LG
Life's Good

OWNER'S MANUAL
Dome Camera

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

MODELS
LT923 Series
LT723 Series

1
Safety Information

CAUTION

**RISK OF ELECTRIC SHOCK
DO NOT OPEN**

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

This lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated dangerous voltage within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

FCC WARNING: This equipment may generate or use radio frequency energy. Changes or modifications to this equipment may cause harmful interference unless the modifications are expressly approved in the instruction manual. The user could lose the authority to operate this equipment if an unauthorized change or modification is made.

REGULATORY INFORMATION: FCC Part 15

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

- A suitable conduit entries, knock-outs or glands shall be provided in the cable entries of this product in the end user.
- Caution: Danger of explosion if battery is incorrectly replaced. Replaced only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.
- Holes in metal, through which insulated wires pass, shall have smooth well rounded surfaces or shall be provided with brushings.

This Class A digital apparatus complies with Canadian ICES-003.
Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

Warning: Do not install this equipment in a confined space such as a bookcase or similar unit.

Warning: Wiring methods shall be in accordance with the National Electric Code, ANSI/NFPA 70.

Warning: This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

1

Safety Information

Warning: To reduce a risk of fire or electric shock, do not expose this product to rain or moisture.

Caution: This installation should be made by a qu alified service person and should conform to all local codes.

Caution: To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.

Caution: The apparatus should not be exposed to water (dripping or splashing) and no objects filled with liquids, such as vases, should be placed on the apparatus.

Caution:

This product employs a Laser System. To ensure proper use of this product, please read this owner's manual carefully and retain it for future reference. Should the unit require maintenance, contact an authorized service center. Performing controls, adjustments, or carrying out procedures other than those specified herein may result in hazardous radiation exposure. To prevent direct exposure to laser beam, do not try to open the enclosure. Visible laser radiation when open. DO NOT STARE INTO BEAM.

To disconnect power from mains, pull out the mains cord plug. When instal ling the product, ensure that the plug is easily accessible.

CE

LG Electronics hereby declares that this/ these product(s) is/are in compliance with the essential requirements and other relevant provisions of Directive 2004/108/ EC, 2006/95/EC, and 2009/125/EC.

European representative :

LG Electronics Service Europe B.V.
Veluwezoom 15, 1327
AE Almere. The Netherlands
(Tel : +31-(0)36-547-8888)

Disposal of your old appliance

1. When this crossed-out wheeled bin symbol is attached to a product it means the product is covered by the European Directive 2002/96/EC.

2. All electrical and electronic products should be disposed of separately from the municipal waste stream via designated collection facilities appointed by the government or the local authorities.

3. The correct disposal of your old appliance will help prevent potential negative consequences for the environment and human health.

4. For more detailed information about disposal of your old appliance, please contact your city office, waste disposal service or the shop where you purchased the product.

EEE Compliance with Directive. (for Turkey only)

IMPORTANT SAFETY INSTRUCTIONS

1. Read these instructions.

2. Keep these instructions.

3. Heed all warnings.

4. Follow all instructions.

5. Do not use this apparatus near water.

6. Clean only with dry cloth.

7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.

8. Do not install near any heat sources such as radiators, heat re gisters, stoves, or other apparatus (including amplifiers) that produce heat.

9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

11. Only use attachments/accessories specified by the manufacturer.

12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

13. Unplug this apparatus during lightning storms or when unused for long periods of time.

14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

Safety Precautions

*   Do not attempt to disassemble the camera
    To prevent electric shock, do not remove screws or covers. There are no user serviceable parts inside. Ask a qualified service personnel for servicing.

*   Avoid the camera with direct sunlight
    Do not aim the camera at bright objects.Whether the camera is in use or not, never face it with direct sunlight or other extremely bright objects. Otherwise blooming or smear may be caused.

*   Handle the camera with care
    Do not abuse the camera. Avoid striking, shaking, etc. The camera could be damaged by improper handling or storage.

*   Do not use strong solvents or detergents
    Use a dry cloth to the camera when it is dirty. If it is hard to remove the dirt on the camera, use a mild detergent and wipe it gently.

*   Do not install this camera upside down
    This camera is designed for mounting on the ceiling or wall.If you install this camera upside down, for example, mounted on the floor, it may cause malfunction.

*   Do not use the camera in such places as shown below. The lens may become cloudy due to condensation if the camera is used under the following conditions.

    ›   Rapid temperature fluctuation by switching an air conditioner on and off.

    ›   Rapid temperature fluctuation due to frequent door opening and closing.

    ›   Use in an environment where eyeglasses become foggy.

    ›   Use in a room filled with cigarette smoke or dust.

    If the lens becomes cloudy due to condensation,

remove the dome cover and wipe all moist surfaces with a soft cloth.

- Before operating, please check proper temperature, humidity and power source ratings.
  Use the camera under conditions where temperature is from -10 ℃ to 50 ℃ and humidity is below 80 %. The input power source is AC 24 V.

- Consumables
  Parts having contacts such as the lens-drive motors, cooling fan built inside the camera are subject to wear with time. About replacement and maintenance of such parts, please ask the nearest service center.

Camera Installation Location
Discuss the installation location for the camera with your retailer, and select a place that is strong enough for the installation.

- Install the camera on a ceiling (concrete, etc.) at a location that is sufficiently strong to support it.

- Install the camera body on the foundation section of the building or sections having sufficient bearing strength.

Never install or use the camera in the following locations
- Do not install it in areas exposed to direct sunlight or rain.

- Do not install the camera near the air outlet of an air conditioner.

- Near a swimming pool or other areas where chemicals are used.

- Food preparation areas and other locations where there are large amounts of steam vapor and oil, in flammable atmospheres, other special environments.

- Areas where radiation, X-rays, strong electric waves, or magnetism is generated.

