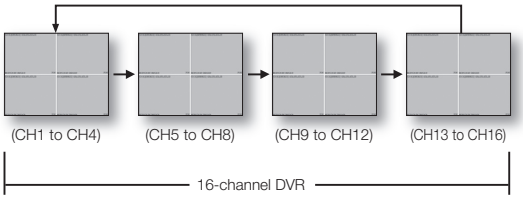
- **SEQUENCE**: When this button is clicked, screens are switched at a preset interval.
  In **SINGLE MODE**, the channel numbers are sequentially switched from 1 to 16.
  In **QUAD MODE**, the screens are changed like 1st 4 channels (1~4) → 2nd 4 channels(5~8) → 3rd 4 channels(9~12) → 4th 4 channels (13~16).
  In **NINE MODE**, the screens are changed from 9 channels (1~9) to 7 channels (10~16).
  In **SIXTEEN MODE**, the screen refreshes at the preset interval

Preset interval (10 seconds)

- **PREVIOUS**: When this button is clicked, previous screen follows.
  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).
  In **SIXTEEN MODE**, the screen is refreshed.

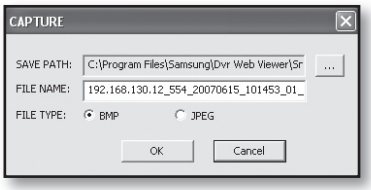
- **NEXT**: When this button is clicked, next screen follows.
  In **SINGLE MODE**, the channel numbers are sequentially switched from 1 to 16.
  In **QUAD MODE**, the screens are changed like 1st 4 channels (1~4) → 2nd 4 channels (5~8) → 3rd 4 channels (9~12) → 4th 4 channels (13~16).
  In **NINE MODE**, the screens are changed from 9 channels (1~9) to 7 channels (10~16).
  In **SIXTEEN MODE**, the screen is refreshed.

- If 16-channel DVR is connected, clicking "**NEXT**" in **QUAD MODE** is to change the screen as shown in the picture.



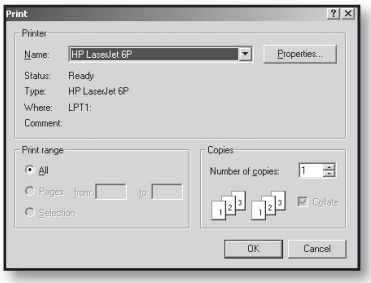
SAVING THE LIVE SCREEN ON THE PC

- **CAPTURE**: Captures the current picture on the screen and saves it as a jpg or bmp image file.

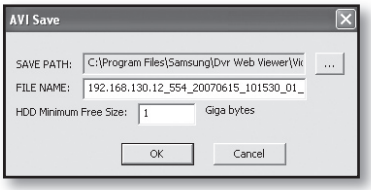


- The default saving path is "C:\Program Files\Samsung\Dvr Web Viewer\SnapShot\Live". To change the saving path, click "SAVE PATH" button(...) and then select the path you want. For Windows Vista, the saving path is "C:\users\(user ID)\AppData\LocalLow\Samsung\DVR Web Viewer\Snapshot\" and it cannot be modified.
- The file is automatically named as following: "IP address_Port number_YYMMDD_camera number_index" Ex) 192.168.130.12_554_20070615_101530_01_00

- **PRINT**: Prints the live screen that is now being displayed.It also prints IP address, time, camera number, and current event state.



• **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, the saving path is “C:\users\(user ID)\AppData\Local-Low\Samsung\DVR Web Viewer\VideoClip\” and it cannot be modified.
- The file is automatically named as following: “IP address_Port number_YYMMDD_camera number_index” Ex) 192.168.130.12_554_20070615_101530_01_00
- For **AVI Save**, you need the DivX codec for playing saved files. You can download the free version of the Divx codec at http://sourceforge.net/projects/ffdshow/.

CHANGING THE LIVE SCREEN CHANNEL

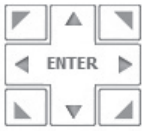
Each number indicates the screen positions in Web Viewer.

- Blue numbers : Indicates that the current channel is connected to a camera.
- Gray numbers : Indicates that the current channel is not connected to any camera.

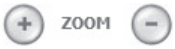


USING PTZ CAMERA





Click the direction buttons to control the camera.

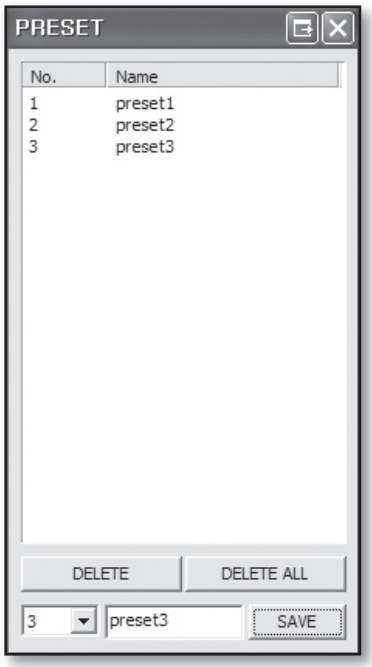


Click the + or - buttons to zoom in or out the image displayed.

MENU: Appears the camera menu screen.



PRESET: Moves the lens direction to a preset direction.



