SNC-B2315

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SNC-B2315

user manual

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SAMSUNG

safety precautions

CAUTION

RISK OF ELECTRIC SHOCK. DO NOT OPEN

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

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

This symbol indicates that there are important operating and maintenance instructions in the literature accompanying this unit.

WARNING

- To reduce the risk of fire or electric shock, do not expose this appliance to rain or moisture.
- The camera is to be only connected to PoE networks without routing to the outside plant.

WARNING

1. Be sure to use only the standard adapter that is specified in the specification sheet. Using any other adapter could cause fire, electrical shock, or damage to the product.
2. Incorrectly connecting the power supply or replacing battery may cause explosion, fire, electric shock, or damage to the product.
3. Do not connect multiple cameras to a single adapter. Exceeding the capacity may cause abnormal heat generation or fire.
4. Securely plug the power cord into the power receptacle. Insecure connection may cause fire.
5. When installing the camera, fasten it securely and firmly. A falling camera may cause personal injury.
6. Do not place conductive objects (e.g. screwdrivers, coins, metal things, etc.) or containers filled with water on top of the camera. Doing so may cause personal injury due to fire, electric shock, or falling objects.
7. Do not install the unit in humid, dusty, or sooty locations. Doing so may cause fire or electric shock.

8. If any unusual smells or smoke come from the unit, stop using the product. In such case, immediately disconnect the power source and contact the service center. Continued use in such a condition may cause fire or electric shock.
9. If this product fails to operate normally, contact the nearest service center. Never disassemble or modify this product in any way. (SAMSUNG is not liable for problems caused by unauthorized modifications or attempted repair.)
10. When cleaning, do not spray water directly onto parts of the product. Doing so may cause fire or electric shock.

CAUTION

1. Do not drop objects on the product or apply strong shock to it. Keep away from a location subject to excessive vibration or magnetic interference.
2. Do not install in a location subject to high temperature (over 50°C), low temperature (below -10°C), or high humidity. Doing so may cause fire or electric shock.
3. If you want to relocate the already installed product, be sure to turn off the power and then move or reinstall it.
4. Remove the power plug from the outlet when then there is a lightning. Neglecting to do so may cause fire or damage to the product.
5. Keep out of direct sunlight and heat radiation sources. It may cause fire.
6. Install it in a place with good ventilation.
7. Avoid aiming the camera directly towards extremely bright objects such as sun, as this may damage the CCD image sensor.
8. Apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the apparatus.
9. The Mains plug is used as a disconnect device and shall stay readily operable at any time.

important safety instructions

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

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FEATURES

Various Communication Protocol Support
This product supports various communication protocols such as ARP, HTTP and DHCP as well as TCP/IP, UDP, RTP/RTSP, SMTP for Email transmission and FTP protocol.

Monitoring Through Web Browser
Monitoring Through Web Browser This product enables watching a video through an Internet web browser so that you can watch a video through the Internet as you can within the local network.

Automatic Local IP Setting Function
This function offers an easy way of configuring the network settings with a minimal key input for those who are not familiar with it.

Alarm Function
If this product is connected with a motion sensor and the sensor detects a motion, a recorded video clip is sent through the FTP/Email(SMTP) registered by the user or saved on the SDHC memory card and a signal is sent to an alarm output port.

Motion Detection Function
If the user specifies a target area to monitor and the motion sensor detects a motion within that area, a still image is sent to the FTP/Email(SMTP) server designated by the user or saved on the SDHC memory card, and signals are sent to the alarm output terminal.

PRECAUTIONS – INSTALLATION AND USE

- Do not disassemble your camera.
- Always be cautious when handling your camera.
- Do not subject the camera to impact or vibration and always be cautious of damaging the camera due to neglectful storage and/or operation.
- Do not install the camera at a location where it would become exposed to rain or humidity and do not operate the camera in a wet environment.
- Do not clean the camera's main body using harsh abrasives or similar substances. If dirty, use a dry piece of cloth to clean instead.
- Install the camera in a shaded area or environment, protected from direct sunlight.
  Direct sunlight exposure has a negative effect on the camera.
- Do not bend or throw the SDHC memory card.
  Do not store or use the SDHC memory card in a hot, humid, or dusty environment.
- Protect the contacts of the SDHC memory card from foreign substance buildup.
  If foreign substances have been built up on the contacts, remove using a soft piece of cloth.
- When removing the SDHC memory card, disable SD Card Recording to protect against data loss (refer to page 59 for instruction on disabling SD Card Recording).
- Data cannot be stored on SDHC memory cards whose service life has expired.
  Please purchase a new SDHC memory card if you experience this.
- The manufacturer will not be held responsible for data loss incurred by the customer due to improper use.
- Using non-recommended PoE device may cause malfunction of either the camera or PoE device itself. (Refer to page 4 for the compatible PoE Switch)

RECOMMENDED PC SPECIFICATIONS

- **CPU:** Pentium4/2.4GHz or higher
- **Operating System:** Windows XP(Service Pack2) / Windows Vista
- **Resolution:** 1024X768 pixels or higher
- **RAM:** 512MB or higher
- **Web Browser:** Internet Explorer 6.0 or higher
- **Video Card:** Radeon, Nvidia
- **Video Memory:** 128MB
- DirectX 8.1 or higher

COMPATIBLE IP ROUTERS

- Linksys
- D-Link
- Netgear

COMPATIBLE POE SWITCHES

- Linksys SRW224G4P
- D-Link DES-1316
- SMC SMCPWR-INJ3

CHECKING THE COMPONENTS IN THE PACKAGE

Make sure that the following items are included in the package.

Camera	User's Manual	C Mount Adapter Auto Iris Lens Connector

	Options	
Software CD	CS Lens	C Lens

NAMES OF EACH PART

Front

1 Auto Iris Lens Connector	Provides the power and signal needed to control the iris and relays video and DC signals.
2 Back Focus Adjustment Bar	Adjust Back Focus by moving this bar up or down.
3 ALC Lens Selection Switch	Used to select the type of auto iris lens you wish to use. Here, the DC or Video setting in the setup menu (ALC… and WDR… under the Iris menu) must be the same as the selected switch position. • DC: Turn the switch to the DC position if using an auto iris lens requiring DC control signal. • Video: turn the switch to the Video position if using an auto iris lens requiring video control signal.
4 Auto Iris Lens (Optional)	This lens is installed on this camera.

- When the camera lens becomes dirty, softly clean it with a lens tissue or a cloth soaked in pure ethanol.

Rear

1 Audio Out	For outgoing audio signals.
2 Audio In	For incoming audio signals.
3 SDHC Memory Card Slot	This is where you insert your SDHC memory card.
4 Video Out	For outgoing video signals from the camera. This port connects to the monitor's video in port.
5 Reset Button	Reverts all camera settings to their default. When it is pressed for 3 seconds, the system indicator goes out and the system reboots. When the camera is reset, connection is possible only after the basic network settings (IP address, subnet mask, gateway, etc.) have been configured again using the IP installer program.
6 Ethernet Port	Ethernet cable port.
7 Power Port	Connect the power cable to this port.

8 I/O Port	Used to connect the camera to an external device. • A_IN 1 and 2: These are alarm in ports. • GND: This is the GND port. • A_OUT 1 and 2: These are alarm out ports. • EXT_SEN: For external control of Day/Night option.
9 System, SD, and Power Indicators	These indicators provide system, SD, and power status information.

LED	Status	Description
SYSTEM	Turns on	When the power is switched on and the network connection is normal.
	Flashes	When the DDNS setting fails.
		When the DDNS is being set.
		When the network connection is not stable.
	Turns off	When the power is switched off.
		When the camera is rebooting.
SD	Turns on	When the memory card is inserted and the system is in normal operation.
	Flashes	When recording fails.
		When the memory card is short of capacity.
		When the memory card is not inserted normally.
	Turns off	When the power is switched off.
		When the camera is rebooting.
		When the memory cared is removed.
PWR	Turns on	When the power is switched on.
	Turns off	When the power is switched off.

INSTALLING THE CAMERA

Disconnect the power cord before installation or relocation.

Mounting the lens

When using the CS lens

Mount the CS lens by rotating it clockwise as shown in the picture.

When using the C lens

After mounting the C-mount adapter by rotating it clockwise, turn the C lens clockwise until it is fixed as shown in the picture.

Setting the ALC lens selection switch

You can set the lens selection switch located on the side of the camera according to the lens type. When the mounted lens is an auto Iris lens of DC control type, set the switch to “**DC**.” When the mounted lens is an auto Iris lens of Video control type, set the switch to “**VIDEO**.”

