LG
Life's Good

OWNER'S MANUAL

# Smart Station

Please read this manual carefully before operating your set and retain it for future reference.

MODELS
LSS464

P/NO : MFL

# Contents

## 4
## Reference

# 1 Introduction

The LG Smart Station is an IP-Surveillance software that works with the LG Video Server and LG IP cameras to provide video monitoring, recording setting and event management functions. The software has multiple search functions for recorded events. Remote viewing and playback are also possible with the use of the Smart Station.

This manual contains instructions on how to use and manage the LG Smart Station in your networking environment. Some knowledge of networking environments would be beneficial to the reader.

Should you require any technical assistance, please contact authorized service center.

## Features

The LG Smart Station offers the following functions:

- Remote setup available for LG IP device.
- Video recording with NAS system and Local HDD drive.
- EMap support
- Device Finder
- Intelligent Video Analytics Function
- Motion detection Function
- 64 channels live view
- Multiple playback at the same time
- Camera Pan/Tilt/Zoom Control
- 2way audio support
- User Privileges
- AVI File Export
- Various Layout and Intuitive User-Friendly GUI

# Recommended PC Requirements

The LG Smart Station must be installed below operating systems for best performance and stability.

| Items | Requirements |
|---|---|
| Operating System | Windows XP Professional Service Pack 2 or above |
| CPU | Intel Quad Core 2 Q6700 (2.66GHz) or above |
| Web Browser | Microsoft Internet Explorer 6.0 or above |
| DirectX | DirectX 9.0 or above |
| Memory | 2GB or above RAM |
| Graphics Card | 256 MB or above Video RAM (Use latest graphics card driver.) |
| Resolution | 1280 x1024 (with 32bit color) or above |
| Network | 100 Megabit Network<br>(Gigabit Network recommended for larger systems) |

# Before install the Smart Station program

- The description pictures may differ from your OS (Operating System) or Web Browser type. The pictures used in this manual are based on Windows XP Professional.
- Do not use other applications with this Smart Station program. This can cause memory shortage and program malfunction.
- Check that the LG IP Device is(are) connected to the network and that power is supplied.
- For more information on product installation, see the user manual of your LG IP device.

# 2
# Getting Started

## Install the Smart Station on your PC

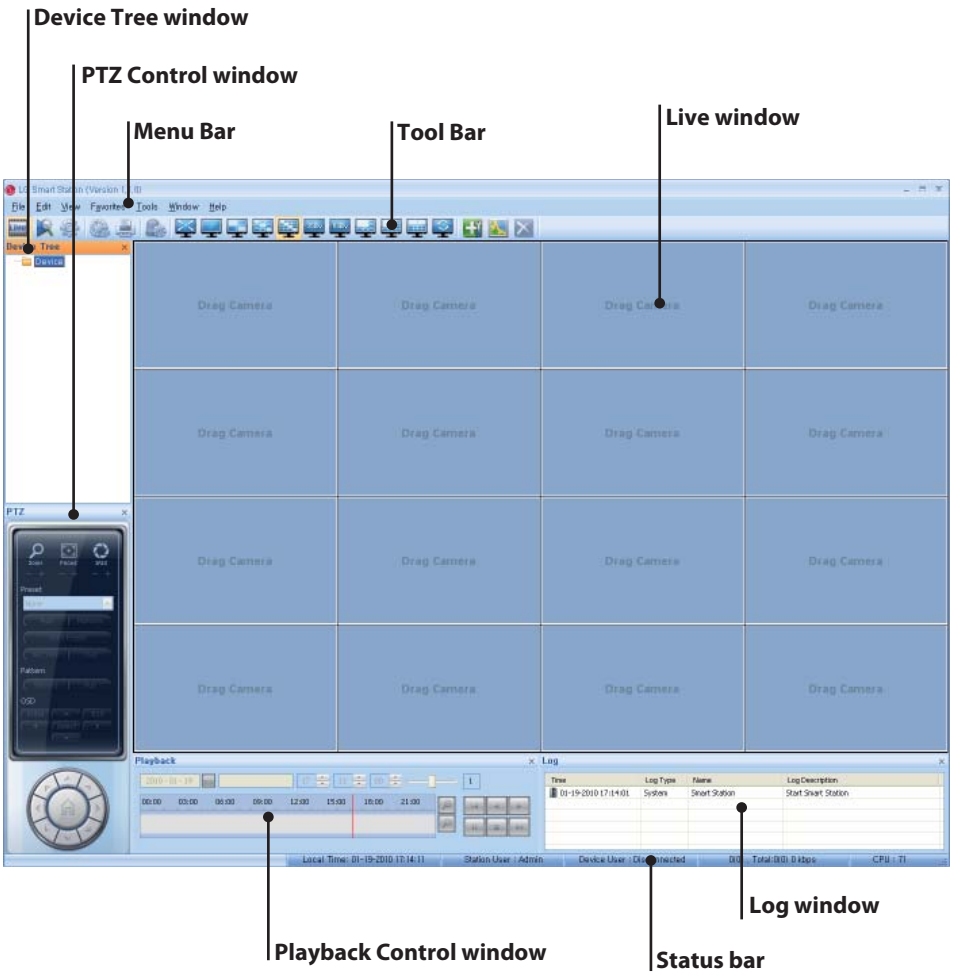
You can install the Smart Station software following steps.

1. Insert the Client Program CD which will be started automatically.
   If the disc does not run automatically on your PC, open the Client Program CD and install the program manually.
2. Run the install file and install the programs to your computer following the on-screen instructions.
3. After finishing installation, you will find the programs in the start menu or on the desktop.

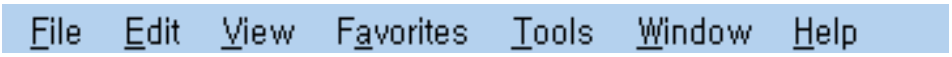
## Starting the Smart Station

1. Run the Smart Station program. To launch Smart Station, select **LG Smart Station** from your **Start > Programs > LG Electronics > Smart Station > Station > LG Smart Station** or click the **LG Smart Station** icon on your desktop.
   The authorization window is displayed.
2. Enter the user ID and password. (Note that the default user ID and password are "admin".)
3. Click the [OK] button and then the **LG Smart Station** window is displayed.

# Smart Station Overview



## Menu Bar




| Menu | Sub-Menu | Description |
|---|---|---|
| File | Print | You can print the current live image of the selected channel. |
| | User Log-in | Selects when you log-in the Smart Station or change the authorized use. |
| | User Log-out | Selects when you want to log-out. |
| | JPEG Saving | You can capture and save the current image by JPEG file format of the selected channel. The save folder is "Root Drive:\LG Exported Files\JPEG".<br>1. Select the channel.<br>2. Select **File > JPEG Saving** option. Jpeg Saving window is displayed.<br>3. Specify a location and filename, and click [Save]. |
| | Connect All | Connect all devices of the current screen division mode. |
| | Disconnect All | Disconnect all devices of the current screen division mode. |
| | Exit | Exit the Smart Station |
| Edit | Delete Channel | Delete the selected channel. |
| | Delete Channel All | Delete the all channels of the current screen division mode. |
| View | Toolbar / Status / PTZ / Tree / Playback / Log | Displays or removes the selected function window. |
| | OSD | Displays or removes the OSD in the selected channel window. |
| | Sequence | View all the channels in sequence in the selected screen division mode. You cannot use sequence mode with the 64 split. While the sequence mode condition, if you change the screen division mode, the sequence function will be canceled. |
| | Language | Select the language for Smart Station. |

| | | |
|---|---|---|
| Favorites | Add to Favorites | You can add the current status of the camera mapping and screen mode to the Favorites menu bar.<br>1. Select **Favorites > Add to Favorites** to Favorites options when you add it to the favorites menu.<br>2. Type a name for the favorites.<br>3. Click [OK]. |
| | Organize Favorites | Selects when you want to rename or delete the favorite item.<br>*To rename the favorite item.*<br>1. Select **Favorites > Organize Favorites** options.<br>2. Select the favorite item from the favorite list.<br>3. Type a new name in the [Name] option.<br>4. Click the [Rename] button to confirm it.<br>5. Click the [OK] button to exit.<br>*To delete the favorite item.*<br>1. Select **Favorites > Organize Favorites** options.<br>2. Select the favorite item from the favorite list.<br>3. Click the [Delete] button to confirm it.<br>4. Click the [OK] button to exit. |
| Tools | Add/Edit/Remove Device | Add, edit or remove devices in Smart Station. |
| | Station Setup | Set the Recording and System options for the Smart Station. |
| | EMap | This function gives a visual overview of the cameras in your surveillance environment using the imported maps. |
| | Log Search | You can search log history. Logs shows all events and user actions. |
| Window | Window1 (17ch~32ch) | Displays from the 17 channel to the 32 channel in the one popup window. |
| | Window2 (33ch~48ch) | Displays from the 33 channel to the 48 channel in the one popup window. |
| | Window3 (49ch~64ch) | Displays from the 49 channel to the 64 channel in the one popup window. |
| | Live Popup | Displays the popup window for EMap or log. |
| Help | About Smart Station | Displays the Smart Station Information. |

## Tool Bar

| | |
|---|---|
| Live | Displays the live view workspace. You can see the surveillance camera's images in the window(s). You can also control the PTZ camera, playback the data or view the system and event log list. |
| Search | Displays the search workspace. You can search and play the recorded data using the Date/Time or Event search functions. |
| Device Setup | You can set the configuration of the selected device in the Device Tree window via the network. |
| Export to AVI | Displays the Export pop-up windows. |
| Print | You can print the current live and playback image of the selected channel. |
| Video Analytics | Displays the VA (Video Analytics) event setting pop-up windows. |
| Full Screen | You can view the live window in full screen mode. To return to the normal screen, press the [Ecs] button on the keyboard. |
| Division | When the icon is clicked, the screen will be changed to split mode and if the icon is clicked again, the screen will be changed by sequence (except 64 split mode). Choose the screen division mode. |
| Sequence | View all the channels in sequence. You cannot use sequence mode with the 64 split. |
| Add/Edit/Remove Device | Displays the Add/Edit/Remove Device pop-up windows. Add, edit or remove device in Smart Station. |
| Emap | Displays the EMap pop-up windows. This function gives a visual overview of the cameras in your surveillance environment using the imported maps. |
| Delete Channel | Delete the selected channel. |

## Function windows

*Device Tree window*

Displays the registered device name and group folder name.

To show or hide a structure level, click the plus (+) or minus (-) signs at the left of the corresponding structure.

*PTZ Control window*

You can control the PTZ unit that the unit connected to the selected device using these buttons.

*Playback Control window*

You can playback the recorded data of the selected channel.

*Log window*

Displays the events and user actions. The log is saved in the "Smart station installed folder\log" folder per each day. You can search the logs by using log search function.

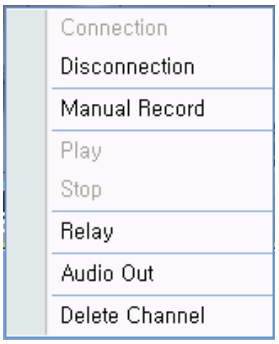
If you click the right mouse button, the pop-up menu is displayed.

- Clear All : All logs are deleted in the log view list.
- Live Popup : Live video will be popup.

## Status bar

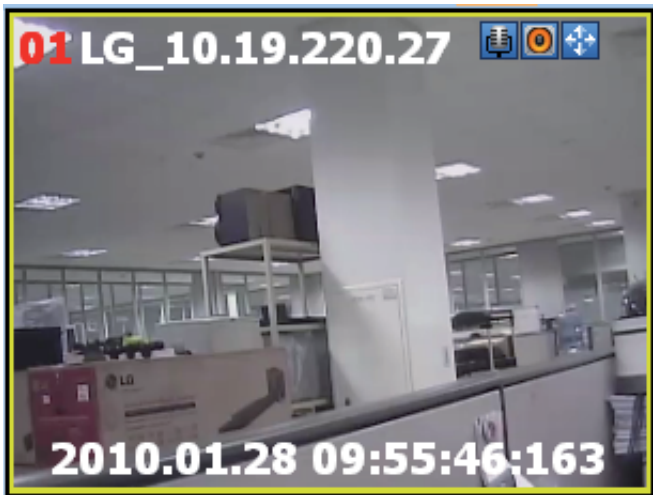

- Local Time: Displays the Local Time.
- Station User: Displays user level to the smart station.
- Device User: Displays the connected user to the selected device.
- Framerate/Bitrate: Displays the Frame rate and Bit rate per second of the selected device.
- CPU: Displays the present CPU usage of the client PC.