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

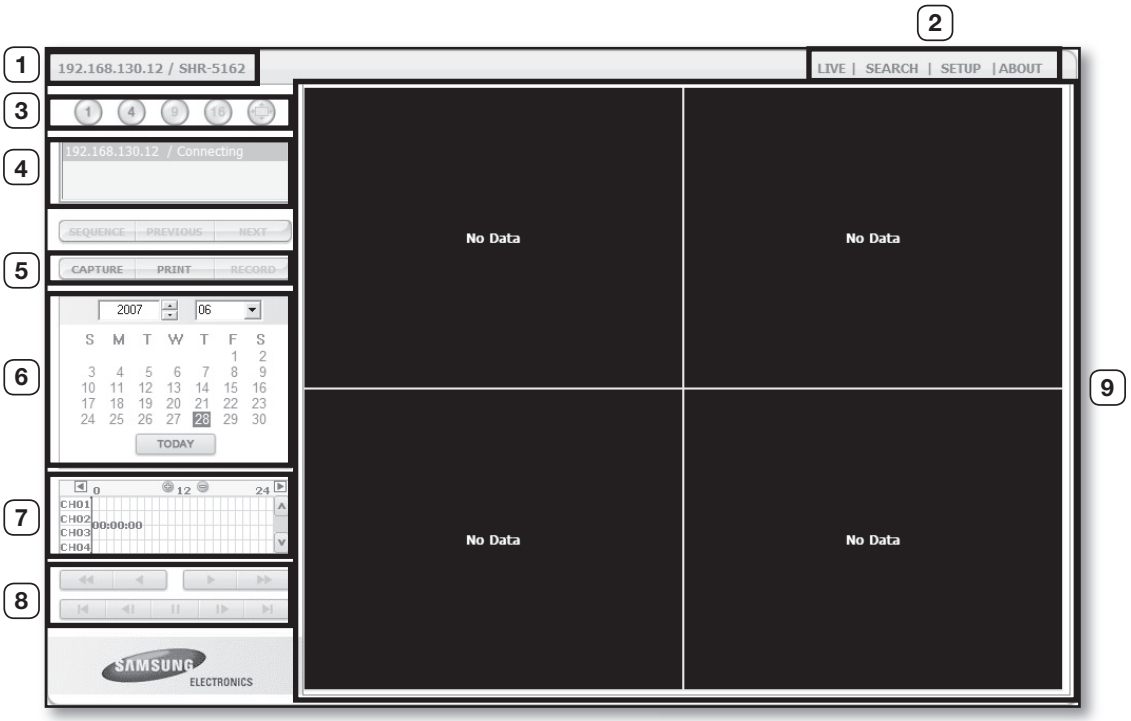
You can save the preset up to 20.

AUTOPAN: 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.

- When a DVR is using the PTZ camera controls, Web Viewer cannot control the PTZ camera.
- The PTZ camera controls can be used by the admin user.
- The Camera Menu Setup function is available only supported cameras.
- All function of PTZ is same as one of DVR.
- Power pan/tilt function operates only with supported cameras. (Example: Samsung SCC-6475)
- Drag down to zoom in or drag up to zoom out by power pan/tilt function.



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

⑤ These buttons are used for capture, print, and save the image.

⑥ This displays a calendar at which you can search the recorded video.

⑦ This displays a timeline at which you can search the recorded video by the time.

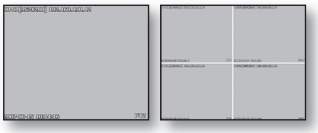
⑧ These buttons are used for controlling playback.

⑨ This displays the screen for playback of recorded video.

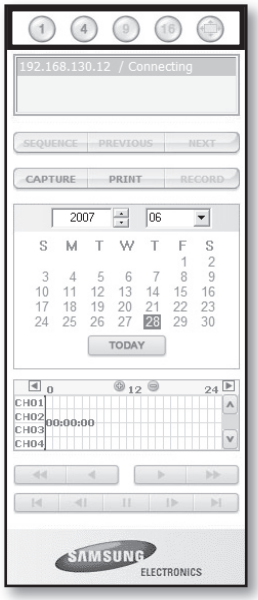
- **SEQUENCE, PREVIOUS, NEXT** buttons are not available in **SEARCH** menu.
- Non-admin users do not have access to **SEARCH** and **SETUP** menu.

SPLIT-SCREEN

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



SINGLE MODE QUAD MODE



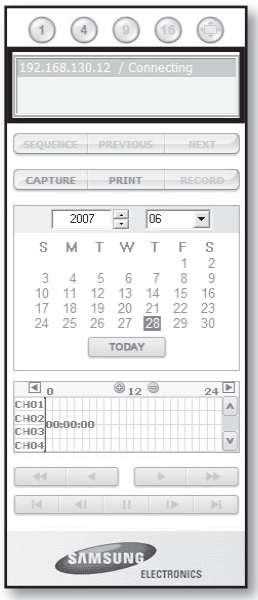
• Click (1) button.
The screen displays the selected camera connected to the DVR in "**SINGLE MODE**".

• 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.
• Om 16-kanals DVR är ansluten, kan du välja kanalerna som ligger från 1 till 16.

CONNECTED DVR

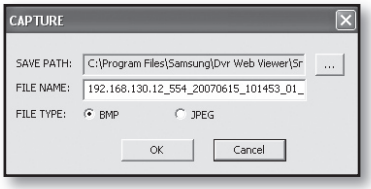
This displays the IP address and the status of the connecting DVR.