Adjusting the back focus

The back focus of the camera is adjusted at the factory before delivery but some lenses can be out of focus depending on the lens type. In this case, you have to adjust the back focus. The following describes how to adjust the back focus of the lenses.

In case of the lens with no zooming function

1 After exposing the camera to an object with high resolution (like a dart-patterned image) at a distance of more than 10m, set the lens focus ring to infinite (∞).

2 Adjust the Back Focus Control Bar until the object is of best quality.

3 Fix the screw of the Back Focus Control Bar.

In case of the lens with zooming function

1 After exposing the camera to an object with high resolution (like a dart-patterned image) at a distance of 3 to 5m, fully rotate the lens zoom to the TELE direction.
Then adjust the lens focus ring until the object is of best quality.

2 Fully rotate the lens zoom to the WIDE direction and adjust the Back Focus Control Bar until the object is of best quality.

3 Repeat step 1 and 2 two or three times until the focuses of Zoom TELE and Zoom WIDE are clear enough.

Inserting/Removing an SDHC Memory Card

Inserting an SDHC Memory Card

Push the SDHC memory card in the direction of the arrow shown in the diagram.

- Do not force the memory card in. If you can't insert the memory card into the slot with ease, you might be inserting the card in the wrong direction. Forcibly inserting a memory card could lead to its damage.

Removing an SDHC Memory Card

Gently press down on the exposed end of the memory card as shown in the diagram to eject the memory card from the slot.

- Pressing too hard on the SDHC memory card can cause the card to shoot out uncontrollably from the slot when released.

- When removing the SDHC memory card, disable the SD Card Recording feature (refer to page 59 for instructions on disabling SD Card Recording).
  Removing the SDHC memory card while recording is in progress can damage the data.

Memory Card Information (not included)

What is a memory card?

The memory card is an external data storage device that has been developed to offer an entirely new way to record and share video, audio, and text data using digital devices.

Selecting a memory card that's suitable for you

Your camera supports SDHC memory cards.
You may, however, experience compatibility issues depending on the model and make of the memory card.

Your camera supports SD memory cards.
However, the maximum supported SD memory card capacity is 2GB and ver 1.1, 4GB or above SD memory cards are incompatible.

For your camera, we recommend you use a memory card from the following manufacturers:
SDHC/SD Memory Card: Panasonic®, SanDisk®, and Toshiba®

Your camera supports 128MB to 16GB of memory card capacity.
Playback performance can be affected depending on the speed of memory card, so use the high-speed memory card. To ensure proper recording of video data, we recommend you use a memory card that supports at least read/write speed 10Mbps and Class 6

Memory Card Use

SD and SDHC memory cards feature a switch that disables writing data on to the media. Having this switch to the Lock position will prevent accidental deletion of data stored in the memory card but at the same time will also prevent you from writing data on to the media.

Memory Card Components

SDHC

CONNECTING

Connecting Ethernet Cable

Connect the Ethernet cable to the network port as shown.

Connecting Power

1 Connect the power adapter to the camera's power port.

2 Using a flathead screwdriver, connect the two lines leading from the power adapter to the camera's power port.

3 Connect the power cord to the power adapter unit.

4 Connect the power plug to a power outlet.

- Beware of DC 12V's polarity charges when making the connection.
- If you are using a PoE (Power over Ethernet) supporting router, you do not need a separate power source.

To connect input and output ports:

Connect alarm lines to the input and output ports on the rear.

A_IN 1, A_IN 2 : These are alarm in ports.
GND : This is the GND port.
A_OUT 1, A_OUT 2 : These are alarm out ports.
EXT_SEN : For external control of Day/Night option.

Alarm In/Out Connection Diagram

Connecting a Monitor Output

1 Connect the **VIDEO OUT** port of the camera and the **VIDEO IN** port of the monitor.

2 Connect the **AUDIO OUT** port of the camera and the **AUDIO IN** port of the monitor.

Connecting to Audio Input/Output

1 Connect the **AUDIO IN** port of the camera with the microphone directly or LINE OUT port of the amplifier that the microphone is connected to.

Direct Mic Connection: Set Audio Input Gain high (10). (Refer to page 45)

Line Out Connection: Set Audio Input Gain low (1). (Refer to page 45)

2 Connect the **AUDIO OUT** port of the camera with the LINE IN port of the speaker.

Audio I/O Block Diagram

- **Audio Codec**
  G.711 PCM, μ-law 64kbps 8kHz sampling
- **Full duplex Audio**
- **Audio in**
  Used for mono signal line input (Max.2.4 Vpp)
- **Audio out**
  Used for mono signal line output (Max.2.4 Vpp)
- **Line out impedance**
  600ohm

network connection & setup

You can set up the network settings according to your network configurations.

Network connection and setup processes are given as follows.

- Connect the camera to an IP router with a xDSL/Cable modem Page 19~21
- Connect the camera to an IP router with local area networking Page 22~23
- Connect the camera directly to a DHCP-based xDSL/Cable modem Page 24~25
- Connect the camera directly to local area networking Page 26

- Compliant IP routers are as listed below.
  - Linksys
  - D-Link
  - Netgear
- Compliant PoE Switches are as listed below.
  - Linksys SRW224G4P
  - D-Link DES-1316
  - SMC SMCPWR-INJ3
- Using non-recommended IP router may cause the network connection error.
- Depending on the performance of the PC (Viewer installed) or the network, the video transmission can be delayed or even disconnected.
  For soft video transmission, you can set the bandwidth in <NETWORK> → <STREAMING SETUP> in the setup menu.

- The IP and MAC addresses used in this manual are for illustrative purposes only. Therefore, you must refer to Notice the network settings of your PC and do not enter the addresses presented in this manual.

CONNECTING THE CAMERA TO AN IP ROUTER WITH THE XDSL/ CABLE MODEM

This is for a small network environment such as homes, SOHO and ordinary shops.

[STEP 1] Configuring the network settings of the local PC connected to an IP router

Configuring the network settings of the local PC connected to an IP router, follow the instructions below.

- Select : <Network Neighborhood> → <Properties> → <Local Area Connection> → <Properties> → <General> -> <Internet Protocol (TCP/IP)> → <Properties> → <Obtain an IP address automatically> or <Use the following IP address>
- Follow the instructions below if you select <Use the following IP address>:

ex1) If the address (LAN IP)of the IP router is 192.168.1.1
IP address: 192.168.1.100
Subnet Mask: 255.255.255.0
Default Gateway: 192.168.1.1

ex2) If the address (LAN IP) of the IP router is 192.168.0.1
IP address: 192.168.0.100
Subnet Mask: 255.255.255.0
Default Gateway: 192.168.0.1

ex3) If the address (LAN IP) of the IP router is 192.168.xxx.1
IP address: 192.168.xxx.100
Subnet Mask: 255.255.255.0
Default Gateway: 192.168.xxx.1

- For the address of the IP router, refer to the product's documentation.

[STEP 2] Checking if the IP router is connected to the xDSL/Cable modem properly

Select <Status> from the Settings menu of the IP Router

- If it is properly connected, <IP Address>, <Subnet Mask> and <Gateway> provided by your ISP are displayed. Please remember these values because they are required so that an external remote computer of the IP router connects to the camera. However, note that certain ISPs change the settings of <IP Address>, <Subnet Mask>and <Gateway>on a regular basis
- If the IP router is not properly connected, press the [Connect] button to try to reconnect or check if the settings of the IP router are correct.

[STEP 3] Setting the IP address

- Refer to "Static IP Setting" on page 28 or "Dynamic IP Setting" on page 32.

[STEP 4] Connecting a local PC in the IP router to the camera

1 Run the IP Installer on your local PC and search for the camera.

2 If found, double-click the camera to start the Internet browser and try to connect to the camera. Alternately, launch the Internet browser manually and enter the IP address of the camera found in the address bar to connect to it. ex) http://192.168.1.2

[STEP 5] Connecting to the camera from a remote PC

1 You can't use the IP Installer on a remote PC that is not connected to the IP router. This is because the IP Installer does not work on the Internet.

2 You can use DDNS URL of the camera to connect to the IP router internal camera.

3 However, you must set the port-forwarding for the IP router before you can connect to the IP router internal camera from a remote PC.
For more information on the port-forwarding, refer to Use IP Router: Port Forwarding Setting (Port Mapping).