## Pop-up menu




- Connection: Select to connect the device.
- Disconnection: Select to disconnect the device.
- Manual Record: Select to record manually.
- Play: Select to play the recording data.
- Stop: Select to stop the playback.
- Relay: Select to run the relay of the device.
- Audio Out: Select to activate the two-way audio.
- Delete Channel: Select to delete the registered device.

## Live window icons




| Icons | Discription |
|---|---|
|  | Displays when the audio input function is available in the network device. |
|  | Displays when the audio funciton is activated in the network device. |
|  | Displays when the PTZ device is connected. |
|  | Indicates sensor recording. |
|  | Indicates motion detection recording (Yellow icon). |
|  | Indicates VA recording (Blue icon). |
|  | Indicates Continuous recording. |
|  | Indicates instant recording. |

# 3
# Operation and settings

## Register the device

The first time Smart Station is started, you should register a LG IP device to control it by the Smart Station.

**Note:**

The computer running Smart Station must be on the same network with device.

### Add the device using search function

1. Select **Tools > Add/Edit/Remove Device** option on the menu bar.
2. Click the [Search] button. After a few seconds the found device is(are) displayed.
3. Select the device name in the Device list. If you want to register the all devices, check the [Select All] option.
4. Click the [Add] button. The Add Device window is displayed.
5. Specify the Device Name, Video Stream, Protocol, User ID, Password and click the [OK] button.
6. Click the [OK] button repeatedly to exit the window.
   The registered device name is displayed in the Device Tree windows.

### Add the device manually

1. Select **Tools > Add/Edit/Remove Device** option on the menu bar.
2. Click the [Add] button. The Add URL window is displayed.
3. Specify the device Name, Video Stream, Protocol, User ID, Password and click the [OK] button.
4. Click the [OK] button to exit the window.
   The registered device name is displayed in the Device Tree windows.

### Edit the device

1. Select **Tools > Add/Edit/Remove Device** option on the menu bar.
2. Select the device name on the device list.
3. Click the [Edit] button. The Edit Device window is displayed.

4. Specify the Device Name, Video Stream, Protocol, User ID, Password and click the [OK] button.
5. Click the [OK] button to exit the window.

### Remove the device

1. Select **Tools > Add/Edit Device** option on the menu bar.
2. Select the device name on the device list.
3. Click the [Remove] button. The selected device is removed.
4. Click the [OK] button to exit the window.

## Create a device group

You can make the device group to manage it.

### Create a new group folder

To create a group under the Device top-level folder, do the following on the Device Tree section:

1. Click the right mouse button on the Device or group folder.
2. Select the [Add Group] option. The dialog window is displayed.
3. Overwrite the default name "New Group" with a group name of your choice.
4. Click the [OK] button to confirm it.
   The new group folder is created under the folder you selected.

### Delete a group folder

1. Select the required group folder and click the right mouse button.
2. Select the [Delete Group] option.

**Notes:**

- It is not possible to delete the Device top-level folder.
- Deleting a group folder will delete all subgroup folders within the group folder as well. If you delete the group folder, the device in the group folder will be moved to the upper group folder automatically.

### Edit a group folder

1. Select the required group folder and click the right mouse button.
2. Select the [Edit Group] option. The dialog window is displayed.
3. Overwrite the existing group name with a new name of your want.

4. Click the [OK] button to confirm it.

**Note:**

You cannot edit the Device top-level folder.

### Add the device to the group folder

1. Select the required device name that you want to group.
2. Click the device name then drag and drop to the group folder.
3. Repeat steps 1 to 2 to group the other devices.

## Connect the device

1. Select the required device name.
2. Drag and drop the device name to the required position in the live window.
   The device is connected automatically and the Live image is displayed in the selected window.
3. Repeat step 1 to 2 to connect the other devices.

## Connect the group device

1. Select the required device group folder.
2. Drag and drop the device group folder to the required position in the live window.
   Each devices are connected automatically and the Live image is displayed in each windows.
3. Repeat step 1 to 2 to connect the other devices.

## Disconnect the device

1. Select the device channel.
2. Click the right mouse button on the live window. Select [Disconnection] option.
   The device of the selected channel is disconnected. If you want to connect again, click the right mouse button and select [Connection] option.
3. Repeat step 1 to 2 to connect the other devices.

# Device setup

You can setup the selected device via the network.

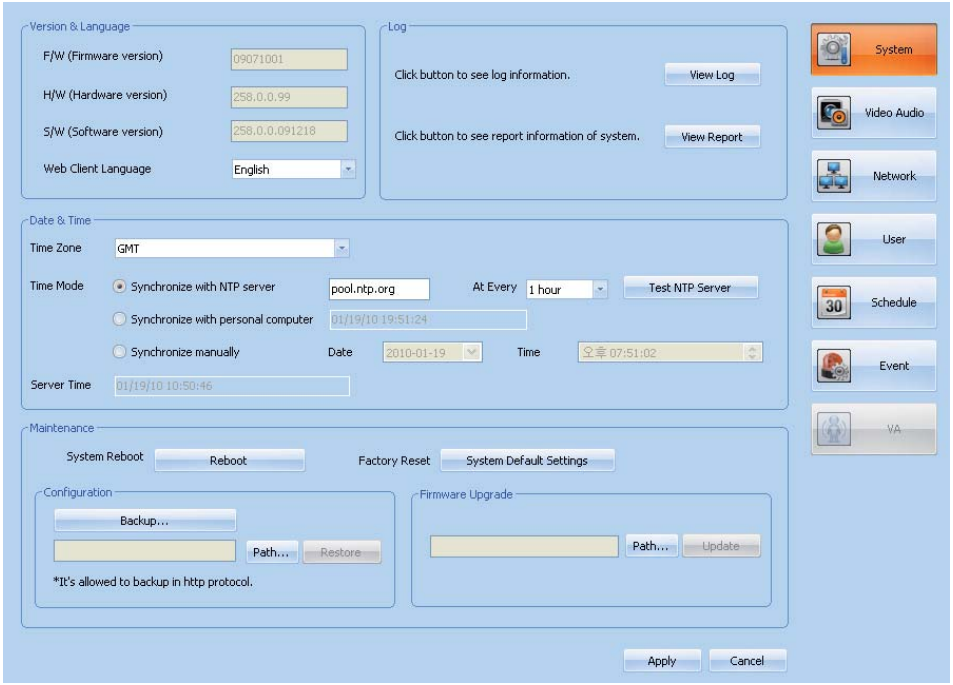
1. Select the live window of the device to setup what you want.
2. Click the Device setup icon.
3. Set the options. For more detail settings, see the next pages.

## Configuration menu overview

The following table shows the list of menu items.

| Main Menu | Sub Menu |
|---|---|
| System | Version & Language |
| | Log |
| | Date & Time |
| | Maintenance |
| Video Audio | Video |
| | Audio |
| | PTZ |
| Network | Basic |
| | RTP stream |
| | TCP/IP |
| | Notification |
| | DDNS Server |
| | IP filtering |
| | Encryption |
| User | Basic |
| | User List |
| Schedule | Total Schedule List |
| | Schedule List |
| | Recording server |
| Event | Event List |
| | Event server |
| | Sensor & Relay |
| | Fan |
| VA | Preset Mode |
| | OSD |
| | Filter |
| | Basic Parameters |
| | Advanced Parameters |

## System settings




**Version & Language**

*F/W (Firmware version), H/W (Hardware version), S/W (Software version)*

Displays the current Firmware, Hardware, Software version.

*Web Client Language*

Select a language for the Web Client configuration menu and information display.

**Log**

The System log provides a summary of the status of the selected LG IP device.

*View Log*

Click this button to display the system log information.

*View report*

Click this button to display the report window of the system.

**Date & Time**

*Time zone*

Select your time zone from the drop-down list.

*Time mode*

> Synchronize with NTP Server: The LG IP device will obtain the time from an NTP server every selected time. Specify the NTP server's IP address or URL. Click the

[Test NTP Server] button to test the server.

> Synchronize with personal computer: Set the time from the clock on your computer.

> Synchronize manually: This option allows you to manually set the time and date.

*Server Time*

Displays the server time.

**Maintenance**

**Notes:**

- System Reboot, Factory Reset, Configuration restore, Firmware upgrade contains operation of "camera reboot". Therefore connection is disconnected and all of camera operation is disabled. If network setting of camera is "Static", connection will be automatically reconnected after camera reboot completed. But if network setting of camera is "DHCP", IP address of camera may be changed. For register to device , remove list of changed device and search by "Add/Edit/Remove Device".
- Firmware upgrade contains file uploading and camera reboot and therefore it will may takes a few minutes.

*System Reboot*

Click the [Reboot] button to restart the system. Use this method if the unit is not performed as expected.

*Factory Reset*

Click the [System Default Settings] button to reset the factory default values (Except the Network settings, PTZ Protocol and Preset settings). The [System Default Settings] button should be used with caution.

*Configuration*

> Backup: To take a backup of all of the settings. If necessary, it is then possible to return to a previous configuration if settings are changed and there is unexpected behavior.

> Restore:

1. Click the [Path] button.
2. Find and locate the saved backup file.
3. Click the [Restore] button then confirmation window is displayed.
4. Click the [OK] button and then the system settings will be restored to the previous configuration and reboot the system.

**Notes:**

- Backup and Restore can only be used on the same unit running the same software version. This feature is not intended for multi-configurations or for firmware upgrades.
- Configuration Backup is supported only http protocol, not https.

*Firmware Upgrade*

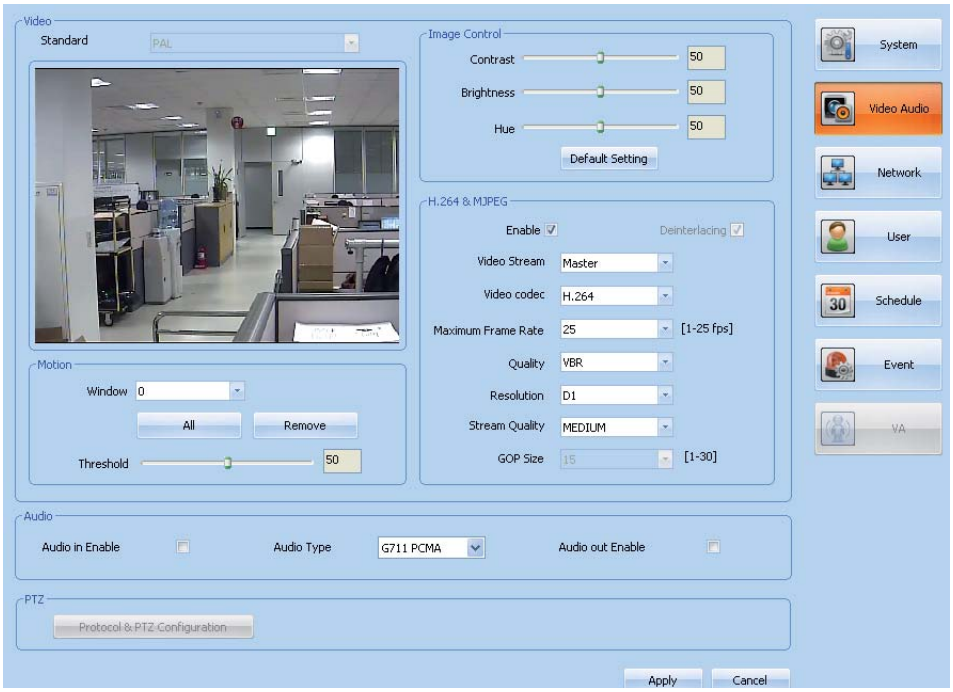
You can update the system manually.

1. Click the [Path] button.
2. Find and open the firmware file.
3. Click the [Update] button to update the firmware.

**Note:**

After completing the settings on this page, click [Apply] button to confirm the settings.

## Video & Audio settings




**Video**

*Standard*

Displays the video system of the camera.

*Image Control*

> Contrast: Select the contrast value.

> Brightness: Select the brightness value.

> Hue: Select the Hue value.

- Default Setting: Click this button to reset the default option to its original factory settings.