• Connection failure message
No Response : Appears when the DVR does not respond.
Wrong ID : Appears when the input ID is wrong.
Wrong Password : Appears when the input password is wrong.
Wrong Port Number : Appears when the port number is wrong.
Collision : Appears when Admin mode is already in use or simultaneous access to the same DVR from the PC.
User Full : Appears when the maximum number of users is exceeded.
• The numbers of simultaneous connection are 3 which includes the users for SmartViewer.

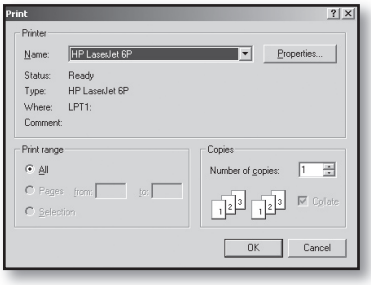
SAVING THE LIVE SCREEN ON THE PC

• **CAPTURE**: Captures the current picture on the screen and saves it as a jpg or bmp image file.

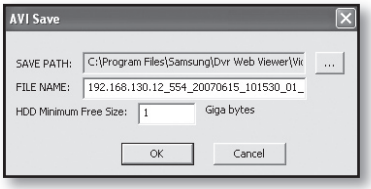


• The default saving path is "C:\Program Files\Samsung\Dvr Web Viewer\SnapShot\Search". To change the saving path, click "SAVE PATH" button(...) and then select the path you want. For Windows Vista, the saving path is "C:\users\(user ID)\AppData\LocalLow\Samsung\DVR Web Viewer\Snapshot\" and it cannot be modified.
• The file is automatically named as following: "IP address_Port number_YYMMDD_camera number_index" Ex) 192.168.130.12_554_20070615_101453_01_00

• **PRINT**: Prints the playback screen that is now being displayed. It also prints IP address, time, camera number, and current event state.



• **RECORD**: If you select a channel and click this button during playback (only play), the video data is saved in a DVR 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, the saving path is “C:\users\(user ID)\AppData\LocalLow\Samsung\DVR Web Viewer\VideoClip\” and it cannot be modified.
- The file is automatically named as following: “IP address_Port number_YYMMDD_camera number_index” Ex) 192.168.130.12_554_20070615_101530_01_00
- For AVI save, you need the DivX codec for playing saved files. You can download the free version of the Divx codec at http://sourceforge.net/projects/ffdshow/.

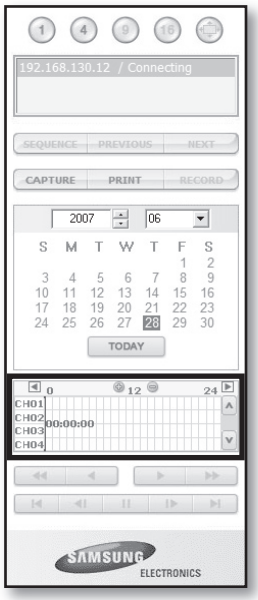
SEARCHING THE RECORDED VIDEO IN THE CALENDAR





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 is changed to today’s date.

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.

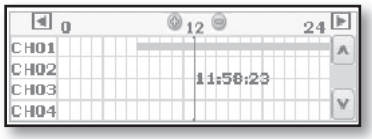
[Normal Mode]

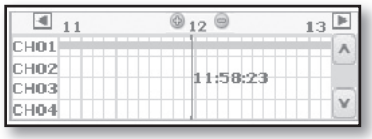
- If you click button, it changes to the extension mode.
- Each time line represents 1 hour.

[Extension Mode]

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

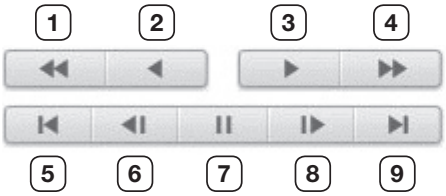
- The channels are ranging from CH01 to CH16.





CONTROLLING PLAYBACK

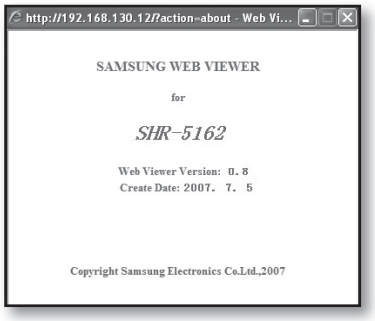




1. Fast Backward: Reverse-plays faster(2x).
2. Reverse Play: Performs Reverse Play.
3. Play: Performs playback.
4. Fast Forward: Plays faster(2x).
5. Go to First: Moves the beginning time of recorded video in the time line.
6. Step Backward: Performs one step reverse-play by one frame.
7. Stop: Stops playing.
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.

ABOUT

Click “ABOUT”.
Displays the model name of connected DVR and the version of Web Viewer.