- At sea, in coastal areas, or in areas where corrosive gas is being generated.

- Areas outside of the allowable ambient operating temperature range.

About Static Electricity Removal
Before installing the camera, touch a metal case or other metallic parts with your hand to remove static electricity from your body.
Do not install in areas subjected to high amounts of humidity or dust.
Doing so may cause internal components to damage more easily or malfunction.
Do not wire cables near power lines.

Tightening the Screws
Screws should be tightened sufficiently in accordance with the materials and structure of the installation location. After tightening the screws, visually inspect them to make sure there is no unevenness and that each screw is tight.

1

Safety Information

Contents

5
Appendix

2
Preparation

Introduction

The dome cameras are designed for installation in an indoor or outdoor video surveillance system.
The camera incorporates the digital signal processor, pan/tilt mechanism, zoom lens and RS-485 communication interface in a compact outdoor enclosure.

Features

- **High Sensitivity Support**

  The camera provides the high quality picture with 4.5 mm EX-view HAD CCD.

- **Preset Position**

  Preset position is the function to register camera monitoring positions (preset positions). By using LKD1000 controller, you can register presets with position number. Maximum 128 Preset Positions are available. By entering the position numbers, you can move cameras to the preset positions. The moving speed and holding time are adjustable.

- **Preset Tour**

  Preset Tour is the function to go through all the registered camera monitoring positions (preset positions). During the working PRESET TOUR, The FOCUS could not be operated properly under -10 ℃ (for LT723 series only)

- **Group Tour**

  Maximum 9 group tours are able to compose the group of preset, pattern, auto pan that the operator can program to be linked together in a sequence.

- **Pattern recording function**

  A routine of manual operations can be stored and reproduced repeatedly. The Pan, Tilt and Zoom controls are available for pattern recording.

> ⓘ **NOTE**
>
> The available total time of pattern differs depending on camera's operation. When the pattern recording is full, the pattern recording will automatically stop.

- **Privacy Mask**

  Privacy zone feature enables users to veil unwanted zones. This setting is used for masking unwanted zones, hiding them from display on the monitor screen. Up to 8 zones can be registered.

- **Auto Pan**

  The camera has an Auto Pan function that enables to keep surveillance on every detail occurring around the specific area, which is preset to watch in advance. The camera can pan among the maximum 8 points you will set. The moving speed and holding time are adjustable.

- **Auto Flip**

  When the camera is operated to tilt through the 90°, it can be watched the opposite side of the locations by Auto Flip of a 180° horizontally.

- **Optical Zoom**
  - LT923 series: The optical zoom range is 1x to 37x.
  - LT723 series: The optical zoom range is 1x to 27x.

- **Digital Zoom**

  Digital zoom enhances the systems zoom range to 12 times beyond the optical zoom limit.
  Total system zoom range is below.
  - LT923 series: 37x (1x digital zoom) to 444x (12x digital zoom)
  - LT723 series: 27x (1x digital zoom) to 324x (12x digital zoom)

- **Alarm In function (4 channels)**

  Alarm input signals are supplied from external devices through the ALARM IN connector to activate 'go to preset' function.

- **Alarm Out function (2 channels)**

When alarm inputs are supplied via the alarm input connector on the camera, the camera sends output signals via the alarm output connector on the camera.

- Controls by General Controller

  This camera can be controlled by RS-485. Especially the camera has an excellent cost-saving effect because it can be controlled by the general RX point of contact signal.

- Connects with the maximum 256 cameras

  This camera can be utilized after being connected with maximum 256 cameras. Therefore, it is capable of performing an excellent job in the large buildings or department stores.

- Day & Night Function

  This camera can be selected Color or Black & White. You can set Color in the daytime and Black & White at night due to the low illumination. (Filter Conversion type)

- DSS (Digital Slow Shutter) function

  It is possible to highly sensitive surveillance because of DSS(Digital Sl ow Shutter) function.

- WDR (Wide Dynamic Range) function

  The camera can be best condition to watch easily inside or outside in the strong back light.

- Power Supply
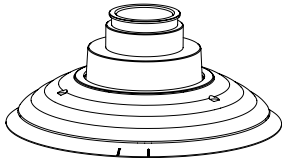
  This camera must always be operated a AC 24 V. Certified/Listed, class 2 power supply only.

Accessories

For LT923NI/PI series

RJ-45 Adapter cable	

For LT923N/P series

Camera main cable	
RJ-45 adapter cable	
Wrench	
PIPE Installation Bracket	

2

Preparation

Part Names and Functions

LT923/723NI/PI series for Indoor
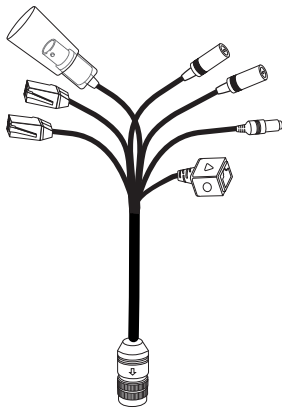

a   **BNC connector cover cap**

b   **Video output BNC connector**

Supplies analog video signal (composite) to the connected device.

c   **Data Port A (RJ-45)**

RS-485 data communication and input data port for alarm (relay) signal.

d   **Data Port B (RJ-45)**

Output data port for alarm (relay) signal.

e   **This port is not used.**

f   **This port is not used.**

g   **Power input jack**

Connects to a AC 24 V power supply using proper cables.

h   **This port is not used.**

i   **Locking screw**

Tighten this screw to fixing the Ceiling Mount Assembly with camera body.

