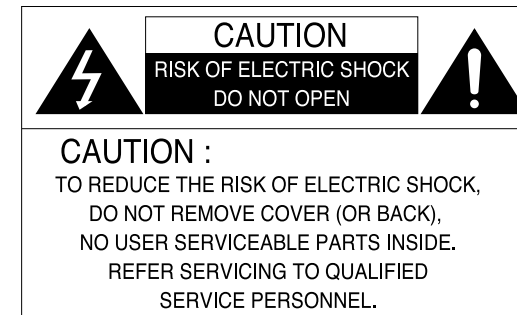# SAMSUNG

WEATHERPROOF DOME CAMERA Series
SPU-3750T/3700 User Guide

Before installing and operating the camera, please read this user's manual carefully.

English

INFORMATION - This equipment has been tested and found to comply with limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.
Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

WARNING
- CHANGES OR MODIFICATIONS NOT EXPRESSLY APPROVED BY THE MANUFACTURER COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.

CAUTION : To prevent electric shock and risk of fire hazards:
- The installation for this apparatus should be by a qualified service person and should conform to all local codes.
- Do NOT use power sources other than Class 2 power source.
- Carefully push the unlock buttons to prevent the apparatus falling and injurying someone.

This installation should be made by a qualified service person and should conform to all local codes.

Contents

Features

A/F 37x Optical Zoom

The built-in 37x optical zoom lens with auto-focus is combined with a 12x digital zoom, providing a maximum of 444x zoom.

Versatile protocols and coaxial communication

RS-422/485, Coaxial communication methods are supported.
- RS-422/485 (10 species) : Samsung Techwin, Pelco (D / P), Samsung Electronics, Panasonic, Honeywell, AD, Vicon, GE, BOSCH
- Coaxial Communications : Pelco Coaxitron (automatic detection)

Wide Range Auto Security Functions

- Auto Tracking(SPU-3750T Only) : A moving object or a person can be tracked and recorded automatically by the camera with its Pan, Tilt, and Zoom functions.
- Multiple Preset Function Saving : Up to 13 camera image properities can be saved individually to provide high quality pictures.
- Image Holding : When moving between presets in Group and Tour functions, using this Preset Freeze function holds the image status and helps the screen observer relieve visual fatigue.
- PTZ Trace : Patterns operated with the joystick can be saved and replayed by users.
- Swing : Using the Swing function commands the camera to move between 2 selected locations, monitoring the route.
- Group Search : Maximum 255 Preset positions are toured in order.
- Tour Search : Maximum 6 Group Search functions are toured in order.

Digital Flip

The Digital Flip function is useful to monitor moving objects or people passing directly under the camera. When an object or a person passes directly under the camera, its tilt motor follows the object or person over 100 degrees to the other side of the tilt area without panning. The screen inversion starts to occur at 100 degrees or higher is digitally adjusted.

Smart P/T

The Smart P/T function automatically adjusts the control speed of the Pan and Tilt functions according to the current zoom ratio. It is useful to adjust the functions manually for detailed controls when monitoring at high zoom ratios.

Day & Night

With its daytime & nighttime switch and Sens-Up functions based on the ICR (Infrared Cut filter Removal) method, the camera provides high quality pictures regardless of whether it is day or night.
* Sens-Up increases the CCD sensitivity by electrically extending the camera's exposure time.
* Day & Night enables you to select between color and B/W modes depending on the lighting conditions.

Highly durable built-in housing

This IP66-rated built-in housing is easy to install, and protects the product from a full range of harsh outdoor conditions. The high performance built-in fan/heater enables the product to operate under extreme temperatures between -50℃ ~ 50℃ .

Preset Position Saving and Loading

Up to 255 preset positions can be set. Using this function saves and brings up the camera feed of a selected monitoring location.

Camera Backup

This is to back up the camera's sequence information and presets. This is useful when the camera or its install base are damaged or malfunctions occur.

Area Masking

If a monitoring location includes a highly private area, the area can be selectively masked on the screen.

Cautions for Operating Temperature

1. The camera cannot operate properly at temperatures lower than -50℃.
2. Even if the surrounding temperature is -50℃ or higher, the camera may not thaw itself and operate properly depending on the installation environment.
3. Always keep the power on, so the camera can maintain its internal temperature at -10℃ or higher.
4. If the camera was turned on after being left at temperatures lower than -50℃ for a long duration:
   - If the internal temperature is lower than -20℃, the camera does not transmit video signals and displays a black screen along with the "Wait to warm up(xx Left)" message, instead of operating properly.
   - If the internal temperature is higher than -20℃ and lower than -10℃, the "Wait to warm up(xx Left)" message disappears as the camera resets itself and enters the operation mode.
     However, only manual P/T operation is in effect while the Sequence and Turbo commands are limited in use.
   - If the internal temperature is higher than -10℃, the camera activates all Sequence and Turbo commands.
5. If the heater malfunctions, a message appears as follows.
   - "Please Check Heater System"
   - If this message appears, turn off the camera and call where you bought.

Cautions for Using Auto Track(SPU-3750T)

The following cautions are for the Auto Track function built-in with the SPU-3750T; The SPU-3700 does not have Auto Track.
To use Auto Track to its full potential, please read and be aware of the following cautions. Neglecting the cautions may cause unsatisfactory performance of the tracking function as well as camera malfunctions.
• Auto Track is specifically to track down unknown intruders. It is not be suitable to monitor a crowd.
• If the camera is not safely secured, tracking errors may occur.
• If the camera lens is smeared with foreign substances, snow flakes, or raindrops, the camera may incur unsatisfactory performance in the tracking function. For optimal performance, please install the camera in an environment safe from contamination, and clean the camera lens on regular basis.
• If the tracking function shows poor performance at nighttime or under low light circumstances, use the Sens-Up function.
• Auto Track may have errors at times when pronounced shadows are created: e.g. sunrise and sunset.
• The camera may catch and follow unintended movements – car traffic or swaying tree branches – during the Auto Track operation. To prevent and correct such errors, adjust the installation direction and angle of the camera, or use Zone Settings (Mask) (page 70).
• Adjust the installation direction and angle of the camera, or use Zone Settings also under the following conditions: With excessively bright light sources, under flickering lights, or if the camera displays internal reflections.
• When using Auto Track, it is recommended to adjust the tracking object size to 1/4 of the screen.
• This feature may not perform as expected depending on the situation and circumstances. Samsung Techwin is not responsible for injuries and financial damage caused by the situation described above.

Setting Up Auto Track

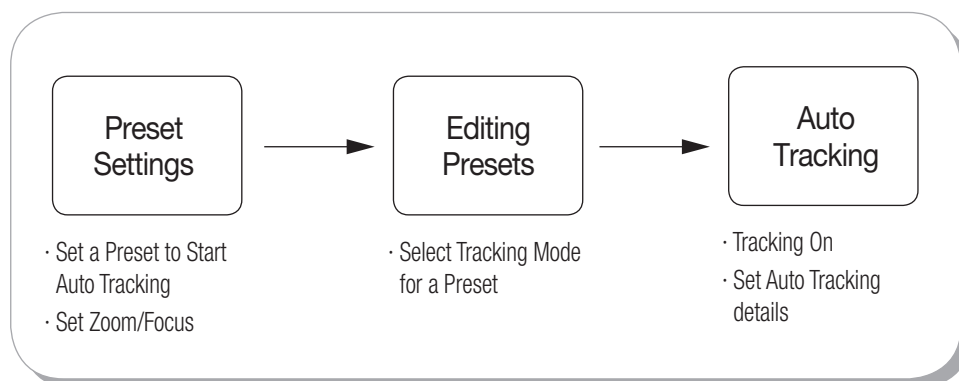• **Two different Auto Track setup methods are available.**

◯ **Using Presets**
  - Select a starting point for Auto Track as a preset to activate Auto Tracking.
    (This can be used in conjunction with Group SEQ and Tour SEQ.)

◯ **Using Target Lock**
  - Select an object on the screen to activate Auto Tracking.

Auto Track Using Presets

```
┌──────────────┐      ┌──────────────┐      ┌──────────────┐
│   Preset     │ ──▶  │   Editing    │ ──▶  │    Auto      │
│  Settings    │      │   Presets    │      │   Tracking   │
└──────────────┘      └──────────────┘      └──────────────┘

· Set a Preset to Start   · Select Tracking Mode   · Tracking On
  Auto Tracking             for a Preset            · Set Auto Tracking
· Set Zoom/Focus                                      details
```

<Auto Track Setting Flow Chart>

1. Selecting Auto Track Starting Point 1

▶ Main Menu/Sequence Settings/Preset/Settings

```
   Preset Setting

Preset = 001   (255)
```

◯ Using the joystick, select a preset number from 1 to 255, and then press [Enter].

```
Preset Setting  Z>ZOOM




1+PST:ZOOM  2+PST:FOCUS
    Use W/T Preset
```

◯ Select the preset as the starting point for Auto Track. Using the joystick, set the Pan/Tilt and Zoom/Focus options.

2. Selecting Auto Track Starting Point 2

▶ Main Menu/Sequence Settings/Preset/Edit

```
   Preset Edit

Preset = 001*   (1~255)
```

◯ At Preset Edit, select the preset number under the Preset Settings menu.

  ✽ The selected preset is indicated with an asterisk (*).

```
Preset Edit     [001]

❶ PTZ          271/045/1X
❷ Focus Mode   ONE SHOT AF
❸ Brightness   050
❹ Iris         AUTO
❺ Back Light
❻ Day & Night  B/W
❼ After Act.   OFF
⑧ Scene Adj.
```

◯ At Menu 7 [After Act.], select [TRACK].
  - TRACK : Perform Auto Track upon arrival.

```
Preset Edit

Preset = 001T (1~255)
```

◯ When the [After Act.] menu is set to [TRACK], the letter "T" appears next to the preset number as shown in the figure.

3. Setting Auto Tracking Details

▶ Main Menu/P/T Settings/Auto Track1

```
Auto Track 1

❶ Auto Track    OFF
❷ Camera Height 02.5M
❸ Object Size   SMALL
❹ Sensitivity   HIGH
❺ Zoom Control  OFF
❻ Auto Release  OFF
❼ Auto Return   OFF
❽ Lost Mode     STOP
```

◯ At Menu 1 [Auto Track], select [ON] to activate Auto Tracking.

◯ Set the Camera Height, Object Size, Sensitivity, and Zoom Control options.

◯ Refer to the timing chart below to set the [Auto Release], [Auto Return], and [Lost Mode] options.

Setting Up Auto Track

[Auto Release]
(10sec ~ 5min)

[Auto Return]
(1sec ~ 5min)

Start
Tracking

[Lost Mode]

Performed only for the
Auto Release duration

Finish
Tracking

Initial
Location

<Auto Track Timing Chart>
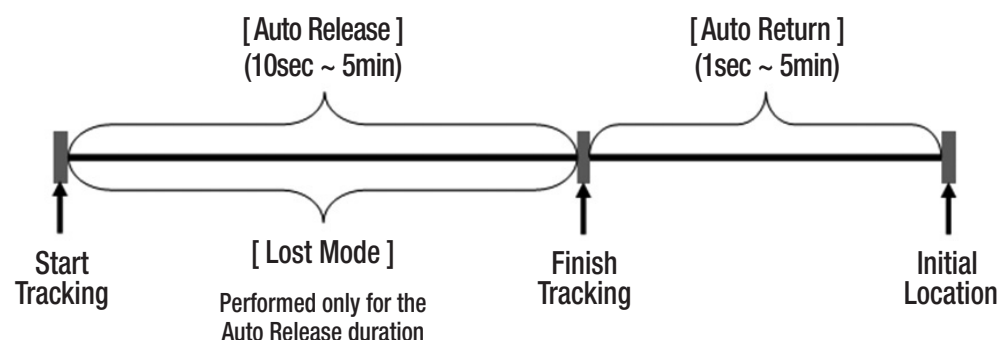
⊖ **Auto Release :** Command the camera to follow an object for a set duration and
then return to its initial (preset) location.

⊖ **Auto Return :** After Auto Release expires, command the camera to stand by at
the tracking finish point and then return to its initial location.
(Selecting OFF keeps the camera at the tracking finish point
instead of returning it to the initial location.)

⊖ **Lost Mode :** Set an action for the camera when it loses its tracking object.
(Performed only for the Auto Release duration.)
- STOP : Stop at the lost point and abort tracking.
- RESEARCH : Stop at the lost point and search for a new object.
- ZOOM-OUT : When an object is lost, Zoom Out to find and track a new object.

4. Starting Auto Track (Loading Presets)
▶ Main Menu/Sequence Settings/Preset

```
Preset

❶ Setting
❷ Edit
❸ Home Position      OFF
❹ Execute
❺ Clear
❻ Status
```

```
Preset Edit

Preset = 001T (1~255)
```

⊖ Start Auto Tracking in the OSD Menu
① Select [Execute].
② Select a Preset to start Auto Tracking.
③ The camera will move to the Preset location
and start Auto Tracking.

⊖ Start Auto Tracking Using the Controller
① Exit the OSD menu then press a Preset
number on the controller keypad to start Auto
Tracking. And Press a <Preset> button.(The
number can be checked on the LCD window.)
② The camera will move to the Preset location
and start Auto Tracking.

5. Auto Tracking Using Group Command
▶ Main Menu/Sequence Settings/Group SEQ/Group X/Settings

```
Group SEQ 1

NO    PSET   DWT(s)  SPD
001:  *** :  003 :   64
002:  *** :  003 :   64
003:  *** :  003 :   64
004:  *** :  003 :   64
005:  *** :  003 :   64
006:  *** :  003 :   64
007:  *** :  003 :   64
```

⊖ **PSET :** Using the joystick, enter a preset number
under which [After Act.] menu is set to
[TRACK].

⊖ **DWT :** Indicates the camera time spent at each
preset location. (1 ~ 120sec)

⊖ **SPD :** Adjusts the camera movement speed by 64
different levels.

Setting Up Auto Track

○ After finishing setup, press [Execute] in the parent menu to activate the Group SEQ mode. (Or turn OFF OSD Menu, and then press [Group]+[Group Number] using the controller.)

<Group SEQ Timing Chart>
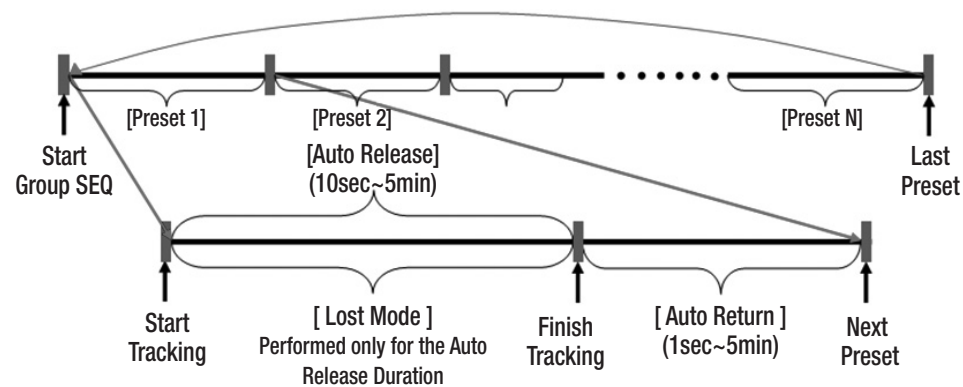
○ When Group SEQ is activated, the camera starts auto tracking at the [Preset 1] location. For the set DWT duration, the camera performs Auto Track according to [Auto Release] and [Auto Return] settings. If no movement is detected, it moves to [Preset 2] and repeats the procedures.

1. Setting Target Lock
▶ Main Menu/P/T Settings/Auto Track2

○ **Target Lock => [ON]**
  - When Target Lock is turned [ON], a red box appears in the center of the screen.

2. Target Lock

P:234　T:5　1x
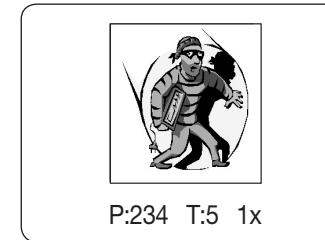
○ Using the joystick, move the red box to encircle an object and then press [Enter] to start Auto Tracking the object.

eco
RoHS compliant

Samsung Techwin cares for the environment at all product manufacturing stages to preserve the environment, and is taking a number of steps to provide customers with more environment-friendly products. The Eco mark represents Samsung Techwin's will to create environment-friendly products, and indicates that the product satisfies the EU RoHS Directive.

Warnings & Cautions

This information is provided to ensure your safety and to prevent any losses, financial or otherwise. Please read it carefully and use the product accordingly.

* For product inquiries, please contact the retail shop where you bought the camera. The use of equipment such as an aerial ladder while providing after-sales service shall be at your expense.
* Unplug the power plug during a thunder storm to prevent fire and damage to the product.
* This product is support equipment for a security system. Therefore, we can't compensate for material losses and/or personal injuries by robbery, fire, natural disaster, or anything of the sort.

Warning/Caution/Special Mark Messages

⚡	Ignoring this information may result in material loss and/or serious personal injuries, including death.	⚠	Ignoring this information may result in material loss and/or slight injuries.
🚫	Indicates "Prohibited".	🚫	Indicates "No Disassembly".

Correct Disposal of This Product
(Waste Electrical & Electronic Equipment)
(Applicable in the European Union and other European countries with separate collection systems)

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

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

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

Warnings & Cautions

⚠ Warnings

Do not install on your own.

This installation should be made by a qualified service person. Installing this product on your own may result in fire or electric shock. For the installation service, contact the retail shop where you bought the product.

Stop using the camera if smoke or abnormal heat is detected.
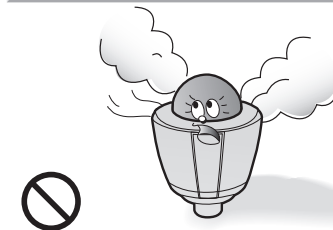
May cause fire.

Do not install in high humidity or in a place that may be exposed to oil or gas.

May cause product malfunctions, electric shocks, and fire.

Do not install on an unsubstantial wall that may be subject to vibrations.
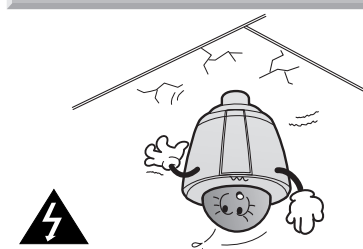
May cause the product to fall.

Do not handle the power plug with wet hands.
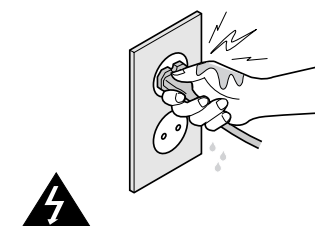
May cause electric shock.

Do not disassemble the camera or insert foreign subjects.
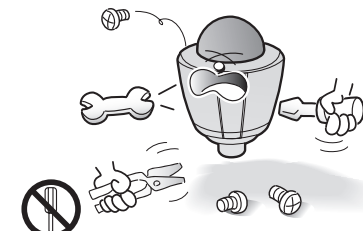
May cause fire and damage to the product.

⚠ Cautions

Do not install under extreme temperature conditions.

Only use in the temperature range of between -50°C and +50°C to prevent low graphics quality and product malfunction. When using in high temperature conditions, provide good ventilation.

Do not install under unstable lighting conditions.

Severe lighting changes or flickering may hinder normal camera operation.

Do not drop the camera or subject it to physical shock.

May cause product malfunctions.

Never keep the camera facing direct sunlight or any other strong lights.

May cause critical damage to the CCD.

Avoid touching the camera lens.
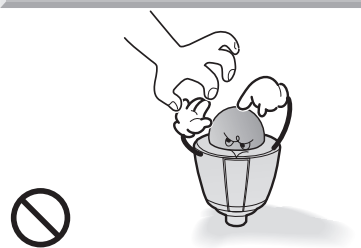
The lens is the most important component of the camera. Be careful not to smear it with fingerprints.

Do not touch the heater when the product is in operation.
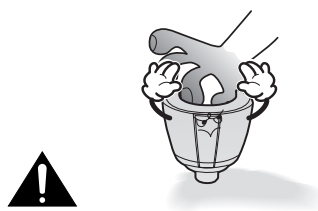
The heater makes high temperature.

Detailed Warnings and Cautions

- Avoid operating the camera for long durations under high temperatures and in high humidity. Excessive heat can shorten the lifespan of the camera components.
- Do not install or place the camera near any heat sources.
- Subjecting the dome cover to physical shock may damage the camera and cause water leakage into it.
- Do not place the camera facing direct sunlight or other intense light sources. Strong lights such as spotlights can cause distortions—blooming and smear—as well as discolorations on the screen by heating up the color filter of the camera. They also may cause internal reflections of the camera, leading to operational malfunctions.
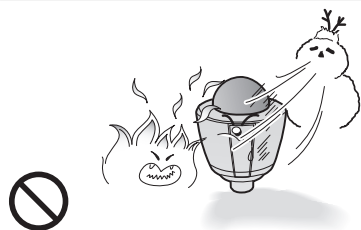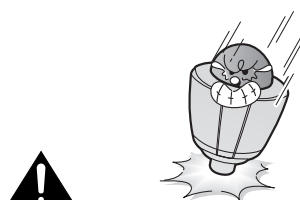- Do not drop the camera or subject it to physical shock or vibration; this can cause serious damage to the camera.
- When installing the camera near a power line, make sure to keep at least 1 meter distance from the power line, or earth an additional metal pipe to separate the camera from the power source.
- Install this camera on the ceiling. Installing it on the ground or a unleveled location may cause product malfunctions and shorten its lifespan.
- Avoid installing and operating the camera in the following places.
  · Places whose temperature exceed the camera's recommended range. (-50℃ ~ 50℃)
  · Places where drastic temperature changes occur: e.g. Near an air conditioner.
  · Places that are exposed to steam, oil, and inflammable substances: e.g. Inside a kitchen.
  · Places that are exposed to radioactivity, X-rays, strong electric waves, and electro-magnetic waves.
  · Places that are exposed to outdoor air contaminants: e.g. Dust and car exhaust.
  · Places in high humidity.
  · Places that are exposed to corrosive gas: e.g. Next to the sea.
- Smeared and dusty dome covers decrease the picture and video quality. Clean the dome cover and camera lens on a regular basis.
- Remove the plastic wrap on the dome cover only after the camera installation is complete.
- This camera is not equipped with a power switch. Plug in the camera only after the installation is complete.