PRODUCT SPECIFICATION

<table>
<tr><th colspan="2">Specs</th><th>Details</th><th>Notes</th></tr>
<tr><td colspan="2">Operating System</td><td>Embedded OS</td><td></td></tr>
<tr><td colspan="2">Broadcasting</td><td>NTSC / PAL System</td><td></td></tr>
<tr><td colspan="2">Input Voltage</td><td>AC 100 ~ 230V (PAL)
AC 110 ~ 220V (NTSC)</td><td></td></tr>
<tr><td colspan="2">Power Usage</td><td>60W</td><td></td></tr>
<tr><td rowspan="2">Video</td><td>Video Input</td><td>Composite 16(8) Channel
- 1.0Vp-p
- 75Ω Hi Z Termination
BNC Type
Loop Through Out 16(8) Channel
- Auto Termination</td><td></td></tr>
<tr><td>Video Output</td><td>Composite 3 Channel
- Normal Video Output 1 Channel
- Spot Output 2 Channel
- BNC Type
S-Video 1 Channel
- 1.0Vp-p
VGA 1 Channel</td><td></td></tr>
<tr><td rowspan="2">Audio</td><td>Audio Input</td><td>Mono 4 Channel
- -5dBm, 600Ω
RCA Type</td><td></td></tr>
<tr><td>Audio Output</td><td>Mono 1 Channel
- -6dBm
RCA Type</td><td></td></tr>
<tr><td rowspan="2">Live Screen</td><td>Resolution & Frame Speed</td><td><table><tr><td></td><td>NTSC</td><td>PAL</td></tr><tr><td>Resolution</td><td>720X480</td><td>720X576</td></tr><tr><td>Frame Rate</td><td>480ips(16Ch)/
240ips(8Ch)</td><td>400ips(16Ch)/
200ips(8Ch)</td></tr></table></td><td></td></tr>
<tr><td>Display Mode</td><td>Single
Screen Split Mode:
SHR-5160/5162 : 4, 6, 7, 8, 9, 16 split
SHR-5080/5082 : 4, 6, 7, 8, 9 split
Mode sequence
Freeze
2 X Zoom</td><td></td></tr>
</table>

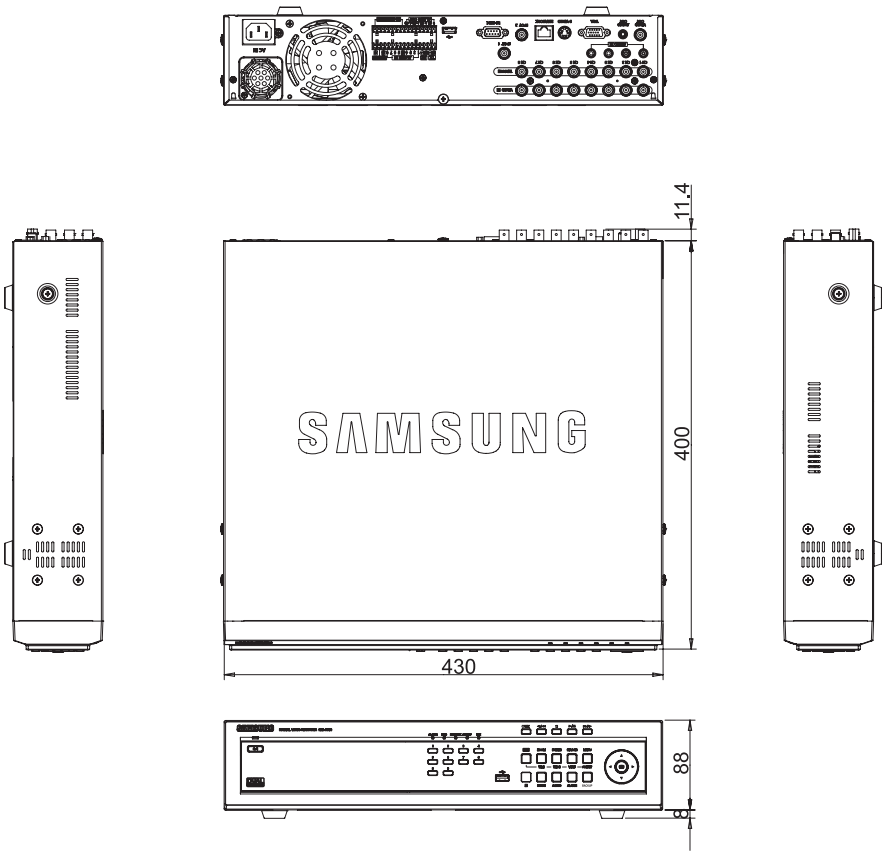
<table>
<tr><th colspan="2">Specs</th><th>Details</th><th>Notes</th></tr>
<tr><td rowspan="4">Recording</td><td>Compression Method</td><td>Video : MPEG4
Audio : ADPCM</td><td></td></tr>
<tr><td>Resolution & Recording Specs</td><td>
<table>
<tr><th>Resolution</th><th>Recording Specs (Picture quality)</th><th>Highest Image Recording Speed</th></tr>
<tr><td>CIF(C) 352X240(NTSC) /352X288(PAL)</td><td>Level8(High) ~ Level1(Low)</td><td>30ips(NTSC)/ 25ips(PAL)</td></tr>
<tr><td>Half D1(N) 720X240(NTSC) /720X288(PAL)</td><td>Level8(High) ~ Level1(Low)</td><td>30ips(NTSC)/ 25ips(PAL)</td></tr>
</table>
</td><td></td></tr>
<tr><td>Recording Mode</td><td>Normal Record → REC Key
Programmed Recording → Schedule Table
Event Recording
-Alarm Detection
-Motion Detection
-Video Loss
-Pre & Post Recording</td><td></td></tr>
<tr><td>Recording ips</td><td>NTSC : 0.9 / 1.8 / 3.7 / 7.5 / 15 / 30ips
(True Recording ips: 0.938/1.875/3.75/7.5/15/30ips)
PAL : 0.7 / 1.5 / 3.1 / 6.2 / 12.5 / 25ips
(True Recording ips: 0.781/1.563/3.125/6.25/12.5/25ips)</td><td></td></tr>
<tr><td rowspan="2">Save</td><td>Internal</td><td>SHR-5162/5082 : ATA HDD x 3(MAX)
MAX HDD Size : 500GB x 3 = 1.5TB
SHR-5160/5080 : ATA HDD x 4(MAX)
MAX HDD Size : 500GB x 4 = 2TB</td><td></td></tr>
<tr><td>External</td><td>USB HDD
-MAX 1 (Not support USB hub)
-MAX HDD Size : 500GB</td><td></td></tr>
<tr><td rowspan="2">Play Back</td><td>Search Mode</td><td>Calendar search
Event search
- Alarm, Motion, Video Loss
Date/time search
Initial search
Latest search
Backup search</td><td></td></tr>
<tr><td>Resolution & Recording Specs</td><td>
<table>
<tr><th rowspan="2">Resolution</th><th colspan="2">Recording Specs</th></tr>
<tr><th>8Ch</th><th>16Ch</th></tr>
<tr><td>CIF</td><td>15ips(NTSC)/12.5ips(PAL)</td><td>7.5ips(NTSC)/6.2ips(PAL)</td></tr>
<tr><td>Half D1(N)</td><td>7.5ips(NTSC)/6.2ips(PAL)</td><td>3.7ips(NTSC)/3.1ips(PAL)</td></tr>
</table>
</td><td>Total 120/100 ips(CIF) 60/50ips (Half D1)</td></tr>
</table>