4 When the port forwarding is done, run the Internet browser on the remote PC and enter the DDNS URL address or, the Internet IP address of the IP router in the address bar for connecting to the camera.

ex) http://mfffe42.websamsung.net

- For the DDNS URL address, refer to "Checking the DDNS address" on page 35.

CONNECTING THE CAMERA TO AN IP ROUTER WITH LOCAL AREA NETWORKING

This is for a large network environment such as corporate office, building, public office and factory.

[STEP 1] Configuring the network settings of the local PC connected to an IP router

Configuring the network settings of the local PC connected to an IP router, follow the instructions below.

- Select : <Network Neighborhood> → <Properties> → <Local Area Connection> → <Properties> → <General> → <Internet Protocol (TCP/IP)> → <Properties> → <Obtain an IP address automatically> or <Use the following IP address>
- Follow the instructions below if you select <Use the following IP address>:

ex1) If the address (LAN IP) of the IP router is 192.168.1.1
IP address: 192.168.1.100
Subnet Mask: 255.255.255.0
Default Gateway: 192.168.1.1

ex2) If the address (LAN IP) of the IP router is 192.168.0.1
IP address: 192.168.0.1
Subnet Mask: 255.255.255.0
Default Gateway: 192.168.0.1

ex3) If the address (LAN IP) of the IP router is 192.168.xxx.1
IP address: 192.168.xxx.1
Subnet Mask: 255.255.255.0
Default Gateway: 192.168.xxx.1

- For the address of the IP router, refer to the product's documentation.

[STEP 2] Setting the IP address

- Refer to "Static IP Setting" on page 28 or "Dynamic IP Setting" on page 32.

[STEP 3] Connecting a local PC in the IP router to the camera

1 Run the IP Installer on your local PC and search for the camera.

2 If found, double-click the camera to start the Internet browser and try to connect to the camera. Alternately, launch the Internet browser manually and enter the IP address of the camera found in the address bar to connect to it.

ex) http://192.168.1.2

[STEP 4] Connecting to the camera from an IP router external PC

1 An IP router external PC can't use the IP Installer to search for an IP router internal camera. This is because the IP Installer does not work in a network where the gateway is different.

2 In this case, you can use the DDNS URL of the camera or the Internet IP address of the IP router to connect to the IP router internal camera.

3 However, you must set the port-forwarding for the IP router before you can connect to the IP router internal camera from a remote PC. For more information on the port-forwarding, refer to Use IP Router: Port Forwarding Setting (Port Mapping).

4 When the port forwarding is done, run the Internet browser on the IP router External PC and enter the DDNS URL address or, the Internet IP address of the IP router in the address bar for connecting to the camera.

ex) http://mfffe42.websamsung.net

- For the DDNS URL address, refer to "**Checking the DDNS address**" on page 35.

- A remote PC in an external Internet out of the LAN network may not be able to connect to the camera installed in the intranet if the port-forwarding is not properly set or a firewall is set. In this case, to resolve the problem, contact your network administrator.

CONNECTING THE CAMERA DIRECTLY TO A DHCP-BASED XDSL/CABLE MODEM

This is enabled for a modem using DHCP.

Setting the IP Router

1 Set the IP address referring to "**Static IP Setting**" on page 28 or "**Dynamic IP Setting**" on page 32.

2 Launch an Internet browser on the local PC connected to the IP Router.

3 Enter the IP Router's address in the address bar of the browser.

ex) http://192.168.1.1 ,http://192.168.0.1 or http://192.168.xxx.1

- For the address of the IP router, refer to the product's documentation.

4 When the IP Router is connected, the login window appears and prompts you to enter the password.

- For the login IP and the password, refer to the IP router's documentation.

5 When done, you will see the setup window of the IP router. In the setup menu, select "**Automatic Configuration-DHCP**" for Internet Connection Type.

- For the menu location of Internet Connection Type or DHCP selection, refer to the IP router's documentation.

6 When done, click the [**Save**] or [**Apply**] button to save the settings.

Connecting to the camera from a remote PC

1 Launch an Internet browser on the remote PC.

2 Enter the DDNS URL address in the address bar of the browser for connecting to the camera.

ex) http://mfffe42.websamsung.net

- For the DDNS URL address, refer to “Checking the DDNS address” on page 35.

- To check if your xDSL / Cable modem uses DHCP, contact your Internet Service Provider.

CONNECTING THE CAMERA DIRECTLY TO LOCAL AREA NETWORKING

Connecting to the camera from a local PC in the LAN

1 Launch an Internet browser on the local PC.

2 Enter the IP address of the camera in the address bar of the browser.

- A remote PC in an external Internet out of the LAN network may not be able to connect to the camera installed in the intranet if the port-forwarding is not properly set or a firewall is set.
  In this case, to resolve the problem, contact your network administrator.

SEARCHING FOR THE CAMERA

IP Installer screen layout

1 **Device Name :** Model name of the connected device.

2 **Mode :** Shows the current selection between <**Static**>and <**Dynamic**>.

3 **Mac Address :** The Mac address of the network interface of the camera that is printed on the rear panel.

4 **IP Address :** The IP address of the camera. (Default setting is '192.168.1.200'.)

5 **UPnP Status** : This is unavailable for this camera.

6 **URL :** This is DDNS address that can be used to connect from an external Internet. However, if the DDNS update fails, it will be displayed as an IP address of the camera.

7 **Search** Button : Searches for the camera connected to the current network.

8 **Auto Set** Button : Sets up the camera network settings automatically using the <**IP Installer**>.

9 **Manual Set** Button : Allows the user to set up the camera network settings manually.

10 **Exit** Button : Exits the IP Installer program.

- On Windows Vista, the settings should be configured by the Administrator to use the IP installer normally.

MANUAL NETWORK SETTING

Run the <**IP Installer.exe**> program and display the camera list found on the screen.
For the initial run, the [**Auto Set**] and [**Manual Set**] button are all disabled.

1 Select a camera you want from the camera list.

- Confirm the MAC Address of the camera on its rear panel.
- The [Auto Set] and [Manual Set] button are activated.

2 Click the [**Manual Set**] button.

- The Manual Set window appears.
- The <IP Address>, <Subnet Mask>, <Gateway> and <HTTP Port> values of the camera are displayed in their default values.
- The password is set to "4321" by factory default.

3 Set up the IP related settings in the <**ADDRESS**>field.

- <MAC Address>: The MAC Address printed on the camera rear penal is automatically displayed. No additional setting is required.

<If using an IP router>

- <**IP Address**>: Set it according to the private IP address range provided by the IP Router.

  ex) 192.168.1.2~254, 192.168.0.2~254, or 192.168.XXX.2~254

- <**Subnet Mask**>: The IP Router's <Subnet Mask> becomes camera's <Subnet Mask>value.
- <**Gateway**>: The IP Router's <LAN IP Address> becomes camera's <Gateway>value.

<If not using an IP router>

- For the <IP Address>, <Gateway> and <Subnet Mask> settings, contact your network administrator.

- You can't change the port numbers of Device, TCP, UDP, Upload and Multicast, which are automatically changed according to the increase/decrease of the port number of HTTP.

4 In the <**PORT**>fields, set up port numbers.

- <**HTTP Port**>: A HTTP port used to connect to a camera using the Internet browser. The default value is 80. The HPPT port value can be changed by using the up/down button to the right.
  The HTTP port number starts with 80 and increases/decreases to 10000, 10006, 10012…
- <**Device Port**>: A port used to control video transmission. The default value is 60001(TCP).
- <**TCP Port**>: A port used to transfer video using TCP protocol. The default value is 60002(TCP).
- <**UDP Port**>: A port used to transfer video using UDP protocol. The default value is 60003(UDP).
- <**Upload Port**>: A port used to upgrade software. The default value is 60004(TCP).
- <**Multicast Port**>: Shows UDP port set for video transmission using UDP Multicast. The default value is 60005(UDP).

5 Enter your password.

- The default password is "4321".
- The password is the camera login password of the root user.

6 Click the [**OK**] button.

- The manual network setting is finished.

7 The camera is set to the manually entered IP and is restarted.

If more than one camera are connected to an IP Router

Set the IP and port settings for camera differently.

Items		1st Camera	2nd Camera
IP Related Items	IP Address	192.168.1.200	192.168.1.201
	Subnet Mask	255.255.255.0	255.255.255.0
	Gateway	192.168.1.1	192.168.1.1
Port Related Items	HTTP Port	80	10000
	Device Port	60001	10001
	TCP Port	60002	10002
	UDP Port	60003	10003
	Upload Port	60004	10004
	Multicast Port	60005	10005

- If <HTTP Port>is not set to 80,the user must specify the port number as well as the IP address in the Address input box of an Internet browser to connect to the camera.