j   **Dome Cover open button.**

k   **Dome Cover**

LT923/723N/P series for Outdoor
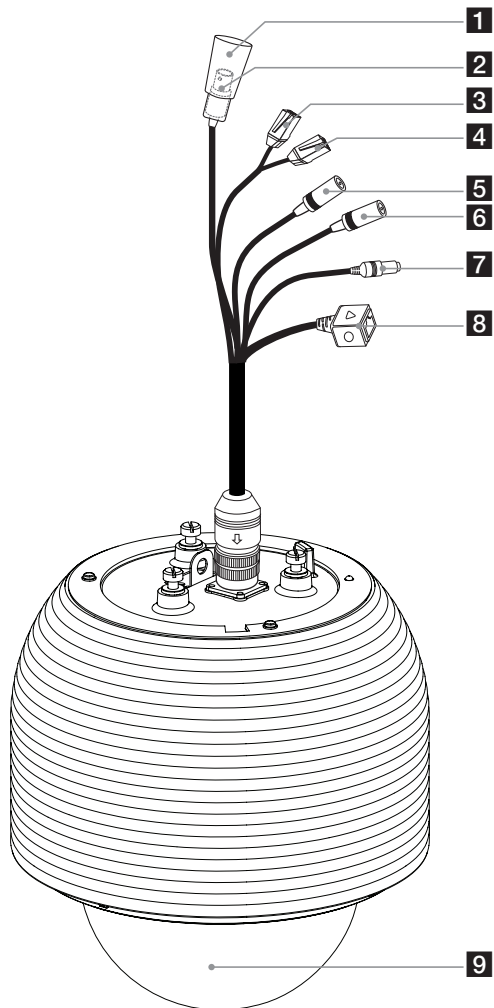
1 **BNC connector cover cap**

2 **Video output BNC connector**

Supplies analog video signal (composite) to the connected device.

3 **Data Port A (RJ-45)**

RS-485 data communication and input data port for alarm (relay) signal.

4 **Data Port B (RJ-45)**

Output data port for alarm (relay) signal.

5 **This port is not used.**

6 **This port is not used.**

7 **Power input jack**

Connects to a AC 24 V power supply using proper cables.

8 **This port is not used.**

9 **Dome Cover**

2

Preparation

3
Installation

Connections

Precautions

- The following steps of installation and connection work should be done by qualified service personnel or system installers and should conform to all local codes.
- Before you install and connect the camera, check and prepare the required peripheral devices and cables.
- Before you connect the camera, turn off all devices to be connected, such as this camera and DVR.
- Do not touch the dome cover's window.

Basic Connection Overview

| LT923/723NI/PI series (for Indoor) | LT923/723N/P series (for outdoor) |
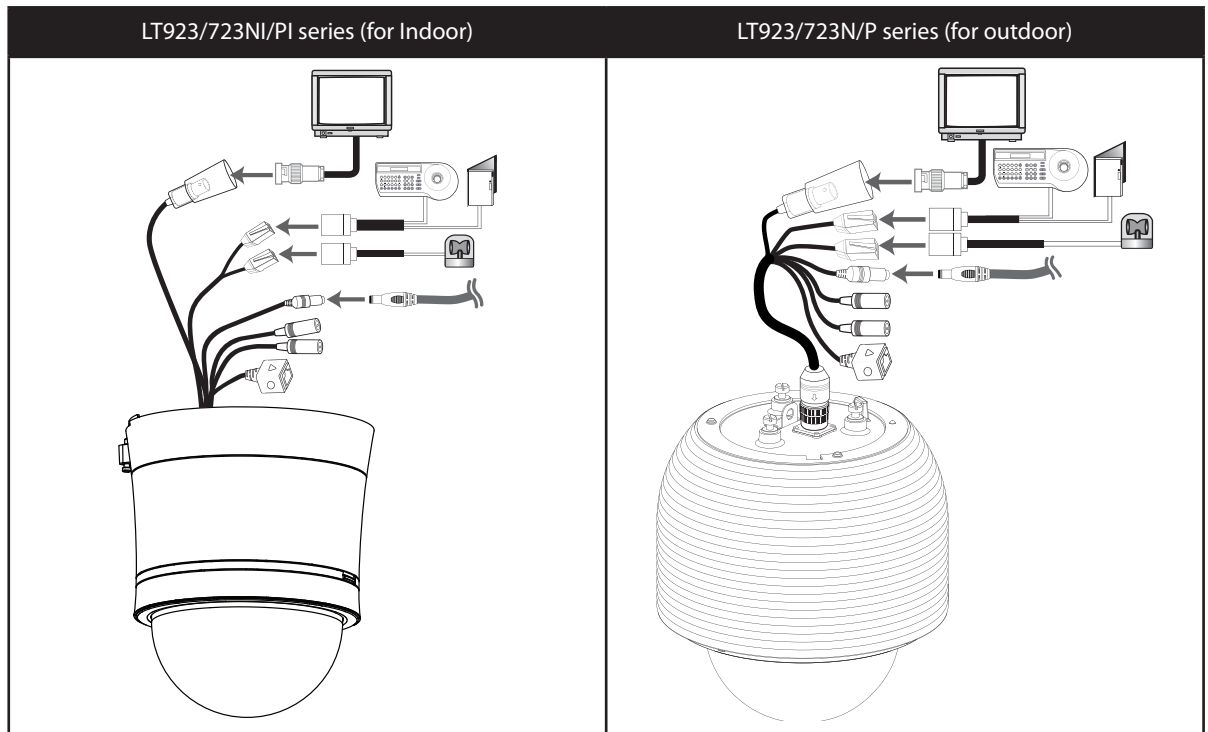
Connecting Display device

The video signal connection between the camera and the monitor.