Specs		Details	Notes
	Display Mode	Single → 1Channel Decoding 16 split (played cameras10-16) 9 split (played cameras 5-9) 4 split (played cameras 2-4) PIP → 1 Channel Decoding + 1Channel Live Triplex 9 split → 8 Channel Live + 1Channel PB Triplex 16 split → 15 Channel Live +1Channel PB	
Play Back	Play Mode	Play, Pause, Stop, 2x Digital Zoom Fast Forward/Fast Reverse - 2x, 4x, 8x, 16x, 32x, 64x	
Backup		USB External HDD USB CD/DVD Writer, Internal DVD (SHR-5162/5082 only) USB memory USB HDD -MAX 1 (Not support USB hub)	
Network		Ethernet : 10/100 Base T, ADSL(PPPoE), DHCP	
Serial Communication		RS-485 → PTZ Device Control, Remote Control Device	
Alarm		Input : SHR-5160/5162 : 16 Channel SHR-5080/5082 : 8 Channel Output : 4 Channel Support external alarm reset	
Remote Viewer	PC Detailed Specs	CPU : Pentium III, 1GHz or higher RAM : SDRAM 256MB or higher Graphic Accelerator : Graphic Memory 32MB or higher DirectX : 8.1 or higher	
	Supported Operating Systems	Win2000, WinXP	
	Function	Live Image Monitoring Mode Local File Search & Play Back Mode Remote File Search & Play Back Mode	
Operating Temperature		0°C ~ 40°C (32°F ~ 104°F)	
Storage Temperature		-20°C ~ +60°C (-4°F ~ +140°F)	
Operating Humidity		20% to 85% RH	
Storage Humidity		20% to 85% RH	
Size (W x H x D)		430 x 88 x 400mm (16.93 x 3.46 x 15.75 inch)	
Weight		SHR-5162/5082 : ~ 7.6kg(16.75 lb) SHR-5080 : ~6.7kg(14.77 lb) SHR-5160 : ~6.8kg(14.99 lb)	

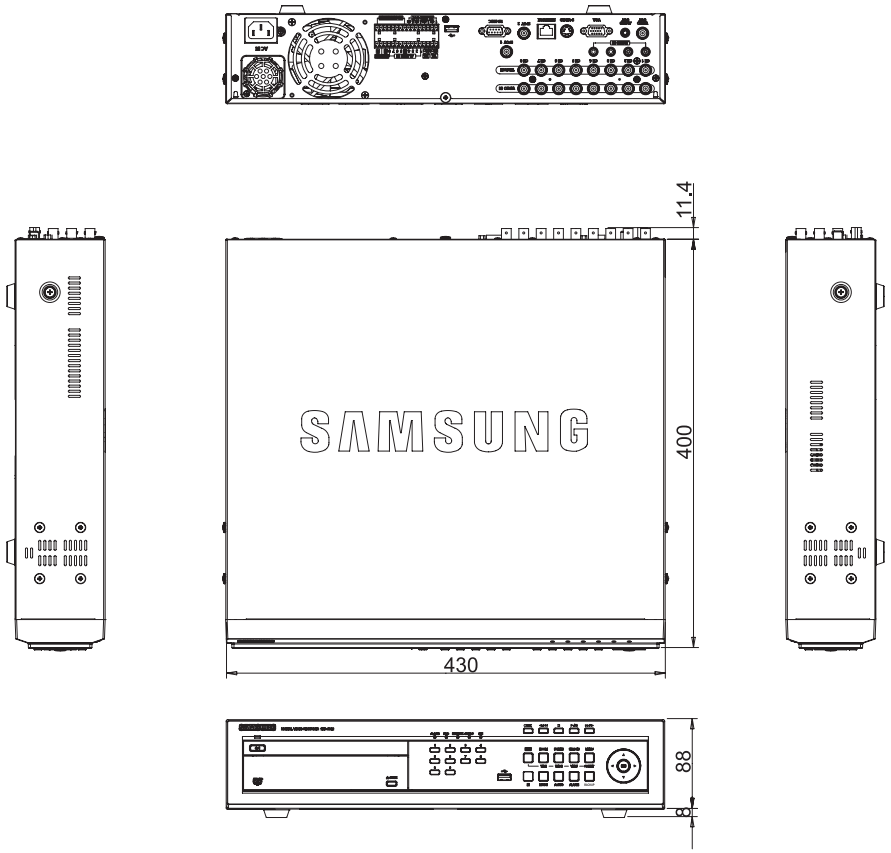
It needs extra software to support ATM/POS function. So please contact your vendor to obtain software.