*H.264 & MJPEG*

> Enable: Click to activate the stream function.
> Deinterlacing: Click to use the deinterlacing function.
> Video Stream: Select the video stream between Master and Slave.
> Video Codec: Select the video codec between H.264 and MJPEG.
> Maximum Frame Rate: Select the frame rate.

| | |
|---|---|
| NTSC | 1 to 30 (fps) |
| PAL | 1 to 25 (fps) |

> Quality: Select the Quality.
  - VBR: The bit rate may vary depending on the complexity of the video to meet the selected quality.
  - CBR: The video quality may vary in order to preserve a constant bit rate.
> Resolution: Select the resolution of the video stream.

| | |
|---|---|
| NTSC | D1 (720 x 480), HALF D1 (720 x240), CIF (352 x 240) and QCIF (176 x 120) |
| PAL | D1 (720 x 576), HALF D1 (720 x288), CIF (352 x 288) and QCIF (176 x 144) |

> Stream Quality: If the [Quality] option set to VBR, this option is displayed. Select the network stream quality. (Highest, High, Medium, Low and Lowest)
> Bit rate: If the [Quality] option set to CBR, this option is displayed. Enter the bit rate. Edit the bit rate value from 64 ~ 10240kbps.
> GOP Size: Select the GOP size. This setting is valid for H.264.

**Motion**

Motion detection window is used to detect movement of the object in the video image. Motion detection is used to generate an event whenever movement occurs in the video image. A total of 5 motion detection windows can be configured.

*How to set the motion detection event*

1. Select Motion Detection window number from the drop-down list.
2. Click one point with the left mouse button on the preview window and drag & drop to adjust the desired size. The Motion detection window will appear in the preview window. If you set to all area, click the [All] button.
3. Set the [Threshold] option.

**Notes:**

You can reset the size and position of the Motion detection window. Click one of the dot point and drag & drop to adjust the motion detection area. Click the Motion detection window and drag to the desired position.

If you want to delete the Motion detection window, select window number and click the [Remove] button.

**Audio**

*Audio in Enable*

Click to use the audio in function.

*Audio type*

Select the audio encoding type. (G711 PCMU, G711 PCMA, G726 24K, G726 32K)

*Audio out Enable*

Click to use the audio out function.

**PTZ (option)**

*Protocol & PTZ Configuration*

Click the [Protocol & PTZ Configuration] button to display the Protocol & PTZ setting window.

*Protocol Setting*

> PTZ Driver

Follow the instructions below to upload PTZ protocol.

1. Click the [...] button, find and open the file.
2. Click the [Upload PTZ Protocol] button and then the PTZ protocol will be added.

> Protocol: Displays the selected PTZ protocol. You can select the other PTZ protocol from the drop-down list.

- Edit: Click to displays the selected PTZ protocol window to check the detail option range.
- Remove: Click to remove the selected PTZ protocol.

**Note:**

The PTZ option range differs depending on the PTZ cameras.

> Baud rate: Select the desired speed of communication between the IP device and the PTZ device. Confirm selected parameter to the baud rate of the IP device.

> Data bit: Set the number of the data bits for RS-485/422 communication

> Parity: Select the desired parameter. The parity bit, added to the data, to perform parity check.

> Stop bit: Enter the desired parameter. The stop bit, added to the last of data, in asynchronous communication.

• Save: Click to confirm the settings.

*Configuration Setting*

Click the [Configuration Setting] button to see the PTZ configuration.

> Enable: Click to use the PTZ protocol.

> Camera ID: Enter the PTZ camera ID. Make the same ID as the PTZ camera.

> Pan speed: Enter the panning speed of the PTZ camera.

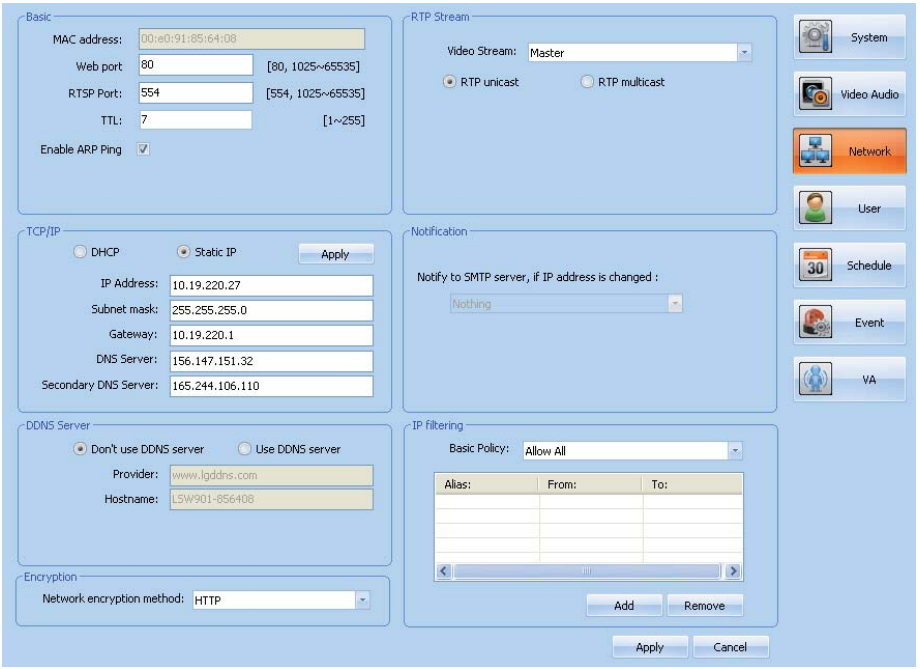
> Tilt speed: Enter the tilting speed of the PTZ camera.

> Focus speed: Enter the focus speed of the PTZ camera.
> Zoom speed: Enter the zoom speed of the PTZ camera.
> Preset tour park time: Enter the parking time.
> Save: Click the [Save] button to confirm the settings.

**Note:**

After completing the settings on this page, click [Apply] button to confirm the settings.

## Network settings




**Basic**

> MAC address: Displays the MAC address.
> Web Port: The default HTTP port number (80) can be changed to any port within the range 1025-65535.
> RTSP Port: The RTSP protocol allows a connecting client to start an video stream. The default setting is 554, and the allowed port range is 1025-65535.

**Notes:**

- The RTSP port number should not be same with the web port number.
- If you change the RTSP port, the current connection is disable and you should remove and re-register the device in the "Add/Edit/Remove Device".

> TTL: Set the TTL(Time To Live) value. The default setting is 7, and the allowed

TTL range is 1-255.

> Enable ARP Ping: If you want enable to ARP Ping setting by IP Utility, check to "Enable ARP Ping".

**RTP stream**

RTP (Real-time Transport Protocol) is an internet protocol that allows programs to manage the real-time transmission of multimedia data, via unicast or multicast.

*Video Stream*

Selects the Video Stream from the drop-down list.

*RTP unicast*

Select when use the RTP unicast.

*RTP multicast*

Select when use the RTP multicast.

> Multicast IP: Set the IP address for RTP multicast. The allowed IP address range is 224.0.0.0 - 239.255.255.255.

> Video Port: Set the Video RTP port number. The allowed port range is 1025-65535.

> Audio Port: Set the Audio RTP port number. The allowed port range is 1025-65535.

> Data Port: Set the VA RTP port number. The allowed port range is 1025-65535.

**Note:**

Each stream using multicast needs its own a pair of multicast IP address and port numbers to avoid address conflict.

**TCP/IP**

*DHCP*

Select when using the DHCP function. Network settings of this unit are configured automatically by the DHCP server.

*Static IP*

Assign the IP address manually.

> IP address: Enter an IP address.

> Subnet mask: Enter a subnet mask address.

> Gateway: Enter the gateway address.

> DNS server: Enter the DNS server address. DNS (Domain Name Service) provides the translation of domain name to IP addresses on your network.

> Secondary DNS server: Enter the Secondary DNS server address.

**Note:**

If you change the IP Address or Type (Static ➔ DHCP, DHCP ➔ Static), the device connection is disconnected and all of operation is disabled. To connect the device again, remove and re-register the device using the "Add/Edit/Remove Device" menu.

- Apply: Click to confirm the settings.

**Notification**

> Notify to SMTP server, if IP address is changed

If you select this option, notify the user about changed IP address information by E-mail.

**Notes:**

- You should register the SMTP server on the Event server setting to set this function.
- This function is activated when you select DHCP option in the TCP/IP setting.

**DDNS Server**

This free service is very useful when combined with the LG DDNS Server. It allows the user to connect the LG IP device using the URL, rather than an IP Address. This also solves the problem of having a dynamic IP address.

*Don't use DDNS server*

Select when disable the DDNS function.

*Use DDNS server*

Select when enable the DDNS function.

> Provider: Displays the DDNS provider.

> Hostname: Enter the hostname you want to use.

**Note:**

If you change the Hostname of the device, you must remove and re-register the device to connect again using the "Add/Edit/Remove Device" menu.

**IP filtering**

The access of the IP addresses in the list are allowed or denied according to the choice made in the drop-down list of the Basic policy option. The administrator can add up to 10 IP address entries to the list (a single entry can contain multiple IP addresses). The users from these IP addresses need to be specified in the user list with the appropriate access rights.

*Basic policy:*

Select the basic policy type.

> Allow all: Allow all the IP address basically, but the IP addresses in the list are denied.

> Deny all: Deny all the IP address basically, but the IP addresses in the list are allowed. It needs one or more an IP address to activate this function.

- Add: Click to add the IP address.
  1. Click the [Add] button.
  2. Set the IP options.
     - Alias: Enter the alias.
     - From: Enter the start IP address for the IP filtering.
     - To: Enter the end IP address for the IP filtering.

**Note:**

If you want to deny or to allow a range of IP addresses, enter th start IP address to "From" and the end IP address to "To". You can also add an IP address by entering the IP address to "From" and "To".

3. Click the [OK] button.
4. Repeat the steps 1-3 to add additional IP address.

- Remove: Click to delete the IP address.
  1. Select the alias from the list.
  2. Click the [Remove] button. The IP address will be deleted.

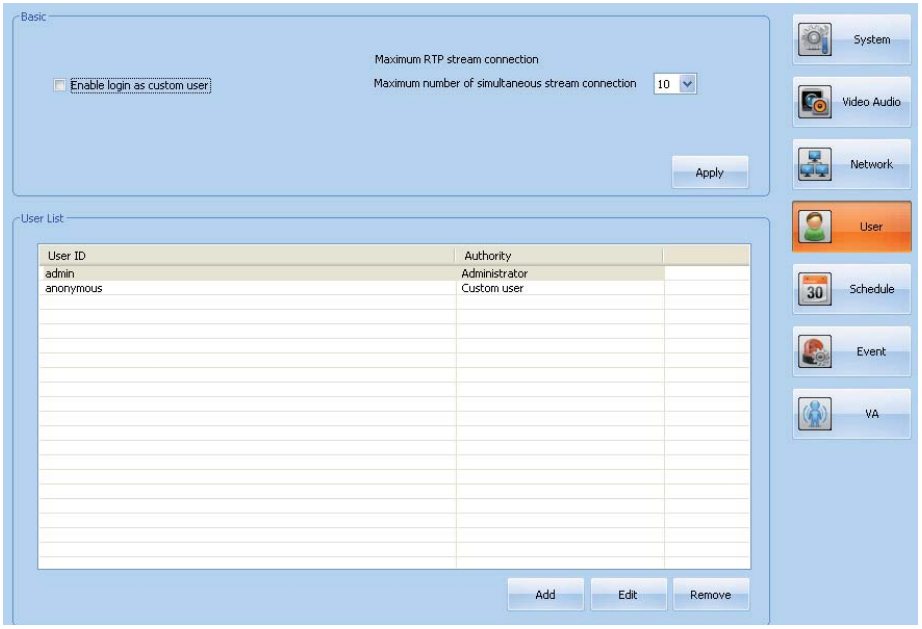
**Encryption**

Select the HTTP or HTTPS option for security.

**Note:**

After completing the settings on this page, click [Apply] button to confirm the settings.

## User settings




**Basic**

*Enable login as custom user*

Check the box to enable custom user login - allows the user access for only viewing the live stream image.

*Maximum RTP stream connection*

> Maximum number of simultaneous stream connection.

Set this number to limit the number of simultaneous stream connections.

**Note:**

Preview window of camera setting and preset setting are affected by this setting.

**User list**

*Add the User*

You can register a new user with various access rights.

1. Click the [Add] button. User Setting window is displayed.
2. Enter the new User ID and Password. (Minimum 4 length with alphabet and number).
3. Enter the password again to verify.
4. Select the authority and then click the [Save] to confirm your selection.
   - Administrator: Unlimited operation of the unit. (Access to the Configuration menu, and you can set the configuration options.)
   - Power user: Use of the limited functions of the system (The Configuration menu is not allowed. A power user can use the Live View, PTZ control, OSD control and audio functions.
   - Normal user: Provides the lowest level of access, which only the live stream image view is available.
   - Custom user: The user can login and view the live stream image only when the "enable login as custom user" option is checked to enable it.

*Edit the registered user*

You can change the password or authority.