Expendable components

The following expendable components should be replaced within the recommended lifetime. Lifetimes vary somewhat and depend on the operating environments and conditions.
- Cooling fan: Approx. 50,000 hours
- Slipring: Approx. 20,000 hours
- VCL lens: Approx. 20,000 hours

Components and Accessories

* Components

Body	Power Adapter (AC 24V, Peak 2.5A)	Hexa Wrench	User's Manual
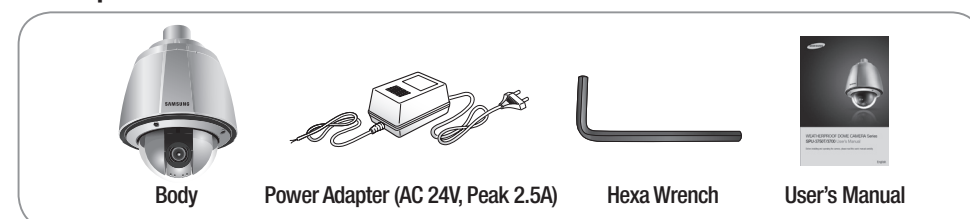
* The set for America does not include the power adapter.

* Accessories
The following items are sold separately from the camera.

Brackets
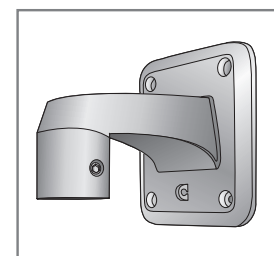
STB-300PW Wall Bracket
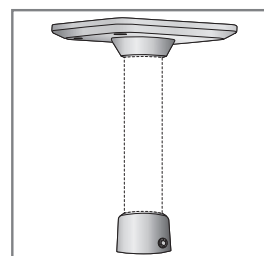
STB-300PP Ceiling Mount

STB-355PPM Parapet Mount
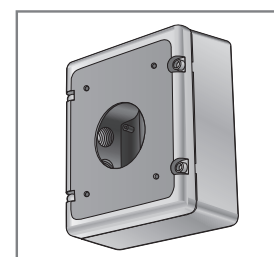
STB-270B Setup Box
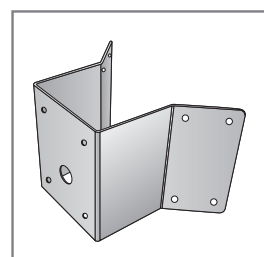
STB-340PCM Corner Mount
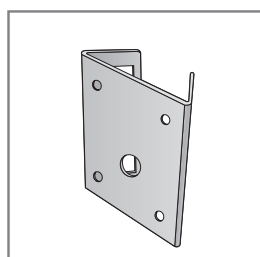
STB-330PPM Pole Mount
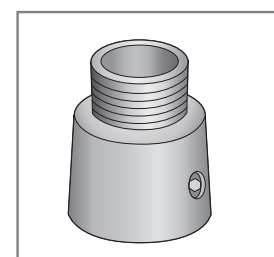
STB-40PF Pendent Coupling

* Ceiling bracket (STB-300PP) pipe not provided

Component Names and Functions

Front

Back

❶

Bottom

❷   ❸
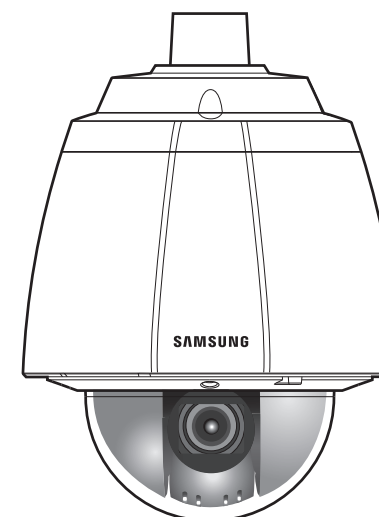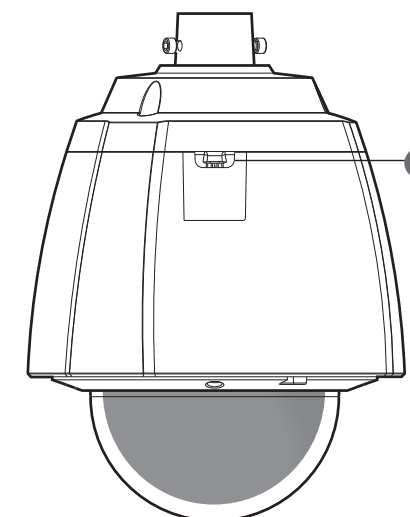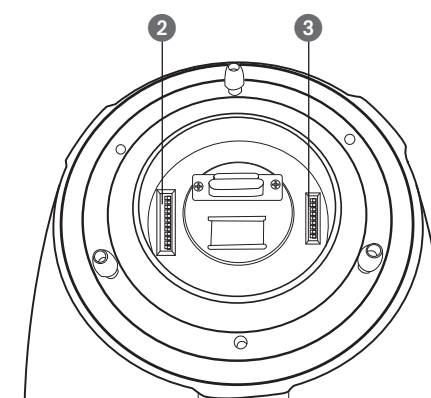
❶ Safety Wire Holder
❷ SW2: Communication DIP Switch
❸ SW1: ID DIP Switch

Notes

• For the DIP switch settings, please refer to the "Installing Your Camera" on Page 23~32.

Component Names and Functions

Camera Wiring Interface Board (Sold Separately)

For the camera wiring, please refer to the picture below.
The camera's wiring interface board is fitted to the housing, this is sold separately.(When using coaxial communication, a separate control signal connection is not required.)

Video Out

Alarm

Controller   Aux

AC FG AC
System
AC AC
Heater

Alarm

| GND |
| GND |
| GND |
| 1.NC |
| 1.NO |
| 1.COM |
| GND |
| GND |
| IN3 |
| GND |
| IN2 |
| IN1 |

Alarm Output

Alarm Input

Communications and AUX

| D+ | D− | TX+ | TX- | GND | A.COM | A.NO |

Refer to the below Control Signal Connection chart

Power Supply

| AC | GND | AC |

AC24V 2.5A

— Power Input
— Ground
L — AUX Output
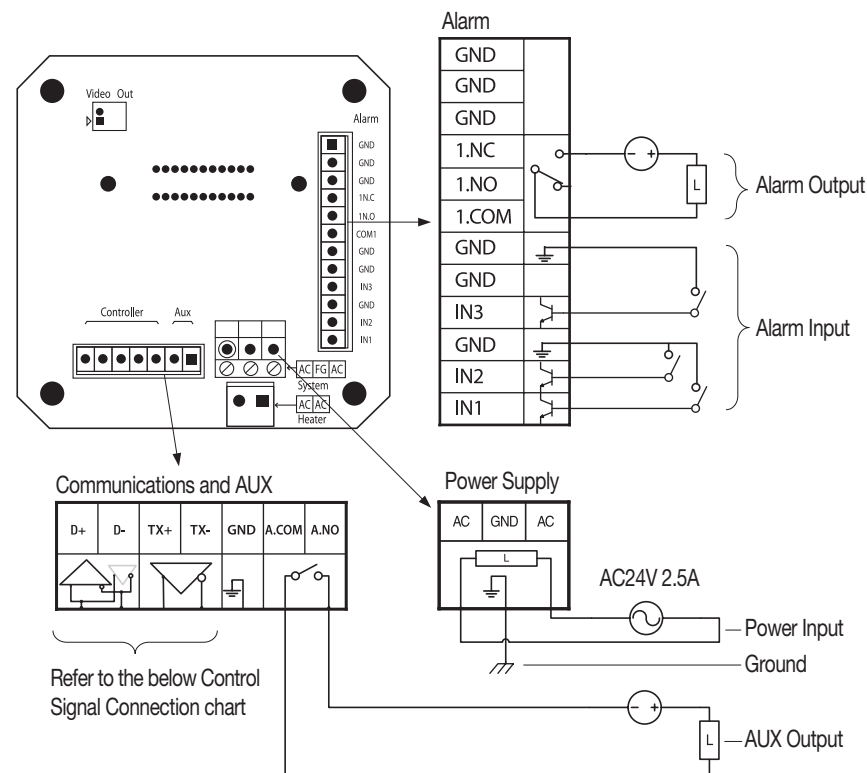
Control Signal Connection

· RS485 Communications

Camera | Controller or DVR
D+ —— TXD+
D− —— TXD−

· RS422 Communications

Camera | Controller or DVR
D+ —— TXD+
D− —— TXD−
TXD+ —— RXD+
TXD− —— RXD−
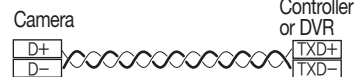
Notes

- The maximum power capacity of the built-in relay is 30VDC/2A, 125VAC/0.5A, and 250VAC/0.25A.
- Connecting the power connector and GND incorrectly to the NC/NO and COM ports may cause a short circuit and fire, damaging the camera.

Installing Your Camera

Speed Dome Camera and Appliances Wiring Diagram

Connecting with Samsung Techwin's "Stand Alone DVR"

· RS-485 :

Camera | Stand Alone DVR
D+ —— T(TX)+
D− —— T(TX)−

SERIAL PORT

| | RS422 | RS232 | RS485 |

Termination Off On
2 4
R+ R− T+ T− G R+ T− G R+ R− G
Com2   Com3   Com4
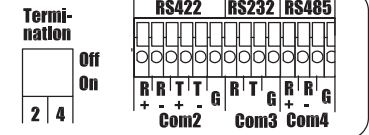
*SVR−1680/1660/1645/960/

·RS-422 :

Camera | Stand Alone DVR
D+ —— T(TX)+
D− —— T(TX)−
TXD+ —— R(RX)+
TXD− —— R(TX)−

SERIAL PORT

| RS485 | RS232 |

Termination Off On
2 4
R+ R− R+ R− G R+ T− G
Com2 Com4 Com3

*SVR−945

R+ R− T+ T−

RS422/485   RS422/485

1 2 3 4   TX+ TX- RX+ RX-
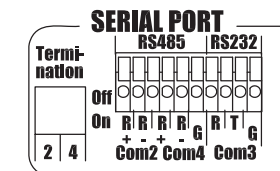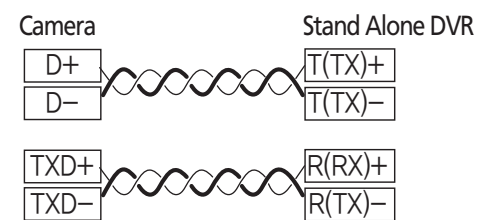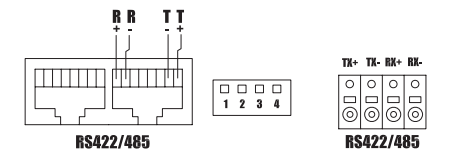
*SVR−1650/1640A/950E   *SVR−940/450

Connecting with the Samsung Techwin Controller SCC-3100A

·RS-485 :

Camera | SCC-3100A Data Box PORT1
D+ —— RX+
D− —— RX−
        TX+
        TX−

SCC-3100A Data Box

RX+ RX− TX+ TX−

·RS-422 :

Camera | SCC-3100A Data Box PORT1
TX+ —— RX+
TX− —— RX−
D+ —— TX+
D− —— TX−
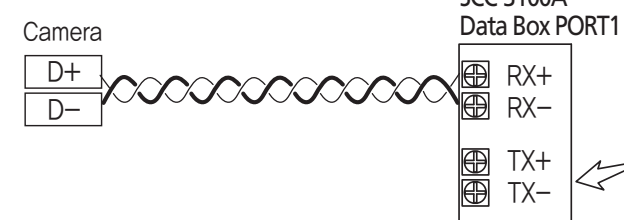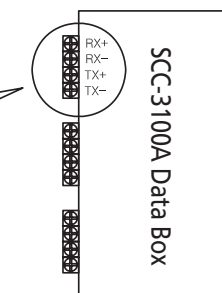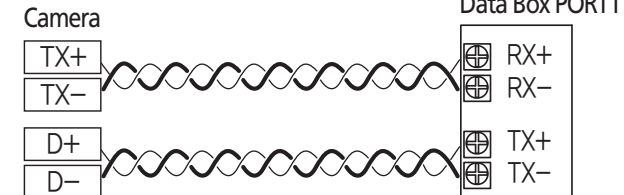
Note!

* DVRs that can fully control a PTZ Dome via RS-422/485 are as follows
  - 32Ch : SVR-3200
  - 16Ch : SVR-1680/1660/1645/1650E/1640A
  - 9Ch : SVR-960/945/950E
  - 4Ch : SVR-440
* Samsung Techwin DVR products that can fully control a PTZ Dome via coaxial are as follows
  - 16Ch : SVR-1680C,SVR-1660C
  - 9Ch : SVR-960C
* The following DVR models support only the Pan, Tilt, Zoom, and Focus functions of the camera.
  - 9Ch : SVR-940
  - 4Ch : SVR-450,SVR-470

* Memo

MEMO

How to Set Up Protocols and ID DIP Switches

You can control various settings of the camera system using the Communication and ID DIP switches. Before installing the product, please set up the DIP switches according to the installation environment.

1. Detach the camera frame from the install base, and place the bottom of the frame toward you as shown in the picture below.

2. Set the switches according to your installation environment. For more detailed setup information, please refer to the chart on the next page.

3. The camera may malfunction if the switches are not fully turned On/Off; please double check the switches before finishing setup.

Communication Protocol DIP Switch(SW2)
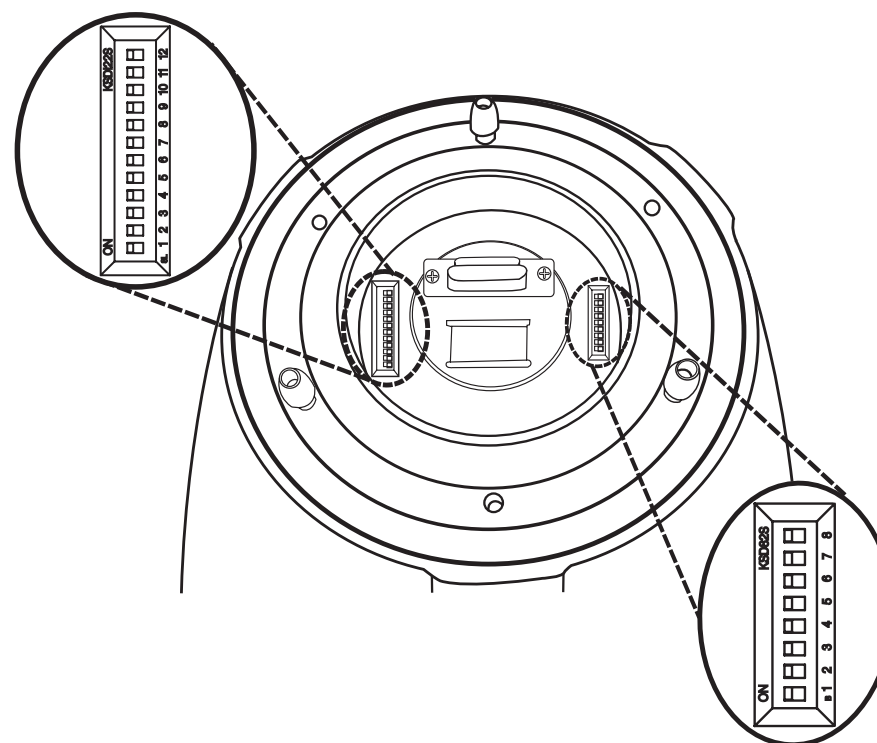
Camera ID DIP Switch(SW1)

Communication Protocol DIP Switch Settings (SW2)

*Coaxial communication automatically detects signals, and so does not require a separate communication setup process.

SW2
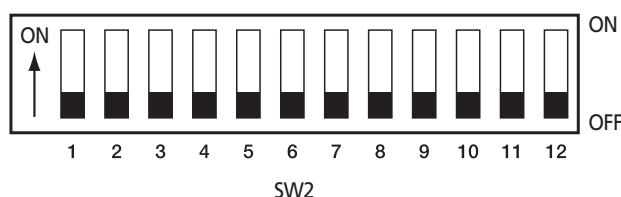
SW2 Pin No.	Purpose
1~4	Protocol Settings
5~6	Baud Rate Settings
7	Transfer Method (RS-485/422) Settings
8	Response Mode Settings
9	Backup Mode Settings 1
10~11	Termination Settings
12	Backup Mode Settings 2

• Protocol Settings

Select a communication protocol for the camera

No	Protocol	SW2-#1	SW2-#2	SW2-#3	SW2-#4
1	Samsung Techwin	OFF	OFF	OFF	OFF
2	Pelco-D	OFF	OFF	OFF	ON
3	Pelco-P	OFF	OFF	ON	OFF
4	Samsung Elec.	OFF	OFF	ON	ON
5	Panasonic	OFF	ON	OFF	OFF
6	Vicon	OFF	ON	OFF	ON
7	Honeywell	OFF	ON	ON	OFF
8	AD	OFF	ON	ON	ON
9	GE	ON	OFF	OFF	OFF
10	BOSCH	ON	OFF	OFF	ON
11	Reserved	ON	OFF	ON	OFF
12	Reserved	ON	OFF	ON	ON
13	Reserved	ON	ON	OFF	OFF
14	Reserved	ON	ON	OFF	ON
15	Reserved	ON	ON	ON	OFF
16	Reserved	ON	ON	ON	ON

• Baud Rate Settings

Select the transfer speed of a selected communication protocol.

No.	Baud Rate(BPS)	SW2-#5	SW2-#6
1	2,400	ON	ON
2	4,800	ON	OFF
3	9,600	OFF	OFF
4	19,200	OFF	ON

• Communication Method Settings

Select a communication method for the camera.

	Function	ON	OFF
SW2- #7	Transfer Mode Switch	RS-422(4Wire)	RS-485(2Wire)

• Communication Response Settings

Select a communication response method for the camera and controller: Response or No Response.

	Function	ON	OFF
SW2- #8	Response Mode Switch	Response	No Response

• Termination Settings

To prevent the attenuation of communication signals between the camera and controller, the items at the end of line must be set up with the termination settings.

Camera Input Position	SW2- #10	SW2- #11
Termination of Longest Path	ON	ON
On the Path	OFF	OFF

*This model is provided with factory defaults of all DIP switches set to OFF. The default settings are shaded in the table.

• Camera Backup Settings

These settings are useful when the camera or its install base are damaged or malfunctions occur. When replacing the camera or its install base, you can transfer existing presets and sequence information to the replacement using these settings.

Backup Function	SW2- #9	SW2- #12
Backup(IB→D)	OFF	OFF
Backup(D→IB)	ON	OFF
Backup Disable	-	ON

- Backup(IB→D) : Enables transferring the current camera's sequence information to a new camera.
- Backup(D→IB) : Enables transferring the current camera's sequence information to a new install base.

*IB: Install base, D: Dome Camera

Notes

- To use a third party controller with this product, please contact our After-Sales Service or Technology Department.
- AD Protocol Control Method
  - Input Camera OSD: 3+Auxiliary On
  - Output Camera OSD: 3+Auxiliary Off
  - Enter: IRIS Open
  - ESC: IRIS Close
- For more information about the protocols, refer to our official website.

Camera ID DIP Switch Settings (SW1)

To set up camera IDs, refer to the "Camera ID Chart" next.