Display device connection
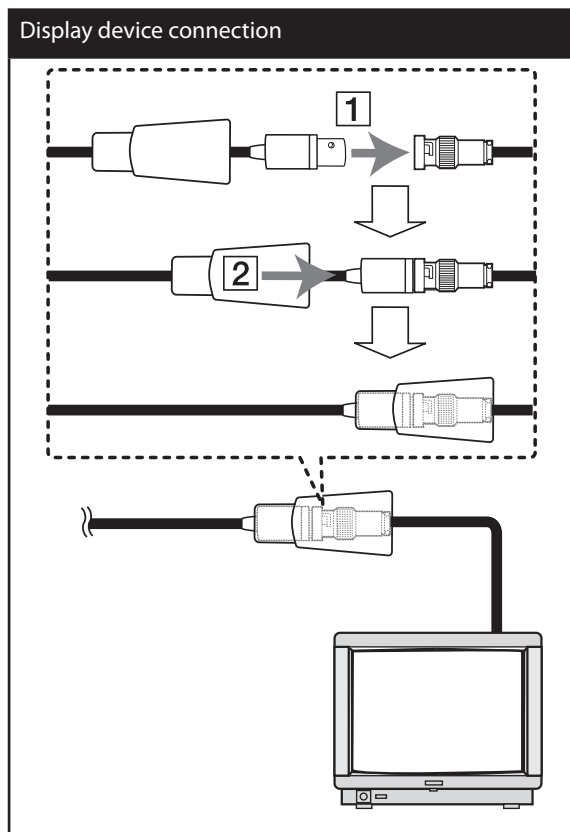
ALARM input connection

You can connect up to 4 alarm sensors to the camera. Each alarm sensor should be connected with Alarm IN COM. You can adjust the signal state to NO (normally open) or NC (normally closed) through the setup menu.

1. Connect the RJ-45 Adapter cable to the PORT A (RJ-45) cable of the camera.

2. Connect the alarm device to the RJ-45 Adapter cable. When connecting lines, check and connect the color lines of the each device correctly. Refer to the below tables for color line information.

> **⚠ CAUTION**
>
> Do not connect one alarm sensor to the several camera's alarm input connector.

Alarm input connection

RJ-45 Adapter cable   **Port A**
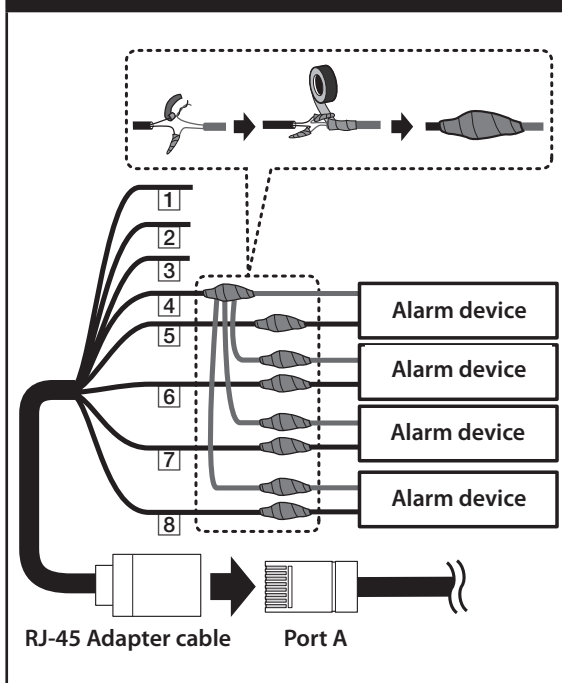
RJ-45 Adapter cable		
No	**Description**	**Color**
1	RS-485 +	White
2	RS-485 -	Orange
3	NC	Black
4	ALARM IN COM	Red
5	ALARM IN 1	Green
6	ALARM IN 2	Yellow
7	ALARM IN 3	Blue
8	ALARM IN 4	Brown

3

Installation

PORT A of the LT923/723NI/PI series	
Description	**Color**
RS-485 +	Red/White
RS-485 -	Black/White
NC	
ALARM IN COM	Red
ALARM IN 1	White
ALARM IN 2	Light Green
ALARM IN 3	Yellow
ALARM IN 4	Pink

PORT A of the LT923/723N/P series	
Description	**Color**
RS-485 +	Green
RS-485 -	Blue
NC	
ALARM IN COM	Yellow
ALARM IN 1	Pink
ALARM IN 2	Gray
ALARM IN 3	White
ALARM IN 4	Violet

Alarm Input function

This speed dome camera has a terminal that can sense the alarm signals.
If the alarm sensor that has installed in a door, window, safe etc. sense a touch or shock, the alarm sensor send the alarm signal to the camera and the camera will observe the sensed position.

Change the observe position to a sensor that senses a touch or shock then return to the position that previously observed. (Set the Duration Time of Alarm Input function to "3 to 255".)

Function status	**Mode**
While observe a specific position.	Change the observe position to the alarmed position then return to the position that previously observed.
While operating Preset Tour function.	Stop preset touring and change the observe position to the alarmed position then restart the preset touring again.
While operating Auto Pan function.	Stop auto panning and change the observe position to the alarmed position then restart the auto panning again.
While operating Pattern function.	Stop operating pattern function and change the observe position to the alarmed position during the dwell time then restart the pattern function again.
in case of HOME POSITION is ON.	After Alarm has been cleared and finished the dwell time, it moves to the HOME POSITION and spend the dwell time at that position.

! NOTE

During the dwell time for alarm, you can not control the controller.