  Example) http://IP Address: HTTP Port
  e.g.) http://192.168.1.201: 10000

AUTOMATIC NETWORK SETTING

Run the <**IP Installer.exe**> program and display the camera list found on the screen.
For the initial run, the [**Auto Set**] and [**Manual Set**] button are all disabled.

1 Select a camera you want from the camera list.

- Confirm the MAC Address of the camera on its rear panel.
- The [Auto Set] and [Manual Set] button are activated.

2 Click the [**Auto Set**] button.

- The Auto Set window appears.
- The automatically found <IP Address>, <Subnet Mask>and <Gate Way> are displayed.

3 Enter your password.

- The password is the camera login password of the root user.
- The default password is “4321”.

4 Click the [**OK**] button.

- The automatic network setting is finished.

5 The camera automatically restarts when the network setting is complete.

DYNAMIC IP SETTING

Examples of using Dynamic IP

- If the camera is installed on an IP router and obtains an IP using DHCP
- If the camera is connected directly to a xDSL/Cable modem using DHCP
- If an IP is allocated by the internal DHCP server in local area networking

Dynamic IP Check

1 When you run the IP Installer on your local PC, the camera with a dynamic IP allocated is listed.

2 Select the camera in the list and click the [**Manual Set**] button to check the camera for the current dynamic IP.

- In this case, the ADDRESS field is automatically filled and you can't change it. However, you can still change the port settings.

PORT FORWARDING (PORT MAPPING) SETTING

With the camera installed on an IP router, you must set the port forwarding for the IP router before an IP router external remote PC can connect to the IP router internal camera.

Manual Port Forwarding

1 Click <**Applications &Gaming**> → <**Port Range Forward**> from the Settings menu of the IP Router.

- For the menu location and the setting of Port Forwarding, refer to the IP router's documentation.

2 Select the <**TCP**> and <**UDP Port**> for each camera connected to the IP Router.

- Each of the port numbers for the IP Router must be according to those presented in <BASIC> → <IP> of the SETUP screen of the camera.

3 If the setting is complete, click the [**Save Settings**] button.

- The changes are saved.

CONNECTING TO THE CAMERA

Connecting to the camera

General

- Run an Internet browser.
- Enter the IP address for the camera in the Address input box.
  Example) IP Address: 192.168.1.200 → http://192.168.1.200
  - The login window appears.

If the HTTP port number is not 80

- Run an Internet browser.
- Enter the IP address and the HTTP port number for the camera in the Address input box.
  Example) IP Address: 192.168.1.200:Port Number(10000) → http://192.168.1.200:10000
  - The login window appears.

Connection using URL

- Run an Internet browser.
- Enter the DDNS URL for the camera in the Address input box.
  Example) URL Address: http://mfffe42.websamsung.net
  - The login window appears.

Connection using URL (If the HTTP port number is not 80)

- Run an Internet browser.
- Enter the DDNS URL and the HTTP port number for the camera in the Address input box.
  Example) URL Address: http://mfffe42.websamsung.net:Port Number(10000) →
  http://mfffe42.websamsung.net:10000
  - The login window appears.

Checking the DDNS address

- A DDNS address consists of <One among from lower-case alphabet characters of c, m and p> + <Last 6 digits of the MAC address> + <websamsung.net>.
- The lower-case alphabet letter is represented as <c>if the first 6 digits of the MAC address is <00:00:f0>, <m> if <00:16:6c>, and <p> if <00:68:36>.

Example) - If the MAC address of the camera is 00 : 00 : f0 : ff : fe : 42 :
c + fffe42 + websamsung.net = cfffe42.websamsung.net

- If the MAC address of a camera is 00 : 16 : 6c : ff : fe : 42 :
m + fffe42 + websamsung.net = mfffe42.websamsung.net

- If the MAC address of a camera is 00 : 68 : 36 : ff : fe : 42 :
p + fffe42 + websamsung.net = pfffe42.websamsung.net

- The IP and MAC addresses are used in this manual for illustrative purposes only. Therefore, you must not enter Notice the addresses presented in this manual when you setting your equipment.

Connecting to the camera using the IP Installer program

Double-click a camera you want from the search result screen.

- The login window appears.
- If the ActiveX window appears, install it referring to the next page.

INSTALLING ACTIVEX

If you connect the camera to the Internet and configure the network settings, you can monitor the picture of the connected camera in real-time.

For Windows XP Service Pack 2

1 If the following screen appears, click the Install button.

2 Click the <**Install ActiveX Control**>.

3 If the Security Warning window appears, click the [**Install**] button.

- For successful installation, disable the pop-up blocker by going to the option below.
  Internet Explorer → Tools → Pop-up blocker → Always Allow Pop-ups from This Site

Logging to the camera

For the first login, the username is “**root**” and password is “**4321**”.

1 Type “root” in the <**User name**> input box.

2 Type “4321” in the <**Password**> input box.

- If you have changed the old password, type the new password here.

3 Click the [**OK**] button.

- When the login is complete, the camera Viewer screen appears.

- For the security purposes, make sure to change the password by clicking <BASIC> → <USER> in the SETUP screen.
  The administrator ID, root is fixed and cannot be changed.
- If you check the <Remember my password>, the username and password are saved and will be entered automatically in the login window.

- You are required to install DirectX 8.1 or later on your Windows-based PC.
- You can download DirectX for free at http://www.microsoft.com/download
- When using Internet Explorer 7, the viewer screen is optimized with page zoom to 100%. Changing the size of the page zoom will only show portion of the page.

USING THE VIEWER SCREEN

If you connect to the camera, the following Viewer screen appears.

Main Screen Layout

Name	Function and Description
1 SEARCH	Moves to the search screen.
2 SETUP	Moves to the setup screen.
3 ABOUT	Displays the information, version, manufacturer, etc.
4 VIEW	Sets the video format and de-interlace.

Name	Function and Description
5 BACKUP	• Capture : Captures the recorded image on the screen and saves it as a .jpeg or .bmp image file. • Print : Prints the recorded image on the screen. • Record : Saves the recorded video as a .avi video file.
6 IO	Sets the alarm reset.(The alarm or motion icon will disappear.)
7 Audio	Check the Listen or Speak check box for Audio.
8 View Screen	Displays the recorded video on live screen. • : Displays the live screen in full screen.

To Capture a Video

1 At a desired scene, click the [**CAPTURE**] button.

- The capture confirmation window appears.

2 Click [**OK**].

- The captured screen image is saved in the specified folder path.

- **Default save paths are provided for each version of Windows.**
  Windows XP: C:\Program Files\Samsung\SNC-B2315\SnapShot\Live
  Windows Vista: C:\users\[user ID]\AppData\LocalLow\Samsung\SNC-B2315\SnapShot\Live
  To change the saving path, click [**SAVE PATH**] button(...) and then select the path you want.
- The file is automatically named as follows: <IP address_Port number_YYMMDD_camera number_index>
  Example) 192.168.130.40_60001_20080601_203523_00

- The save path cannot be changed if you are using Windows Vista.

To Print a Video

1 At a desired scene, click the [**PRINT**] button.

- The print setup window appears.

2 Click [**OK**].
The captured screen image is printed.

To Record a Video

1 At desired scene, click the [**RECORD**] button.

2 Set up the AVI save.

- 2-1 Destination Folder:
  Allows you to change the file save path.
- 2-2 File Name:
  Allows you to change the name of the file.
- 2-3 Insufficient Disk Space Setting:
  Recording automatically stops if the amount of space available on the hard disk falls below the amount designated under this setting.

3 Click [**OK**].

- On the viewer screen, <REC> indicator appears and the recording is started.
- The captured screen image is saved in the specified saving path.

4 To stop a recording, click the [**RECORD**] button once again.

- **Default save paths are provided for each version of Windows.**
  Windows XP: C:\Program Files\Samsung\SNC-B2315\VidedClip\Live
  Windows Vista: C:\users\[user ID]\AppData\LocalLow\Samsung\SNC-B2315\SnapShot\Live
  To change the saving path, click [SAVE PATH] button(...) and then select the path you want.
- The file is automatically named as follows: <IP address_Port number_YYMMDD_camera number_index>
  Example) 192.168.130.40_60001_20080601_203523_00
- If the inappropriate video codec is installed on your computer, the video will not be played properly.

- The save path cannot be changed if you are using Windows Vista.

USING THE SEARCH VIEWER SCREEN

If you connect to the camera, the following Search Viewer screen appears.