1. Choose the user ID and then click the [Edit] button.
2. Change the Password or Authority, then click the [Save] button to confirm your selection.

*Delete the registered user*

1. Choose the user ID you want to delete.
2. Click the [Remove] button.

**Notes:**

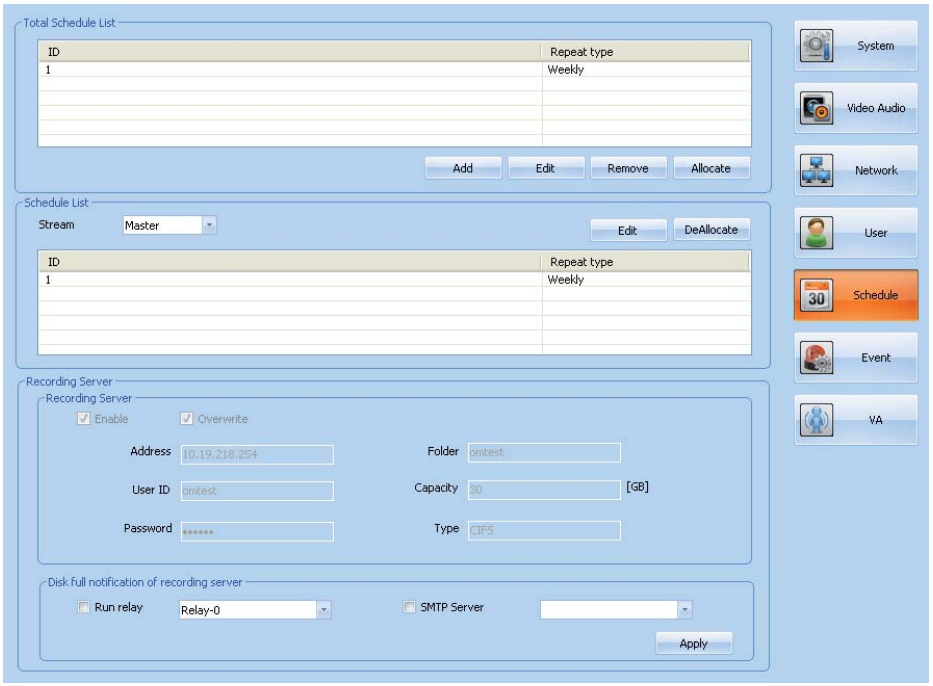
- Remember the password.
- The default administrator user ID 'admin', custom user ID 'anoymous' are permanent and cannot be deleted.

**Note:**

After completing the settings on this page, click [Apply] button to confirm the settings.

## Schedule settings

A schedule recording can be activated at preset times, in a repeating pattern on selected weekdays. If the recording server is not set, this function is not activated.




**Total schedule List / Schedule List**

*To set the Recording Schedule*

1. Click the [Add] button. Recording schedule setting window is displayed.
2. Set the [Pre alarm] and/or [Post alarm] option.
   - Pre alarm: Specify the pre-event recording time that records the situation until the input has been detected.
   - Post alarm: Specify the post-event recording time that records the situation after the input has been detected.
3. Select the [Repeat type] option and set the detail options. It can be configured in 5 different ways, Repeat None, Daily, Weekly, Monthly and Yearly.
   - Custom day: If the [Repeat type] option set to [Monthly] or [Yearly], this option is displayed.
   - Schedule duration: If the [Repeat type] option set to [Repeat none], [Monthly] or [Yearly], this option is displayed.
4. Select the recode mode and set the recording schedule time using drag on the time table.

- None: No scheduled recording
- Continuity: Recording starts automatically from the preset time.
- Sensor: Recording starts automatically when the sensor input is activated within a designated time.
- Motion: Recording starts automatically when motion is detected within a designated time.
- VA: Recording starts automatically when the object or event is detected within a designated time.
- C+S: Recording starts automatically from the preset time. When the input is activated within a designated time, change the continuous recording mode to the sensor event recording mode and recording starts automatically.
- M+S: Recording starts automatically when the sensor alarm signal has input or motion has been detected.
- V+S: Recording starts automatically when the object or event is detected or the sensor input is activated within a designated time.
- C+V: Recording starts automatically from the preset time. When the object or event has been detected within a designated time, change the continuous recording mode to VA event recording mode and recording starts automatically.
- C+M: Recording starts automatically from the preset time. When the motion is detected within a designated time, change the continuous recording mode to motion event recording mode and recording starts automatically.
- C+V+S: Recording starts automatically from the preset time. When VA or SENSOR event is detected, change the continuous recording mode to the VA event recording mode or the sensor event recording mode.
- C+M+S: Recording starts automatically from the preset time. When Motion or Sensor event is detected, change the continuous recording mode to the motion event recording mode or the sensor event recording mode.

5. Click the [Save] button to confirm the settings.

*To edit the Recording Schedule*

1. Choose the schedule in the Total schedule list or Schedule list.
2. Click the [Edit] button.
   You can check or change the recording schedule options except for repeat type.

*To activate the Recording Schedule*

1. Set the [Stream] option.
2. Choose the schedule in the Total schedule list and then click the [Allocate] button.

*To deactivate the Recording Schedule*

1. Choose the schedule in the Schedule list.

2. Click the [DeAllocate] button.

*To delete the Recording Schedule*

1. Choose the schedule in the Total Schedule list.
2. Click the [Remove] button.

**Recording server**

Recording server is used to save the recorded data files.

*Recording Server*

These options can be set using the Recording Storage Settings in the Station Setup menu.

*Disk full notification of recording server.*

> Run relay: Marks up to activate the alarm. Alarm is activated when the Recording Server fully recorded via relay output.

> SMTP server: Select the SMTP server address. Sends an e-mail when the Recording Server fully recorded.

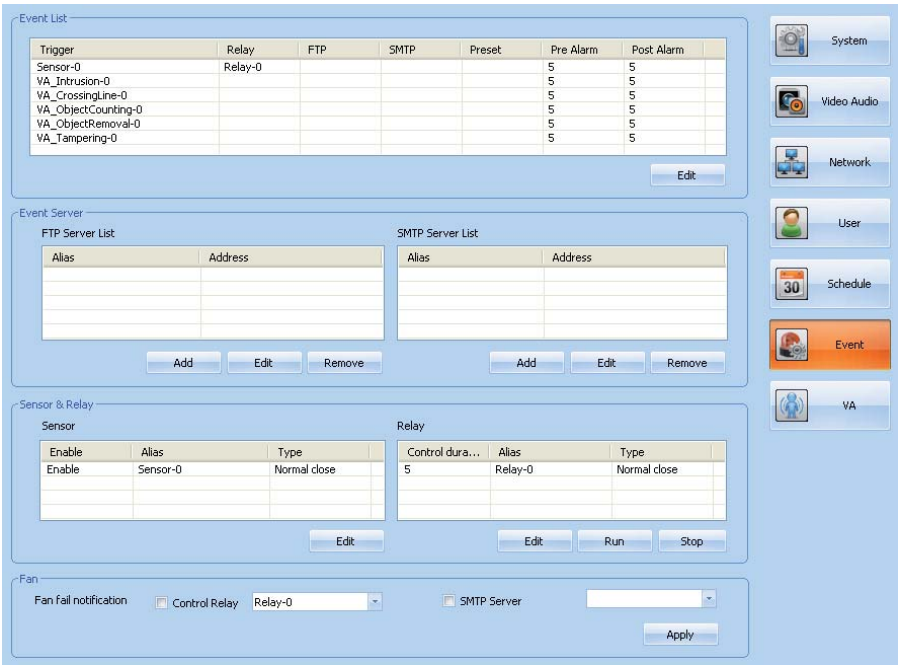
**Note:**

You should register the SMTP server on the Event server setting to set this function.

**Note:**

After completing the settings on this page, click [Apply] button to confirm the settings.

## Event settings




**Event List**

An event will be started by some sort of external signal, such as sensor or video analytics event.

*To edit the Event Schedule*

1. Click the trigger event in the event schedule list. Event schedule window is displayed.
2. Set the options.
   - Trigger: Displays the selected trigger event.
   - Time: Sets the weekday, Start, End, Pre Alarm, Post Alarm and Ignore interval time options.
   - Action: Selects the options. This occurs when the event runs, for example, uploading of images to an FTP server, or e-mail notification.
   - Stream: Selects the stream of the connected camera.
   - Default: Sets to default setting value.
3. Click the [Save] button to confirm the settings.

   **Note:**

   You should register the SMTP and FTP server on the Event server setting to set this function.

**Event Server**

Event Servers are used to receive the recorded video clip and/or notification messages.

*FTP server list*

FTP server is used to receive the recorded video clip.

> *To add the FTP server*

1. Click the [Add] button. FTP server setting window is displayed.
2. Set the FTP server options.
   - Alias: Enter the alias.
   - Address: Enter the FTP server address.
   - Port: Enter the port number.
   - User ID: Enter the user ID of the sever.
   - Password: Enter the password.
   - Folder: Enter the data save folder name.
   - Test: Click the [Test] button to test the server.
3. Click the [Save] button to confirm the settings.

> *To edit the FTP server*

1. Choose the FTP server in the FTP server list.
2. Click the [Edit] button.
   You can check or change the FTP server options.

> *To delete the FTP server*

1. Choose the FTP server in the FTP server list.
2. Click the [Remove] button.

*SMTP server list*

SMTP server is used to receive the notification messages.

> *To add the SMTP server*

1. Click the [Add] button. SMTP server setting window is displayed.
2. Set the SMTP server options.
   - Alias: Enter the SMTP server name.
   - User ID: Enter the user ID of the SMTP server.
   - Password: Enter the password.
   - Address: Enter the SMTP server address.
   - Port: Enter the port number.
   - Enable SSL: Check when use the SSL (Secure Socket Layer) protocol. SSL protocol is cryptographic protocols that provide secure communication on a network.
   - Receiving address: Enter the receiving address.
   - Administrator address: Enter the administrator address.
   - Subject: Enter the subject.

- Message: Enter the notification messages.
- Test: Click the [Test] button to test the server.

3. Click the [Save] button to confirm the settings.

> *To edit the SMTP server*

1. Choose the SMTP server in the SMTP server list.
2. Click the [Edit] button.
   You can check or change the SMTP server options.

> *To delete the SMTP server*

1. Choose the SMTP server in the SMTP server list.
2. Click the [Remove] button.

**Sensor & Relay**

*Sensor*

> *To edit the Sensor*

1. Select the sensor in the Sensor list.
2. Click the [Edit] button. The Sensor window is displayed.
3. Check or change the sensor options.
   - Enable: Marks up when you want to activate the sensor.
   - Alias: Displays the sensor name.
   - Type: Select the sensor type.
4. Click the [OK] button to confirm and exit the sensor window.

*Relay*

> *To edit the Relay*

1. Select the relay in the Relay list.
2. Click the [Edit] button. The Relay window is displayed.
3. Check or change the Relay options.
   - Control duration: Enter the relay time.
   - Alias: Displays the relay name.
   - Type: Select the relay type.

> *To run the Relay*

1. Select the relay on the Relay list.
2. Click the [Run] button to activate the relay.

> *To Stop the Relay*

1. Select the relay in the Relay list.
2. Click the [Stop] button to stop the relay.

**Fan (option)**

*Fan fail notification*

> Control relay: Marks up when you want to activate the selected relay.

> SMTP server: Selects the SMTP server. If you select this option, notify the user about the fan fail information by E-mail.

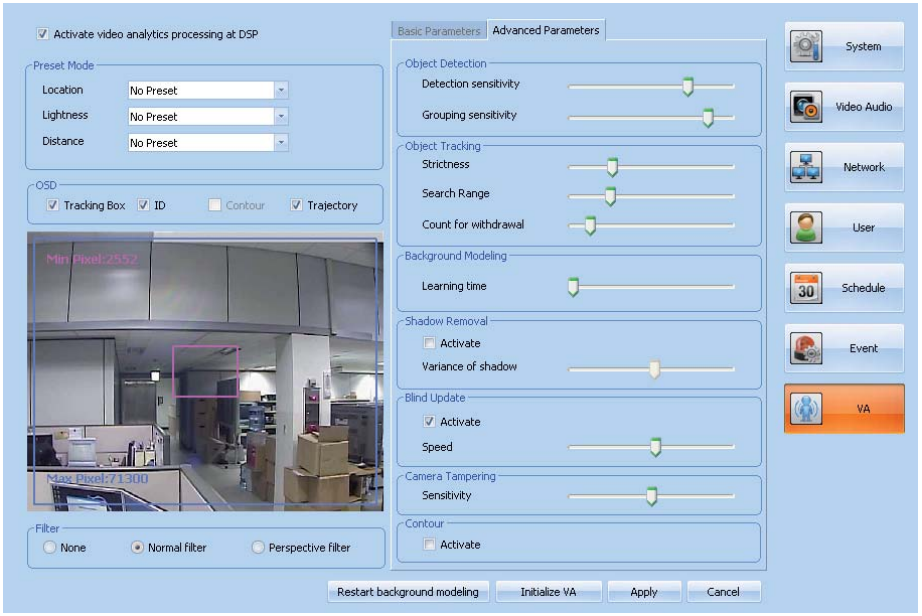
**Note:**

After completing the settings on this page, click [Apply] button to confirm the settings.