ALARM output connections

Connect the alarm device to the alarm output data port. Alarm signal output at an event occurrence. You can set the Alarm Output to the normal open or normal close mode.
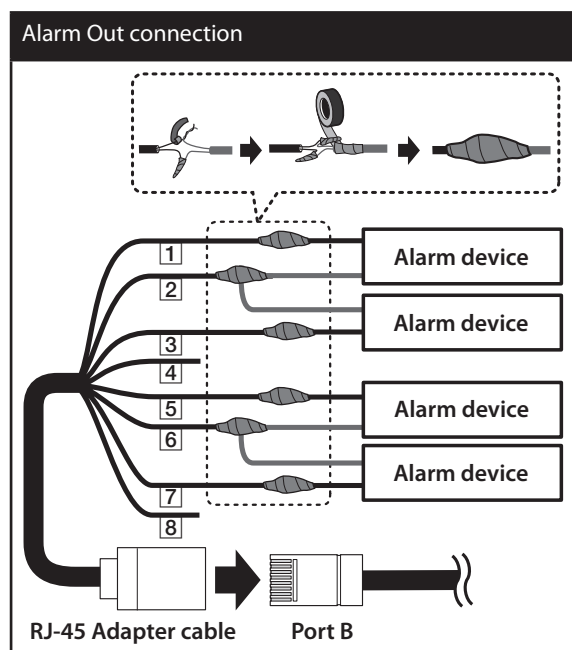
1. Connect the RJ-45 Adapter cable to the PORT B (RJ-45) cable of the camera.
2. Connect the alarm device to the RJ-45 Adapter cable. When connecting lines, check and connect the color lines of the each device correctly. Refer to the below tables for color line information.

Alarm Out connection

RJ-45 Adapter cable

No	Description	Color
1	ALARM OUT [NO1]	White
2	ALARM OUT [COM1]	Orange
3	ALARM OUT [NC1]	Black
4	NC	Red
5	ALARM OUT [NO2]	Green
6	ALARM OUT [COM2]	Yellow
7	ALARM OUT [NC2]	Blue
8	NC	Brown

PORT B of the LT923/723NI/PI series

Description	Color
ALARM OUT [NC1]	Blue
ALARM OUT [COM1]	Violet
ALARM OUT [NO1]	Brown
NC	
ALARM OUT [NC2]	Gray
ALARM OUT [COM2]	Orange
ALARM OUT [NO2]	Black
NC	

PORT B of the LT923/723/N/P series

Description	Color
ALARM OUT [NO1]	White Blue
ALARM OUT [COM1]	Beige
ALARM OUT [NC1]	Black
NC	
ALARM OUT [NO2]	Brown
ALARM OUT [COM2]	Red
ALARM OUT [NC2]	Orange
NC	

3
Installation

Connecting LKD1000 controller

1. Connect the RJ-45 Adapter cable to the PORT A (RJ-45) cable of the camera.
2. Connect the LKD1000 controller to the RJ-45 Adapter cable. (Refer to the manuals of the LKD1000 controller for more details.)

LKD1000 connection
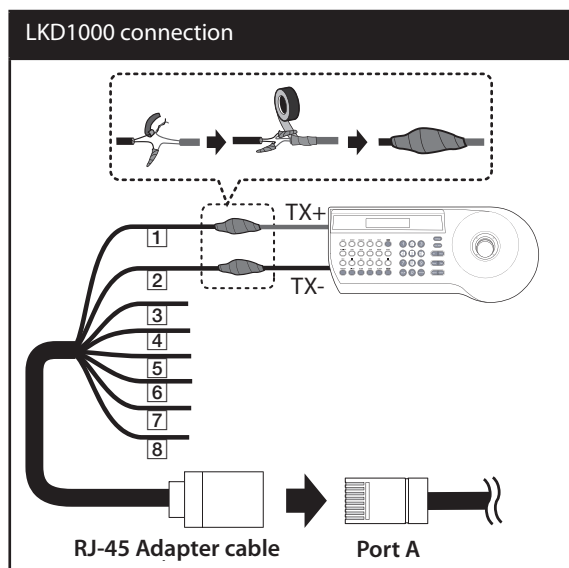
RJ-45 Adapter cable		
No	**Description**	**Color**
1	RS-485 +	White
2	RS-485 -	Orange

Connecting RS-485 device

Use the cable that is described below for RS-485 site communication.

- Shielded, twisted pair cable
- Low impedance
- Wire gauge size is thicker than AWG #22 (0.33 mm^2).

RS-485 connection
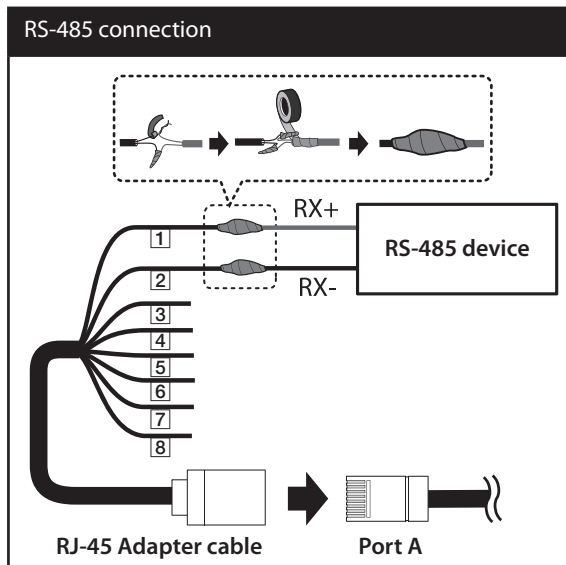
1. Connect the RJ-45 adapter cable to the PORT A (RJ-45) cable of the camera.
2. Connect the RS-485 device to the RJ-45 Adapter cable. When connecting lines, connect the "Orange color line" of the RJ-45 Adapter cable to "RX -" of the RS-485 unit and "White color line" of the RJ-45 Adapter cable to "RX +" of the RS-485 unit correctly.

RJ-45 Adapter cable		
No	**Description**	**Color**
1	RS-485 +	White
2	RS-485 -	Orange

PORT A of the LT923/723NI/PI series	
Description	**Color**
RS-485 +	Red/White
RS-485 -	Black/White

PORT A of the LT923/723N/P series	
Description	**Color**
RS-485 +	Green
RS-485 -	Blue

Connecting power source

Connect a AC 24 V power source to the power input jack.