Main Screen Layout

Name	Function and Description
1 Date	You can select the desired date to search for events generated.
2 Thumbnail Size	The thumbnail images are displayed based on the selected size.
3 SCHEDULE	You can select the desired time to search the schedule events.
4 ALARM INPUT	You can select the desired time to search the alarm events.
5 MOTION	You can select the desired time to search the motion detection events.

SETTING THE CAMERA

You can set various functions such as Basic Setting, System, Layout, etc.

To setup the camera

In the viewer screen, click the [**SETUP**] tab.

The setup window appears.

SETUP Screen Layout

BASIC CONFIGURATION

To setup Video/Audio

You can set the video resolution, quality, frames per second, and input gain.

1 Click <**BASIC**> → <**VIDEO & AUDIO**>.

- The VIDEO & AUDIO window appears.

2 To complete the video setting, click the [**Apply**] button.

- The settings are saved.

- You will not be able to hear the audio data if the audio input gain is at zero.

- <**Resolution**>: Select a video size from <**D1**>, <**VGA**>, and <**CIF**>.
  NTSC: D1(720x480), VGA(640x480), CIF(352x240)
  PAL: D1(720x576), VGA(640x480), CIF(352x288)
- <**Quality**>: Select a video quality level between 0 and 10.
- <**Frame Rate**>: Select a frame rate.
  NTSC: 30fps, 15fps, 8fps, 3fps, 1fps
  PAL: 25fps, 13fps, 5fps, 3fps, 1fps
- <**Input Gain**>: Select the audio amplification level between 0 and 10

To Setup IP settings

1 Click <**BASIC**> → <**IP**>.

- IP Setting window appears.

2 To complete the setting, click the [**Apply**] button.

- The settings are saved and the system is restarted.
- The currently opened web browser is closed.

- If more than one camera are connected to an IP Router, set the IP and port Settings for the camera differently.

- <**IP Type**>: Shows the current camera IP setting type.
  - Select the IP setting type from <**Static IP**>, <**Dynamic IP**> or <**PPPoE IP**>.
- <**IP Configuration**>: Allows setting the camera and port related settings.
  - <**MAC Address**>: Shows the Ethernet MAC address. Since this value is used to create a DDNS address, confirm the value.
  - <**IP Address**>: Shows the currently configured IP address. If the <**IP Type**> is set to <**Static IP**>, you can change the IP address.
  - <**Subnet Mask**>: Shows the <**Subnet Mask**> for the configured IP address.
  - <**Gateway**>: Shows the <**Gateway**> address for the configured IP address.
  - <**DNS Server**>: Shows the IP address of the DNS (Domain Name Service) server.
  - <**HTTP Webserver Port**>: Shows the HTTP port used to connect to the camera using the web browser. The default port number is 80(TCP).
  - <**Device Port(TCP)**>: A port used to control video transmission. The default value is 60001(TCP).
  - <**TCP Streaming Port**>: A port used to transfer video using the TCP protocols. The default value is 60002(TCP).
  - <**UDP Streaming Port**>: A port used to transfer video using the UDP multicast protocols. The default value is 60003(UDP).
  - <**Upload Port(TCP)**>: A port used to upgrade software. Default value is 60004(TCP).
- <**Multicast Settings**>: To transmit a video using UDP Multicast, you can set the IP address, port and TTL.
  - <**Multicast Address**>: Shows IP address set for video transmission using UDP Multicast. The default value is 225.128.1.128. It is recommended to set it to between 224.0.0.0 and 239.255.255.255.
  - <**Multicast Port**>: Shows UDP port set for video transmission using UDP Multicast. The default value is 60005(UDP).
  - <**TTL**>: TTL stands for "**Time To Live**" that allows you to set the number of routers so that the packet can pass through. Each router decrease the TTL value one by one when a packet passes it through. If the TTL value reaches 0, the packet cannot pass through a router. The default value is 63. It is recommended to set it to between 0 and 255.

To Setup Users

1 Click <**BASIC**> → <**USER**>.

- The USER window appears.

2 To complete the setting, click the [**Apply**] button.

- The settings are saved and the system is restarted.
- The currently opened web browser is closed.

- <**Login Authentication**>: You can determine whether to require login authentication for users.
  - If it is set to <**Enable**>, the users can connect to the system through login authentication, while it is set to <**Disable**>, the users can connect to the system without login authentication. However, users connected to the system without login have USER permission.
  - When the setting is complete, click the [**Apply**] button.
- <**User Login ID/Password List**>: Shows user ID, password and level (permissions) in a list.
  - You can register up to 10 users.
  - The default administrator ID is root.
  - <**Administrator**> cannot be deleted or added and you can change the password only.

To register an user

1 In the USER window, click the [**Insert**] button.

- The <Insert User> window appears.

2 Enter user ID and password.

- For the ID and password, up to 9 alphanumeric and some special characters are allowed.

3 Select the user permission.

- Select a user permission for the new user from the <Operator> and <User> in the Level field.

4 Click the [**Apply**] button.

- The user registration is completed.

- You cannot register a duplicated user ID.
- You cannot register root or guest user ID.

To modify a registered user account

1 Select the <**Select**> check box of a user account to be modified in the USER window.

2 Click the [**Modify**] button in the USER window.

- The <Modify User> window appears.

3 In the window, modify <**User ID**>, <**Password**>, <**Confirm Password**> or <**Level**> of the user account.

4 Click the [**Apply**] button.

- Modifying a registered user is complete.

To delete a registered user account

1 Select the <**Select**> check box of a user account to be deleted in the USER window.

2 Click the [**Delete**] button in the USER window.

- Deleting a registered user is complete.

- **About User Level**

  <Administrator>: The Administrator can use all functions and change the setup or search.
  <Operator>: The Operator can use all functions except setup and playback functions.
  <User>: The User can monitor video only.

To set the display language

1 Click <**BASIC**> → <**LANGUAGE**>.

- The LANGUAGE window appears where you can select a preferred language.
- You can select once from 7 languages (English/Korean/Chinese/French/Italian/Spanish/German).

2 To complete the setting, click the [**Apply**] button.

- The language has been changed to the selected one.

SYSTEM CONFIGURATION

To set date/time

You can get the current system time from a NTP server or a PC and set the system time.

1 Click <**SYSTEM**> → <**DATE/TIME**>.

- The DATE/TIME window appears.

2 To complete the setting, click the [**Apply**] button.

- The settings are saved.

- The date can be configured between 1 January 2000 and 31 December 2037.

- <Current System Time>: Shows the time according to the setting of System Time Setup.
- <System Time Setup>: You can set the time synchronized with NTP server (time server) or PC, or manually setup.

To setup the system time

1 Select one of the NTP server addresses of the <**Address**> list, or click <**Syncronize with PC Viewer**>.

2 Set the date and time directly if you select <**Manual**>.

3 Click the [**Apply**] button.

- The setting time is applied.

- NTP Server IPs are provided by a public agency and their list is therefore subject to change.
- In a local network, a separate NTP server must be manually defined.

- The current time can vary depending on the computers regional (GMT and DST) and country (PC time configuration) settings.

To view the log information

Click <**SYSTEM**> → <**LOG**>.

- The Log window appears showing log information.

- <System Log List>: Shows the log information about the system changes along with time and IP address.
  - <User Log In>: Shows current camera login user.
  - <Video Configuration Change>: Shows video setting changes.
  - <System Time Change>: Shows time changes.
  - <System Start>: Shows time when the camera is turned on.

- Up to 2000 logs can be recorded.
- If the log number is over 2000, a log in the bottom of log list will be deleted and added new log information.

To update the software

Click <**SYSTEM**> → <**SOFTWARE UPDATE**>.

- The Software Update window appears.

To update the software

1 In the USER window, click the [**Browse**] button.

- The Open File window appears.

2 Select an update file and click the [**Open**] button.

3 In the USER window, click the [**Install**] button.

- The file is uncompressed and the software update begins.
- Software update may take tens of minutes.
- To cancel an update, click the [**Cancel**] button.

4 When the software update is done, the system will automatically restart.

- Since the current connection is disconnected, you have to connect to the system again.

- Since, if the network is disconnected, the power fails or the PC abnormally operates during a software update, the system may not work afterwards, take care not to cause a problem during an update.

To reset the system

If the system abnormally operates or a problem occurs, you can restart or reset the system.

Click <**SYSTEM**> → <**RESET**>.

- The Reset window appears.