## VA(Video Analytics) settings (option)

You will need professional knowledge to set VA functions. You must be careful to change the options.

Video analytics is possible to detect specific events. Video analytics makes it possible to filter video when you defined events have been detected.




**Activate video analytics processing at DSP**

Check the box to enable the video analytics.

**Preset Mode**

It provides multiple pre-defined configuration data sets each are proper to the condition of the environment where surveillance cameras are located.

*Location*

Select the location from the drop-down list.

*Lightness*

Select the lightness from the drop-down list.

*Distance*

Select the Distance from the drop-down list.

**Note:**

After the location option have been selected, you can set the lightness and distance options.

If these options are set, the Basic and Advanced parameters are set automatically to default value.

**OSD**

*Tracking box*

Check the box to display the object tracking box. The object tracking box is displayed with green color on the preview window.
(contour check box enabled when "contour activated" in advanced parameters.)

*ID*

Check the box to display the object tracking ID. The object tracking ID is displayed with white color on the preview window.

*Contour*

Check the box to display the object contour. The object contour is displayed with blue color on the preview window.

*Trajectory*

Check the box to display the object trajectory. The object trajectory is displayed with red color on the preview window.

**Filter**

You can set the filter size for tracking the object within the filter box.

*None*

Selects when you do not use this function.

*Normal filter*

Objects whose size are out of the range between Minimum size and Maximum size will be filtered.

If you select this option, the blue and pink box is displayed on the preview window. Click on the edge of a box and drag it larger or smaller as required. Click on the other edge of the box and drag it larger or smaller to resize it appropriately.

> Blue box (Maximum pixel size) : This option determines the maximum size of the objects to be filtered among the final detection results.

> Pink box (Minimum pixel size) : This option determines the minimum size of the objects to be filtered among the final detection results. (Display pink box in preview)

*Perspective filter*

For certain video analytics, use the perspective filter function.

If you select this option, the blue and pink box is displayed on the preview window. Click on the edge of a box and drag it larger or smaller as required. Click on the other edge of the box and drag it larger or smaller to resize it appropriately.

> Pink box (Perspective plane polygon): This parameter determines the perspective plane.

> Blue box (Mini size polygon): This option determines the minimum size of the objects to be filtered among the final detection results.

**Basic Parameters**

Basic parameters are direct related for the video analytics.

*Object Detection*

> Detection sensitivity: Select the sensitivity to detect the object. If this option is set as relatively high value, even a slight local change in the scene will be detected as an object and vice versa.

*Object Tracking*

> Strictness: Select the strictness for object tracking. If this option is set as relatively low value, system will track objects even though the similarities of objects between frames are low and vice versa.

**Advanced Parameters**

For more detailed parameter settings, use these options.

*Object Detection*

> Detection sensitivity: Selects the sensitivity to detect the object. If this option is set as relatively high value, even a slight local change in the scene will be detected as an object and vice versa.

> Grouping sensitivity: Selects the grouping sensitivity for the degree of 'object grouping'. If this option is set as relatively high value, local changes which are proximally positioned in the scene will be grouped as one object and vice versa.

*Object Tracking*

> Strictness: Selects the strictness for object tracking. If this option is set as relatively low value, system will track objects even though the similarities of objects between frames are low and vice versa.

> Search range: Selects the search range of 'tracking'. If this option is set as relatively low value, system will search the small range of region to track the objects in next frame and vice versa.

> Count for withdrawal: Selects the time to make decision for object's withdrawal in the scene. If this option is set as relatively low value, system will decide the withdrawal of objects in small amount of time and vice versa.

*Background Modeling*

> Learning time: Selects the Learning time when the tracking loss occurred. If this option is set as relatively low value, the background learning will be carried out in a short time interval and vice versa.

*Shadow Removal*

> Activate: Check to activate the shadow removal function. If this option is set, the region classified as shadow will be filtered among the final detection results and vice versa.

> Variance of shadow: Selects the maximum variance of the color of the shadow region. If this option is set as relatively low value, the region with uniform color will only be classified as shadow and vice versa.

*Blind Update*

> Activate: Check to activate the blind update function. If this option is set, detected objects with little movement progressively will be recognized as the environment after certain amount of time (blind update). If this parameter is not set, detected objects will never be recognized as the environment (selective update).

> Speed: Selects the blind update speed. If this option is set as relatively high value, objects with little movement will be recognized as the background fast and vice versa.

*Camera Tampering*

> Sensitivity: Selects the sensitivity of 'camera tampering'. If this option is set as relatively low value, the system will dully detect the movement, the veiling of cameras and vice versa.

*Contour*

> Activate: Check to activate the contour function. If this option is set, contour processing is on at DSP and detected objects with contour will be display. If this option is not set, contour processing is off at DSP and detected objects with contour will never display.

- **Restart background modeling**
  Compulsorily initialize the background model and make the system to learn the background.
- **Initialize VA**
  Initializes the VA options as default values.
- **Apply**
  After completing the settings on this page, click [Apply] button to confirm the settings.
- **Cancel**
  Cancels the setting of current values.

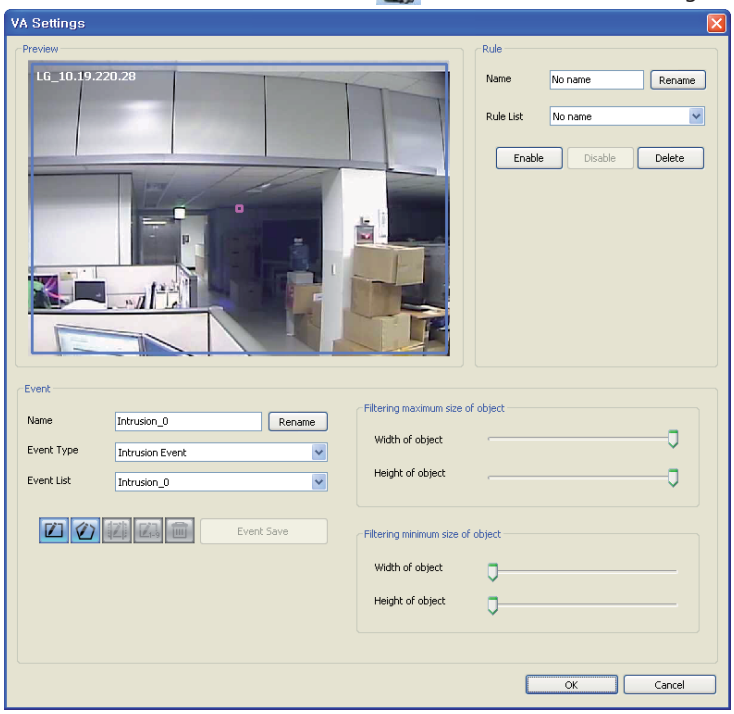
# Event (VA Rule) Setup

By setting the rules, you can manage the event detection settings per each camera. It is available to save maximally 10 rules at a time and to apply 1 rule per each camera.

## Open the rule setting window

If the camera have the VA function, the Event (Video Analytics) icon is activated.

Select the channel window and click the  (Event) icon. The VA setting window is displayed.




## Rule settings

*Make a rule*

1. Select the rule name from the Rule List drop-down list.
2. Select a name option.
3. Overwrite the existing rule name with a new name of your want.
4. Click the [Rename] button. The new name is added in the Rule list.

*Delete the rule*

1. Select the rule name from the Rule List drop-down list.

2. Click the [Delete] button. The rule name is deleted in the Rule list.

*Enable the rule*

1. Select the rule name from the Rule List drop-down list.
2. Click the [Enable] button.

*Disable the rule*

1. Select the rule name from the Rule List drop-down list.
2. Click the [Disable] button.

## Event settings

Set the event options for the Rule.

1. Select the event type from the drop-down list.
   - Intrusion Event: When the perceived object is(are) move into the event area, the Intrusion Event is activated.
   - Crossing Line Event: When the perceived object go through a setting lines, the Crossing Line Event is activated.
   - Object Counting Event: When the perceived object go through a setting line, the Object Counting Event is activated.
   - Object Removal Event: When the object is disappear from the setting area, the Object Removal Event is activated.
   - Tampering Event: When the camera condition is changed such as the screening camera or shaking the image and so on. (You can set this function for once).
2. Select the event from the drop-down list.

   **Note:**

   If you want to change the event name, select the Name option and overwrite the existing name with a new name. Click the [Rename] button.
3. Set the event area on the preview window using the event tool button.

| | |
|---|---|
|  | Use for Intrusion and Object Removal event.<br>You can set the rectangle event area. |
|  | Use for Intrusion and Object Removal event. You can set the polygon event area. (The maximum number of polygon's vertex is constrained to 32). |

| | |
|---|---|
|  | Use for Crossing Line event.<br>Draw the line for crossing line event. Yellow and black arrows will be displayed at the center of line. Two arrows mean the event-triggering direction. Default setting is bi-direction. If you want to change it to single direction, select yellow direction or black direction button. |
|  | Use for Object Counting event. Draw the line for Object Counting event. Yellow and black plus (+) symbols will be displayed at the center of line.<br>Yellow and black color means direction of passing object. (+) symbol and (-) symbol mean the plus and minus counting respectively. Thus default setting is bi-directional plus counting. If you want to change the default setting, select another option. Additionallly, you can set the limit of counting with Max Count. |
|  | Use to delete the saved event. |

4. Click the [Event Save] button to save the settings.

*Filtering maximum size of object*

Set the filtering size of the object. The maximum filtering size is displayed with blue color on the preview window.

> Width of object: Adjusts the vertical filtering size of the object.

> Height of object: Adjusts the horizontal filtering size of the object.

*Filtering minimum size of object*

Set the filtering size of the object. The minimum filtering size is displayed with pink color on the preview window.

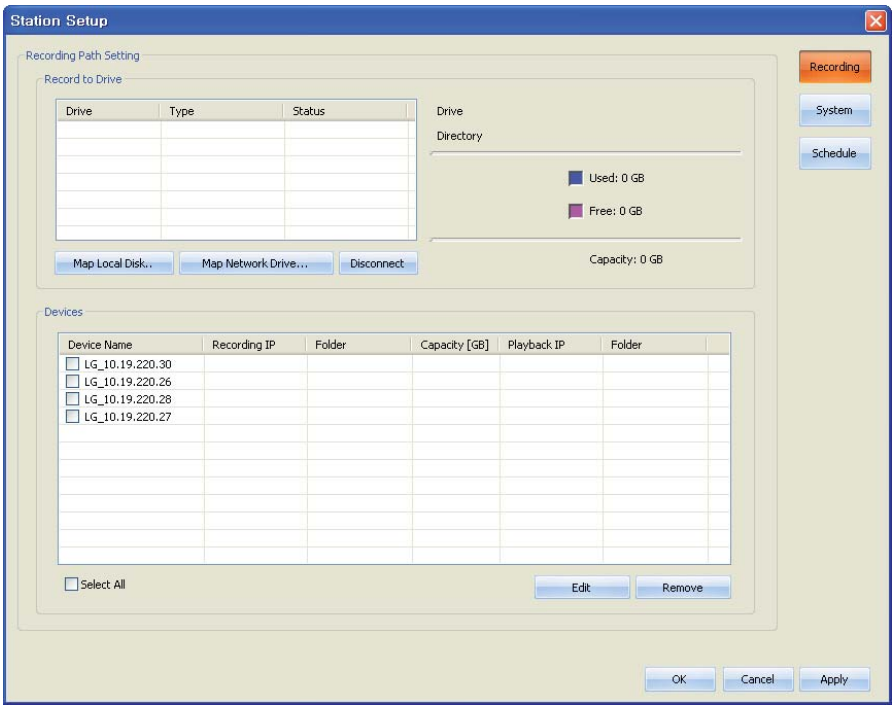
> Width of object: Adjusts the vertical filtering size of the object.

> Height of object: Adjusts the horizontal filtering size of the object.

# Station Setup

## Recording Setting

Select **Tools > Station Setup** option on the menu bar. The Station setup window is displayed. Click the [Recording] button to display the recording setting option.