SW1
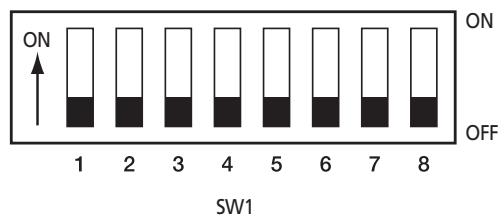
• Camera ID Chart

ID	SW1-#1	SW1-#2	SW1-#3	SW1-#4	SW1-#5	SW1-#6	SW1-#7	SW1-#8
1	ON/OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
2	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF
3	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF
4	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF
5	ON	OFF	ON	OFF	OFF	OFF	OFF	OFF
6	OFF	ON	ON	OFF	OFF	OFF	OFF	OFF
7	ON	ON	ON	OFF	OFF	OFF	OFF	OFF
8	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF
9	ON	OFF	OFF	ON	OFF	OFF	OFF	OFF
10	OFF	ON	OFF	ON	OFF	OFF	OFF	OFF
11	ON	ON	OFF	ON	OFF	OFF	OFF	OFF
12	OFF	OFF	ON	ON	OFF	OFF	OFF	OFF
13	ON	OFF	ON	ON	OFF	OFF	OFF	OFF
14	OFF	ON	ON	ON	OFF	OFF	OFF	OFF
15	ON	ON	ON	ON	OFF	OFF	OFF	OFF
16	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF
17	ON	OFF	OFF	OFF	ON	OFF	OFF	OFF
18	OFF	ON	OFF	OFF	ON	OFF	OFF	OFF
19	ON	ON	OFF	OFF	ON	OFF	OFF	OFF
20	OFF	OFF	ON	OFF	ON	OFF	OFF	OFF
21	ON	OFF	ON	OFF	ON	OFF	OFF	OFF
22	OFF	ON	ON	OFF	ON	OFF	OFF	OFF
23	ON	ON	ON	OFF	ON	OFF	OFF	OFF
24	OFF	OFF	OFF	ON	ON	OFF	OFF	OFF
25	ON	OFF	OFF	ON	ON	OFF	OFF	OFF
26	OFF	ON	OFF	ON	ON	OFF	OFF	OFF
27	ON	ON	OFF	ON	ON	OFF	OFF	OFF
28	OFF	OFF	ON	ON	ON	OFF	OFF	OFF
29	ON	OFF	ON	ON	ON	OFF	OFF	OFF
30	OFF	ON	ON	ON	ON	OFF	OFF	OFF
31	ON	ON	ON	ON	ON	OFF	OFF	OFF
32	OFF	OFF	OFF	OFF	OFF	ON	OFF	OFF
33	ON	OFF	OFF	OFF	OFF	ON	OFF	OFF
34	OFF	ON	OFF	OFF	OFF	ON	OFF	OFF
35	ON	ON	OFF	OFF	OFF	ON	OFF	OFF
36	OFF	OFF	ON	OFF	OFF	ON	OFF	OFF
37	ON	OFF	ON	OFF	OFF	ON	OFF	OFF
38	OFF	ON	ON	OFF	OFF	ON	OFF	OFF
39	ON	ON	ON	OFF	OFF	ON	OFF	OFF
40	OFF	OFF	OFF	ON	OFF	ON	OFF	OFF
41	ON	OFF	OFF	ON	OFF	ON	OFF	OFF

ID	SW1-#1	SW1-#2	SW1-#3	SW1-#4	SW1-#5	SW1-#6	SW1-#7	SW1-#8
42	OFF	ON	OFF	ON	OFF	ON	OFF	OFF
43	ON	ON	OFF	ON	OFF	ON	OFF	OFF
44	OFF	OFF	ON	ON	OFF	ON	OFF	OFF
45	ON	OFF	ON	ON	OFF	ON	OFF	OFF
46	OFF	ON	ON	ON	OFF	ON	OFF	OFF
47	ON	ON	ON	ON	OFF	ON	OFF	OFF
48	OFF	OFF	OFF	OFF	ON	ON	OFF	OFF
49	ON	OFF	OFF	OFF	ON	ON	OFF	OFF
50	OFF	ON	OFF	OFF	ON	ON	OFF	OFF
51	ON	ON	OFF	OFF	ON	ON	OFF	OFF
52	OFF	OFF	ON	OFF	ON	ON	OFF	OFF
53	ON	OFF	ON	OFF	ON	ON	OFF	OFF
54	OFF	ON	ON	OFF	ON	ON	OFF	OFF
55	ON	ON	ON	OFF	ON	ON	OFF	OFF
56	OFF	OFF	OFF	ON	ON	ON	OFF	OFF
57	ON	OFF	OFF	ON	ON	ON	OFF	OFF
58	OFF	ON	OFF	ON	ON	ON	OFF	OFF
59	ON	ON	OFF	ON	ON	ON	OFF	OFF
60	OFF	OFF	ON	ON	ON	ON	OFF	OFF
61	ON	OFF	ON	ON	ON	ON	OFF	OFF
62	OFF	ON	ON	ON	ON	ON	OFF	OFF
63	ON	ON	ON	ON	ON	ON	OFF	OFF
64	OFF	OFF	OFF	OFF	OFF	OFF	ON	OFF
65	ON	OFF	OFF	OFF	OFF	OFF	ON	OFF
66	OFF	ON	OFF	OFF	OFF	OFF	ON	OFF
67	ON	ON	OFF	OFF	OFF	OFF	ON	OFF
68	OFF	OFF	ON	OFF	OFF	OFF	ON	OFF
69	ON	OFF	ON	OFF	OFF	OFF	ON	OFF
70	OFF	ON	ON	OFF	OFF	OFF	ON	OFF
71	ON	ON	ON	OFF	OFF	OFF	ON	OFF
72	OFF	OFF	OFF	ON	OFF	OFF	ON	OFF
73	ON	OFF	OFF	ON	OFF	OFF	ON	OFF
74	OFF	ON	OFF	ON	OFF	OFF	ON	OFF
75	ON	ON	OFF	ON	OFF	OFF	ON	OFF
76	OFF	OFF	ON	ON	OFF	OFF	ON	OFF
77	ON	OFF	ON	ON	OFF	OFF	ON	OFF
78	OFF	ON	ON	ON	OFF	OFF	ON	OFF
79	ON	ON	ON	ON	OFF	OFF	ON	OFF
80	OFF	OFF	OFF	OFF	ON	OFF	ON	OFF
81	ON	OFF	OFF	OFF	ON	OFF	ON	OFF
82	OFF	ON	OFF	OFF	ON	OFF	ON	OFF
83	ON	ON	OFF	OFF	ON	OFF	ON	OFF
84	OFF	OFF	ON	OFF	ON	OFF	ON	OFF

ID	SW1-#1	SW1-#2	SW1-#3	SW1-#4	SW1-#5	SW1-#6	SW1-#7	SW1-#8
85	ON	OFF	ON	OFF	ON	OFF	ON	OFF
86	OFF	ON	ON	OFF	ON	OFF	ON	OFF
87	ON	ON	ON	OFF	ON	OFF	ON	OFF
88	OFF	OFF	OFF	ON	ON	OFF	ON	OFF
89	ON	OFF	OFF	ON	ON	OFF	ON	OFF
90	OFF	ON	OFF	ON	ON	OFF	ON	OFF
91	ON	ON	OFF	ON	ON	OFF	ON	OFF
92	OFF	OFF	ON	ON	ON	OFF	ON	OFF
93	ON	OFF	ON	ON	ON	OFF	ON	OFF
94	OFF	ON	ON	ON	ON	OFF	ON	OFF
95	ON	ON	ON	ON	ON	OFF	ON	OFF
96	OFF	OFF	OFF	OFF	OFF	ON	ON	OFF
97	ON	OFF	OFF	OFF	OFF	ON	ON	OFF
98	OFF	ON	OFF	OFF	OFF	ON	ON	OFF
99	ON	ON	OFF	OFF	OFF	ON	ON	OFF
100	OFF	OFF	ON	OFF	OFF	ON	ON	OFF
101	ON	OFF	ON	OFF	OFF	ON	ON	OFF
102	OFF	ON	ON	OFF	OFF	ON	ON	OFF
103	ON	ON	ON	OFF	OFF	ON	ON	OFF
104	OFF	OFF	OFF	ON	OFF	ON	ON	OFF
105	ON	OFF	OFF	ON	OFF	ON	ON	OFF
106	OFF	ON	OFF	ON	OFF	ON	ON	OFF
107	ON	ON	OFF	ON	OFF	ON	ON	OFF
108	OFF	OFF	ON	ON	OFF	ON	ON	OFF
109	ON	OFF	ON	ON	OFF	ON	ON	OFF
110	OFF	ON	ON	ON	OFF	ON	ON	OFF
111	ON	ON	ON	ON	OFF	ON	ON	OFF
112	OFF	OFF	OFF	OFF	ON	ON	ON	OFF
113	ON	OFF	OFF	OFF	ON	ON	ON	OFF
114	OFF	ON	OFF	OFF	ON	ON	ON	OFF
115	ON	ON	OFF	OFF	ON	ON	ON	OFF
116	OFF	OFF	ON	OFF	ON	ON	ON	OFF
117	ON	OFF	ON	OFF	ON	ON	ON	OFF
118	OFF	ON	ON	OFF	ON	ON	ON	OFF
119	ON	ON	ON	OFF	ON	ON	ON	OFF
120	OFF	OFF	OFF	ON	ON	ON	ON	OFF
121	ON	OFF	OFF	ON	ON	ON	ON	OFF
122	OFF	ON	OFF	ON	ON	ON	ON	OFF
123	ON	ON	OFF	ON	ON	ON	ON	OFF
124	OFF	OFF	ON	ON	ON	ON	ON	OFF
125	ON	OFF	ON	ON	ON	ON	ON	OFF
126	OFF	ON	ON	ON	ON	ON	ON	OFF
127	ON	ON	ON	ON	ON	ON	ON	OFF

ID	SW1-#1	SW1-#2	SW1-#3	SW1-#4	SW1-#5	SW1-#6	SW1-#7	SW1-#8
128	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON
129	ON	OFF	OFF	OFF	OFF	OFF	OFF	ON
130	OFF	ON	OFF	OFF	OFF	OFF	OFF	ON
131	ON	ON	OFF	OFF	OFF	OFF	OFF	ON
132	OFF	OFF	ON	OFF	OFF	OFF	OFF	ON
133	ON	OFF	ON	OFF	OFF	OFF	OFF	ON
134	OFF	ON	ON	OFF	OFF	OFF	OFF	ON
135	ON	ON	ON	OFF	OFF	OFF	OFF	ON
136	OFF	OFF	OFF	ON	OFF	OFF	OFF	ON
137	ON	OFF	OFF	ON	OFF	OFF	OFF	ON
138	OFF	ON	OFF	ON	OFF	OFF	OFF	ON
139	ON	ON	OFF	ON	OFF	OFF	OFF	ON
140	OFF	OFF	ON	ON	OFF	OFF	OFF	ON
141	ON	OFF	ON	ON	OFF	OFF	OFF	ON
142	OFF	ON	ON	ON	OFF	OFF	OFF	ON
143	ON	ON	ON	ON	OFF	OFF	OFF	ON
144	OFF	OFF	OFF	OFF	ON	OFF	OFF	ON
145	ON	OFF	OFF	OFF	ON	OFF	OFF	ON
146	OFF	ON	OFF	OFF	ON	OFF	OFF	ON
147	ON	ON	OFF	OFF	ON	OFF	OFF	ON
148	OFF	OFF	ON	OFF	ON	OFF	OFF	ON
149	ON	OFF	ON	OFF	ON	OFF	OFF	ON
150	OFF	ON	ON	OFF	ON	OFF	OFF	ON
151	ON	ON	ON	OFF	ON	OFF	OFF	ON
152	OFF	OFF	OFF	ON	ON	OFF	OFF	ON
153	ON	OFF	OFF	ON	ON	OFF	OFF	ON
154	OFF	ON	OFF	ON	ON	OFF	OFF	ON
155	ON	ON	OFF	ON	ON	OFF	OFF	ON
156	OFF	OFF	ON	ON	ON	OFF	OFF	ON
157	ON	OFF	ON	ON	ON	OFF	OFF	ON
158	OFF	ON	ON	ON	ON	OFF	OFF	ON
159	ON	ON	ON	ON	ON	OFF	OFF	ON
160	OFF	OFF	OFF	OFF	OFF	ON	OFF	ON
161	ON	OFF	OFF	OFF	OFF	ON	OFF	ON
162	OFF	ON	OFF	OFF	OFF	ON	OFF	ON
163	ON	ON	OFF	OFF	OFF	ON	OFF	ON
164	OFF	OFF	ON	OFF	OFF	ON	OFF	ON
165	ON	OFF	ON	OFF	OFF	ON	OFF	ON
166	OFF	ON	ON	OFF	OFF	ON	OFF	ON
167	ON	ON	ON	OFF	OFF	ON	OFF	ON
168	OFF	OFF	OFF	ON	OFF	ON	OFF	ON
169	ON	OFF	OFF	ON	OFF	ON	OFF	ON
170	OFF	ON	OFF	ON	OFF	ON	OFF	ON

ID	SW1-#1	SW1-#2	SW1-#3	SW1-#4	SW1-#5	SW1-#6	SW1-#7	SW1-#8
171	ON	ON	OFF	ON	OFF	ON	OFF	ON
172	OFF	OFF	ON	ON	OFF	ON	OFF	ON
173	ON	OFF	ON	ON	OFF	ON	OFF	ON
174	OFF	ON	ON	ON	OFF	ON	OFF	ON
175	ON	ON	ON	ON	OFF	ON	OFF	ON
176	OFF	OFF	OFF	OFF	ON	ON	OFF	ON
177	ON	OFF	OFF	OFF	ON	ON	OFF	ON
178	OFF	ON	OFF	OFF	ON	ON	OFF	ON
179	ON	ON	OFF	OFF	ON	ON	OFF	ON
180	OFF	OFF	ON	OFF	ON	ON	OFF	ON
181	ON	OFF	ON	OFF	ON	ON	OFF	ON
182	OFF	ON	ON	OFF	ON	ON	OFF	ON
183	ON	ON	ON	OFF	ON	ON	OFF	ON
184	OFF	OFF	OFF	ON	ON	ON	OFF	ON
185	ON	OFF	OFF	ON	ON	ON	OFF	ON
186	OFF	ON	OFF	ON	ON	ON	OFF	ON
187	ON	ON	OFF	ON	ON	ON	OFF	ON
188	OFF	OFF	ON	ON	ON	ON	OFF	ON
189	ON	OFF	ON	ON	ON	ON	OFF	ON
190	OFF	ON	ON	ON	ON	ON	OFF	ON
191	ON	ON	ON	ON	ON	ON	OFF	ON
192	OFF	OFF	OFF	OFF	OFF	OFF	ON	ON
193	ON	OFF	OFF	OFF	OFF	OFF	ON	ON
194	OFF	ON	OFF	OFF	OFF	OFF	ON	ON
195	ON	ON	OFF	OFF	OFF	OFF	ON	ON
196	OFF	OFF	ON	OFF	OFF	OFF	ON	ON
197	ON	OFF	ON	OFF	OFF	OFF	ON	ON
198	OFF	ON	ON	OFF	OFF	OFF	ON	ON
199	ON	ON	ON	OFF	OFF	OFF	ON	ON
200	OFF	OFF	OFF	ON	OFF	OFF	ON	ON
201	ON	OFF	OFF	ON	OFF	OFF	ON	ON
202	OFF	ON	OFF	ON	OFF	OFF	ON	ON
203	ON	ON	OFF	ON	OFF	OFF	ON	ON
204	OFF	OFF	ON	ON	OFF	OFF	ON	ON
205	ON	OFF	ON	ON	OFF	OFF	ON	ON
206	OFF	ON	ON	ON	OFF	OFF	ON	ON
207	ON	ON	ON	ON	OFF	OFF	ON	ON
208	OFF	OFF	OFF	OFF	ON	OFF	ON	ON
209	ON	OFF	OFF	OFF	ON	OFF	ON	ON
210	OFF	ON	OFF	OFF	ON	OFF	ON	ON
211	ON	ON	OFF	OFF	ON	OFF	ON	ON
212	OFF	OFF	ON	OFF	ON	OFF	ON	ON
213	ON	OFF	ON	OFF	ON	OFF	ON	ON

| ID	SW1-#1	SW1-#2	SW1-#3	SW1-#4	SW1-#5	SW1-#6	SW1-#7	SW1-#8
214	OFF	ON	ON	OFF	ON	OFF	ON	ON
215	ON	ON	ON	OFF	ON	OFF	ON	ON
216	OFF	OFF	OFF	ON	ON	OFF	ON	ON
217	ON	OFF	OFF	ON	ON	OFF	ON	ON
218	OFF	ON	OFF	ON	ON	OFF	ON	ON
219	ON	ON	OFF	ON	ON	OFF	ON	ON
220	OFF	OFF	ON	ON	ON	OFF	ON	ON
221	ON	OFF	ON	ON	ON	OFF	ON	ON
222	OFF	ON	ON	ON	ON	OFF	ON	ON
223	ON	ON	ON	ON	ON	OFF	ON	ON
224	OFF	OFF	OFF	OFF	OFF	ON	ON	ON
225	ON	OFF	OFF	OFF	OFF	ON	ON	ON
226	OFF	ON	OFF	OFF	OFF	ON	ON	ON
227	ON	ON	OFF	OFF	OFF	ON	ON	ON
228	OFF	OFF	ON	OFF	OFF	ON	ON	ON
229	ON	OFF	ON	OFF	OFF	ON	ON	ON
230	OFF	ON	ON	OFF	OFF	ON	ON	ON
231	ON	ON	ON	OFF	OFF	ON	ON	ON
232	OFF	OFF	OFF	ON	OFF	ON	ON	ON
233	ON	OFF	OFF	ON	OFF	ON	ON	ON
234	OFF	ON	OFF	ON	OFF	ON	ON	ON
235	ON	ON	OFF	ON	OFF	ON	ON	ON
236	OFF	OFF	ON	ON	OFF	ON	ON	ON
237	ON	OFF	ON	ON	OFF	ON	ON	ON
238	OFF	ON	ON	ON	OFF	ON	ON	ON
239	ON	ON	ON	ON	OFF	ON	ON	ON
240	OFF	OFF	OFF	OFF	ON	ON	ON	ON
241	ON	OFF	OFF	OFF	ON	ON	ON	ON
242	OFF	ON	OFF	OFF	ON	ON	ON	ON
243	ON	ON	OFF	OFF	ON	ON	ON	ON
244	OFF	OFF	ON	OFF	ON	ON	ON	ON
245	ON	OFF	ON	OFF	ON	ON	ON	ON
246	OFF	ON	ON	OFF	ON	ON	ON	ON
247	ON	ON	ON	OFF	ON	ON	ON	ON
248	OFF	OFF	OFF	ON	ON	ON	ON	ON
249	ON	OFF	OFF	ON	ON	ON	ON	ON
250	OFF	ON	OFF	ON	ON	ON	ON	ON
251	ON	ON	OFF	ON	ON	ON	ON	ON
252	OFF	OFF	ON	ON	ON	ON	ON	ON
253	ON	OFF	ON	ON	ON	ON	ON	ON
254	OFF	ON	ON	ON	ON	ON	ON	ON
255	ON	ON	ON	ON	ON	ON	ON	ON

Preparing Adapter and Cables

– Power Adapter
Power adapter has the capacity of AC24V 2.5A.
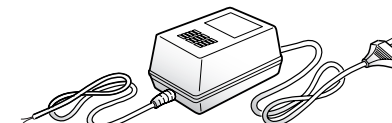
– Video Cable
The camera's video output port is connected to the monitor with a BNC coaxial cable, shown below : If the distance between the camera and the monitor exceeds the recommended maximum, please use an auxiliary video amp.
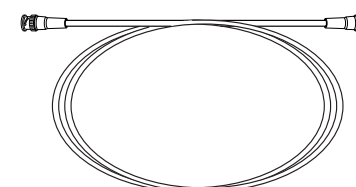
| Distance	Recommended Cable Specification
300m	4C2V(RG-59/U)
450m	5C2V(RG-6/U)
600m	7C2V(RG-11/U)

Notes

• If the camera is controlled through coaxial communication, please use a video amp intended for coaxial communications. Regular video amps do not transfer coaxial signals.

– Communications Cable
For the camera to communicate with the controller, a RS-485/422 communications line is required. To ensure the quality of long distance communication and the accuracy of the overall communication it is recommended using a twisted pair cable such as UTP.
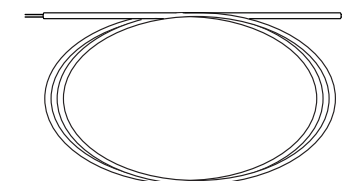
* Caution!
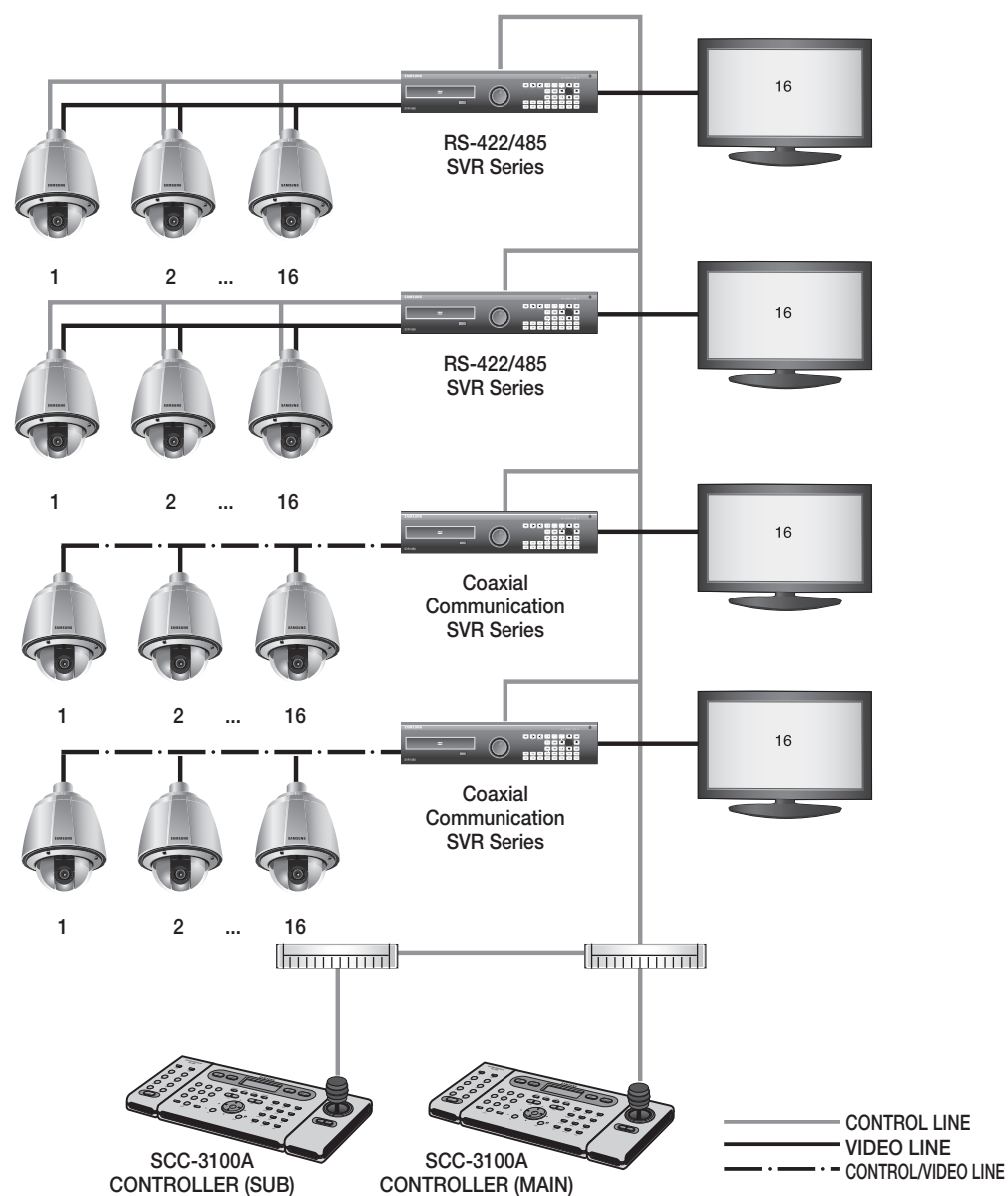Depending on the camera's environment, the communications distance may vary.