- <**Restart**>: The Reset window appears.
- <**Factory Default**>: Initializes the system settings to the factory settings and then restarts the system.
  - <**Except Network Parameter**>: Initializes the system settings except network settings.
  - <**All**>: Initializes all the system settings. Selecting this option is the same as pressing the [FACTORY RESET] button on the rear panel of the main body.

- After reset and restart, you have to connect to the system again.
- It takes a few minutes until the system booting is completed.
  You cannot connect to the system until the system booting is complete.
- After running <**Factory Default**> → <**All**>, you have to run <**IP Installer.exe**> program and setup network settings such as IP address, Subnet mask, Gateway, etc., to connect to the Internet.

To setup the camera

1 Click <**SYSTEM**> → <**CAMERA**>.

- You can select one from <Image Flip>, <Shutter>, <IRIS>, <BLC>, <AGC>, <White Balance>, <Day & Night>, <Detail>, <Y-Level> and <C-Level>.

2 To complete the setting, click the [**Apply**] button.

- <Image Flip>: Flips the image in vertical or horizontal direction.
- <Shutter>: Electronic shutter speed can be adjusted if monitoring a fast-moving subject. (Available Speeds: Off, 1/100, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10K, Auto X2, Auto X4, Auto X6, Auto X8, Auto X12, Auto X16, Auto X24, AutoX32, AutoX48, AutoX64, AutoX96, AutoX128, and AutoX256)
- <IRIS>: Automatically control the iris depending on the amount of incoming light. At Level 1, brightness is set; at Level 2, shutter speed is set.
  WDR Level 1: 0, 1, 2, 3, 4, 5, 6, 7, 8 Level 2: 0, 1, 2, 3, 4, 5, 6, 7, 8
  ALC Level 1: 0, 1, 2, 3, 4, 5, 6, 7, 8
  ELC Level 1: 0, 1, 2, 3, 4, 5, 6, 7, 8
- <BLC>: Allows for appropriate correction if the subject is situated under severe backlight. (Available Settings: Off, Bottom, Top, Left, Right, and Center)
- <AGC>: Automatically controls the gain when video data of less than a specific level of brightness is acquired (poor lighting). This option is deactivated if Shutter is set to auto. (Available Settings: Off, Low, and High)
- <White Balance>: A correction feature that ensures white balance under any level of color temperature.
  ATW1: The range of the color temperature that can be changed is approx. 2500K – 9300K.
  ATW2: The range of the color temperature that can be changed is approx. 2000K – 10,000K.
  AWC: The color temperature is adjusted appropriately to the current surroundings.
  3200K: The color temperature is set to 3200K.
  5600K: The color temperature is set to 5600K.
- <Day & Night>: The camera can be configured to record in color during the day and in black and white at night. (Available Settings: Color, BW, Auto, and Ext)
  The IR (Infrared) filter function of the camera can be switched on or off.
- <Detail>: Enables vertical and horizontal sharpness control. (Available Settings: 0, 1, 2, and 3)
- <Y-Level>: Used to configure the sync signal and total brightness signal levels. (Available Settings: 0, 1, 2, 3, 4, 5, 6, 7, and 8)
- <C-Level>: Used to configure the burst signal and total color signal levels. (Available Settings: 0, 1, 2, 3, 4, 5, 6, 7, and 8)

LAYOUT CONFIGURATION

You can display text on the screen.

To Set text

1 Click <**OVERLAY**> → <**OVERLAY TEXT**>.

- The Overlay Text window appears.

2 To complete the setting, click the [**Apply**] button.

- The settings are saved.

- <Overlay Text Settings>: The <Disable> option hides an overlay text while <Enable> shows it on the screen.
- <Show date>: Determines whether to display date on the bottom screen.
  - <Display format>: Select a date display format.
    YYYY-MM-DD: Year-Month-Day / MM-DD-YYYY: Month-Day-Year / DD-MM-YYYY: Day-Month-Year
- <Show time>: Determines whether to display time on the bottom screen.
  - <Display format>: Select a date time format.
    24hr: Time notation in 24 hours / 12hr: Time notation in 12 hours with AM/PM.
- <Text color>: Determines text color. You can select either <White> or <Black>.
- <Background color>: Determines text background color. You can select one from <White>, <Black> and <Transparent>.

EVENT CONFIGURATION

To set the image transmission function

You can set an FTP/Email(SMTP) server to send the prior/posterior alarm image saved in the camera when an alarm is generated.

Click <**EVENT**> → <**TRANSFER SETUP**>.

- The TRNASFER SETUP window appears.

- **<FTP Transfer>**: You can transfer an alarm image to an FTP server. When the initial FTP server setting and connection are not verified, the <**Not verified**> message appears.
  - <**Use Passive Mode**>: Select this option when the passive mode connection is necessary due to firewall or FTP server setting.
  - <**FTP Server Address**>: Enter the IP address of an FTP server to which an alarm image will be sent.
  - <**Upload Path**>: You can set the path of the FTP account to transfer an alarm image. You can set a path by just typing <**/directory name**> or <**directory name**> in this field. If you do not specify a path, alarm files are sent to the root directory of the FTP account.
  - <**Port**>: Although FTP server port is 21 as a default, you can change the port number according to the FTP server settings.
  - <**User ID**>: Enter a user account ID to connect to login the FTP server.
  - <**Password**>: Enter a user account password to login the FTP server.

To test FTP transmission

Click the [**Test**] button.

- Connect to the configured FTP server and conduct image transmission test automatically.
- When the FTP server connection and transmission tests are complete, the <**Verified**> message will be displayed.
- If the test fails, an error message appears. In this case, check the FTP server status and the configured settings once again.

- <E-mail(SMTP) Transfer> : You can transfer an alarm image through Email. This function supports SMTP Email server only. When the initial SMTP server setting and connection are not verified, the <Not verified> message appears.
  - <SMTP Server Address>: Enter the IP address of an SMTP server to be used to send an Email. Example) smtp.hotmail.com
  - <User ID>: Enter a user account ID to connect to connect the SMTP server.
  - <Password>: Enter a user account password to the SMTP server.
  - <E-mail Sender>: Enter the address of the Email sender. If the sender address is incorrect, the Email from the sender may be classified into SPAM mail by the SMTP server and may not be sent.
  - <E-mail Receiver>: Enter the address of the Email recipient.
  - <Title>: Enter the title of the Email.
  - <Message>: Enter the contents of the Email. An alarm image is attached to the Email as an attached file.

To test Email transmission

Click the [**Test**] button.

- Connect to the configured SMTP server and conduct image transmission test automatically.
- When the SMTP server connection and transmission tests are complete, the <Verified> message will be displayed.
- If the test fails, an error message appears. In this case, check the SMTP server status and the configured settings once again.

To setup the record

1 Click <**EVENT**> → <**RECORD SETUP**>.

- The RECORD SETUP window appears.

2 To complete the setting, click the [**Apply**] button.

- The settings are saved.

- <SD Card>: Enables you to verify data saved on the SDHC memory card and format the memory card itself. It is possible to set to automatically delete movie clips recorded before a certain period of time (e.g. 1 week, 1 month, or 1 year).
- <Options>: Determine whether or not you wish to receive Email notification of insufficient capacity warnings.

To set an alarm image

You can set an image to be sent through FTP/Email(SMTP) or saved on the SDHC memory card when an alarm is generated or during the scheduled transfer.

1 Click <**EVENT**> → <**ALARM IMAGE**>.

- The ALARM IMAGE SETUP window appears.

2 To complete the setting, click the [**Apply**] button.

- The settings are saved.

---

1. <**Transfer Mode**>: You can select a method to send an alarm image from the <**FTP**>, <**E-Mail**> and <**SD Card Record**>.

- <FTP Transfer>: The image is sent to the specified FTP address.
- <E-Mail Transfer>: The image is sent to the specified Email address.
- SD Card Recording
  - ▶ Insert an SDHC memory card.
  - ▶ Configure the SDHC memory card (refer to page 58 for details).
  - ▶ Check the SD Card Recording option and then click on the [Apply] button. The SD indicator will then turn on and recording will commence.
  - ▶ To remove the SDHC memory card, first uncheck the SD Card Recording option and then click on the [Apply] button.

⚠ Removing the SDHC memory card while recording is in progress can damage the data.

2. <**Transferred Image Naming Setup**>: You can set the file name of an alarm image to be sent when an alarm is generated or during the scheduled transfer.

3. <**Pre/Post Alarm Image**>: You can determine which of previous or posterior image is to be sent.