*Add the recording drive*

1. Click the [Map Local Disk..] or [Map Network Drive...] button.
2. Set the detail options.
   - [Map Local Disk..] options.
     - Local Disk: Selects the local HDD drive of your PC.
     - Directory: Enter the folder name to save the recorded data files.
   - [Map Network Drive...] options.
     - Drive: Selects the network drive name.
     - Folder: Enter the network drive address with folder name.
     - User ID: Type the user ID for the Folder access in the Network drive.
     - Password: Type the password for the folder access in the Network drive.

3. Click the [Connect] button.
4. Click the [Apply] button to confirm the settings.

*Recording and playback device setting*

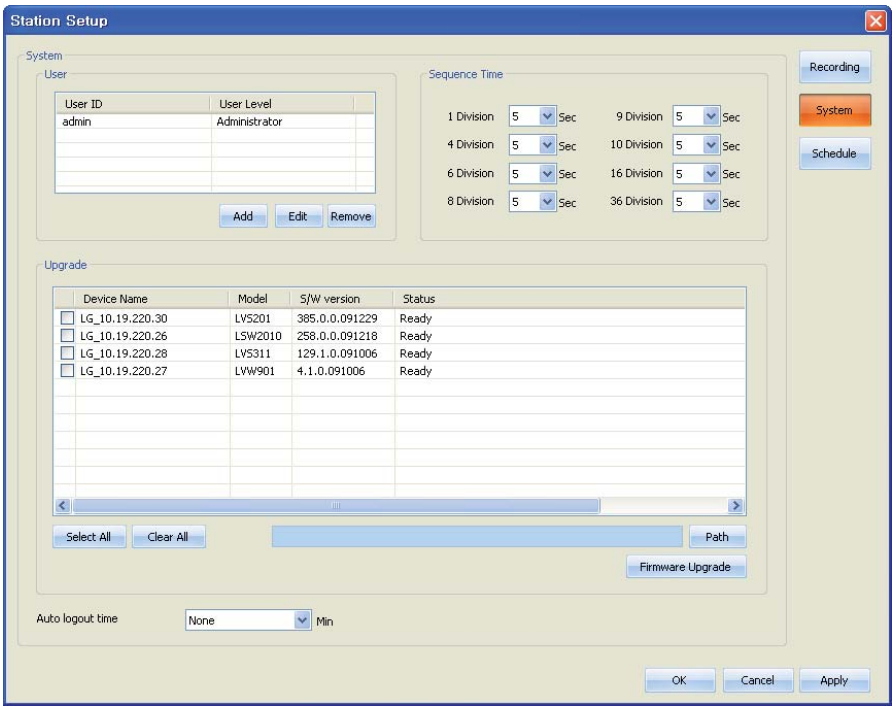
1. Select the device name on the device list.
2. Click the [Edit] button. The Recording Server Setting window is displayed.
3. Set the options of the [Recording Storage device].
   - Enable: Check to enable the Storage device recording.
   - Overwrite: Select when allow the overwrite recording. This function is possible when the selected Storage device has fully recorded.
   - Device Recording: Check to enable the record from the network device to the NAS recording server. It is not available to record with local HDD drive.
   - Drive: Select the Storage device drive.
   - Capacity: You can set the limit data capacity of the folder to record the data.
   - Address, User ID, Password, Folder, Type: Displays the selected Storage device system option value.
4. Click the [>>] button to copy the information of the Storage device for playback and export.
5. Click the [Save] button.
6. Click the [Apply] button to confirm the settings.

**Note:**

If you select NAS as Storage device, the Storage device supports up to 16 device connection for each recording and playback. A local HDD drive supports unlimited connection. If you have not the SW lock key, you can connect only one Storage device.

## System Setting

Select **Tools > Station Setup** option on the menu bar. The Station setup window is displayed.
Click the [System] button to display the system setting option.
You can set the options for the Smart Station.




*User setting*

> *Add the User*

You can register a new user with various access rights.

1. Click the [Add] button. User Setting window is displayed.
2. Enter the new User ID and Password. (Minimum 4 length with alphabet and number).
3. Enter the password again to verify.
4. Select the user level.
5. Select the user authority and then click the [Save] to confirm your selection.

> *Edit the registered user*

You can change the password user level or authority.

1. Choose the user ID and then click the [Edit] button.

2. Change the Password, User Level or Authority, then click the [Save] button to confirm your selection.

> *Delete the registered user*

1. Choose the user ID you want to delete.
2. Click the [Remove] button.

| User Level | Live | PTZ | Add/ Edit Camera | Search | Export | Event | Emap | Log Search |
|---|---|---|---|---|---|---|---|---|
| Administrator | O | O | O | O | O | O | O | O |
| Power user | O | O | O | O/X | O/X | O/X | O/X | O/X |
| Normal user | O | O | O/X | X | O/X | O/X | O/X | O/X |
| Guest | O | X | X | X | X | X | X | X |

Defualt setting (Not changeable)  Changeable setting

*Sequence Time setting*

Select the sequence time for each division mode.

*Firmware upgrade setting*

1. Select the model on the Camera on Server list.
   If you want to upgrade the all devices, check the [Select All] option.
2. Click the [Path] button.
2. Find and open the firmware file.
3. Click the [Firmware Upgrade] button to update the firmware.

**Note:**

This "Upgrade" is multi upgrade in system setting page. Therefore it needs more time than single upgrade in Device setup maintenence. So upgrade time has relation to number of camera or SmartStation status. But this operation is useful for management of many devices.

*Auto logout time setting*

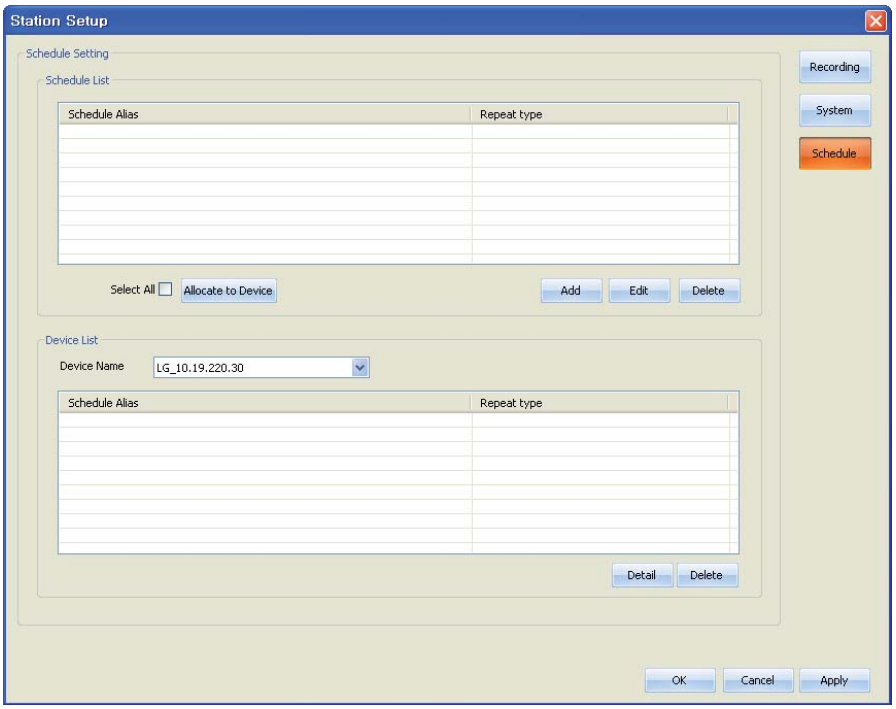
Set auto logout time for Smart Station. Logout is automatically at fixed intervals.

**Note:**

After completing the settings on this page, click [Apply] button to confirm the settings.

## Schedule Setting

Select **Tools > Station Setup** option on the menu bar. The Station setup window is displayed. Click the [Schedule] button to display the schedule setting option.




*To set the Recording Schedule*

1. Click the [Add] button. Recording schedule setting window is displayed.
2. Enter the schedule alias.
3. Select the repeat type and set the detail options. It can be configured in 5 different ways, Repeat None, Daily, Weekly, Monthly and Yearly.
   - Custom day: If the [Repeat type] option set to [Monthly] or [Yearly], this option is displayed.
   - Schedule duration: If the [Repeat type] option set to [Repeat none], [Monthly] or [Yearly], this option is displayed.
4. Select the record mode and set the recording schedule time using drag on the time table. The record mode differ from the model. The Samrt Station is displayed the record mode automatically as the connected network device.
   - None: No scheduled recording
   - Continuity: Recording starts automatically from the pre-setting time.
   - Motion: Recording starts automatically when motion is detected within a designated time.

- VA: Recording starts automatically when the object or event is detected within a designated time.
- Sensor: Recording starts automatically when the sensor input is activated within a designated time.
- C+V: Recording starts automatically from the preset time. When the object or event has been detected within a designated time, change the continuous recording mode to VA event recording mode and recording starts automatically.
- C+S: Recording starts automatically from the preset time. When the input is activated within a designated time, change the continuous recording mode to the sensor event recording mode and recording starts automatically.
- V+S: Recording starts automatically when the object or event is detected or the sensor input is activated within a designated time.
- C+V+S: Recording starts automatically from the preset time. When VA or SENSOR event is detected, change the continuous recording mode to the VA event recording mode or the sensor event recording mode.
- C+M: Recording starts automatically from the preset time. When the motion is detected within a designated time, change the continuous recording mode to motion event recording mode and recording starts automatically.
- M+S: Recording starts automatically when the sensor alarm signal has input or motion has been detected.
- C+M+S: Recording starts automatically from the preset time. When Motion or Sensor event is detected, change the continuous recording mode to the motion event recording mode or the sensor event recording mode.

5. Click the [Save] button to confirm the settings.

*To edit the Recording Schedule*

1. Choose the schedule in the Schedule list.
2. Click the [Edit] button.
   You can check or change the recording schedule options except for repeat type.

*To activate the Recording Schedule*

1. Select the device from the drop-down list of the [Device Name] option.
2. Choose the schedule in the schedule list and then click the [Allocate to Device] button.

*To deactivate the Recording Schedule*

1. Choose the schedule in the Device list.
2. Click the [Delete] button in the Device list..

*To delete the Recording Schedule*

1. Choose the schedule in the Schedule list.
2. Click the [Delete] button in the Schedule list.

**Note:**

After completing the settings on this page, click [Apply] button to confirm the settings.

# Recording and Playback

Before you start recording, first check the recording settings in the Station setup menu. If there is no recording drive, set the Recording Storage device.

## Manual recording

1. In the Live mode, select the live channel you want to record.
2. Click the right mouse button on the live window channel and then the sub menu is displayed.
3. Select the [Manual Record] option.
4. The REC text is displayed on the selected channel and recording is started.
5. Click the right mouse button on the live window channel and then select the [Manual Record] option again to stop the recording.

## VA recording

For the VA Recording, you must set the schedule in the device setup and set the VA rule in the Video Analytics Event setup menu.

1. In the Live mode, select the live channel you want to record.
2. Set the Recording Storage Device for each device on Recording setting of Station Setup.
3. Click the Video Analytics Event Settings icon and set the VA rules.

## Motion recording

For the Motion Recording, you must set the schedule in the device setup and set the Motion detection Window in the device setup menu.

1. In the Live mode, select the live channel you want to record.
2. Set the Recording Storage Device for each device on Recording setting of Station Setup.
3. Set the motion detection window in the Video & Audio setting menu of the device setup menu.

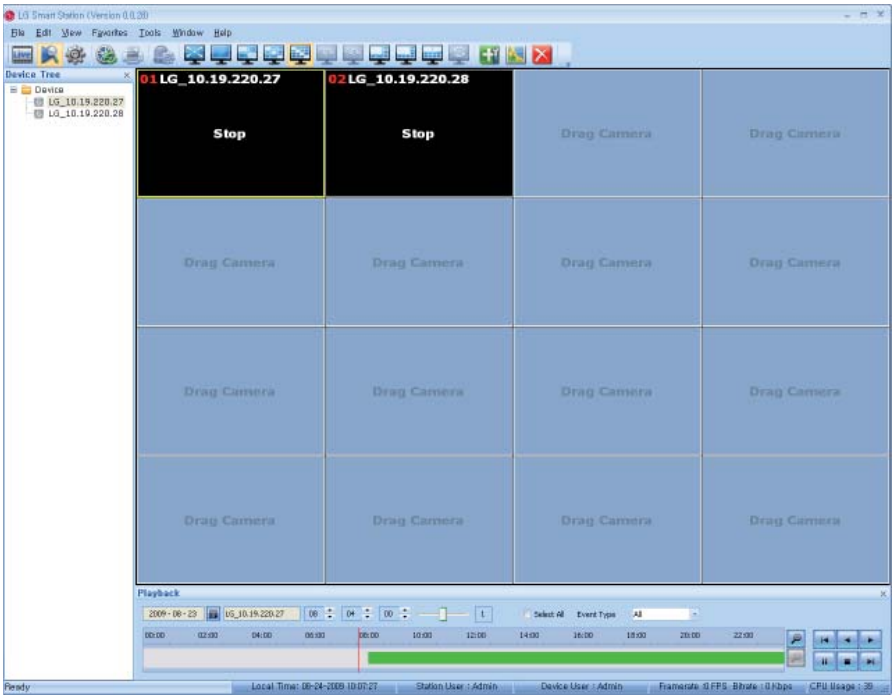
## Schedule recording

1. Set recording schedule on Schedule page.
2. Set the Recording Storage Device for each device on Recording setting of Station Setup.
3. The Recording will be start automatically as schedule.