Notes

• Neither the video nor communications cable is enclosed with the camera.
it is recommended that pure copper coax cable is used and not copper coated steel, as this will cause issues with the communication over the coaxial cable."

* Neither the video nor communications cable is enclosed with the camera.

• Camera Wiring Diagram

16

RS-422/485
SVR Series

1   2   ...   16

16

RS-422/485
SVR Series

1   2   ...   16

16

Coaxial
Communication
SVR Series

1   2   ...   16

16

Coaxial
Communication
SVR Series

1   2   ...   16

SCC-3100A
CONTROLLER (SUB)

SCC-3100A
CONTROLLER (MAIN)

CONTROL LINE
VIDEO LINE
CONTROL/VIDEO LINE
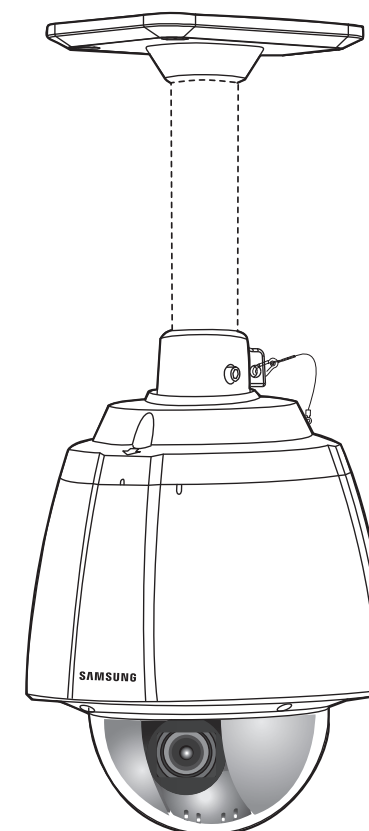
Installation Suggestions for Bracket Types

To install the camera on a wall or ceiling, please purchase and use an extra wall mount:
STB-300PW for walls, STB-300PP for ceilings or STB-355PPM for parapet
For more detailed instructions, please refer to the bracket's user manual.
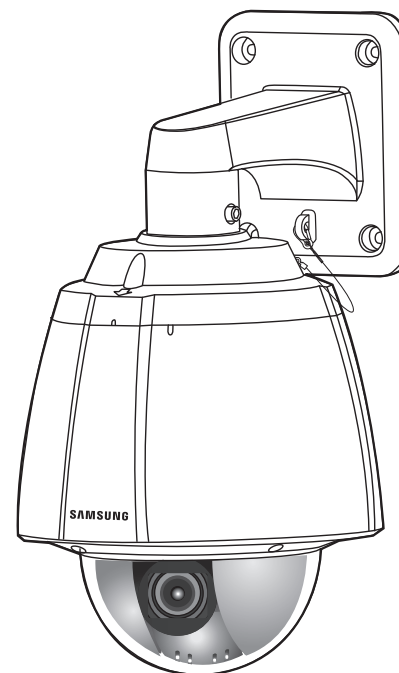
Wall Bracket (STB-300PW)   Ceiling Mount (STB-300PP)

Notes

• Do not connect the camera to a power outlet until the installation is complete. Supplying power in the middle of the installation may cause fire or damage the product.
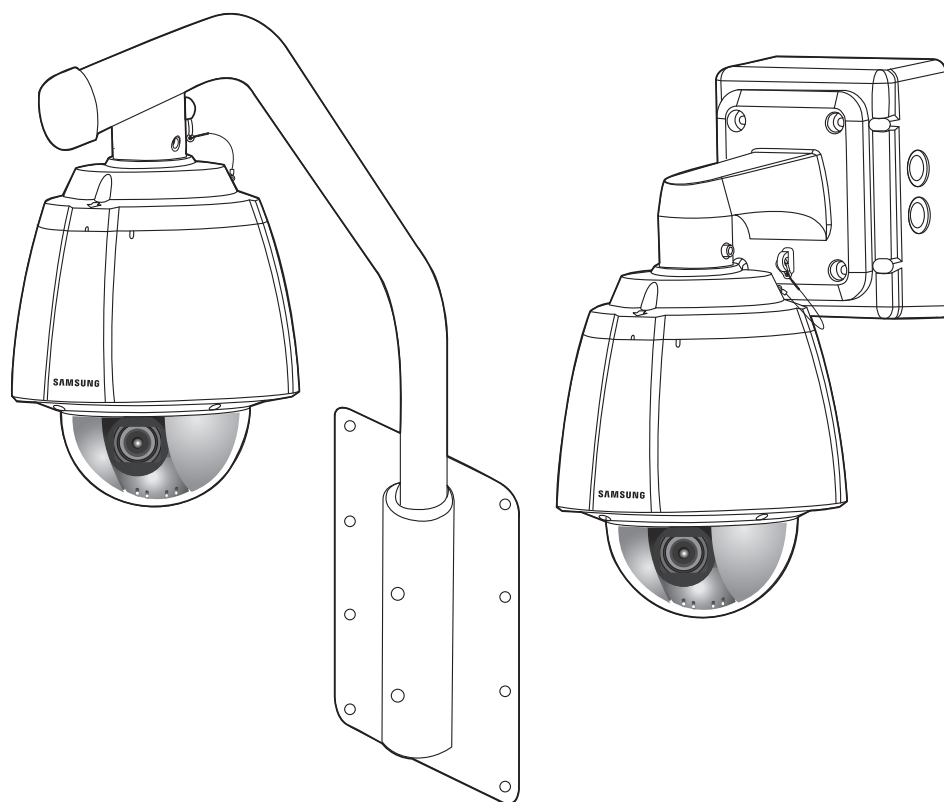
Parapet Mount (STB-355PPM)

Setup Box (STB-270B)

On-wall Mount Type Installation Example

• How to Set Up Install Base

1. Open Hinged Door

   As shown in the picture below, gently press and lift up the handle of the hinged door on the bottom of the install base.

Knob
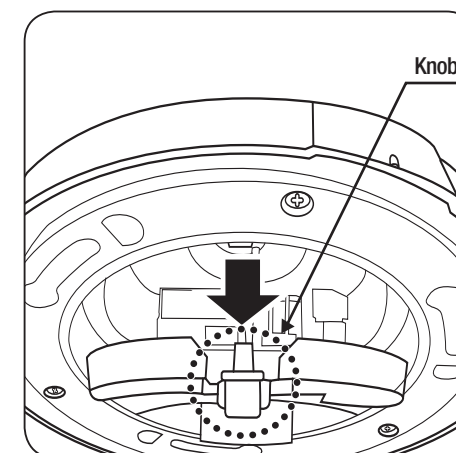
2. Connect Terminal Wires

   Connect each wire to the pertinent terminal block.
   For more detailed instructions, please refer to the "Camera Wiring Diagram" on Page 20.
   Once all the wires are connected, close the hinged door.

Control Line

Power Line

Video Out Line
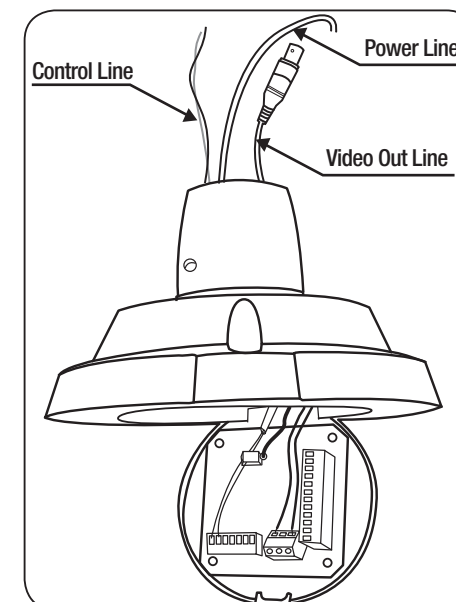
Notes

• Make sure to first hook the camera's safety cable to the mount before proceeding. Otherwise you may be exposed to serious injury caused by a fallen camera.

• Secure Install Base to Bracket

1. Assemble Bracket and Install Base

   Assemble the install base and bracket following the screw directions. Make sure to keep the installation direction guide at the front.

Arrow
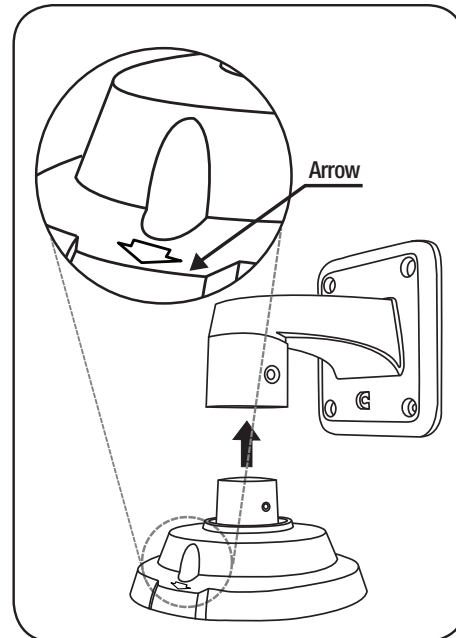
2. Secure Bracket and Install Base

   Using 2 hexagon screws, secure the assembled bracket and install base.
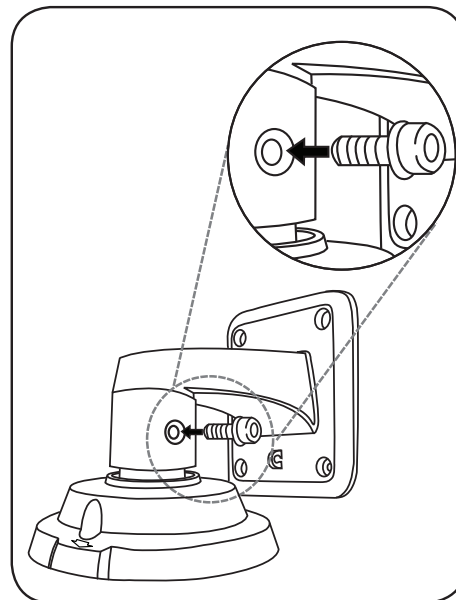
• Attach Camera

1. Assemble Camera and Install Base

   Assemble the install base and camera by matching the installation direction guides.

CLOSE   OPEN
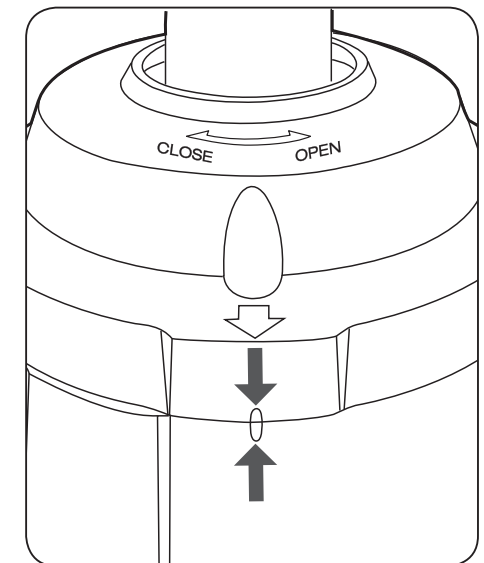
2. Attach Camera

   Turn the camera frame counterclockwise until the protrusions on the camera frame and install base become matched perfectly.

CLOSE   OPEN
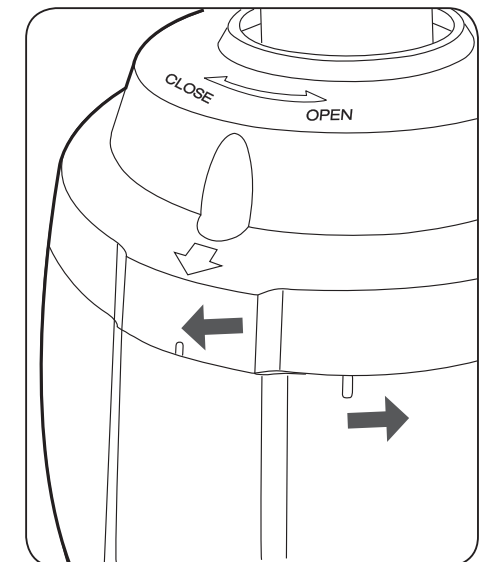
Installing Your Camera ◯

• Secure Camera and Attach Safety Cable

1. Secure Camera and Install Base

   As shown in the picture below, secure the install base and camera using 3 hexagon screws.
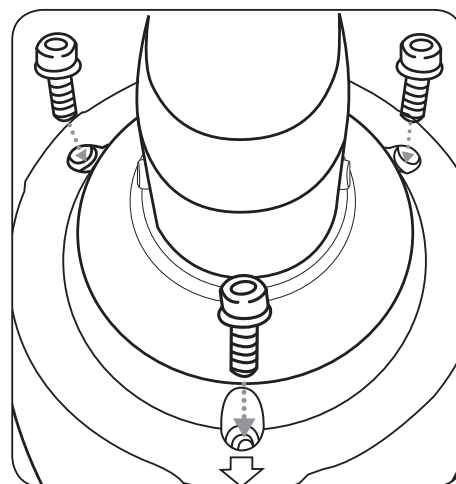
2. Connect Safety Cable

   Hook the safety cable on the back of the camera to the loop on the bracket.
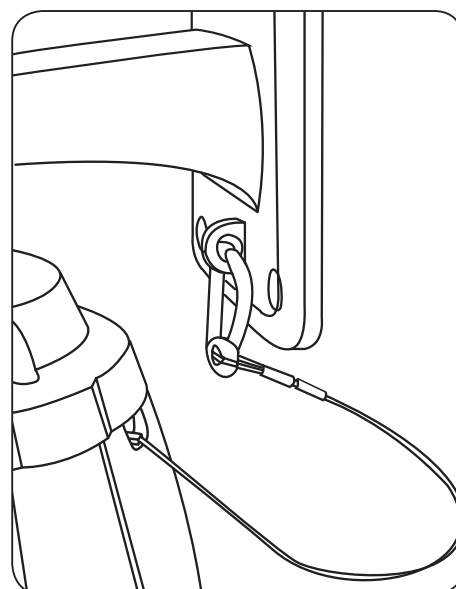
◯ Interface Symbols

- **Motion Detection Standby/Operation Display :**
  - When in standby mode, the "**D**" in the upper right of the screen blinks and then changes to "👤" if motion is detected.
- **Alarm Input Port Status Display :**
  - "①", "②" and "③" in the upper right of the screen blink.
- **Current Alarm Port Display According to Input Alarm Ports(Priority) :**
  - Only one of " ⚡❶ "," ⚡❷ "," ⚡❸ " in the upper right of the screen blinks.
- **Preset Number Display Settings :**
  - '*' : If a preset number is already available
  - 'H' : If a preset location is the camera's home position
  - 'T' : If a preset location is the camera's Auto Track starting point(SPU-3750T Only)
- **If an OSD Menu has Sub Menus :**
  - The color of the circle around the menu number shows as embossed, e.g. "①".
- **If an OSD Menu Does Not Have Sub Menus :**
  - The circle around the menu number shows as engraved, e.g. "❶".

- **PTZ Function Screen :**

  Motion Detect
  Alarm Input

  ```
  ID=001        D ⚡❶①②③
  Area1 Area Name




  G-SEQ1
  PRESET=001 Preset Name
       P:300 T:040 10X
  ```

  Area Display
  Sequence Status
  Preset Info
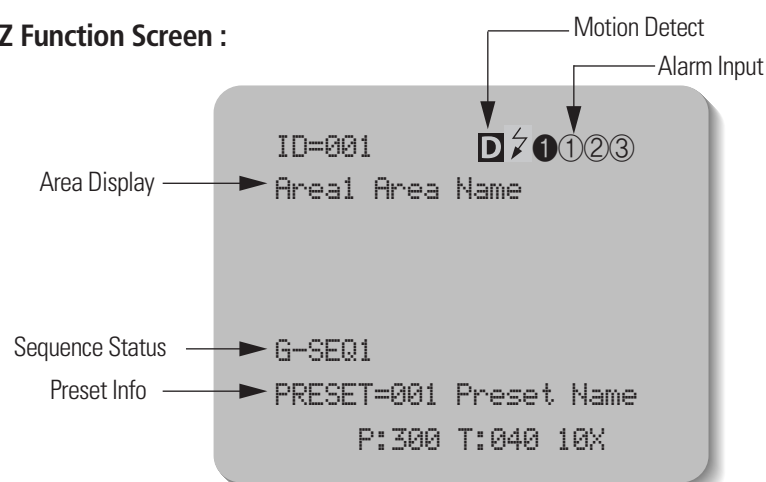
- **Preset Number Setting Screen :**

  ```
          Preset Edit
  Preset=011* (1~255)
  ```

• OSD Menu Screen :

```
                Camera Setting
Sub Menu Available  ──────►  ① Focus & Zoom
Sub Menu Not Available ────►  ❷ White Balance        ATW
                              ───
                              ───
```
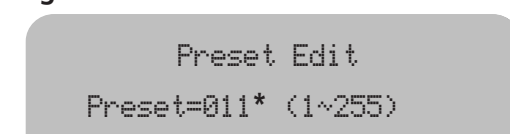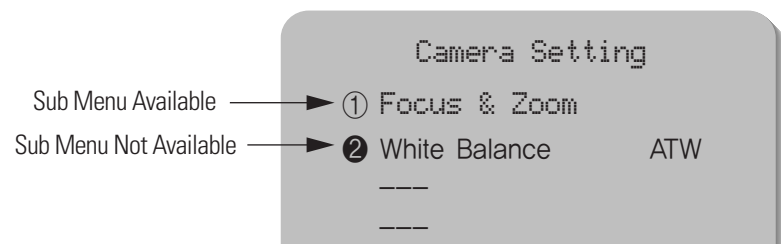
Operating Your Camera

• **Panning and Tilting**
  - Use the joystick of the controller or its direction buttons.
• **Controlling Zoom**
  - Move the joystick clockwise (Tele) or counterclockwise (Wide), or use the zoom buttons.
• **Accessing Screen Menus**
  - Press the Menu or OSD button on the controller.

✽ For more detailed information about controls using a third party controller or a DVR, refer to the user's manual of the product.

OSD Commands, Function Chart, and Menu Controls

This dome camera can be operated using two methods: Using hot keys on its dedicated controller, or accessing the OSD (On Screen Display) on the video output. The OSD menu commands are as follows:

Command	Function
Move the joystick up/down/left/right	Moves the OSD menus up/down/left/right, respectively.
Enter/Focus Far	Selects a menu and allows access to the sub menus.
ESC/Focus Near	Cancels a command and moves back to an upper-level menu.