- <Number of Image>: Determines number of images to be sent per second. You can select 1, 2, 3 and 5 images per second.
- <Pre-Alarm Duration>: Determines time of prior images to be sent. You can select one from <5 sec>, <10 sec>, <15 sec> and <30 sec>. You can send a prior image of up to 30 seconds after an alarm is generated. (The maximum time is determined by the number of images to be sent per second.)
- <Post-Alarm Duration>: Determines time of posterior images to be sent. You can select one from <5 sec>, <10 sec>, <15 sec> and <30 sec>. You can send a posterior image of up to 30 seconds after an alarm is generated. (The maximum time is determined by the number of images to be sent per second.)

To set an alarm input

1 Click <**EVENT**> → <**ALARM INPUT 1**> or <**ALARM INPUT 2**>.

- The ALARM INPUT window appears.

2 To complete the setting, click the [**Apply**] button.

- The settings are saved.

- <Input Device Setup>: Select an input type from the <OFF>, <NO> and <NC>.
  - <NO>(Normal Open): It is normally open, but if it is close, an alarm will be generated.
  - <NC>(Normal Close): It is normally close, but if it is open, an alarm will be generated.
- <Activation Time>: You can set time to accept an alarm to take an action.
  - <Always>: Always conducts the <Action> setting when an alarm is generated.
  - <Only Scheduled Time>: Conducts the <Action> setting for an alarm only when it occurs during the specified time period on the specified day of the week. The Start Time must prior to and must differ from the End Time.
- <Action>: You can set an operation to be conducted when an alarm is generated.
  - <Alarm Output>: Determines alarm output port to which the alarm signal is to be sent.
  - <Output Duration>: Determines the period of time to output alarm signal to the specified alarm output port when an alarm is generated. If another alarm event is generated during the alarm output, the delay time is recalculated on the basis of the most recently generated an alarm.
  - <Alarm Image Transfer>: If <On> is selected, a JPG image is transmitted through FTP or Email (SMTP) or saved on the SDHC memory card according to the <EVENT> → <TRANSFER SETUP> settings.

To set the motion detection function

1 Click <**EVENT**> → <**MOTION**>.

- The MOTION window appears.

2 To complete the setting, click the [**Apply**] button.

- The settings are saved.

- <M.D. Function>: <Enable> activates the motion detection function, while <Disable> disables the function.
- <M.D. Configuration>: You can set motion detection performance parameters.
  - <Motion Sensitivity>: Select a motion detection function sensitivity from <High>, <Medium> and <Low>. The <High> option provides high sensitivity of motion detection and generates motion detection event if a small motion is detected.
  - <Motion Area>: You can set an area to detect motion.
- <Activation Time>: You can set time to accept a motion detection to take an action.
  - <Always>: Always conducts the <Action> setting when a motion is detected.
  - <Only Scheduled Time>: Conducts the <Action> setting for a motion detection only when it occurs during the specified time period on the specified day of the week. The Start Time must prior to and must differ from the End Time.
- <Action>: You can set an operation to be conducted when a motion is detected.
  - <Alarm Output>: Determines a motion detection output port to which the alarm signal is to be sent.
  - <Output Duration>: Determines the period of time to output the alarm signal to the specified alarm output port when a motion is detected. If another detection event is generated during the alarm output, the delay time is recalculated on the basis of the most recently generated motion detection.
  - <Alarm Image Transfer>: If <On> is selected, a JPG image is transmitted through FTP or Email (SMTP) or saved on the SDHC memory card according to the <EVENT> → <TRANSFER SETUP> settings.

To set a motion detection target area

You can set a specific area to detect a motion in.

1 In the MOTION window, click the [**Motion Area**] button.

- The Motion Area window appears.
- You can set a specific area to detect a motion in.

2 Click over square boxes corresponding to your desired motion detection target area.

- The selected area is colored in yellow.

3 To cancel a selection, click over the square box once again.

- The square box returns to its original color.

4 To complete the setting, click the [**Apply**] button.

- The settings are saved.
- The motions in the selected area will be detected.

To set scheduled transmission

You can have a JPEG image sent through FTP and Email or recorded on the SDHC card periodically.

1 Click <**EVENT**> → <**SCHEDULE**>.

- The SCHEDULE window appears.

2 To complete the setting, click the [**Apply**] button.

- The settings are saved.

- <Schedule Transfer Function>: <Enable> activates the scheduled transmission function, while <Disable> disables the function.
- <Transfer Interval>: You can set the time interval to transmit images. You can select a unit of time from <SECONDS> or <MINUTES>. You can set the time interval so that an image is transmitted every 5/15/30/45/60 seconds or minutes.
- <Activation Time>: You can set the time to execute the scheduled transmission function.
  - <Always>: Always transmits images according to the specified interval.
  - <Only Scheduled Time>: Transmits images according to the specified interval during the specified time period on the specified day of the week.

- The Start Time must be prior to and must differ from the End Time.

NETWORK CONFIGURATION

To set video streaming

You can control the data transfer rate according to the camera video streaming type and network bandwidth.

1 Click <**NETWORK**> → <**STREAMING SETUP**>.

- The STREAMING SETUP window appears.

2 To complete the setting, click the [**Apply**] button.

- The settings are saved.

- <Streaming Type>: You can select a protocol for video transmission from the <TCP>, <UDP(Unicast)> and <UDP(Multicast)>.
  - <TCP>: It is a general purpose protocol used for a transmission that requires reliability. Since it provides a connection based communication between the sender and recipient, it provides high reliability against transmission data loss. However, it is inappropriate to transmit a large amount of data in real-time because of its transmission overhead. It enables reliable data transmission over xDSL and cable network at a relatively slow speed.
  - <UDP(Unicast)>: It refers to transmitting data to only one receiver (1:1).
  - <UDP(Multicast)>: It refers to the data transfer protocol in one-to-many (1:N) between the transmitting and receiving terminals. Although it alleviates the network load, it requires <Multicast> router. For more information such as whether the network over which the camera is installed supports <Multicast>, ask your network administrator.

- **UDP**: It is a protocol appropriate to transmit a large amount of data such as multimedia data in short time. However, it provides higher transmission efficiency than TCP especially over high speed connections faster than 100Mbps.

- With multicast activated, it is not possible to perform video recording search.
- Audio cannot be transmitted to the camera through the microphone.
- Multicast backbone (MBone) is not supported, and the camera can only be used in a LAN-based multicast environment.

- <Streaming Control>: You need to set the bandwidth to an appropriate value according to the data rate of your network for smooth video streaming.
  - You can set the <Bandwidth> by selecting one from <Unlimited/5Mbps/3Mbps/1Mbps/600Kbps/300kbps/150Kbps>.
  - If your network provides data rate equal to or higher than 100Mbps, it is recommended to set the <Bandwidth> to <Unlimited> or <5Mbps>. If you are using a broadband Internet connection, set the <Bandwidth> to <3Mbps> or <1Mbps>.
  - If you are using low speed xDSL network, set the <Bandwidth> to <600Kbps> or lower for smooth video streaming.
  - The maximum number of images per second in the video setting menu is automatically determined depending on the selected <Bandwidth> value.

To set DDNS

DDNS is an abbreviation of Dynamic Domain Name Service that converts the IP address of a camera into a general Host Name so that the user can easily remember it and enables connecting a camera with a fixed Host Name even if the IP address of the camera may be dynamically changed.

1 Click <**NETWORK**> → <**DDNS**>.

- The DDNS window appears.

2 To complete the setting, click the [**Apply**] button.

- The settings are saved.

- If Samsung's DDNS service is selected, the Host Name is automatically generated using the camera MAC address.
- A camera MAC address consists of <One among from lower-case alphabet characters of c, m and p> + <Last 6 digits of the MAC address> + <websamsung.net>.
- The lower-case alphabet letter becomes <c> if the first 6 digits of the MAC address is <00:00:f0>, <m> if <00:16:6c>, and <p> if <00:68:36>.
  Example) - If the MAC address of a camera is 00 : 00 : f0 : ff : fe : 42,
  c + fffe42 + websamsung.net = cfffe42.websamsung.net
  - If the MAC address of a camera is 00 : 16 : 6c : ff : fe : 42,
  m + fffe42 + websamsung.net = mfffe42.websamsung.net
  - If the MAC address of a camera is 00 : 68 : 36 : ff : fe : 42,
  p + fffe42 + websamsung.net = pfffe42.websamsung.net
- To use another DDNS service, sign up a DDNS site that is supported by a camera and use it with the user ID and password you have specified when you sign up the site.
- For information about how to sign up another DDNS and setup Host Name, please visit the corresponding DDNS service website and ask about that.