Protocol and baud rate settings

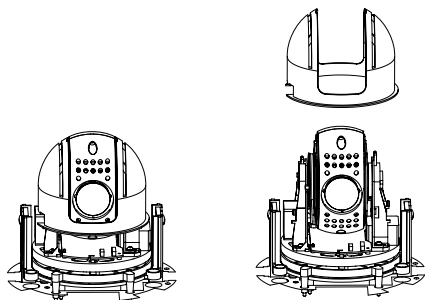The camera has one 8-bit DIP switch blocks that determine the protocol and baud rate of the data communication. Settings are loaded when the camera boots up. Be sure to turn the camera off, change the DIP switch settings, and then power the camera back up to load the changes.

1. Turn off the camera.
2. Remove the dome cover.
3. Remove the camera assembly cover.

4. Set the DIP switches.

DIP switch locations
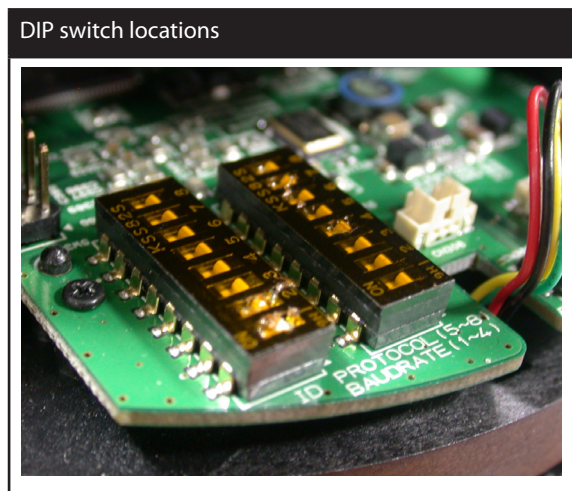
5. Assemble the dome cover and the camera assembly cover in the reverse order.
6. Power up the camera to load the changes.

Baud Rate setting
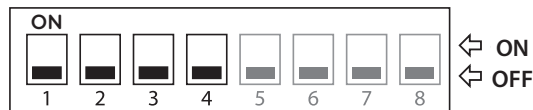
DIP switch position				BAUD RATE (BPS)
SW1	SW2	SW3	SW4	
OFF	OFF	OFF	OFF	9 600
OFF	OFF	OFF	ON	2 400
OFF	OFF	ON	OFF	4 800
OFF	ON	OFF	OFF	19 200
ON	OFF	OFF	OFF	38 400
ON	ON	ON	ON	OSD Set

Protocol setting
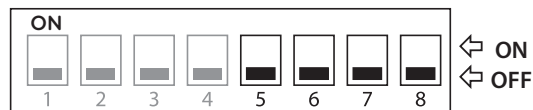
DIP switch position				Protocol
SW5	SW6	SW7	SW8	
OFF	OFF	OFF	OFF	LG Multix
OFF	OFF	OFF	ON	Pelco D
OFF	OFF	ON	OFF	Pelco P
ON	ON	ON	ON	OSD Set

> **!** **NOTE**
>
> If you are not using the controller with LG Multix protocol, there may be some limitation of function control.

Camera ID Setting

The camera's ID is set to "0" as factory default. If you use two or more cameras simultaneously, change the ID of the cameras.
Set the camera ID setting referring to the pictures and the table on the below.

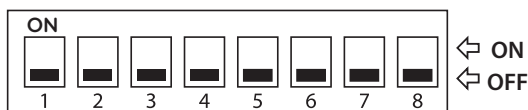| ID	DIP switch position							
	SW1	SW2	SW3	SW4	SW5	SW6	SW7	SW8
0	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
1	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF
2	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF
3	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF
4	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF
5	ON	OFF	ON	OFF	OFF	OFF	OFF	OFF
6	OFF	ON	ON	OFF	OFF	OFF	OFF	OFF
7	ON	ON	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
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
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
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

3

Installation

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
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
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

Removing the Protection Tape

You should remove the protection tape before installing the camera.
Remove the protection tape carefully.

For LT923/723N/P series models.

1. Loosen the screws using the wrench and remove the dome cover.
2. Remove the protection tape and attach the dome cover.

For LT923/723NI/PI series models.

1. Press the Dome Cover open button and then disassemble the dome cover by using ALIGN mark.
2. Remove the protection tape and attach the dome cover.

⚠️ **CAUTION**

You must align the OPEN and LOCK mark correctly when you turn the dome cover to open or close.
If you do not align the mark, it causes a malfunction.

3
Installation

Mounting the camera

You can mount the camera on the ceiling or wall.

Surface mount (optional)

Follow the instructions below to surface mount the camera.

> ⚠️ **CAUTION**
>
> The building structure must be able to support 8 kg.