*OSD Menu Chart

P1	P2	P3	P4	P5	Default
①Camera Setting	①Focus &Zoom	①Focus Mode	Auto/Manual/One Shot AF		One Shot AF
		②Zoom Tracking	Mode	Auto/Tracking/Off	Auto
			Speed	Slow/Medium/Fast	Fast
		③Digital Zoom	Off/2X/3X/4X/5X/.../12X		Off
	②White Balance	AWB Mode	ATW/INDOOR/OUTDOOR/AWC		ATW
			Manual	Red	117
				Blue	93
	③Exposure	①Brightness	0~100		50
		②Iris	Auto		Auto
			Manual	Iris Level	F1.6
		③Shutter	---/A.FLK/Manual		---
		④Sens-Up	Auto/Off	Sens-Up Limit X2/X4...X256	Auto(X2)
	④Back Light	①Off			Off
		②WDR	Limit	Low/Medium/High	Medium
			Level	1~100	50
		③HLC	Level	Low/High	Low
			Mask Color	0~10	5
		④BLC	Up/Down/Left/Right/ Increase/Decrease		
	⑤AGC	Off/Low/Medium/High			Medium
		Manual	Level	5~41	5 dB
	⑥SSNR	Off/Low/Medium/High			Medium
	⑦Day&Night	Mode	Auto		Color
			Color	Burst Level 0~100	
			B/W	Burst On/Off	
		Duration	Slow/Fast		Fast
		Dwell Time	5/7/10/15/20/30/40/60 Sec		5 Sec
	⑧Others	Sync	Internal		Internal
			Line Lock	Line Lock Phase	
		Stabilizer	On/Off		Off
		Image Adj.	①Sharpness	On(0~32)/Off	20
			②Color	0~100	50
		Freeze	On/Off		Off
	①Preset	①Setting②Edit③Home Position④Execute⑤Clear ⑥Status			

②Sequence Setting	②Swing SEQ.	①Pan Swing	①Setting②Execute③Clear	
		②Tilt Swing	①Setting②Execute③Clear	
		③P&T Swing	①Setting②Execute③Clear	
	③Group SEQ.	Group1~6	①Setting②Execute③Clear	
	④Tour SEQ.	①Setting②Execute③Clear		
	⑤PTZ Trace	Trace1~4	①Replay②Memorize	
	⑥Auto Run	①Mode	Off/Home/Preset/Swing/Group/Tour/Trace/A.Pan	Off
		②Time	1~60(Sec), 1~60(Min)	30 Sec
	⑦Power On Resume	On/Off		On
	⑧MD Dwell Time	①Off		
		②On	1~60(Sec),1~60(Min)	30 Sec
③P/T Setting	①Pan/Tilt Limit	①Pan Limit	①Position	
			②On/Off	Off
		②Tilt Limit	①Position	
			②On/Off	Off
	②Area Setting	Area1~8	①Name/②Position/③On/Off	Off
	③Area Masking	Mask1~8	①Position/②On/Off	Off
	④Prop.P/T	On/Off		On
	⑤Digital Flip	On/Off		On
	⑥Image Hold	On/Off		Off
	⑦Auto Track 1	①Auto Track	On/Off	Off
		②Camera Height	2.5m~30m	2.5 m
		③Object Size	Small/Medium/Large	Small
		④Sensitivity	High/Medium/Low	High
		⑤Zoom Control	Off/One Shot/Continuous	Off
		⑥Auto Release	Off/10sec~5min	Off
		⑦Auto Return	Off/1sec~5min	Off
		⑧Lost Mode	Stop/Research/Zoom Out	Stop
	⑧Auto Track 2	①Zone Setting	Zone1~8 ①Position	
			Zone1~8 ②Mode(Alarm/Mask)	Mask
			Zone1~8 ③On/Off	Off
		②Indicator	Off/On/Pointer/Target	Off
		③Target Lock	On/Off	Off
	①Camera ID	On/Off		On

④OSD Setting	②Camera Name	①On/Off		Off
		②Edit		
	③Preset Number	On/Off		On
	④Preset Name	①On/Off		
		②Edit		Off
	⑤Sequence Status	On/Off		On
	⑥Area Name	On/Off		Off
	⑦PTZ Position	On/Off		On
	⑧Language	English/Chinese/Français/Deutsch/Español/Italiano		English
⑤Alarm Setting	①Alarm Enable	On/Off		Off
	②Alarm Input	①In1	MOD:NC/NO/OFF Priority:1~3 SEQ:Preset/Swing/Group/Tour/ A.Pan/Trace/Off	Off
		②In2		
		③In3		
	③Alarm Output	Out	1~3,MD,TRK	
		Time	Off/On/Momentary	Off
			Dwell Time 1~60(Sec), 1~60(Min), 1~60(Hour)	
	④Aux. Output	①On/Off	On/Off	Off
		②Time	1~60(Sec), 1~60(Min)	
⑥Initialize	①Power On Reset	Cancel/Execute		
	②Factory Default Set	Cancel/Execute		
	③Camera Default Set	Cancel/Execute		
	④Auto Refresh	Off,1~7Days		Off
	⑤Auto Track Default	Cancel/Execute		
	⑥Fan Life	①Message Display	On/Off	On
		②Message Clear	Cancel/Execute	
		③Time Reset	Cancel/Execute	
		④Time Remain(hour)		49000
⑦Status				

Camera Setting

1. Focus and Zoom Settings

1.1 Focus Mode and Digital Zoom Setting Menu
▶ Main Menu/Camera Setting/Focus & Zoom

```
Main Menu

① Camera Setting
② Sequence Setting
③ P/T Setting
④ OSD Setting
⑤ Alarm Setting
⑥ Initialize
❼ Status
```

⬇

```
Camera Setting

① Focus & Zoom
❷ White Balance    ATW
③ Exposure
④ Back Light       OFF
❺ AGC              Medium
❻ SSNR             Medium
⑦ Day & Night
⑧ Others
```

⬇

```
Focus & Zoom

❶ Focus Mode    ONE SHOT AF
② Zoom Tracking
③ Digital Zoom   OFF
```

● **Focus Mode :**
- Auto : Performs continuous auto-focus.
- Manual : Changes the camera mode to Manual Focus.
- One Shot AF : Auto-focuses the camera once after the Pan, Tilt, or Zoom function is used.

● **Digital Zoom :**
Enables the maximum digital zoom.
Setting the digital zoom to 12x provides a total zoom of 444x.

📌 *Notes*

- Unlike the optical zoom, the graphics quality of the digital zoom decreases as its zoom ratio increases.
- The auto-focus function may not operate normally under the following conditions :
  - When background illumination is low
  - While Slow-Shutter is in operation
  - If the zoom level is set too high
  - When background illumination is too high
  - If a long distance object and a close distance object appear together within a monitoring area
  - If there is no contrast, e.g. the sky or a wall
  - If the camera is facing a thin horizontal line
- Auto Focus focuses on an object in the center of the screen; objects around the screen edges may not be properly in focus.

1.2 Zoom Tracking
▶ Main Menu/Camera Setting/Focus & Zoom/Zoom Tracking

```
Main Menu

① Camera Setting
② Sequence Setting
③ P/T Setting
④ OSD Setting
⑤ Alarm Setting
⑥ Initialize
❼ Status
```

⬇

```
Camera Setting

① Focus & Zoom
❷ White Balance    ATW
③ Exposure
④ Back Light       OFF
❺ AGC              Medium
❻ SSNR             Medium
⑦ Day & Night
⑧ Others
```

⬇

```
Focus & Zoom

❶ Focus Mode    ONE SHOT AF
② Zoom Tracking
③ Digital Zoom   OFF
```

⬇

```
Zoom Tracking

❶ Mode     AUTO
② Speed    FAST
```

Through this menu you can set up the camera's focus mode when zooming.

● **Mode :**
- Auto : Auto-focuses when zooming.
- Tracking : Focuses manually when zooming.
- Off : Disable the focus modes when zooming. (Full manual mode)

● **Speed :**
- Slow/Fast : Adjusts the zooming speed.

2. White Balance

▶ Main Menu/Camera Setting/White Balance

```
Main Menu

① Camera Setting
② Sequence Setting
③ P/T Setting
④ OSD Setting
⑤ Alarm Setting
⑥ Initialize
❼ Status
```

⬇

```
Camera Setting

① Focus & Zoom
❷ White Balance      ATW
③ Exposure
④ Back Light         OFF
❺ AGC                Medium
❻ SSNR               Medium
⑦ Day & Night
⑧ Others
```

The White Balance menu adjusts the balance of the screen colors under different lighting conditions.

- ATW : Adjusts the screen color automatically.
- Indoor : Adjusts the screen color to be optimal in an indoor environment. (Operating Temperature: about 1,800°K ~ about 10,500°K)
- Outdoor : Adjusts the screen color to be optimal in an outdoor environment. (Operating Temperature: about 3,600°K ~ about 10,500°K)
- AWC : Adjusts the screen color to be optimized to the current lighting and monitor conditions. Using this setting may require an readjustment if the lighting conditions changes.
- MANUAL : Enables customization the Red and Blue gains.

Notes

White Balance may not work properly under the following conditions.
❶ When the color temperature of the environment surrounding the subject is out of the control range.(e.g. Clear sky or sunset)
❷ When the ambient illumination of the subject is dim.
❸ If the camera is directed towards a fluorescent light or is installed in a place where illumination changes dramatically, White Balance adjustments may not deliver consistent results.

3. Exposure

▶ Main Menu/Camera Setting/Exposure

```
Main Menu

① Camera Setting
② Sequence Setting
③ P/T Setting
④ OSD Setting
⑤ Alarm Setting
⑥ Initialize
❼ Status
```

⬇

```
Camera Setting

① Focus & Zoom
❷ White Balance      ATW
③ Exposure
④ Back Light         OFF
❺ AGC                Medium
❻ SSNR               Medium
⑦ Day & Night
⑧ Others
```

⬇

```
Exposure

❶ Brightness         050
❷ Iris               AUTO
❸ Shutter            ---
❹ Sens-Up            AUTO
```

The Exposure settings are to control the camera's exposure meter.

◗ **Brightness :** Adjusts the screen brightness.
(Over 50: Brighter, Under 50: Darker)

◗ **Iris :**
- Auto : Automatically adjusts the exposure meter.
- Manual : Enables manual adjustment of the exposure meter. (Over 50: Brighter, Under 50: Darker)

◗ **Shutter :** Controls the camera's electronic shutter.
- --- : The shutter speed is fixed at 1/60 for NTSC and 1/50 for PAL. Operates when Iris is on the Auto Mode.
- ESC : Adjusts the shutter speed automatically according to the screen brightness. Operates when Iris is on the Manual Mode.
- A.FLK : Select this setting when you experience picture flickering. Flickering can happen when artificial lighting frequencies clash with camera frame rates.
- Manual : Enables manual adjustment of the shutter speed.

◗ **Sens-Up :**
- Auto : Automatically detects light levels and maintains a clear picture at night or under low-light conditions.
- Sens-Up Limit : Adjusts to the maximum-powered zoom per frame.

Notes

• For optimal performance of the A.FLK mode, avoid using the mode in conjunction with Backlight.
• While the Internal Sync mode is in effect, setting the shutter to '---' and facing the camera directly to a bright light source may cause poor camera performance.
• Sens-Up is disabled when the shutter is in Manual or A. FLK mode.

4. Backlight
4.1 Backlight Mode Settings
▶ Main Menu/Camera Setting/Back Light

```
Main Menu

① Camera Setting
② Sequence Setting
③ P/T Setting
④ OSD Setting
⑤ Alarm Setting
⑥ Initialize
❼ Status
```

⬇

```
Camera Setting

① Focus & Zoom
❷ White Balance      ATW
③ Exposure
④ Back Light         OFF
❺ AGC                Medium
❻ SSNR               Medium
⑦ Day & Night
⑧ Others
```

Unlike other cameras, Samsung Techwin's unique SV-IV DSP chip(SPU-3750T) / W-IV DSP chip(SPU-3700) gives you a clear image of the subject even with bright backlight.

⬤ **Back Light Mode :**

- Off : Disables the Backlight mode.
- WDR : Activates the Wide Dynamic Range mode.
- HLC : Activates the High Light Compensation mode.
- BLC : Activates a user defined backlight compensation mode.

4.2 WDR(SPU-3750T Only)
▶ Main Menu/Camera Setting/Back Light/WDR

```
Main Menu

① Camera Setting
② Sequence Setting
③ P/T Setting
④ OSD Setting
⑤ Alarm Setting
⑥ Initialize
❼ Status
```

⬇

```
Camera Setting

① Focus & Zoom
❷ White Balance      ATW
③ Exposure
④ Back Light         WDR
❺ AGC                Medium
❻ SSNR               Medium
⑦ Day & Night
⑧ Others
```

⬇

```
WDR Setting

❶ Limit              Medium
❷ Level              50
```

When there are both bright and dark areas at the same time, this mode makes both areas distinctive.
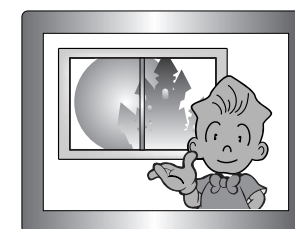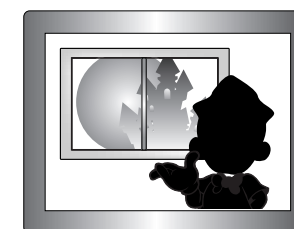
WDR ON   WDR Off

⬤ **Limit :**

Three WDR sensitivity levels are available in 3: Low, Medium , and High.
Note that the higher the sensitivity level, the lower the contrast in the light and dark areas becomes.

⬤ **Level :**

Adjusts the screen brightness in WDR mode.

✎ **Notes**

- WDR is disabled if the shutter is in Manual mode.
- During WDR operation, noise, discoloration, spots, and whitish symptoms may occur depending on lighting conditions. If they occur, stop using WDR.

4.3 HLC
▶ Main Menu/Camera Setting/Back Light/HLC

```
Main Menu
─────────────────────
① Camera Setting
② Sequence Setting
③ P/T Setting
④ OSD Setting
⑤ Alarm Setting
⑥ Initialize
❼ Status
```

⬇

```
Camera Setting
─────────────────────
① Focus & Zoom
❷ White Balance     ATW
③ Exposure
④ Back Light        HLC
❺ AGC               Medium
❻ SSNR              Medium
⑦ Day & Night
⑧ Others
```

⬇

```
HLC Setting
─────────────────────
❶ Level             LOW
❷ Mask Color        05
```

The HLC settings selectively eliminates high lights in a limited environment such as the entrance to an apartment parking lot or gas station, and is useful to detect a small objects like car license plates.

HLC is disabled during the daytime. While monitoring night time car traffic, if car headlights reflects too much bright light on the screen, the camera automatically eliminates the headlamp lights and adjusts the color of the license plate accordingly.

HLC Masking Area

<HLC ON>   <HLC OFF>
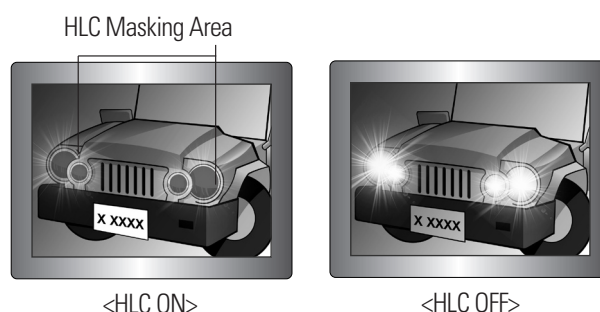
⊖ **Level :**
Adjusts the HLC sensitivity level.

⊖ **Mask Color :**
Adjusts the mask color on the highlighted area.

Notes

• Even if HLC is on, car license plates may not be detectable depending on the location and angle of the camera as well as the lighting condition.

4.4 BLC Setting
▶ Main Menu/Camera Setting/Back Light/BLC

```
Main Menu
─────────────────────
① Camera Setting
② Sequence Setting
③ P/T Setting
④ OSD Setting
⑤ Alarm Setting
⑥ Initialize
❼ Status
```

⬇

```
Camera Setting
─────────────────────
① Focus & Zoom
❷ White Balance     ATW
③ Exposure
④ Back Light        BLC
❺ AGC               Medium
❻ SSNR              Medium
⑦ Day & Night
⑧ Others
```

⬇

```
┌─────────────────────┐
│                     │
│      ┌──────┐       │
│      │      │       │
│      └──────┘       │
│                     │
│ ↑:Up ↓:Down ←:Left →:Right
│ W:Decrease  T:Increase
└─────────────────────┘
```

You can selectively choose a screen area to see objects within the area more clearly than others.

⊖ **Four-direction Joystick Controls :**
- Moving the joystick in all four directions—upward, downward, left, and right—adjusts the location and size of a selected area.

⊖ **Zoom Control :**
- Zoom Tele : Enlarges the size of a selected area.
- Zoom Wide : Reduces the size of a selected area.

Notes

• Color saturation may occur depending on the environment.

5. AGC

▶ Main Menu/Camera Setting/AGC

```
Main Menu

① Camera Setting
② Sequence Setting
③ P/T Setting
④ OSD Setting
⑤ Alarm Setting
⑥ Initialize
❼ Status
```

⬇

```
Camera Setting

① Focus & Zoom
❷ White Balance      ATW
③ Exposure
④ Back Light         OFF
❺ AGC                Medium
❻ SSNR               Medium
⑦ Day & Night
⑧ Others
```
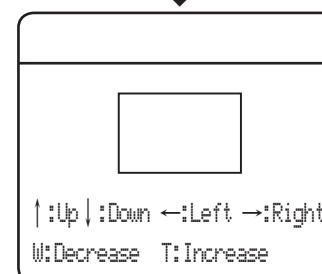
AGC (Automatic Gain Control) adjusts the camera's gain control and the screen brightness if the camera has captured an object under low-light conditions.
The Off, Low, Medium, High, and Manual modes are available.

6. SSNR (Samsung Super Noise Reduction)

▶ Main Menu/Camera Setting/SSNR

```
Main Menu

① Camera Setting
② Sequence Setting
③ P/T Setting
④ OSD Setting
⑤ Alarm Setting
⑥ Initialize
❼ Status
```

⬇

```
Camera Setting

① Focus & Zoom
❷ White Balance      ATW
③ Exposure
④ Back Light         OFF
❺ AGC                Medium
❻ SSNR               Medium
⑦ Day & Night
⑧ Others
```

SSNR significantly reduces the amount of low luminance noise.

- Off : Disables the noise reduction function.
- Low : Reduces only a small amount of noise, but generates almost no afterimage.
- Medium : The most commonly used mode. Reduces a suitable amount of noise while generating a subtle afterimage.
- High : Reduces noise significantly, but generates obvious afterimages.

Notes

• SSNR is disabled when the AGC mode is turned off.

7. Day & Night
▶ Main Menu/Camera Setting/Day & Night

```
Main Menu

① Camera Setting
② Sequence Setting
③ P/T Setting
④ OSD Setting
⑤ Alarm Setting
⑥ Initialize
❼ Status
```

⬇

```
Camera Setting

① Focus & Zoom
❷ White Balance    ATW
③ Exposure
④ Back Light       OFF
❺ AGC              Medium
❻ SSNR             Medium
⑦ Day & Night
⑧ Others
```

⬇

```
Day & Night

① Mode         COLOR
❷ Duration     FAST
③ Dwell Time   05 SEC
```

The Day & Night function allows the camera to switch between the Color and B/W modes.

⊃ **Modes :**
- Auto : Operates in Color mode most times, and switches to B/W mode if a low light level is detected during nighttime.
- Color : Operates in Color mode at all times.
- B/W : Operates in B/W mode at all times. By using the Burst On/Off sub menu, burst signals can be retained or disabled.

✳ If the camera is in B/W mode and connected to equipment that requires external sync through burst signals, set the Burst On/Off option to "On."

⊃ **Duration :**
The camera's light sensitivity is adjustable as in the chart below. The camera's ambient light diversion performance may vary depending on its environment.

	Color → B/W	B/W → Color
Fast	2.5 Lux	4 Lux
Slow	0.8 Lux	6 Lux

⊃ **Dwell Time :**
The duration of both the lighting conditions can be customized to let the camera divert between the daytime and nighttime settings.

Notes

- The Auto mode is disabled when AGC is turned off. This function is only available when the Color or B/W mode is selected.
- Using B/W mode under sunlight or a halogen lamp may decrease the focusing performance.

---

8. Others
▶ Main Menu/Camera Setting/Others

```
Main Menu

① Camera Setting
② Sequence Setting
③ P/T Setting
④ OSD Setting
⑤ Alarm Setting
⑥ Initialize
❼ Status
```

⬇

```
Camera Setting

① Focus & Zoom
❷ White Balance    ATW
③ Exposure
④ Back Light       OFF
❺ AGC              Medium
❻ SSNR             Medium
⑦ Day & Night
⑧ Others
```

⬇

```
Others

❶ Sync        INTERNAL
❷ Stabilizer  OFF
③ Image Adj
❹ Freeze      OFF
```

⊃ **Sync :** Enables selecting Internal Synchronization or the external Line Lock.
(SPU-3750T not supported)
- Internal : Synchronizes the camera's output timing to the internal crystal.
- Line Lock : Synchronizes the camera's output timing to the AC adapter power to synchronize multiple cameras. This option is useful when using a switch such as Matrix Switcher.
- Line Lock Phase : Enables setting the adapter's synchronization phase between 0 and 360°.

⊃ **Stabilizer :** The Stabilizer compensates for any small movements of the camera caused by due to the wind and other reasonable causes.

Notes

- The Stabilizer uses the digital zoom and may cause low picture quality.
- The Stabilizer is disabled if the ambient light is too low.
- The Stabilizer is disabled if the field of view has very low or no contrast, e.g. The sky or a white wall.

⊃ **Image Adj :**
- Sharpness : Sharpens outlines of an image.
- Color : Adjusts the color density of an image.

⊃ **Freeze :** Stops or reanimates an image.

Sequence Setting

9. Power On Resume and MD Dwell Time

▶ Main Menu/Sequence Setting

```
Main Menu

① Camera Setting
② Sequence Setting
③ P/T Setting
④ OSD Setting
⑤ Alarm Setting
⑥ Initialize
❼ Status
```

↓

```
Sequence Setting

① Preset
② Swing SEQ
③ Group SEQ
④ Tour SEQ
⑤ PTZ Trace
⑥ Auto Run
❼ Power On Resume    ON
❽ MD Dwell Time      ON
```

◯ **Power On Resume :**

This is useful when the power is disconnected and reconnected due to power failures or other power interruptions.

If the camera was performing a sequence action prior to a power disconnection, the camera automatically resumes the action when the power is reconnected.

◯ **MD Dwell Time :**

When Motion Detection under the Preset Edit menu is selected, MD Dwell Time performs the Tour or Group function.

While the camera is performing a sequence action, if motion is detected from a selected preset location, the camera pauses the sequence action operation and starts monitoring the location instead for a duration that is set under the MD Dwell Time menu.

If the motion is no longer detectable or the duration expires, the camera aborts the monitoring operation and then resumes the sequence action.