## Search and Playback

You can search and play back the recorded data of a selected IP device. Use to search recorded data by specifying date and time.

To start playback, you must connect the recording Storage Device. Check the recording Storage Device condition in the Station setup menu.




1. Select the  (Search) icon .
2. Select the channel window you want to view. Mark up the [Select All] option when you want to view from all playback channel windows.
3. Click the date icon and select the date. The day is displayed in a blue text when recorded data exists.
4. Select playback start time using the time-line and time input column. When using time-line to search a start time, use the zoom in/out icons for more detailed searches (4 step).

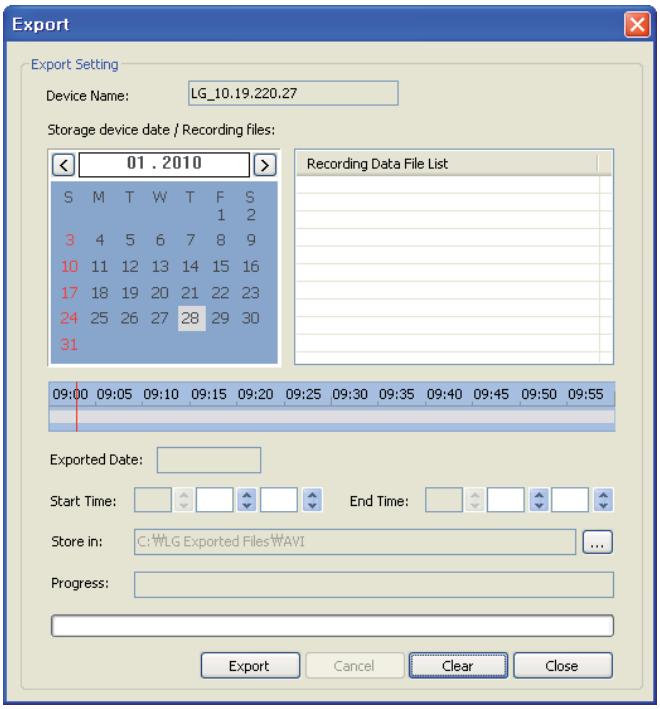
5. Select the playback speed.
6. Start playback using the playback control buttons.

**Note:**

When you play back the recorded data, the data could be intermittent according to the PC or Network condition.

# Export

You can export the recorded data to AVI file from the recording Storage Device to the PC. This function is permitted for Administrator and Power user.



## Export Setting

- Device Name: Displays the selected IP device name.
- Storage device date/Recording files: Displays the recorded day with the blue color, recording data file and time-line.
- Exported Date: Displays the selected date.
- Start Time: Set the start time to copy.
- End Time: Set the end time to copy.
- Store in: Displays the current exported data save folder. You can select (or make) the folder on the computer to save the exported data. The initial save folder is "Root Drive:\LG Exported Files\AVI". If you want to change the exported data save folder, click the [...] icon of the [Store in] option and select the new folder.
- Progress: Views the export data condition while the export is in progress.
- Export: Click to start export the data of the selected export setting.
- Cancel: Click it to cancel data exporting.
- Clear: Delete the selected export setting schedule from the list.
- Close: Click to exit the window.

*How to export the data*

1. In the Live mode, select the live channel.
2. Select the Export icon.
3. Select the date and recording data file.
4. Select playback start time using the time-line and time input column.
5. Select the folder on the computer to save the exported data.
8. Click the [Export] button to begin the export. The export status will be displayed on the progress option.

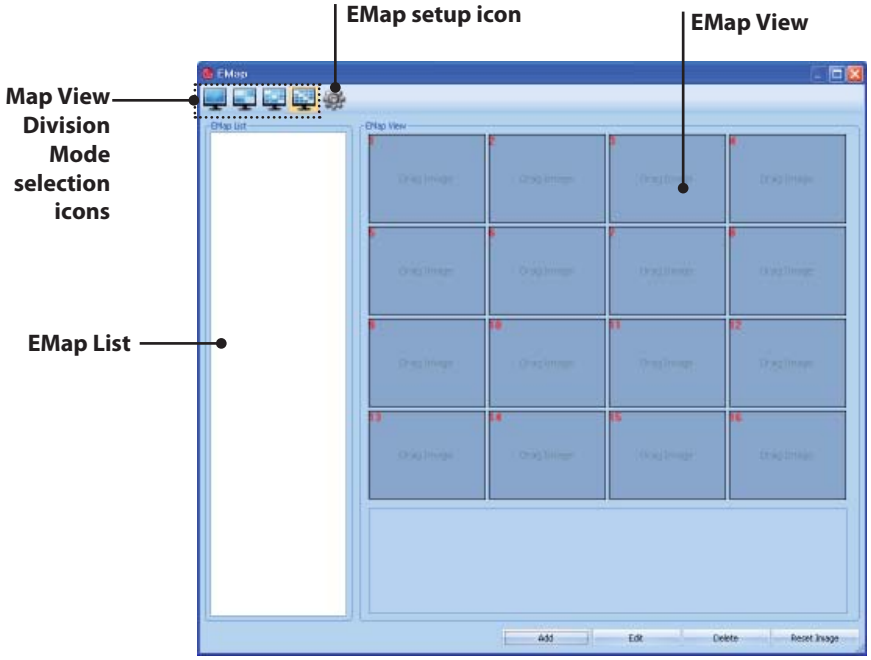
**Note:**

- The exported data file name is made automatically as the [IP device name_export date_export start time.avi] type.
- If you set the time for data that does not exist, the export function is not activated.
- The warning message appears for the conditions listed below.
  - When the start date/time and end date/time are the same.
  - When the start date/time is later than the end date/time.

# EMap

This function gives a visual overview of the cameras in your surveillance environment.

## EMap Overview




- Map View Division Mode selection icons
- When the icon is clicked, the screen will be changed to split mode. Choose the Map View division mode.
- EMap setup icon

  Click to setup the EMap options.

  > Event Action Type: Select the event action type from the drop down list.

    - Draw Rectangle: Displays the rectangle box in the live window with red blinking box when the event is occurred. The rectangle box will blink during the operation time.
    - Display 1 Division: Displays the event image in the live window as 1 division mode when the event is occurred.
    - Live Popup: Displays the live popup window when the event is occurred.

      **Note:**

      If the EMap window is closed, the Event Action does not work.

> Operation Time: Select the operation time.
> Folder Size: Select the folder size to save the event image.

- EMap List
  Displays the imported Maps.
- EMap View
  Displays the registered EMaps.

  *Add the Map*

  1. Click the [Add] icon in the EMap window. The Add/Edit EMap window is displayed.
  2. Click the [...] button in the EMap path option.
  3. Find and open the map file. If you want to change the EMap name, select the EMap name option and overwrite the existing name with a new name.
  4. Drag-and-drop cameras on the map.
     **Note:**
     To delete the registered camera, follow these steps:
     4.1 Select the camera and click right mouse button on the selected camera
     4.2 Select [Delete] option to delete it.
  5. Click [Add] button to save settings and close the window.
  6. Repeat steps 1~5 to add the other EMaps.

  *Activate the Map*

  1. Select the required EMap.
  2. Drag and drop the Emap on the required position of the EMap View window.
  3. Repeat steps 1~2 to add the other EMaps.

  *Edit the Map*

  1. Select the required EMap.
  2. Click the [Edit] button. The EMap Add/Edit window is displayed.
  3. Edit the camera position, EMap name or delete the camera.
  4. Click the [Add] button to exit the window.

  *Delete the Map*

  1. Select the required EMap.
  2. Click the [Delete] button. The selected EMap is deleted.

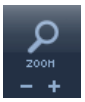
  *Reset the event image*

  Click to reset the event images. If you click the [Reset Image] button, all event images are deleted.

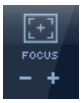
# PTZ control

You can control the PTZ device via the network.

1. Select the PTZ channel window.
2. Use virtual remote control buttons to control the PTZ device.

**ZOOM + / - icon** 


To adjust the camera zoom.

**FOCUS + / - icon** 


To manually adjust the focus of a camera.

**IRIS + / - icon** 


To manually adjust the iris of a camera.

**PRESET** 


- 


  Click to add the preset position.

  1. Click the [Add] button.
  2. Select the preset index number.
  3. Enter the preset alias.
  4. Click the [Save] button.
  5. Repeat the steps 1-4 to add other positions.

  **Note:**

  If you set the HOME position, check the [Set home position] option.

- 


  Click to delete the preset position.

  1. Select the preset from the list.
  2. Click the [Remove] button. The preset will be deleted.

- 


  Move to the preset position.

  1. Select the preset from the list.
  2. Click the [Go to preset]. The camera will be moved to the selected preset.

- 


  A preset tour is composed of a group of preset positions that the operator can link together in a sequence.

  Click to display the preset tour setting menu.

  1. Choose the preset in the [Preset list].
  2. Click the [V] button.
  3. Repeat the steps 1-2 to add another preset.
  4. Click the [Save] button to confirm the preset tour setting.

  **Note:**

  Use the [V] [Λ] buttons in the right side of the preset tour order list to change the preset tour order.

- 


  Click to start or stop the preset tour.

  **Note:**

  If you control the PTZ or OSD, the preset tour will be stopped.

**PATTERN** 


You can activate the camera in a repeating pattern. The pattern is programed by recording your manual pan, tilt, and zoom operations. The camera stores the movements you performed in memory.

> *To record the pattern*

1. Click the [Record] button to start the pattern recording.
2. Move the camera through the desired movement.
3. Click the [Record] button again to stop the pattern recording.

**Note:**

The available total time of pattern differs depending on connected PTZ device and operation.

> *To play the pattern*

1. Click the [Run] button to play the programmed pattern.
2. Click the [Run] button again to stop playing.

**Note:**

If you control the PTZ or OSD, the pattern run will be stopped.

**OSD** 


Use these buttons to setup the Camera.

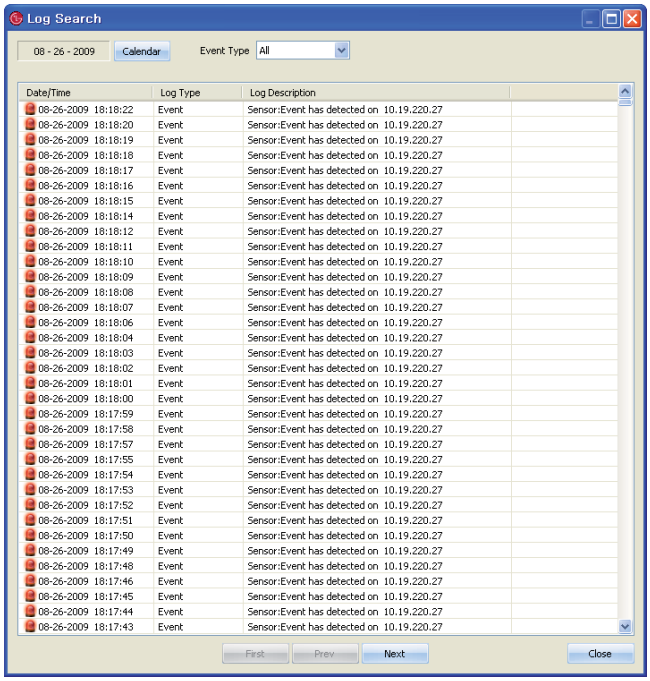
**Arrow buttons** 

Use these buttons to control the PTZ unit. Click  button to move the home preset.

# Log Search

You can search log history.