OUTLINE DRAWINGS

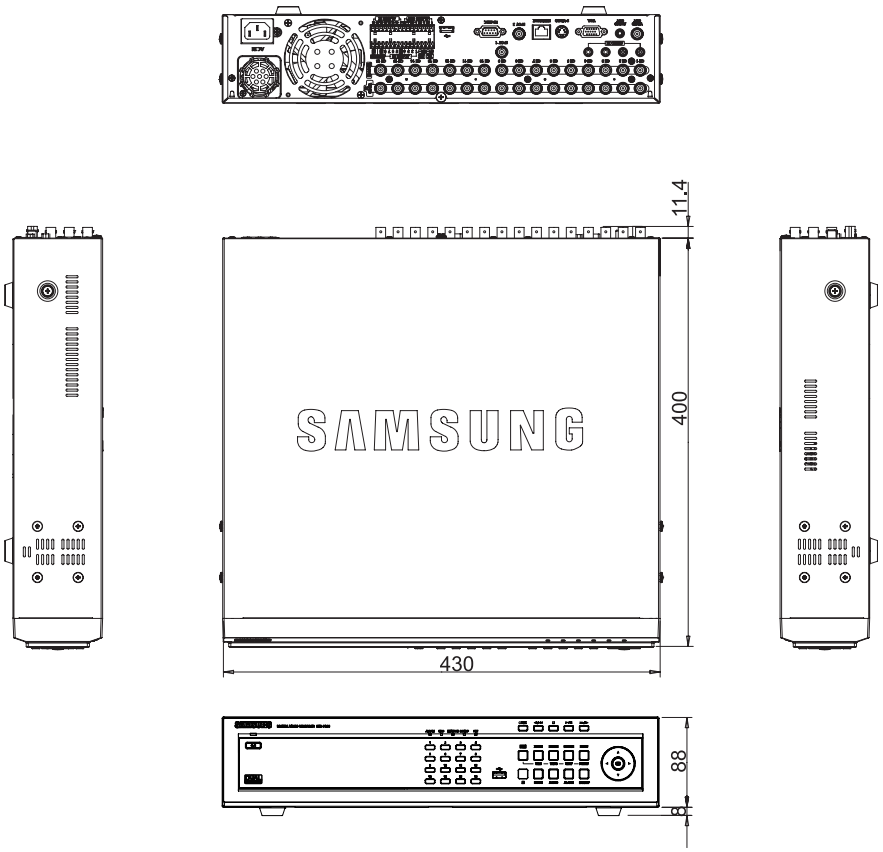
• 5080 Outline Drawings



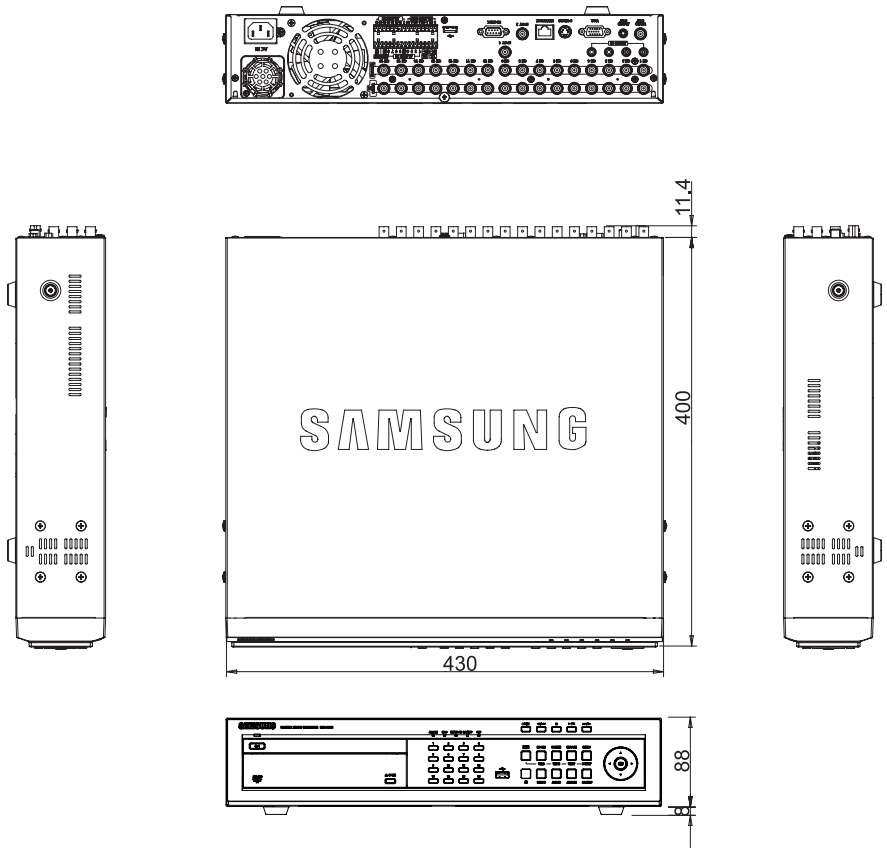
• **5082 Outline Drawings**



• **5160 Outline Drawings**



• **5162 Outline Drawings**



FACTORY DEFAULT

This returns the factory default settings.

The settings are made as follows;
- Use System/Load Factory Default in MENU
- In Live mode, press and hold down MODE and then PTZ on the front panel for 6 seconds to reset the settings.

Classification	Detailed Items		Factory Setup
System Setup	Time/Date/Language	Date Format	YYYY-MM-DD
		Time Format	24 Hours
		Language	English
		DST	Off
	Password	Password	4321
		Password Lock	On
		Record Lock	Off
	HDD Mode	HDD repeat record	Overwrite
		HDD ending alarm	Off
Camera Setup	Camera Config	Video	On
		Audio	Off
		Title	CAM_01 to CAM_16 (SHR-5082/5080 : 8)
		Auto Seq.	5 sec
	PTZ Device	ID	Camera No.
		Protocol	None
		Baudrate	9600
		Parity	None
		Data	8
		Stop	1
		Serial Mode	Half Duplex
	Screen Setup	Brightness	50
		Contrast	50
		Color	50

Classification	Detailed Items		Factory Setup
Monitoring	Event Monitoring	Duration	Off
	OSD Display	Date	On
		Time	On
		Title	On
		Status	On
	Spot Out Channel		CH1
	Spot Out Event Monitor		Off
	Monitor Out		Dual Out
	Play channel location		Lower right-hand corner
	Multi-channel change		5 seconds
Record Mode Setup	Record Quality & Auto Deletion	Normal Quality	Level4
		Event Quality	Level4
		Auto Deletion	Off
	Record Rate & Video Size	Normal Rate	7.5ips(NTSC)/6.2ips(PAL)
		Event Rate	7.5ips(NTSC)/6.2ips(PAL)
		Video Size	CIF
	Event Record Duration	PreEvent	Off
		PostEvent	1 min.
Record Schedule	Continuous Recording		Off
	Event Recording		On
Event Record Setup	Alarm Detection Setup	Sensor State	Off
		Camera	Camera No.
		Alarm-Out	None
		Duration	10 sec
	Motion Detection Setup	M.D State	Off
		Area	All Area
		Sensitivity	Very High
		Alarm-Out	None
		Duration	10 sec
	Video Loss Detection Setup	Video Loss Detection Setup	Off
		Alarm-Out	None
		Duration	10 sec

Classification	Detailed Items		Factory Setup
Network	IP Settings	Connection Mode	Static IP
		Bandwidth	2Mbps
		Admin Password	4321
		User Password	4321
		IP	192.168.001.200
		Gateway	192.168.001.001
		Subnet Mask	255.255.255.000
		DNS	168.126.063.001
		ADSL User ID	ID
		Password	-
	Transfer Protocol Settings	Protocol type	UDP
		Port(TCP)	0554.0555.0556.0557
		Port(UDP)	8000-8159
		Unicast / Multicast	Unicast
		Multicast IP	224.126.063.001
		TTL	005
		DDNS Site	Off
		Host Name	-
		User Name	-
		User Password	-
	Callback Settings	On / Off	Off
		IP Address	192.168.001.010
		Port(UDP)	7900
		Retry	05
		Transfer Alarm In	Off