---

10. Preset

10.1 Preset Location Saving

▶ Main Menu/Sequence Setting/Preset/Setting

```
Main Menu

① Camera Setting
② Sequence Setting
③ P/T Setting
④ OSD Setting
⑤ Alarm Setting
⑥ Initialize
❼ Status
```

↓

```
Sequence Setting

① Preset
② Swing SEQ
③ Group SEQ
④ Tour SEQ
⑤ PTZ Trace
⑥ Auto Run
❼ Power On Resume    ON
❽ MD Dwell Time      OFF
```

↓

```
Preset

❶ Setting
❷ Edit
❸ Home Position OFF
❹ Execute
❺ Clear
❻ Status
```

This function enables the memorization of a selected location and activates the Pan, Tilt, and Zoom functions at that location. Saved locations can be recalled using the Preset Execute command.

◯ **Setting Up Preset Numbers :**

Selecting the Preset Setting menu brings up a screen as shown below. Move the joystick in all four directions to select the desired number.

```
Preset Setting

Preset = 001 (255)
```

◯ **Saving Preset Locations :**

Selecting a preset number and pressing the Enter key redirects the menu to the screen shown below.
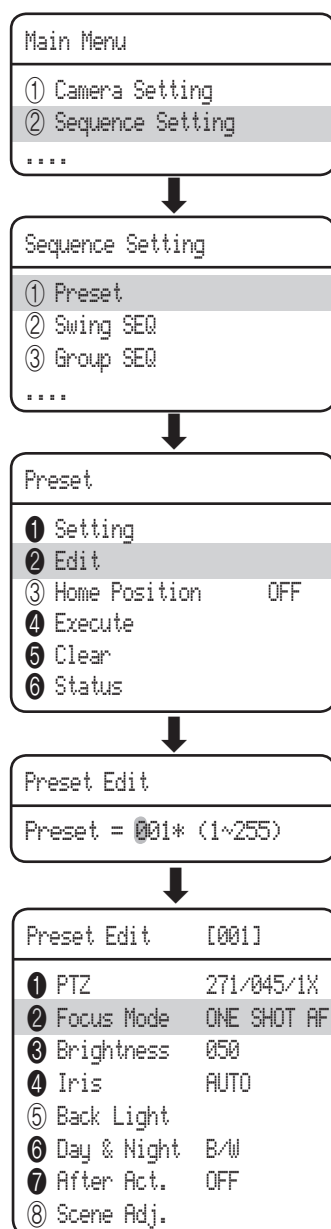
Using the joystick, adjust the location of the Pan and Tilt functions and then set the Zoom and Focus command.

In Preset Settings, the Zoom and Focus command is controllable only by the Zoom command. To switch between Zoom and Focus, use the Preset 1 and 2 commands as shown below.

```
Preset Setting  Z>ZOOM




1+PST:ZOOM  2+PST:FOCUS
     Use W/T Preset
```

10.2 Preset Edit

▶ Main Menu/Sequence Setting/Preset/Edit

```
Main Menu
① Camera Setting
② Sequence Setting
....
```

```
Sequence Setting
① Preset
② Swing SEQ
③ Group SEQ
....
```

```
Preset
❶ Setting
❷ Edit
③ Home Position    OFF
❹ Execute
❺ Clear
❻ Status
```

```
Preset Edit
Preset = 001* (1~255)
```

```
Preset Edit      [001]
❶ PTZ          271/045/1X
❷ Focus Mode   ONE SHOT AF
❸ Brightness   050
❹ Iris         AUTO
⑤ Back Light
❻ Day & Night  B/W
❼ After Act.   OFF
⑧ Scene Adj.
```
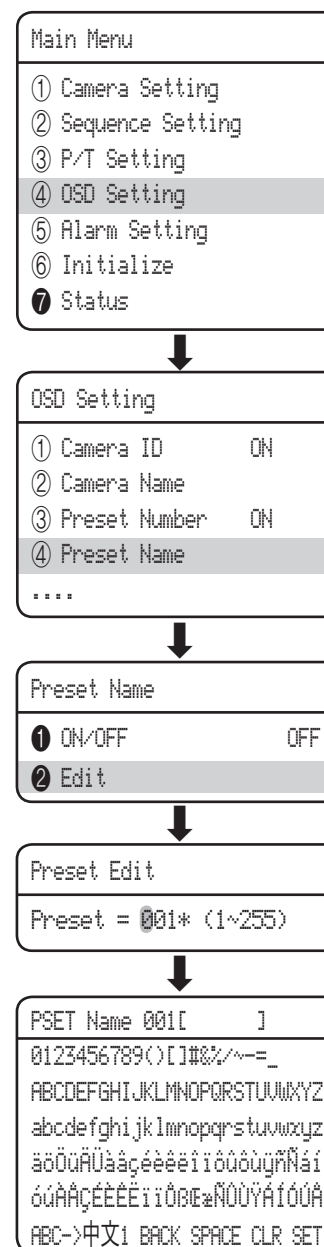
You can edit the preset items such as Pan/Tilt location, Zoom and Focus, which are selected among camera functions.

◗ PTZ :

Recalls saved locations using the Preset Settings command.

◗ Focus Mode :

Refer to the section entitled Setting Up Your Camera.

◗ Brightness :

Refer to the section entitled Setting Up Your Camera.

◗ Iris :

Refer to the section entitled Setting Up Your Camera.

◗ Backlight :

Refer to the section entitled Setting Up Your Camera.

◗ Day & Night :

Refer to the section entitled Setting Up Your Camera.

◗ After Act :

Enables setting up an automatic action after the camera arrives at a selected preset location.

- TRACK : Commands the camera to perform the Auto Tracking function.
- MD : Commands the camera to perform the Motion Detection function.
- None : Select this when no action is desired.

◗ Scene Adj :

Enables setting the Shutter, AGC, SSNR, Sens-Up, White Balance, and Stabilizer functions. For more information about interface terminology, please refer to the section entitled Setting Up Your Camera.

10.3 Preset Name Setting

▶ Main Menu/OSD Setting/Preset Name/Edit

```
Main Menu
① Camera Setting
② Sequence Setting
③ P/T Setting
④ OSD Setting
⑤ Alarm Setting
⑥ Initialize
❼ Status
```

```
OSD Setting
① Camera ID       ON
② Camera Name
③ Preset Number   ON
④ Preset Name
....
```

```
Preset Name
❶ ON/OFF          OFF
❷ Edit
```

```
Preset Edit
Preset = 001* (1~255)
```

```
PSET Name 001[      ]
0123456789()[]#&%/~-=_
ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
äöÖüÄÜàâçéèêëîïôûõùýÑáí
óúÀÂÇÉÈÊËïìÒßŒæÑÕÙŸÁÍÓÚÅ
ABC->中文1 BACK SPACE CLR SET
```
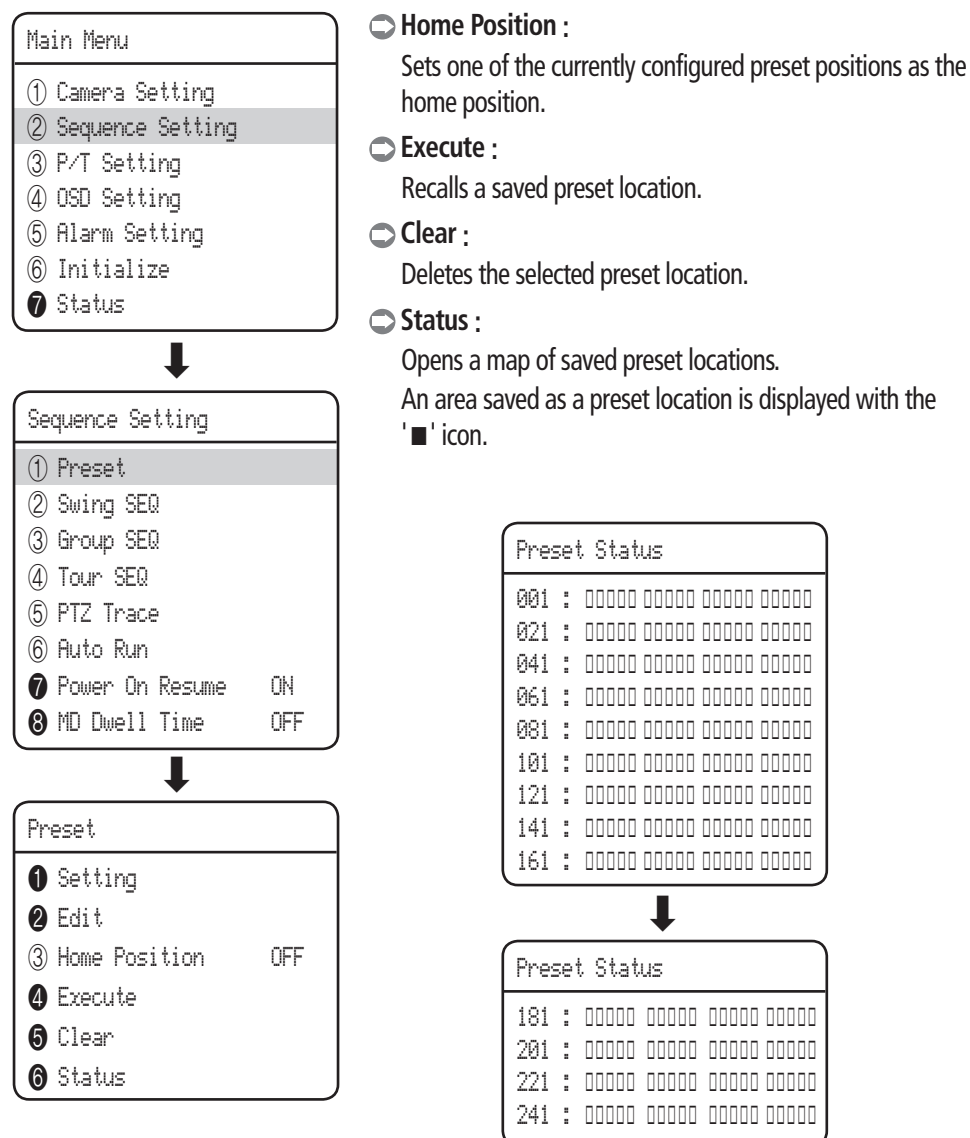
Using this function, you can add names to preset locations. up to 12 characters.

Once a name is entered, use the joystick and the Enter key to perform the Set command and save the name.
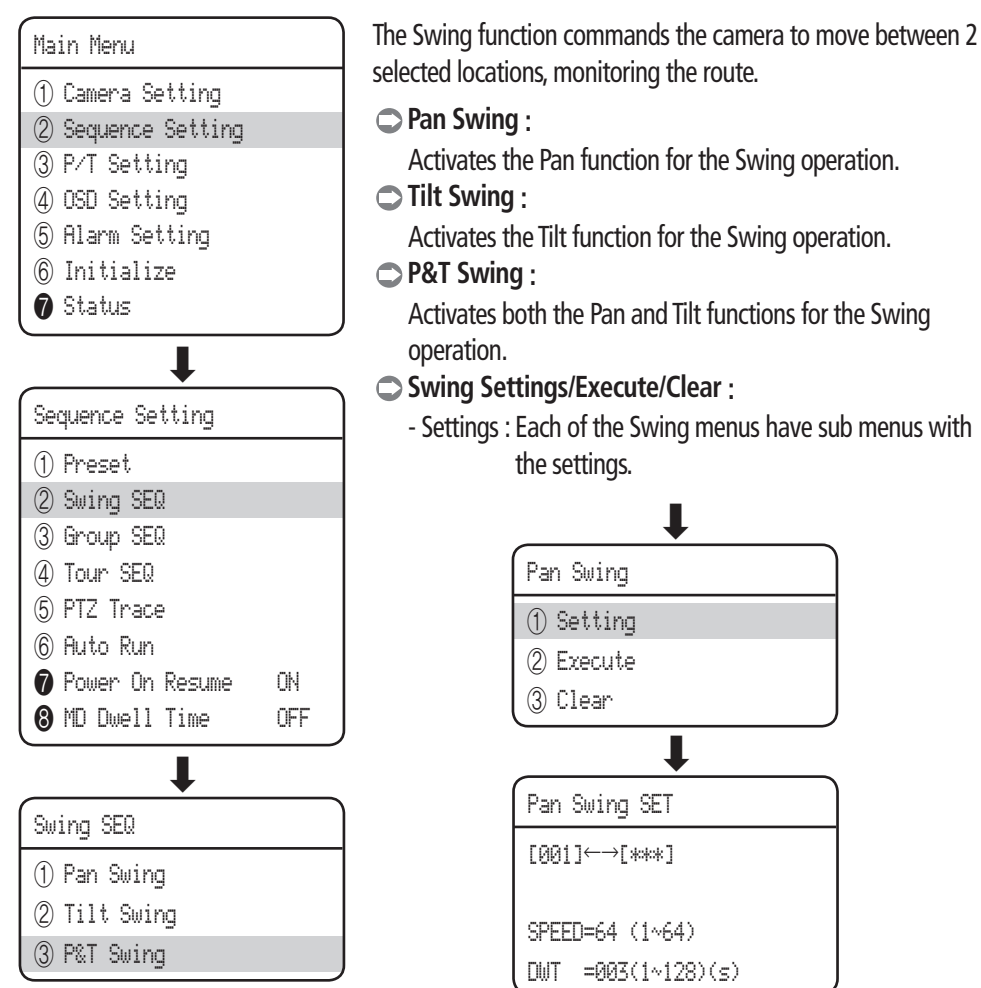
10.4 Preset Execution/Deletion/Memory Check
▶ Main Menu/Sequence Setting/Preset

```
Main Menu

① Camera Setting
② Sequence Setting
③ P/T Setting
④ OSD Setting
⑤ Alarm Setting
⑥ Initialize
❼ Status
```

⬇

```
Sequence Setting

① Preset
② Swing SEQ
③ Group SEQ
④ Tour SEQ
⑤ PTZ Trace
⑥ Auto Run
❼ Power On Resume     ON
❽ MD Dwell Time       OFF
```

⬇

```
Preset

❶ Setting
❷ Edit
③ Home Position      OFF
❹ Execute
❺ Clear
❻ Status
```

Home Position :
Sets one of the currently configured preset positions as the home position.

Execute :
Recalls a saved preset location.

Clear :
Deletes the selected preset location.

Status :
Opens a map of saved preset locations.
An area saved as a preset location is displayed with the '■' icon.

```
Preset Status

001 : □□□□□ □□□□□ □□□□□ □□□□□
021 : □□□□□ □□□□□ □□□□□ □□□□□
041 : □□□□□ □□□□□ □□□□□ □□□□□
061 : □□□□□ □□□□□ □□□□□ □□□□□
081 : □□□□□ □□□□□ □□□□□ □□□□□
101 : □□□□□ □□□□□ □□□□□ □□□□□
121 : □□□□□ □□□□□ □□□□□ □□□□□
141 : □□□□□ □□□□□ □□□□□ □□□□□
161 : □□□□□ □□□□□ □□□□□ □□□□□
```

⬇

```
Preset Status

181 : □□□□□ □□□□□ □□□□□ □□□□□
201 : □□□□□ □□□□□ □□□□□ □□□□□
221 : □□□□□ □□□□□ □□□□□ □□□□□
241 : □□□□□ □□□□□ □□□□□ □□□□□
```

---

11. Swing SEQ
▶ Main Menu/Sequence Setting/Swing SEQ

```
Main Menu

① Camera Setting
② Sequence Setting
③ P/T Setting
④ OSD Setting
⑤ Alarm Setting
⑥ Initialize
❼ Status
```

⬇

```
Sequence Setting

① Preset
② Swing SEQ
③ Group SEQ
④ Tour SEQ
⑤ PTZ Trace
⑥ Auto Run
❼ Power On Resume     ON
❽ MD Dwell Time       OFF
```

⬇

```
Swing SEQ

① Pan Swing
② Tilt Swing
③ P&T Swing
```

The Swing function commands the camera to move between 2 selected locations, monitoring the route.

Pan Swing :
Activates the Pan function for the Swing operation.

Tilt Swing :
Activates the Tilt function for the Swing operation.

P&T Swing :
Activates both the Pan and Tilt functions for the Swing operation.

Swing Settings/Execute/Clear :
- Settings : Each of the Swing menus have sub menus with the settings.

⬇

```
Pan Swing

① Setting
② Execute
③ Clear
```

⬇

```
Pan Swing SET

[001]←→[***]


SPEED=64 (1~64)
DWT  =003(1~128)(s)
```

Select 2 preset locations by using the joystick.
Speed indicates the camera's movement speed. DWT indicates the camera's duration of stay at a preset location.
- Execute: Executes the Swing operation.
- Clear: Deletes data in the Swing memory.

12. Group SEQ

▶ Main Menu/Sequence Setting/Group SEQ

```
Main Menu

① Camera Setting
② Sequence Setting
③ P/T Setting
④ OSD Setting
⑤ Alarm Setting
⑥ Initialize
❼ Status
```

⬇

```
Sequence Setting

① Preset
② Swing SEQ
③ Group SEQ
④ Tour SEQ
⑤ PTZ Trace
⑥ Auto Run
❼ Power On Resume    ON
❽ MD Dwell Time      OFF
```

⬇

```
Group SEQ

① Group 1
② Group 2
③ Group 3
④ Group 4
....
```

⬇

```
Group SEQ 1

❶ Setting
❷ Execute
❸ Clear
```

Selecting Group SEQ recalls a group of multiple preset locations in a consecutive manner. A group can contain up to 255 preset locations.

⬭ **Setting :**

Using the joystick, enter desired preset numbers into the PSET section. DWT indicates the camera's duration of stay at a preset location. SPD shows the camera's movement speed by 64 different levels.

```
Group SEQ 1

NO    PSET   DWT(s)  SPD
001:  *** :  003 :   64
002:  *** :  003 :   64
003:  *** :  003 :   64
004:  *** :  003 :   64
005:  *** :  003 :   64
006:  *** :  003 :   64
007:  *** :  003 :   64
```

⬭ **Execute :**

Executes the group operation.

⬭ **Clear :**

Deletes the selected group.

13. Tour SEQ

▶ Main Menu/Sequence Setting/Tour SEQ

```
Main Menu

① Camera Setting
② Sequence Setting
③ P/T Setting
④ OSD Setting
⑤ Alarm Setting
⑥ Initialize
❼ Status
```

⬇

```
Sequence Setting

① Preset
② Swing SEQ
③ Group SEQ
④ Tour SEQ
⑤ PTZ Trace
⑥ Auto Run
❼ Power On Resume    ON
❽ MD Dwell Time      OFF
```

⬇

```
Tour SEQ

❶ Setting
❷ Execute
❸ Clear
```

Selecting Tour SEQ recalls groups of preset locations in a consecutive manner. Up to 6 groups can be listed for this function.

⬭ **Settings :**

Selecting the Settings menu brings up the following screen. Using the joystick, you can enter desired group numbers to the Group section. DWT indicates the camera's standby time before a new group is recalled.

```
Tour SEQ

NO    Group    DWT(s)
01:   *        003
02:   *        003
03:   *        003
04:   *        003
05:   *        003
06:   *        003
```

⬭ **Execute :**

Executes the group operation.

⬭ **Clear :**

Deletes the selected group.

14. PTZ Trace
▶ Main Menu/Sequence Setting/PTZ Trace

```
Main Menu
① Camera Setting
② Sequence Setting
③ P/T Setting
④ OSD Setting
⑤ Alarm Setting
⑥ Initialize
❼ Status
```

⬇

```
Sequence Setting
① Preset
② Swing SEQ
③ Group SEQ
④ Tour SEQ
⑤ PTZ Trace
⑥ Auto Run
❼ Power On Resume    ON
❽ MD Dwell Time      OFF
```

⬇

```
PTZ Trace
① Trace 1
② Trace 2
③ Trace 3
④ Trace 4
```

⬇

```
PTZ Trace 1
❶ Replay
❷ Memorize
```

Maximum 4 patterns of the manual operation paths (for Pan, Tilt, Zoom and Focus) are memorized and replayed.

⬤ **Replay :**

Replays a route saved by the Trace function. Use the Stop button to stop the replay.

⬤ **Memorize :**

Up to 120 seconds of a memory can be saved. The memory duration varies depending on the difficulty level of the PTZ Trace action. If the memory capacity is full, the Over message appears and the memorization action is terminated.

15. Auto Run
▶ Main Menu/Sequence Setting/Auto Run

```
Main Menu
① Camera Setting
② Sequence Setting
③ P/T Setting
④ OSD Setting
⑤ Alarm Setting
⑥ Initialize
❼ Status
```

⬇

```
Sequence Setting
① Preset
② Swing SEQ
③ Group SEQ
④ Tour SEQ
⑤ PTZ Trace
⑥ Auto Run
❼ Power On Resume    ON
❽ MD Dwell Time      OFF
```

⬇

```
Auto Run
❶ Mode              OFF
❷ Time              30 SEC
```

If there is no controller operation by the user for a certain time, the sequence operation designated by the user will be executed.