1. Select **Tools > Log Search** options.

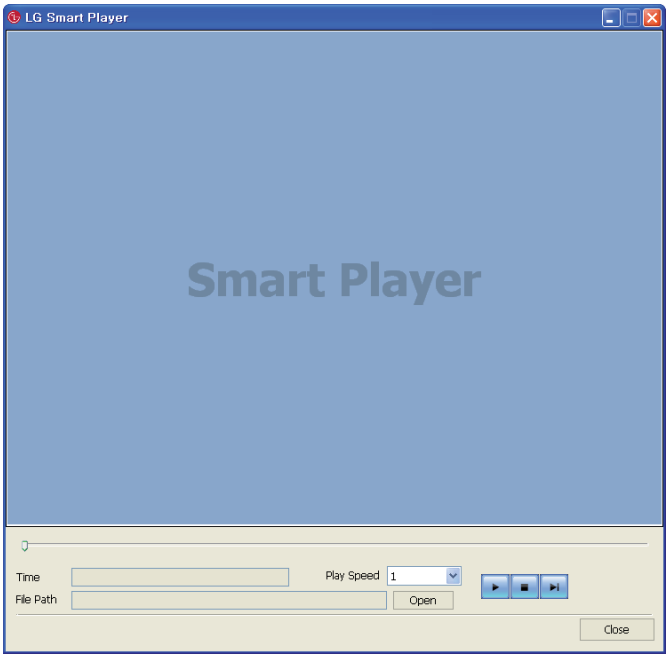



2. Click the [Calendar] button and select the day. (The selectable days are displayed in blue color.)
3. Select the event type and then the log search result is displayed on the list.
4. Use [Prev] or [Next] to see the previous or next log list. If you move to the beginning page of the log list, click the [First] button.
5. Click the [Close] button to exit the window.

# LG Smart Player

You can playback from the recording data in the Storage device or in the FTP server.

1. Run the LG Smart Player program.




2. Click the [Open] button. The open window is displayed.
3. Find and open the DAT file.
4. Select the play speed from the drop-down list.
5. Use the control buttons to play the file.

| | |
|---|---|
|  | Starts playback. |
|  | Stops playback. |
|  | Frame-by-frame playback. |

**Notes:**

- You can search the image directly using the slide bar in stop mode. Click the slide bar and move to the other point you want and then release it. Or, Click the point on the slide bar you want to playback.
- The slide search is available when the DAT file and INFO file exist in the same folder.

6. Click the [Close] button to exit the window.

# Using the IP Utility

The IP Utility can automatically discover and display LG IP devices on your network. The IP Utility shows the MAC address, IP address, Model name and so on.

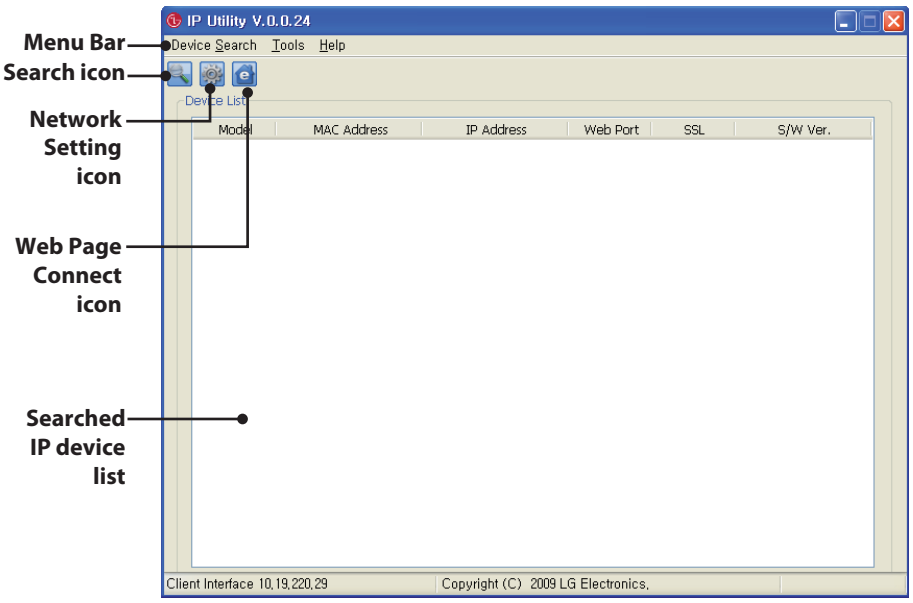
**Note:**

The computer running the IP Utility must be on the same network segment (physical subnet) as the LG IP device.

## Starting the IP Utility

1. Insert the Client Program CD.
2. Find and Copy IP utility folder to your PC.
3. Run the IP Utility program.

## IP Utility Overview



| Menu | Sub-Menu | Description |
|---|---|---|
| Device Search | Search | Click to discover the LG IP device. After a few seconds the found LG IP device is(are) displayed in the Device List. |
| | Exit | Exit the program. |
| Tools | Connect Web Page | 1. Select the LG IP device in the Device List.<br>2. Select the [Connect Web Page] option in the Tools menu. When accessing the selected LG IP device, the login window will be displayed on the screen.<br>3. Enter the user name and password. (Note that the default administrator user ID and password are "admin".)<br>4. Click the [OK] button and then the LG Smart Web Viewer is displayed in your browser.<br>**Note:**<br>You can also access the LG Smart Web Viewer as double-click the IP device in the Device list. |
| | Network Setting | 1. Select the LG IP device in the Device List.<br>2. Select the [Network Setting] option in the Tools menu. The login window will be displayed.<br>3. Enter the administrator user name and password.<br>4. Click the [OK] button and then the Device Network Settings window is displayed.<br>5. Set the options and click the [Apply] button to confirm your settings. |
| | IP Setting by ARP_PING | 1. Select the LG IP device in the Device List.<br>2. Select the [IP Setting by ARP_PING] option in the Tools menu. The login window will be displayed.<br>3. Enter the administrator user name and password.<br>4. Click the [OK] button and then the IP Setting by Serial number window is displayed.<br>5. Enter the IP address and click the [Apply] button to change the IP address.<br>Note:<br>You can also access the tools menu. Click the right mouse button on the IP device in the Device list. |
| Help | About IP Utility | Displays the IP Utility Information. |

# 4
# Reference

## Troubleshooting

| Symptoms | Resolutions |
|---|---|
| The Smart Station does not activate properly | • Check your PC system. Please use the recommended PC system with Smart Station program.<br>• Do not use other applications with this Smart Station program.<br>• Use the graphics card in your computer with the latest driver. |
| Repeat error message "Unable to connect to device" | Reduce the CPU usage and Network bandwidth using the device setting for each device. Reduce the resolution, increase the compression setting and lower the frame rate. |
| Connection refused, server is not accepting any connections. Connection suceeded but unable to the video | Check that internet and security firewall are not blocking a connection to the device. |
| There is no audio in the live view | If audio was not enable in audio settings of the device there will not be audio in the live view.<br>Follow these steps to troubleshoot audio.<br>1. Select a channel<br>2. Click the Device setup button<br>3. Click the Video/Audio<br>4. Enable the Audio In<br>5. Go to the live view and reconnect to device with enabled audio.<br>**Note:**<br>If there is a noise, Reduce the CPU usage and Network bandwidth using the device setting for each device. |

<table>
<tr><th>Symptoms</th><th>Resolutions</th></tr>
<tr><td>The Graphics card driver is more than 6 months old</td><td>The Graphics card driver is more than 6 months old. For Smart Station to run properly, the graphics card in your computer has been updated with the latest driver. To find out what graphics card is installed in your computer, a diagnostic program called dxdiag can be used. DirectX version is 9.0 or higher.<br><br>In Windows XP<br>1. Select Start<br>2. Choose Run<br>3. Enter dxdiag in the Run dialog and click OK<br>4. If a prompt appears for the Diagnostic Tool, click [Yes].<br>5. Select the Display tab. The name of the Graphics card appears under Device<br>6. If Direct3D is not enabled then change to enable.<br><br>In Windows Vista<br>1. Select Start<br>2. Enter dxdiag in the Start Search field.<br>3. If a prompt appears for the Diagnostic Tool, click [Yes].<br>4. Select the Display tab. The name of the Graphics card appears under Device<br>5. If Direct3D is not enabled then change to enable.<br><br>To download the latest driver you need to visit the graphics card manufacturer's web site. Some of the more common ones are<br>• nVidia - www.nvidia.com<br>• ATI - www.amd.com<br>• S3 - http://www.s3graphics.com</td></tr>
<tr><td></td><td>To upgrade the graphics card drivers on your computer:<br>1. Download the driver from the manufacturers web site to your hard drive<br>2. Make sure that there are no other programs running on your computer.<br>3. Uninstall the existing drivers.<br>4. Run the installer and follow the wizard to install necessary files.<br>5. Reboot to activate the change.</td></tr>
</table>

| Symptoms | Resolutions |
|---|---|
| Video Streaming Problem | • If the client PC's are unable to access the multicast stream, check with the system administrator for the use of a valid multicast address or check if the router is supporting multi-casting.<br>• If the images appear to have white of gray stripes on it, upgrade the Video graphics driver on the client PC to the lat-est version.<br>• If two different video streams were mixed in one channel, check they have same multicast address. |
| UI is not drag & drop | Reduce the CPU usage and device connection number. Disconnect the device or reduce the frame rate. |
| Error message was shown except authenti-cation deny while load-ing the device setup | Check the device status such as IP configuration, network con-nection and the network bandwidth usages of the smart station. |
| Suffer a long time to load timetable data and to play video/audio data from the recording server (NAS) | • Check that the usages of recording server (NAS) meets it's requirements and the network bandwidth usages.<br>• At the same time while recording video/audio data, the reading of it may cause delay. |
| Fail to read Timetable data from the recording server (NAS) | Check network drive setting for playback in the Station Setup or the IP device's system time |

| Symptoms | Resolutions |
|---|---|
| Device Search_<br>Add/Edit/Remove | *There is no Search device.*<br>1. Check the Device Status.<br>ex) network connection , booting operation of device and power connection of device.<br>cf) network condition : Client(SmartStation installed PC) network and device network are the same local area.<br>2. Check the Client Status.<br>ex) check the network connection or check that a firewall is not blocking a "Bonjour".<br>If firewall refused "Bonjour" or "UDP Packet" , please set to the accept "Bonjour" and "UDP Packet".<br>3. Not supported "port forwarding".<br>ex) Unique value of device is only IP Address in SmartStation Device Search. So SmartStation is not suprted "Port forwarding".<br>*Too long Device Search time*<br>Check the CPU Usage. If CPU usage is over 90%, all of operation of SmartStation couldn't normal performance.<br>*Can't manual registration of device .(not search registration)*<br>Manual registration is possible only connectable device. Check the device information for register condition. Ex) IP Address, User ID , Password.<br>*There are same IP address in searched results.*<br>It is IP Conflict. If the LG network device is set with a static IP address and if the DHCP option is set then there may be ip's same as the network device and other network partner. Hence set the static ip address to 0.0.0.0 to resolve this conflict. |

| Symptoms | Resolutions |
|---|---|
| IP Utility | *There is no Search device.*<br>1) Check the Device Status.<br>ex) network connection , booting operation of device and power connection of device.<br>cf) network condition : Client(SmartStation installed PC) network and device network are the same local area.<br>2) Check the Client Status.<br>ex) check the network connection or check that a firewall is not blocking a "Bonjour".<br>If firewall refused "Bonjour" or "UDP Packet" , please set to the accept "Bonjour" and "UDP Packet".<br>3) Not supported "port forwarding".<br>ex) Unique value of device is only IP Address in SmartStation Device Search. So SmartStation is not suprted "Port forwarding".<br>4) There are same IP address in searched results.<br>It is IP Conflict. If the LG network device is set with a static IP address and if the DHCP option is set then there may be ip's same as the network device and other network partner. Hence set the static ip address to 0.0.0.0 to resolve this conflict.<br>*Can't network setting.*<br>1) For network setting, Client(SmartStation installed PC) network and device network have to the same local area.<br>2) Check that a firewall is not blocking a port number 81. "81 port" is used WSDL communication for network setup. Please set to the accept "81 Port".<br>*Can't IP setting by ARP_PING of device.*<br>1) For IP setting by ARP_PING, client IP address and device address is the same local area .For example, If the client IP address is 10.164.47.ooo , device IP address must 10.164.47.xxx . That is ARP_PING SPEC.<br>2) Check the device setting of Enable ARP Ping in SmartStation_RemoteSetup. If this setting is not checked , ARP Ping is disabled. |

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Linux kernel 2.6, bash, busybox, gdbm, libreadline, module-init-tools, mount, mtd-utils, net-tools, quftp, tar, util-linux

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