		Transfer Motion Detection	Off
		Transfer Video Loss	Off
		Transfer System Log	Off
	Transfer Picture Settings	Video Size	CIF
		Quality	Low
	Web Viewer Port Setting	Port	80

TROUBLESHOOTING (FAQ)

PROBLEM	SOLUTION
The system power is dead and LEDs on the front of the set do not operate at all.	• Please check the power connection. • Check the power voltage. • If all your efforts as above end up with nothing, check or exchange the power supply.
Video data remains in the system but some channels display no video data but turns all blue.	• Check the image of the camera connected to the system. Improper input of camera may cause this symptom. • Check the camera power supply. • Sometimes, you see this symptom when the video data is connected with multisystems and the video signal from the video data distributor in use is weak. If it's the case, you shall connect the camera images with your DVR directly to check or correct the symptom.
The RECORD button is pressed but the REC LED does not light and recording is not active.	• Please check the HDD space. • Please check the Record Mode setup in MENU. It should be **On**.
Although all the LED operate on the front panel, the screen is blink or the display quality is low.	• Please make sure the cable is connected. Video out may come out differently with the connected monitor. In short, Video Out is set to Composite Output but connected to VGA Input Monitor or vice versa. Then, keep pressing both the **MODE** button and the **ZOOM** button for 5 seconds to change the Video Out mode. You may experience low display quality while the dual video output is in use. In this case, please switch it to the composite or VGA video output.
The LEDs blink and the logo screen repeatedly appears.	• This symptom may be resulted from the failure of HDD connection inside the DVR. Take off the cover and check HDD connection status. If HDD connection has no problem, please consult with the dealer.
You cannot enter MENU by forgotten password.	• If you forget the password, you shall reset the DVR to the values set at the factory. Keep pressing both the **MODE** button and the **PTZ** button for 5 seconds. The default password is "**4321**."
The channel button does not operate in Live mode.	• If the current screen is in Event Monitoring, the channel button does not operate. Then, press the **ALARM** button to terminate the current screen and select a channel.
The cursor cannot reach the starting point during Calendar Search.	• Please check both the channel and date are left checked. Both shall be checked for play with Start. The cursor cannot reach the unrecorded date.