⬤ **Mode :**
- Home : Auto run Home Position (Refet to the Preset Menu.)
- Preset : Auto run a selected preset number.
- Swing : Auto run a selected Swing mode.
- Group : Auto run a selected Group mode.
- Tour : Auto run a selected Tour mode.
- Trace : Auto run a selected trace mode.
- A.Pan : Auto run a 360-degree pan. To activate the panning command, you need to set up the camera's tilt angle and auto pan speed manually.
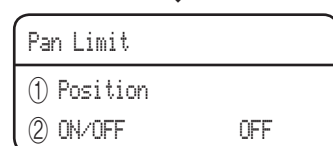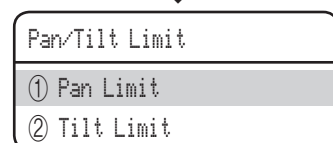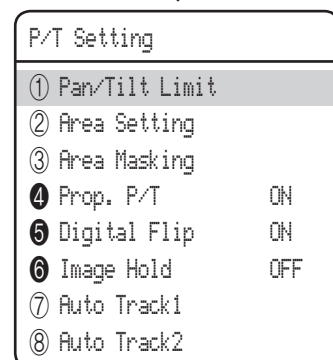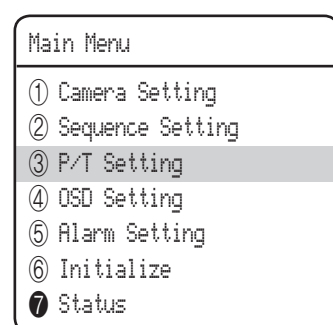
⬤ **Time :**

Enables setting up an Auto Run duration. (The duration can be 1~60 seconds, or 1~60 minutes.)

P/T Setting

16. Pan/Tilt Limit
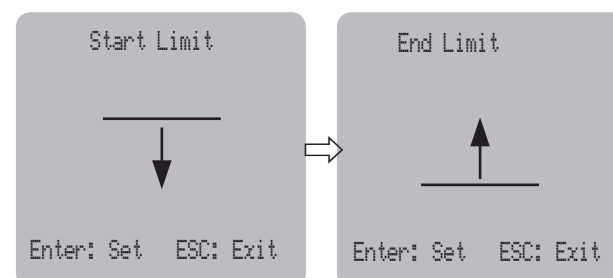▶ Main Menu/P/T Setting/Pan/Tilt Limit

```
Main Menu
① Camera Setting
② Sequence Setting
③ P/T Setting
④ OSD Setting
⑤ Alarm Setting
⑥ Initialize
❼ Status
```

```
P/T Setting
① Pan/Tilt Limit
② Area Setting
③ Area Masking
❹ Prop. P/T        ON
❺ Digital Flip     ON
❻ Image Hold       OFF
⑦ Auto Track1
⑧ Auto Track2
```

```
Pan/Tilt Limit
① Pan Limit
② Tilt Limit
```

```
Pan Limit
① Position
② ON/OFF          OFF
```

The moving ranges in the Pan/Tilt directions can be limited.

◔ Position :
Selecting the Position menu brings up the following screen if it is for the Pan Limit setting. Move the joystick left and right to select a movement range from the starting point to the end.

```
Start Limit               End Limit

      →                        ←

Enter: Set   ESC: Exit    Enter: Set   ESC: Exit
```
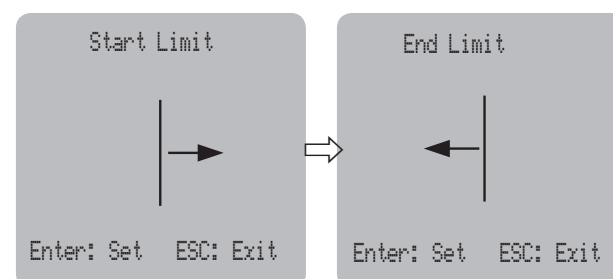
The following picture shows the Tilt Limit setting. Move the joystick left and right to select a movement range from the starting point to the end.
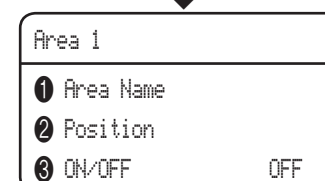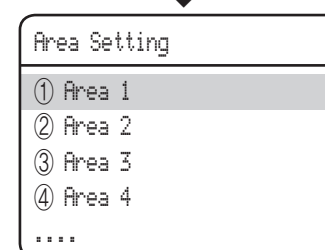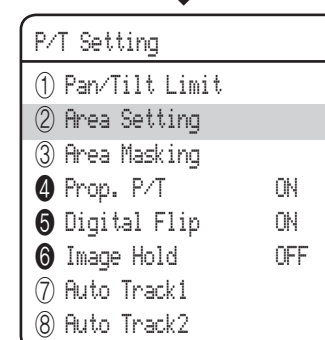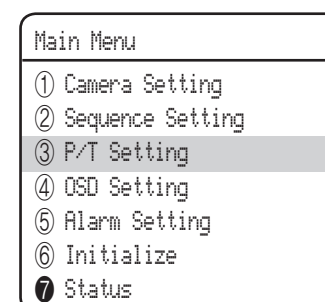
```
Start Limit               End Limit

      ↓                        ↑

Enter: Set   ESC: Exit    Enter: Set   ESC: Exit
```

◔ On/Off :
Cancels or activates the Pan/Tilt Limit functions.

17. Area Setting
▶ Main Menu/P/T Setting/Area Setting

```
Main Menu
① Camera Setting
② Sequence Setting
③ P/T Setting
④ OSD Setting
⑤ Alarm Setting
⑥ Initialize
❼ Status
```

```
P/T Setting
① Pan/Tilt Limit
② Area Setting
③ Area Masking
❹ Prop. P/T        ON
❺ Digital Flip     ON
❻ Image Hold       OFF
⑦ Auto Track1
⑧ Auto Track2
```

```
Area Setting
① Area 1
② Area 2
③ Area 3
④ Area 4
....
```
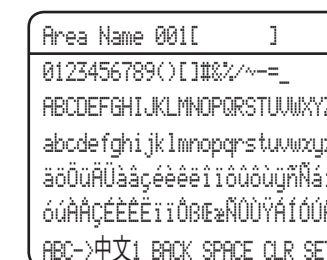
```
Area 1
❶ Area Name
❷ Position
❸ ON/OFF          OFF
```

The Area Setting menu enables selecting certain locations in the course of the Pan and Tilt operation, and then display the areas with the OSD (On Screen Display) texts when the camera passes through them. Up to 8 areas can be selected.
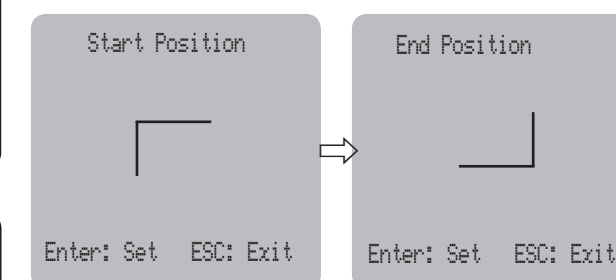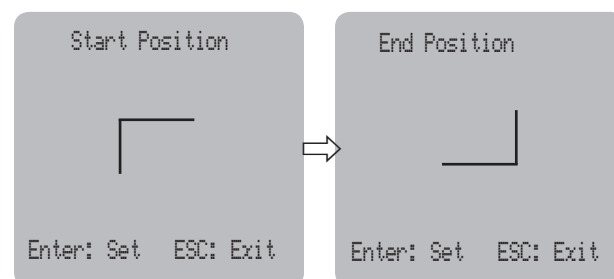
◔ Area Name :
You can add names to selected areas. Names can be up to 12 characters and can be entered via the joystick and the Enter key. Once a name is entered, use the joystick and the Enter key to perform the Set command and save the name.

```
Area Name 001[      ]
0123456789()[]#&%/~-=_
ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
äöÖüÄÜàâçéèêëîïôûòùÿÑÑáí
óúÀÂÇÉÈÊËïïÒßŒæÑÒÙŸÁÍÓÚÀ
ABC->中文1 BACK SPACE CLR SET
```

◔ Position :
As shown in the picture below, move the joystick to select the upper left corner and lower right corner of an area.

```
Start Position            End Position

   ⌐                            ⌐

Enter: Set   ESC: Exit    Enter: Set   ESC: Exit
```

◔ On/Off :
Cancels or activates the display function of selected areas.

18. Area Masking
▶ Main Menu/P/T Setting/Area Masking

```
Main Menu
─────────────────
① Camera Setting
② Sequence Setting
③ P/T Setting
④ OSD Setting
⑤ Alarm Setting
⑥ Initialize
❼ Status
```

⬇

```
P/T Setting
─────────────────
① Pan/Tilt Limit
② Area Setting
③ Area Masking
❹ Prop. P/T        ON
❺ Digital Flip     ON
❻ Image Hold       OFF
⑦ Auto Track1
⑧ Auto Track2
```

⬇

```
Area Masking
─────────────────
① Mask 1
② Mask 2
③ Mask 3
④ Mask 4
....
```

⬇

```
Mask 1
─────────────────
❶ Position
❷ ON/OFF           OFF
```

If a monitoring location includes a highly private area, the area can be selectively excluded from monitoring.

⬤ **Position** :

As shown in the picture below, move the joystick to select the upper left corner and lower right corner of an area.

```
  Start Position          End Position


      ┌───                    ───┐
      │                          │

  Enter: Set   ESC: Exit     Enter: Set   ESC: Exit
```

⬤ **On/Off** :

Cancels or activates the Area Masking function.

19. Prop. P/T
▶ Main Menu/P/T Setting/Prop. P&T

```
Main Menu
─────────────────
① Camera Setting
② Sequence Setting
③ P/T Setting
④ OSD Setting
⑤ Alarm Setting
⑥ Initialize
❼ Status
```

⬇

```
P/T Setting
─────────────────
① Pan/Tilt Limit
② Area Setting
③ Area Masking
❹ Prop. P/T        ON
❺ Digital Flip     ON
❻ Image Hold       OFF
⑦ Auto Track1
⑧ Auto Track2
```

This commands the camera to change the Pan and Tilt speed automatically according to the current zoom ratio. Moving the joystick clockwise (Tele) slows down and counterclockwise (Wide) accelerates the Pan and Tilt speed, allowing detailed adjustments.
Turning this "Off" executes the function the optical 1x zoom speed regardless of how far the lens is zoomed in.

20. Digital Flip
▶ Main Menu/P/T Setting/Digital Flip

```
Main Menu

① Camera Setting
② Sequence Setting
③ P/T Setting
④ OSD Setting
⑤ Alarm Setting
⑥ Initialize
❼ Status
```

⬇

```
P/T Setting

① Pan/Tilt Limit
② Area Setting
③ Area Masking
❹ Prop. P/T        ON
❺ Digital Flip     ON
❻ Image Hold       OFF
⑦ Auto Track1
⑧ Auto Track2
```

Digital Flip is useful to monitor a moving object or a person passing directly under the camera.
 When an object or a person passes directly under the camera, the camera tilt monitor follows the object or person over 100 degrees to the other side of the tilt area without panning. The screen inversion occurs at 100 degrees or higher and is digitally adjusted.

21. Image Holding
▶ Main Menu/P/T Setting/Image Hold

```
Main Menu

① Camera Setting
② Sequence Setting
③ P/T Setting
④ OSD Setting
⑤ Alarm Setting
⑥ Initialize
❼ Status
```

⬇

```
P/T Setting

① Pan/Tilt Limit
② Area Setting
③ Area Masking
❹ Prop. P/T        ON
❺ Digital Flip     ON
❻ Image Hold       OFF
⑦ Auto Track1
⑧ Auto Track2
```

When the camera is moving between presets locations, this function freezes the cameras image until the camera reached the next location. This is useful to help the screen observer keep sharp eyes and to monitor multiple locations within a network.

22. Auto Track 1 (SPU-3750T Only)
▶ Main Menu/P/T Setting/Auto Track1

```
Main Menu

① Camera Setting
② Sequence Setting
③ P/T Setting
④ OSD Setting
⑤ Alarm Setting
⑥ Initialize
❼ Status
```

```
P/T Setting

① Pan/Tilt Limit
② Area Setting
③ Area Masking
❹ Prop. P/T         ON
❺ Digital Flip      ON
❻ Image Hold        OFF
⑦ Auto Track1
⑧ Auto Track2
```

```
Auto Track 1

❶ Auto Track       OFF
❷ Camera Height    02.5M
❸ Object Size      SMALL
❹ Sensitivity      HIGH
❺ Zoom Control     OFF
❻ Auto Release     OFF
❼ Auto Return      OFF
❽ Lost Mode        STOP
```

This commands the camera to automatically follow a moving object or a person on the screen.

◗ Auto Track :
On/Off : Turns Auto Track on or off.

◗ Camera Height :
Adjusts the height of the camera. Tracking performance may decrease if the camera height is not adjusted properly.
(Height: 2.5m ~ 30m)

◗ Object Size :
Sets a maximum zoom ratio to zoom in on an object if the Zoom function is used for the tracking operation.
- Small : Zooms in on a tracking object up to 1/4 of the screen height.
- Medium : Zooms in on a tracking object up to 2/4 of the screen height.
- Large : Zooms in on a tracking object up to 3/4 of the screen height.

◗ Sensitivity :
The object detection sensitivity is adjustable. Lower the sensitivity if the camera catches a swaying tree branch, raindrops, or snowflakes during the Auto Track operation.

◗ Zoom Control :
The function's zoom control settings are as follows.
- Off : Disables the Zoom control.
- One Shot : Performs the Zoom control once during the Motion Detection and Auto Track operations. Depending on the movement detection, the camera performs the Zoom control multiple times.
- Continuous : Performs the Zoom control continuously.

◗ Auto Release :
Enables setting a maximum duration to follow an object. When the duration expires, the camera stops following the object and returns to the start position to follow another objects.

◗ Auto Return :
- Off : Commands the camera to stay on the location the last object stopped at instead of returning to the initial position.
- Time Setting : Sets a duration for the camera to standby upon the Auto Release expiration and then return to the start position.

◗ Lost Mode :
Sets up an action for the camera in case the object it is following goes out of the detection range.
- Stop : Commands the camera to stop and abort tracking at the spot where its object disappeared.
- Research : Commands the camera to stop and standby at the spot where its object disappeared.
- Zoom-Out : Commands the camera to zoom out and look for a new object in case its current object disappears.

23. Auto Track 2 (SPU-3750T Only)
▶ Main Menu/P/T Setting/Auto Track2

```
Main Menu

① Camera Setting
② Sequence Setting
③ P/T Setting
④ OSD Setting
⑤ Alarm Setting
⑥ Initialize
❼ Status
```

```
P/T Setting

① Pan/Tilt Limit
② Area Setting
③ Area Masking
❹ Prop. P/T        ON
❺ Digital Flip     ON
❻ Image Hold       OFF
⑦ Auto Track1
⑧ Auto Track2
```

```
Auto Track 2

① Zone Setting
❷ Indicator        OFF
❸ Target Lock      OFF
```

Auto Track 2 provides Auto Track related settings other than the ones programmed in the Auto Track 1 menu.

◯ **Zone Setting :**
- Position : Enables the designation of certain areas as zones for the Auto Track operation. The setting procedures are the same as for Area Mask.
- Mode : Two modes are available: Mask and Alarm. When Mask is selected, the camera does not follow the object entering the masked zone. This is useful if the camera catches swaying objects such as tree branches and flags during the Auto Track peration. When Alarm is selected, the camera activates an alarm if an object enters the zone.
- On/Off : Activates or deactivates the Zone function.

```
Track Zone            Zone 1
① Zone 1              ① Position
② Zone 2              ② Mode          MASK
③ Zone 3              ③ ON/OFF        OFF
④ Zone 4
⑤ Zone 5
⑥ Zone 6
⑦ Zone 7
⑧ Zone 8
```

◯ **Indicator :**
Indicates objects with icons on the screen.
- Off : Disables the Indicator function.
- On (🔳) : Indicates both the pointer and target.
- Pointer (-¦-) : Indicates the indicator when following an object using the joystick; shows as a cross in the center of the screen.

- Target (🔲) : Indicates the camera's target for the Auto Track operation; when a moving object is detected, a square grid appears and surrounds the object.

◯ **Target Lock :**
Target Lock is useful to select and follow an object using the Auto Track mode while operating the camera with the joystick. Target Lock can be turned On or Off.
To activate the Auto Track mode, turn on Target Lock, select an object to follow, and then press Enter.
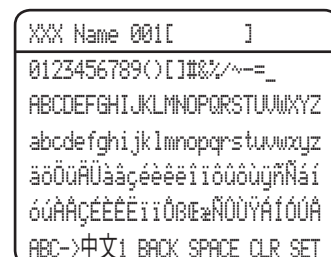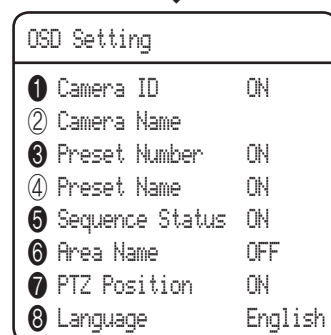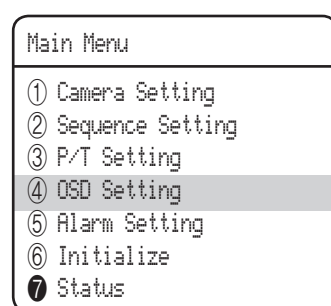
Notes
- Auto Track is specifically to track down intruders. Thus, it may not be suitable to monitor a crowd.
- If the camera is not safely secured, tracking errors may occur.
- If the camera lens is smeared with foreign substances or is scratched, an error may occur causing the camera to not behave as expected.
- The camera may not follow an object or tracking errors may occur under the following conditions:
  · If the contrast between an object and the background is low
  · If the camera lens is smeared with foreign substances, e.g. raindrops or snowflakes
  · If the lighting is changing dramatically
  · If many movements around an object are detected
  · If an object moves vertically on the optic angle of the camera
  · If an object passes directly under the camera
  · If an object creates inconsistent light levels, e.g. the object is too shiny or flickering
  · In environments where there are light reflections causing internal reflections of camera, e.g. windows, shiny road surfaces, and backlights
  · If an object moves behind large and tall objects, e.g. telephone poles
  · If an object moves too quickly
  · If the camera is vibrating

OSD Setting

24. OSD Setting
▶ Main Menu/OSD Setting

```
Main Menu

① Camera Setting
② Sequence Setting
③ P/T Setting
④ OSD Setting
⑤ Alarm Setting
⑥ Initialize
❼ Status
```

⬇

```
OSD Setting

❶ Camera ID       ON
② Camera Name
❸ Preset Number   ON
④ Preset Name     ON
❺ Sequence Status ON
❻ Area Name       OFF
❼ PTZ Position    ON
❽ Language        English
```

```
XXX Name 001[      ]
0123456789()[]#&%/~-=_
ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
äöÖüÄÙàáçéèêêîìôûôùyñÑáí
óúÀÂÇÉÊÈÉïïÔßŒæÑÔÙŸÁÍÓÚÀ
ABC->中文1 BACK SPACE CLR SET
```

○ **Camera ID :**
Displays or hides Camera ID in the upper left of the screen.

○ **Camera Name :**
Add a name to the camera. (First check the Note.)

○ **Preset Number :**
Displays or hides Preset Numbers on the screen.

○ **Preset Name :**
Add names to preset locations. (First check the Note.)

○ **Sequence Status :**
Displays or hides the status of a sequence action that is in progress.

○ **Area Name :**
Displays or hides the Area Name for the Area Settings on the screen.

○ **PTZ Position :**
Displays or hides the status of the Pan, Tilt, and Zoom operation that is in progress.

○ **Language :**
Enables changing the system language. This camera supports English, Chinese, French, German, Spanish, and Italian.

✱ When selecting the Camera Name and Preset Name, the screen displays the Left keypad. Names can be up to 12 characters and can be entered via the joystick and the Enter key. Once a name is entered, use the joystick and the Enter key to perform the Set command and save the name.
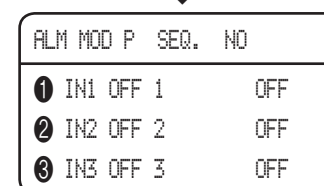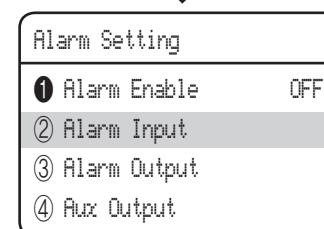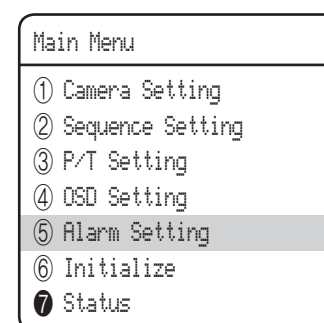
Alarm Setting

25. Alarm Setting
25.1. Setting Up Alarm Input
▶ Main Menu/Alarm Setting/Alarm Input

```
Main Menu

① Camera Setting
② Sequence Setting
③ P/T Setting
④ OSD Setting
⑤ Alarm Setting
⑥ Initialize
❼ Status
```

⬇

```
Alarm Setting

❶ Alarm Enable      OFF
② Alarm Input
③ Alarm Output
④ Aux Output
```

⬇

```
ALM MOD P  SEQ.  NO
❶ IN1 OFF 1        OFF
❷ IN2 OFF 2        OFF
❸ IN3 OFF 3        OFF
```
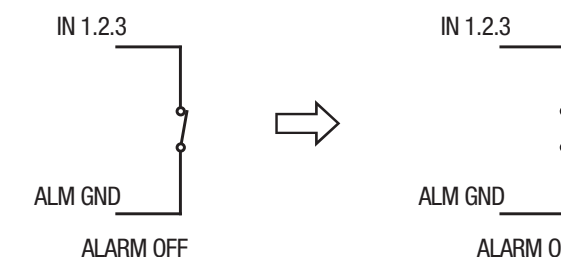
○ **Alarm Enable :**
- On/Off : Enables or disables the Alarm function.