1. Use the installation guide template to check the mounting location. Face the front of the label toward the area of interest.
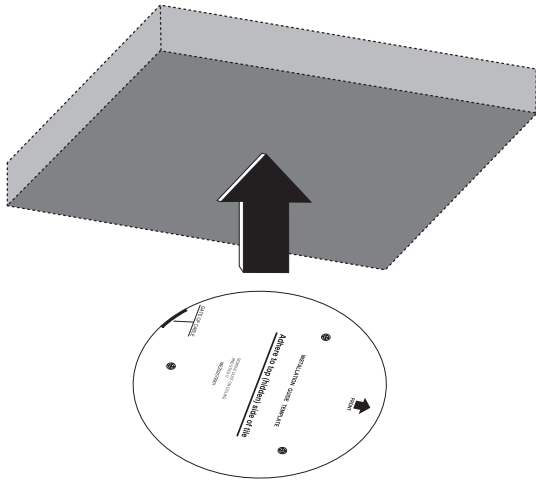
2. Install the surface mounting bracket on the ceiling.
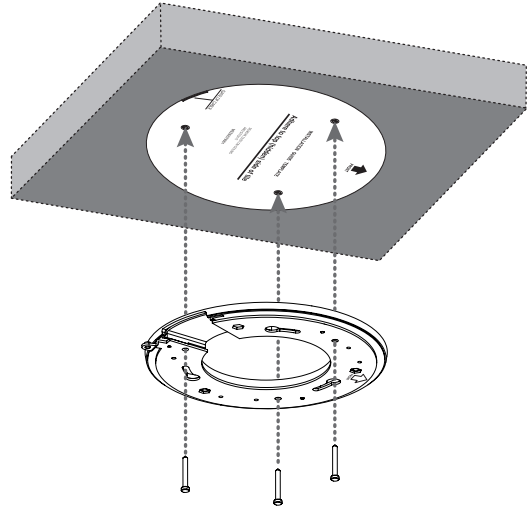
3. Assemble the camera and the surface mounting bracket by following step **1** and **2**. Align the locking point of the surface mounting bracket and the camera.
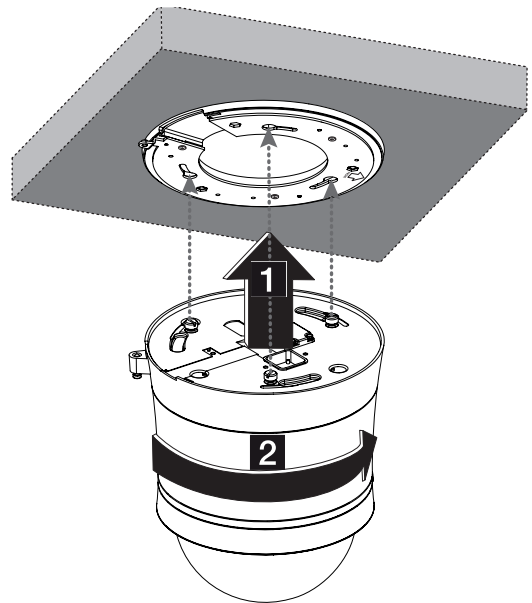
4. Tighten the locking screw.
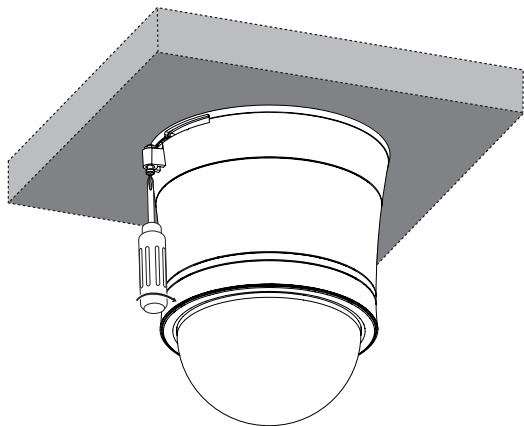
5. Connect the cables to the cable jacks of the camera body. After installing the camera, you should arrange the cables using the outlet box to protect the cables.
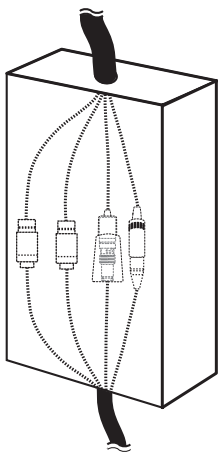
Ceiling mount (optional)

Follow the instructions below to mount the camera on the ceiling.

> **! CAUTION**
>
> The building structure must be able to support 8 kg.