TROUBLESHOOTING

PROBLEM	SOLUTION
I can't access the camera from a web browser.	• Check to make sure that the camera's Network settings are appropriate. • Check to make sure that all network cables have been connected properly. • If connected using DHCP, verify that the camera is able to acquire dynamic IP addresses without any problem. • If connected using a DDNS URL, verify that the MAC address has been properly entered. • If the camera is connected to an xDSL network, ensure that Bandwidth is set to less than 600Kbps. Because xDSL offers slow connection speed, setting Bandwidth high results in network load and hinder network connection. • If the camera is connected to a router, verify that port forwarding is properly configured.
Viewer got disconnected during monitoring.	• Connected Viewers become disconnected upon any change to camera or network configurations. • Check all network connections. • If the camera is connected over an xDSL network, it's possible for Viewer to disconnect under poor network conditions.
I cannot connect to the system using a tab browser of Internet Explorer 7.0.	• When you try to connect to the system using a tab browser, the same cookie information is shared, resulting in errors when connected. Therefore, instead of using a tab browser, open a new browser window to connect to the system.
The camera connected to the network is not detected in the IP installer program.	• Turn off the firewall settings on your PC and then search the camera again.
Images overlap.	• Check whether two or more cameras are set to a single multicast address instead of different addresses. If a single address is used for multiple cameras, the images may overlap. • If the inappropriate video codec is installed on your computer, the video will not be played properly. Uninstall the video codec installed and check it again.

PROBLEM	SOLUTION
No image appears.	• If the transmission method is set to multicast, check whether there is a router that supports multicast in the LAN the camera is connected to.
I enabled Motion Detection Feature under Motion Detection, but .jpg files are not getting sent over FTP/ SMTP even after motion detection occurs at the FT camera.	• Verify the settings in the following sequence: A. NTP must be properly configured. B. Motion Detection Feature must be enabled. C. Alarm Video Transmission must be enabled. D. Check for scheduling conflict.
Is it possible to configure Motion Zone with Motion Detection Feature disabled?	• Yes. Motion Zone can be configured independently of whether or not Motion Detection Feature is in use.
A motion event took place but didn't trigger an alarm.	• Check alarm output port settings.
Data is not getting recorded on the SDHC memory card.	• Make sure that the memory card is not defective. • Verify that the Lock switch on the memory card is not enabled.
SD Indicator will not turn on after inserting an SDHC memory card.	• Make sure that the memory card is not defective. • Go to Configurations → Events → Alarm Image Settings and verify that SD Card Recording option is checked.
I inserted an SDHC memory card, but the camera isn't working properly.	• Make sure that the memory card has been inserted correctly in the right direction. With memory cards that have been formatted from a different device, their performance cannot be guaranteed when used in the camera. Go to Configurations → Events → Recording Settings and format the memory card again.
The SDHC memory card is not getting formatted.	• Verify that the memory card's Lock function is not enabled.

SPECIFICATIONS

Item			Details	
			NTSC	PAL
Scanning Mode			525 Lines, 30f/sec	625 Lines, 25f/sec(PAL)
Image Device			1/3" PS 410K Pixel CCD	1/3" PS 470K Pixel CCD
Effective Pixels			768(H) x 494(V)	752(H) x 582(V)
Synchronization			Internal	
Resolution			540(Color)/570(BW) TV Lines	
S/N			Approx. 50dB	
Min. Scene Illumination			Color : 0.4 Lux(50IRE) 0.0005 Lux (15IRE,Sense x256)	
			B/W : 0.04 Lux(50IRE) 0.00005 Lux (15IRE,Sense x256)	
Wide Dynamic Range			128x	160x
Day/Night			Moving Filter (Ture Day/Night)	
Lens			Auto Iris (Video/DC)/ Manual Iris	
Lens Mount			CS/C (Mount adaptor)	
Signal Out			VBS 1.0Vp-p(75Ω,Composite)	
Environment	Network Board	OS	Embedded Linux	
	Client	OS	Windows XP , VISTA	
Browser	Web Browser		Internet explorer 6.0 higher	
Video Player			Quicktime, VLC player(RTP/RTSP)	
Compression	Video		MPEG4 ,MJPEG	
	Audio		G.711 : Full Duplex, 64Kbps, 8KHz sampling	
Network Hardware	Flash Memory		16M byte	
	SDRAM		128M byte	
Network	Ethernet		10/100BASE-T	
	Network Protocol	Network Protocol	TCP, UDP, NTP, HTTP, DHCP, PPPoE	
		Streaming	TCP, UDP(Unicast, Multicast), RTP, RTSP	
		DDNS	Samsung DDNS and Public DDNS servers support	

Item			Details	
			NTSC	PAL
Video Resolution			D1(720x480), VGA(640x480), CIF(352x240)	D1(720x576), VGA(640x480), CIF(352x288)
Motion Detection			High, Medium, Low	
Connection Users	Unicast		Maximum 10 Users	
	Multicast		Maximum 20 Users	
Alarm IN/OUT			Input: 2, Output: 2	
Alarm Event Image Transfer	Alarm Input Transfer		FTP Transfer / E-Mail(SMTP) Transfer / SD Card Record	
	Motion Detection Transfer		FTP Transfer / E-Mail(SMTP) Transfer / SD Card Record	
Time Setup			Synchronization with NTP, Synchronization with PC, Manual setting	
IP installer			IP installation function(XP, VISTA support)	
Software Upgrade			Firmware upgrade by web browser	
SDK	HTTP API	Application program interface	Provides functionality to set/retrieve internal parameter values. Get JPEG image or multi-part JPEG stream. Monitor alarm in and control alarm out.	
	Windows API	Windows API	ActiveX components for viewing streams from video camera and controlling.	
Power			AC24V±10%(60Hz±0.3Hz) DC12V+10%/-5% PoE (Power over Ethernet)	AC24V±10%(50Hz±0.3Hz) DC12V+10%/-5% PoE (Power over Ethernet)
Power Consumption			Approx. 8W	
Operation Temperature			-10℃~50℃	
Operation Humidity			~90%	
Dimension			W147.4 X D60.9 X H83 mm	
Weight			Approx. 428g	

Item	Details									
	NTSC									
Frame Rate (FPS)	MJPEG / MPEG4	Level 10	Level 9	Level 8	Level 7	Level 6	Level 5	Level 4	Level 3	Level 2	Level 1
	Level 10	24	25	25	26	26	26	28	28	28	28
	Level 9	25	26	26	27	28	28	28	29	29	30
	Level 8	25	26	26	27	28	28	29	29	30	30
	Level 7	25	26	26	28	29	29	29	29	30	30
	Level 6	25	26	26	28	29	29	29	29	30	30
	Level 5	25	26	26	28	29	29	29	30	30	30
	Level 4	25	26	26	28	29	30	30	30	30	30
	Level 3	25	27	26	28	29	30	30	30	30	30
	Level 2	25	27	27	28	30	30	30	30	30	30
	Level 1	27	27	27	29	30	30	30	30	30	30
	PAL										
	MJPEG / MPEG4	Level 10	Level 9	Level 8	Level 7	Level 6	Level 5	Level 4	Level 3	Level 2	Level 1
	Level 10	21	21	23	23	24	24	24	24	25	25
	Level 9	22	22	23	24	25	24	24	24	25	25
	Level 8	22	22	23	24	24	24	24	25	25	25
	Level 7	22	22	23	24	24	24	24	25	25	25
	Level 6	22	22	23	24	24	24	25	25	25	25
	Level 5	22	22	23	24	24	24	25	25	25	25
	Level 4	22	22	23	24	24	25	25	25	25	25
	Level 3	22	22	23	24	24	25	25	25	25	25
	Level 2	22	23	24	24	24	25	25	25	25	25
	Level 1	22	23	24	24	24	25	25	25	25	25

Image Size	NTSC			PAL		
		MPEG (bps)	MJPEG (KB)		MPEG (bps)	MJPEG (KB)
	Level 10	6M	47	Level 10	6M	52
	Level 9	5M	35	Level 9	5M	42
	Level 8	4M	32	Level 8	4M	39
	Level 7	3M	29	Level 7	3M	36
	Level 6	2M	28	Level 6	2M	34
	Level 5	1.5M	26	Level 5	1.5M	33
	Level 4	1.25M	23	Level 4	1.25M	29
	Level 3	1M	20	Level 3	1M	26
	Level 2	768K	17	Level 2	768K	22
	Level 1	512K	15	Level 1	512K	19

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