PROBLEM	SOLUTION
Alarms keep continuously issued so you cannot cancel using the **ALARM** button.	• Press the **MENU** button and do the following: 1) To cancel Event Monitoring: **Monitoring > Event Monitoring Duration Off** 2) To cancel Buzzer: **Event Record > Alarm (Motion Detection/Video Loss) > Alarm-Out**. 3) To cancel Event: **Event Record > Alarm (Motion Detection/Video Loss) > State Off**.
Pressing the PTZ button in Live mode receives no response.	• Check the Protocol and other setup values through **Menu > Camera > PTZ Device** match with the PTZ camera.
When you connect several IEEE1394 armored HDDs to the DVR through Menu, the DVR cannot recognize all the HDDs.	• It requires time to recognize several armored HDDs. Please try again in a few minutes. If retrial makes no improvement, HDD could be abnormal. Please exchange the HDD.
"CLOCK BATTERY HAS FAILED" is displayed on the screen.	• This message is displayed if the internal clock in DVR has problem. DVR will not work in order to protect recorded data in HDDs. Please consult with an expert who works for the shop where you bought the product.
You cannot connect to the DVR through Smart Viewer.	• Check if 3 Smart Viewer users are in connection with your DVR. The DVR allows no more than 3 users' connection with Smart Viewer at a time. • Check the Network setup of your DVR. • Check Network cable connection. • When you use DHCP/ADSL(PPPoE) for connection, please check if you get the right DVR MAC Address. • If your DVR is connected to the ADSL network, please check if the bandwidth is set below 600 Kbps. If the Bandwidth for ADSL is set to high, the connection with Smart Viewer may be instable due to the heavy network load because the ADSL speed is low.
Smart Viewer in operation is disconnected.	• If you change information such as time, network setup, HDD format, Default Setup, or HDD attachment or detachment for your DVR, the current Smart Viewer will be automatically disconnected. • Check the network connection. Smart Viewer, if disconnected from the network, will try reconnection up to 5 times. If it remains unconnected after 5 time trials, it will automatically give up connection. • As far as your DVR is connected to the ADSL network, you may be disconnected from Smart Viewer when the network conditions go worse.

PROBLEM	SOLUTION
The **Audio** icon of Smart Viewer is left deactivated in Live mode. Setting Audio to **On** in the Camera menu of your DVR will make no difference.	• If your PC has no Audio driver or has some problem with Audio play by an Audio driver, the **Audio** icon will be deactivated. Please check Audio driver installation status.
When selecting the channel which PTZ Camera is connected to in the Live mode of Smart Viewer, click the "Menu Control" button among PTZ setup buttons to enter the Function Menu mode in PTZ Camera, and return from the other channel, the PTZ related buttons have been initialized.	• PTZ control is available in both Smart Viewer and your DVR. Other user might control the PTZ for your DVR to terminate the PTZ Camera Menu or Auto Pan/Scan/Pattern motions while you select the other channel. This may cause the initialization.
No Time Bar in the Search	• Time Line can be converted into 2 modes, General (24 Hour Display) and Extension (2 Hour Display). In Extension mode, Time Bar may not be seen in the current time. Please enter General mode or click the LEFT or RIGHT button to search Time Bar.
"NO HDD" icon and error message pops up.	• Please check the HDD connection status. If this problem persist without connection failure, contact the technical support for checking hard disk.
DVR device does not show what has been upgraded after adding a hard disk.	• Make sure that the additional external HDD installed is one of the devices listed on the compatibility list of HDDs. The list of the compatible devices with Samsung DVR can be obtained from your vendor.
The connection status is not shown after connecting the external storage device, USB memory, USB HDD and such.	• Make sure that the external storage device installed is one of the storage devices listed on the compatibility list of storage devices. The list of the compatible devices with Samsung DVR can be obtained from your vendor.
Pressing the ESC key in "FULL SCREEN MODE" of WebViewer does not work to change into normal split mode.	• Press the ALT+TAB key to select 'ACTIVE MOVIE', and then press ESC key again. It will be changed into normal split mode.

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If such an object file uses only numerical parameters, data structure layouts and accessors, and small macros and small inline functions (ten lines or less in length), then the use of the object file is unrestricted, regardless of whether it is legally a derivative work. (Executables containing this object code plus portions of the Library will still fall under Section 6.)

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c) Accompany the work with a written offer, valid for at least three years, to give the same user the materials specified in Subsection 6a, above, for a charge no more than the cost of performing this distribution.

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