○ **MOD :**
Enables selecting an Alarm Input method.
- NO (Normally Open)

IN 1.2.3   IN 1.2.3

ALM GND   ALM GND

ALARM OFF   ALARM ON
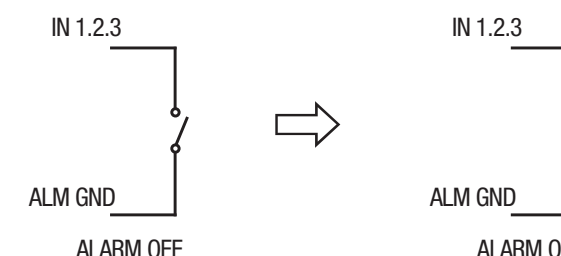
- NC (Normally Closed)

IN 1.2.3   IN 1.2.3

ALM GND   ALM GND

ALARM OFF   ALARM ON

Notes

• As shown in the picture above, the Alarm Input must be entered with the Open or Closed switch signals. Supplying power without entering the signals may damage the product.

⊃ **P (Priority) :**

Set the priority of Alarm Inputs. If more than one alarm is simultaneously activated, the alarm with the highest priority activates before the others. Once the alarm is canceled, the next highest priority alarm activates.

⊃ **SEQ :**

Enables setting up a sequence action for the camera in response to an alarm. Available sequence actions are Preset, Swing, Group, Tour, Trace and A.Pan.

25.2. Alarm Output

▶ Main Menu/Alarm Setting/Alarm Output

```
Main Menu

① Camera Setting
② Sequence Setting
③ P/T Setting
④ OSD Setting
⑤ Alarm Setting
⑥ Initialize
❼ Status
```

```
Alarm Setting

❶ Alarm Enable      OFF
② Alarm Input
③ Alarm Output
④ Aux Output
```

```
Alarm Output

❶ Output    ①1②2③3MD□TRK
❷ Time       OFF
```

⊃ **Setting :**

Enables selecting an Alarm Output method.

- 1, 2, 3 and MD on the menu selection indicate the alarm input port and motion detection input. Up to 3 alarm inputs can be set for each MD (Motion Detection) and TRK (Auto Track). Alarm output port can be used for more than 2 alarm inputs along with ones for MD and TRK.
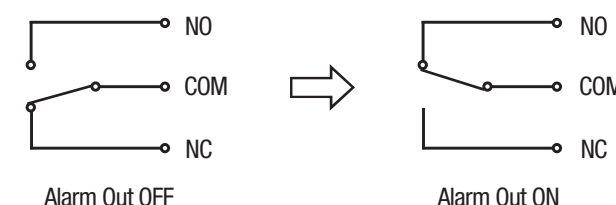
✳ The TRK function becomes activated only if the Zone mode under Zone Settings under Auto Track 2 is set to Alarm.

⊃ **Time :**

Enables selecting an Alarm Output method.

- On : Retains an alarm output for a set duration from a minimum of 1 second to a maximum of 60 hours upon the alarm occurrence.

- Momentary : Retains an alarm output only until the alarm is canceled.

✳ The Alarm Output is equipped with a relay circuit. The operation of the alarm output port is as shown in the diagram below.

```
        ○ NO                    ○ NO
        ○ COM                   ○ COM
        ○ NC                    ○ NC

   Alarm Out OFF           Alarm Out ON
```

Notes

• Connecting the power connector and GND incorrectly to the NC/NO and COM ports may cause a short circuit and fire, damaging the camera.

• The maximum power capacity of the built-in relay is 30VDC/2A, 125VAC/0.5A, and 250VAC/0.25A. Operating the camera beyond the capacity may decrease the camera's lifespan and damage it.

25.3. Aux Output
▶ Main Menu/Alarm Setting/Aux Output

```
Main Menu
① Camera Setting
② Sequence Setting
③ P/T Setting
④ OSD Setting
⑤ Alarm Setting
⑥ Initialize
❼ Status
```

```
Alarm Setting
❶ Alarm Enable      OFF
② Alarm Input
③ Alarm Output
④ Aux Output
```

```
AUX Output
❶ On/Off          OFF
❷ Time           00 SEC
```
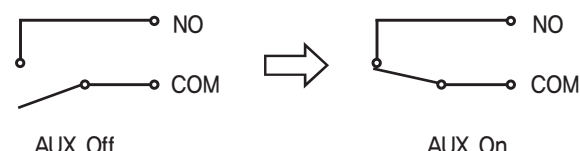
AUX Output menu is to operate the camera's peripheral devices such as lamps and sirens through the controller and switches as well as through network communications.

◯ On/Off :
- Cancels or activates the Aux function.

◯ Time :
Enables setting up a duration for the Aux output when the Aux command is transmitted from the controller. A duration can be selected from a minimum of 1 second to a maximum of 60 minutes.

```
        o—— NO              o—— NO
                                  \
  o——o                    o——o  o—— COM
        o—— COM

   AUX Off                   AUX On
```

Notes

- Connecting the power connector and GND incorrectly to the Aux terminal's NO and COM ports may cause a short circuit and fire, damaging the camera.
- The maximum power capacity of the built-in relay is 30VDC/2A, 125VAC/0.5A, and 250VAC/0.25A. Operating the camera beyond the capacity may decrease the camera's lifespan and damage it.

Initialize

26. Initialize
26.1. Initialization Menu
▶ Main Menu/Initialize

```
Main Menu
① Camera Setting
② Sequence Setting
③ P/T Setting
④ OSD Setting
⑤ Alarm Setting
⑥ Initialize
❼ Status
```

```
Initialize
① Power On Reset
② Factory Default
③ Camera Default
❹ Auto Refresh       OFF
⑤ Auto Track Default
⑥ Fan Life
```

◯ Power On Reset : Restarts the camera.

◯ Factory Default :
Enables resetting the camera to its factory default settings. When the mode is selected, all custom data such as preset locations is deleted from the camera. Use this function if it is necessary to reset the settings of the camera.

◯ Camera Default :
This mode can be used if the camera module has been replaced and you want to keep the camera's existing settings for the new module.
To reset the camera, first replace the old module with a new camera module. When the replacement is properly installed, turn on the module, then execute this command.

◯ Auto Refresh :
Enables optimizing the status of the camera's built-in electric circuits and components on a regular basis. (A regular operation can be scheduled.)
This mode can be used to maintain and repair the current settings of the camera when anomalous operations occur: e.g. The camera happened to directly face a light source, or the settings have been canceled after the camera repeatedly rotated in all four directions for a long time to monitor a specific location.
The default setting is Off.
- Off, 1~7 Days : Selecting Off disables Auto Refresh and selecting 1~7 Days automatically executes it after 1~7 days has passed.

✱ Auto Refresh takes approximately 10 seconds to finish. If Auto Refresh activates in the middle of a sequence action, the camera pauses the sequence action and performs an Auto Refresh, then resumes the sequence action once the refresh is complete.

◯ Auto Track Default : Enables resetting the Auto Track settings.

◯ Fan Life : Enables setting the Fan Life.

26.2 Setting Fan Life
▶ Main Menu/Initialize/Fan Life

```
Main Menu

① Camera Setting
② Sequence Setting
③ P/T Setting
④ OSD Setting
⑤ Alarm Setting
⑥ Initialize
❼ Status
```

⬇

```
Initialize

① Power On Reset
② Factory Default
③ Camera Default
❹ Auto Refresh      OFF
⑤ Auto Track Default
⑥ Fan Life
```

⬇

```
Fan Life

❶ Message Display    ON
② Message Clear
③ Time Reset
❹ Time Remain.(hour)  49000
```

◑ **Message Display :**

The following alert message appears 2 months before the fan lifespan expires: Fan Life was Expired. Replace the Fans. "Fan life Expired., Replace the Fans"
-ON : Displays alert messages. (Default Option)
-Off : Hides alert messages.

✱ The [Off] option does not automatically delete the messages but keeps them hidden from the screen. To show the messages again, change it back to [On]. (Displays only messages that are not deleted by [Message Clear].)

◑ **Message Clear :**

Deletes alert messages from the screen.

✱ [Cleared] messages do not display on the screen when the display option changes back to [On].

◑ **Time Reset :**

Resets and starts counting the lifespan of a fan when it is replaced.
(The Reset function activates only after the fan lifespan alert message is active.)

✱ This function counts the lifespan of a fan only during its operation; it may be used longer than the expiration date displayed on the OSD.

◑ **Time Remain.(hour) :**

- 49000 : Indicates the remaining lifespan of the current fan. (Unit: hours)
- The remaining time refreshes when the [Fan Life] menu is selected and the [Enter] key is pressed in the [Time Remain (hour)] option.

Status

27. **Status**
▶ Main Menu/Status

```
Main Menu

① Camera Setting
② Sequence Setting
③ P/T Setting
④ OSD Setting
⑤ Alarm Setting
⑥ Initialize
❼ Status
```

⬇

```
Camera Status

CAM MODEL     = 37NHU
CAM VERSION   = 3.8
DOME VERSION  = 1.16
CON PROTOCOL  = SAMSUNG TW
DOME ID       = 001
CONTROLLER    = Simplex-9600
TRACK VERSION = 1.08
COAX VERSION  = 1.04
```

Displays the settings and version of the dome camera.

◑ **Cam Model :**
Indicates the model name of the camera.
◑ **Cam Version :**
Indicates the software version of the camera.
◑ **Dome Version :**
Indicates the version of the camera control board.
◑ **CON Protocol :**
Indicates the status of the current protocol.
◑ **Dome ID :**
Dome Camera ID
◑ **Controller :**
Indicates the settings of the current communications mode.
◑ **Track Version :**
Indicates the Auto Track software version of the camera.
◑ **COAX VERSION :**
Indicates the software version of the Coax communication

Problem	Cause and Solution	PAGE
Controller does not work.	▶ Check if the camera and peripheral devices are properly connected.	34
	▶ Verify the setups of ID, protocol, and baud rates.	23~32
No picture is displayed on monitor.	▶ Check if power cable is securely connected to the camera and the monitor. Check if the video cable is properly connected. Consult the operation manual of the system controller connected to the camera.	20~21
	▶ Check if the iris of the lens is closed. Adjust the menu for the iris of the lens.	49
	▶ Check the camera's fixed shutter speed. Adjust the camera's shutter menu.	49
The picture is too dark/bright.	▶ Check the camera's Brightness menu. Adjust the camera's Brightness menu.	49
The monitor displays a white image.	▶ Check if the iris of the lens is open. Adjust the menu for the iris of the lens.	49
Picture is out of focus.	▶ Check if the dome cover or the camera lens is dirty or smudged. If it is, clean the dirt off.	-
	▶ Verify the distance between the camera and the subject, as well as the subject's surroundings. Camera may have difficulty focusing on a subject against a white background.	-
	▶ If Auto Focusing is having difficulty focusing on a particular subject, set Focus Mode to Manual and adjust the focus by yourself.	46~47
	▶ Use the camera's reset menu to restore the camera settings in order to default.	83
	▶ Adjust Sharpness level.	57
Digital noise appears in picture.	▶ Check if the video cable is properly connected.	-
	▶ Make sure that the power cable and video cable do not exceed the recommended maximum lengths.	33
	▶ Adjust Sharpness level.	57

Problem	Cause and Solution	PAGE
Picture's colors are not good.	▶ Check the White Balance.	48
	▶ Adjust Color Menu in Image Adj.	57
	▶ Check if the dome cover or the camera lens is dirty or smudged. If it is, clean the dirt off.	-
The picture is flickering.	▶ Check if the camera is pointing directly at a fluorescent light or sunlight. If so, change the camera's direction to remove the flickering.	-
Afterimages appear in picture.	▶ Check Sens-Up settings.	49
Camera switches between color and B&W modes frequently.	▶ Adjust Duration and Dwell Time in Day & Night menu.	56
A circular object appears on screen when the camera is pointing straight down.	▶ You are seeing a pinpoint-like injection artifact on the dome cover. The camera is functioning normally.	-
Pan, tilt, zoom, and/or focus do not work.	▶ Check if power cable is securely connected to the camera and the monitor. Check if the video cable is properly connected. Consult the operation manual of the system controller connected to the camera.	20~21
	▶ Check if Pan Limit and/or Tilt Limit are set. If so, remove the limit(s).	68
	▶ A motor or the lens may be overheated. If so, contact your service personnel or system provider for assistance.	-
The camera's position differs from the position defined in a preset.	▶ This phenomenon may happen, since the motors have a margin error of ±0.1˚.	-
Sequence configuration of the camera does not work.	▶ Check if Preset or another operation mode has been set.	59~62
	▶ Check the Auto Refresh settings.	83
The upper side of the picture is dark when the camera is on the horizontal reference point.	▶ You are seeing the camera's internal cover. The camera is functioning normally.	-

Camera suddenly turns on or moves to a preset position by itself.	▶ Check the Auto Run settings. Auto Run puts a camera through a predefined action sequence if the user does not use the Controller to operate the camera for a certain period of time.	67
	▶ Check the Auto Refresh settings. Auto Refresh optimizes the camera's circuitry and components according to a predefined schedule.	83
Although The subject is moving, but Auto Tracking does not work.	▶ Check if the subject is in an area set of Area Masking.	70
	▶ Check the Auto Release settings. Auto Release stops tracking a subject after a preset period of time, and returns the initial position of the camera to track a new subject.	75
	▶ Sensitivity may be set too low for the camera to detect a moving subject. Adjust a higher Sensitivity setting.	74
	▶ Check if the subject is too small. Adjust picture angle to increase the subject size.	42
Auto Tracking suddenly functions incorrectly.	▶ Check if there are trees, grass, flags, or other subjects being moved by wind, and/or water, glass, paved roads, or other subjects with a highly reflective surface. If so, set Area Masking of the area containing such subjects.	70
	▶ The sensitivity of the camera's threshold detection may be set too high. Adjust a lower Sensitivity setting.	74
	▶ Check if it is raining/snowing. Auto Tracking may function incorrectly or fail to function at all if the dome cover is contaminated with water or snow particles.	-

A subject being Auto-Tracked is out of screen immediately.	▶ Check Object Size settings. If Object Size is set too small, adjust it to a larger value.	72
	▶ Check if the monitored area contains multiple moving subjects. Auto Tracking is intended for monitoring intruders, and may not be suitable for crowd monitoring.	-
Coxial communication does not work.	▶ Check the distance between the camera and the monitor.	-
	▶ If the distance between the camera and the monitor exceeds the recommended maximum, please use an auxiliary video amp.	
I turned on the power, but the camera didn't start running.	▶ Please check the environment temperature; the camera may not operate properly if it has been left at temperatures lower than -50℃ for a prolonged duration.	-
	▶ The motor may malfunction at temperatures lower than -20℃; please turn on the camera in Standby mode instead of [Initialize].	-
	▶ Keep in Standby mode for at least 90 minutes. Once the internal temperature reaches -20℃ or higher, the camera automatically resets itself and activates the [Initialize] mode for normal operation.	-
I can't see the screen. (The screen is black.)	▶ When the camera's internal temperature drops down to -20℃ or lower, it becomes unable to transmit video signals and may cause a black screen.	-
	▶ A black screen does not indicate camera breakage; it resets itself and starts displaying video again once its internal temperature reaches -20℃ or higher.	-
The camera stops in the Initialize mode and won't proceed to the next mode.	▶ The motor may malfunction at temperatures lower than -20℃; please turn on the camera in Standby mode instead of [Initialize].	-
	▶ Once the camera's internal temperature reaches -20℃ or higher, it resets itself and activates the [Initialize] mode for normal operation.	-

Troubleshooting

I can use the controller, but I can't activate the Sequence command.	▶ When the camera's internal temperature is between -10℃ to -20℃, the motor may malfunction, limiting the use of the Sequence and Turbo commands.	-
	▶ Once the internal temperature reaches -10℃ or higher, all Sequence modes become reactivated normally.	-
I can't get rid of this message from the screen: " Fan life Expired. Replace the Fans."	▶ Please make sure to "Clear" the message from the screen.	80
The camera suddenly resets itself while displaying the black screen.	▶ Such symptoms may occur if the camera's temperature increases from -20℃ or lower to -20℃ or higher.	-
	▶ The motor may malfunction at temperatures lower than -20℃; please reset the camera and reactivate the [Initialize] mode.	-
"Please Check Heater System" appears.	▶ The heater may malfunction. Turn off the camera and call where you bought.	-
"Auto Refresh(Wait)" appears and the camera reboots.	▶ Such symptoms may occur if the camera's temperature increases from -10℃ or lower to -10℃ or higher to prevent the malfunction of motor.	-
Check the Power cord's by periods		
• The Power cord's coating has been damaged. • The power cord is hot to touch when the product is in operation. • The power cord gets hot after being folded or pulled on.	Continuing to use the product when its power cord is damaged constitutes an electrical and fire hazard. The power plug must be removed from the outlet immediately, and a qualified service personnel or your system provider should be contacted for assistance.	-

Product Specification

Model Name	SPU-3750T	SPU-3700
Imaging Device	1/4 inch, Double Density Interline Transfer CCD	1/4 inch, Super HAD color CCD
TV Standard	NTSC / PAL	
Total Pixels	NTSC: 811(H) × 508(V) / PAL: 795(H) × 596(V)	
Effective Pixels	NTSC: 768(H) × 494(V) / PAL: 752(H) × 582(V)	
Scanning System	2:1 Interlace	
Synchronization	Internal	Internal/External(AC Line Lock)
Horizontal Scan	15.734 KHz	
Vertical Scan Rate	59.94 Hz	
Horizontal	550 TV Line(Color)/680 TV Line(B/W)	
Min. Illumination	0.7 Lux (50 IRE @ F1.6 Color) 0.03Lux (50 IRE @ F1.6 B/W)	0.4 Lux (50 IRE @ F1.6 Color) 0.02Lux (50 IRE @ F1.6 B/W)
S/N (Y Signal)	50 dB	
Video Output	CVBS:1.0Vp-p/75Ω	
Zoom Ratio	37X (Optical),12X (Digital)	
Focal Length	3.5~129.5mm (F1.6 ~3.9)	
Min. Object	1.9m	
Angular Field of view	H:55.5°(Wide)~1.59°(Tele) V:42.5°(Wide)~1.19°(Tele)	
Focus	AUTO / MANUAL / ONE-SHOT	
Zoom Speed	2.5sec	
IRIS	AUTO/MANUAL	
Lens Initialization	Built-In	
Auto Tracking	Built-In	-
Horizontal Rotation Angle	360° Endless	
Horizontal Rotation Speed	Manual:0.024°/sec ~120°/sec, Preset 500°/sec	
Vertical Rotation Angle	-5° ~ 185°	
Vertical Rotation Speed	Manual:0.024°/sec ~120°/sec, Preset 500°/sec	

Product Specification 🔘

Model Name	SPU-3750T	SPU-3700
Preset Position	Max. 255 Point	
Preset Accuracy	±0.1°	
Camera ID	255	
Day & Night	AUTO / COLOR / BW	
Backlight	WDR / BLC / HLC / OFF	BLC / HLC / OFF
Dynamic Range	52dB	
Motion Detection	ON/OFF	
Stabilizer	ON/OFF	
Privacy Mask	ON/OFF (8 Areas)	
SSNR	LOW/MEDIUM/HIGH/OFF	
Sens-up	On/Off (Selectable limit ~ 256X)	
Gain Control	LOW/MEDIUM/HIGH/MANUAL/OFF	
White Balance	ATW/INDOOR/OUTDOOR/AWC/MANUAL	
Electronic Shutter	AUTO(NTSC:1/60~120,000sec, PAL:1/50~120,000sec)/MANUAL/A.FLK	
Serial Com.	RS-422/485, Coaxial Communication	
Protocol	Samsung Techwin, Pelco-D, Pelco-P, Pelco Coaxitron, Panasonic, Honeywell, AD, Vicon, Samsung Electronics, GE, BOSCH	
Alarm	3 In, 1 Out, 1 Aux	
Digtal Flip	ON/OFF	
Waterproof Standards	IP66(IEC-60529)	
Operating Temperature/ Humidity	-50℃ to +50℃ / 20% to 80% RH	
Storage Temperature/ Humidity	-50℃ to +60℃ / 20% to 95% RH	
Input Voltage	AC24V ± 10%	
Power	Max.60W(When the heater and the fan work)	Max.58W(When the heater and the fan work)
External Dimensions (Ø×D)	Ø248×331mm	
Weight	About 4.5Kg	

DECLARATION OF CONFORMITY

Application of Council Directive(s)	EMC-Directive 92/31 EEC and its amendments
Manufacturer's Name	SAMSUNG TECHWIN CO., LTD
Manufacturer's Address	SAMSUNG TECHWIN CO., LTD
	42, SUNGJU-DONG CHANGWON-CITY,
	KYUNGNAM, KOREA, 641-716
European Representative Name	
European Representative Address	
Equipment Type/Environment	WEATHERPROOF DOME CAMERA
Model Name	SPU-3750T/3700
Beginning Serial NO.	C10S7010007
Year of Manufacture	2009.07.01
Conformance to	EN 55022 : 2006
	EN 50130-4 : 2003

We, the undersigned, hereby declare that the equipment specified above conforms to the above Directive(s).

Manufacturer	SAMSUNG TECHWIN CO., LTD	Legal Representative in Europe	
Signature	*BJ Gu*	Signature	
Full Name	BON JUNG GU	Full Name	
Position	QUALITY CONTROL MANAGER	Position	
Place	SUNGNAM, KOREA	Place	
Date	2009.07.01	Date	

MEMO

MEMO

SAMSUNG TECHWIN

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P/No. :Z6806-1026-01B
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