1. Make a hole through the ceiling as shown below.

Ø 166 mm
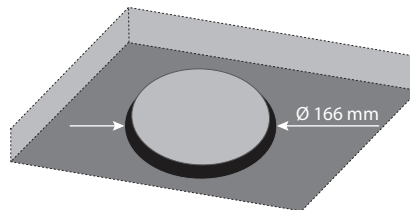
2. Fasten the safety cable to the building superstructure. The building superstructure can vary depending on your installation environment.
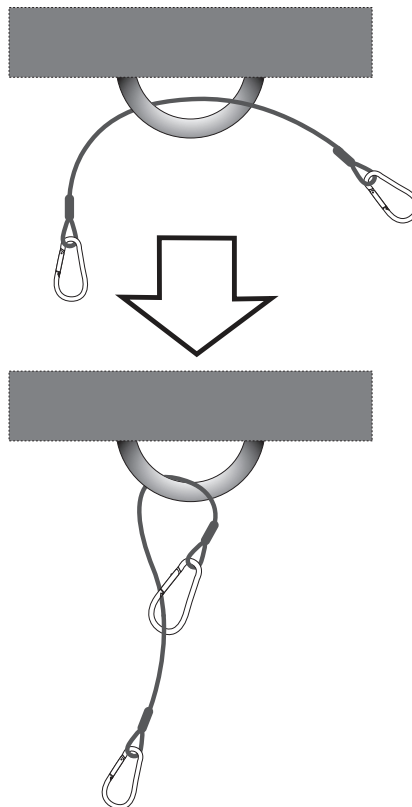
3. Install the ceiling mounting bracket on the ceiling. Face the front of the ceiling mounting bracket toward the area of interest.
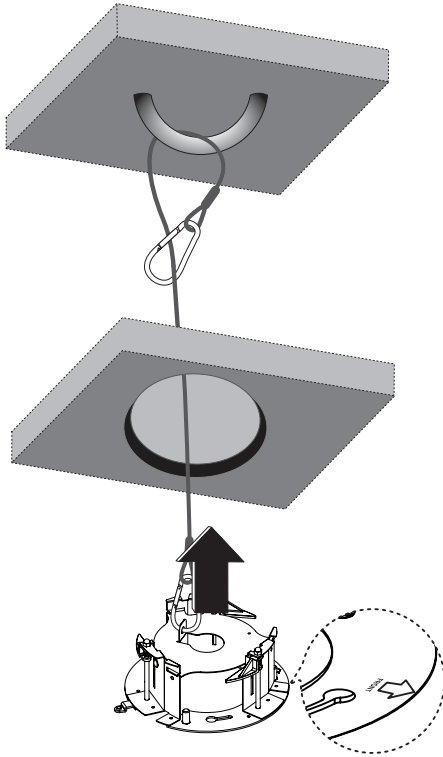
4. Tighten the screws until the ceiling mounting bracket holds the ceiling firmly.
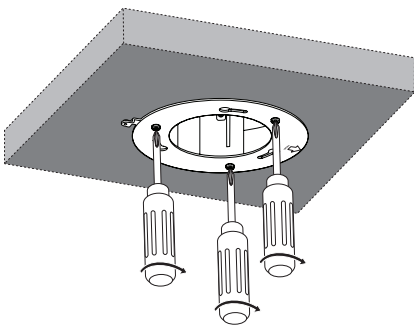
5. Pass the connection cable through the inner side of the ceiling. Connect the cables to the cable jacks of the camera body.
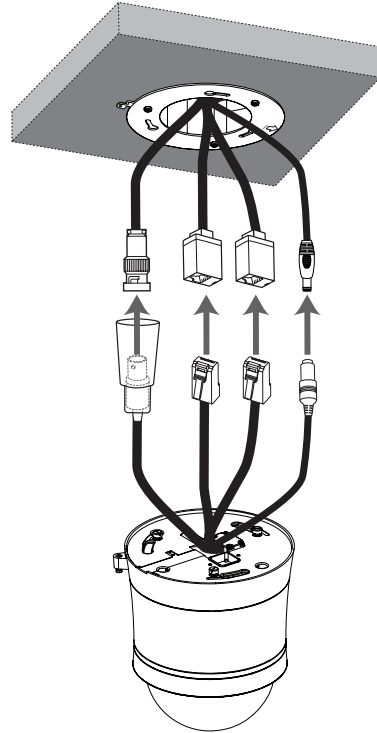
6. Assemble the camera and ceiling mounting bracket by following step 1 and 2. Align the locking point of the surface mounting bracket and the camera.
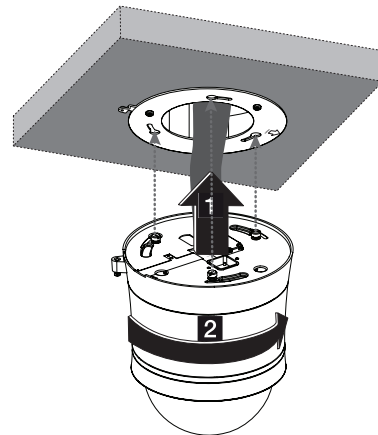
7. Tighten the locking screw.
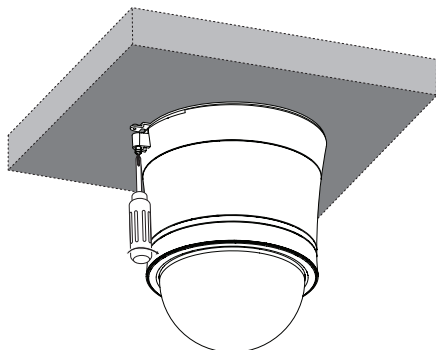
8. Connect the cables to the cable jacks of the cam era body. After installing the camera, you should arrange the cables using the outlet box to protect the cables.
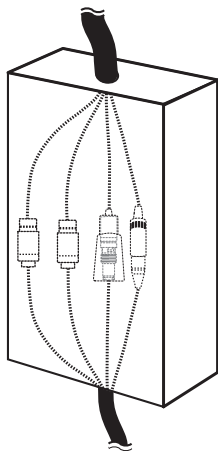
Wall mount (optional)

Install the camera by the following order.

1. Disassemble the PIPE Installation Bracket to remove the [A] part.
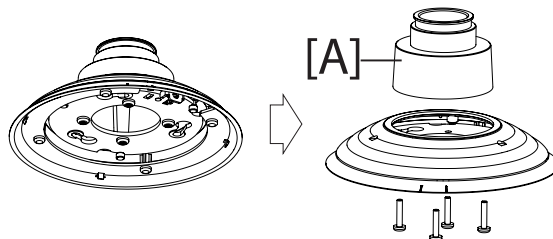
2. Install the PIPE Installation Bracket to the Wall Mount assembly.

3

Installation
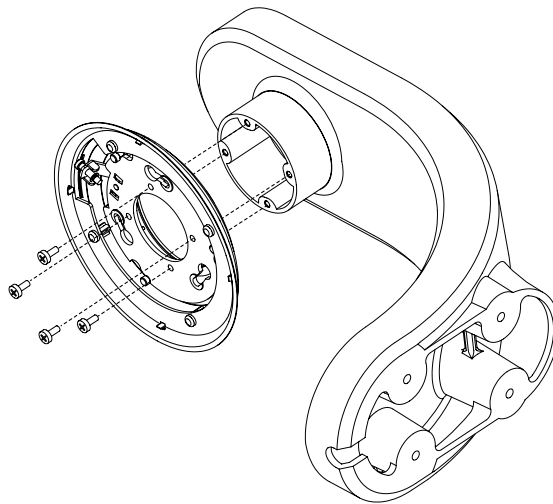
⚠️ **CAUTION**

Do not expose the connected part of the camera cable jacks in the rain or moisture.
Check the red stripe on one side of the safety cable.

3. Connect the safety cable to the wall mount assembly.
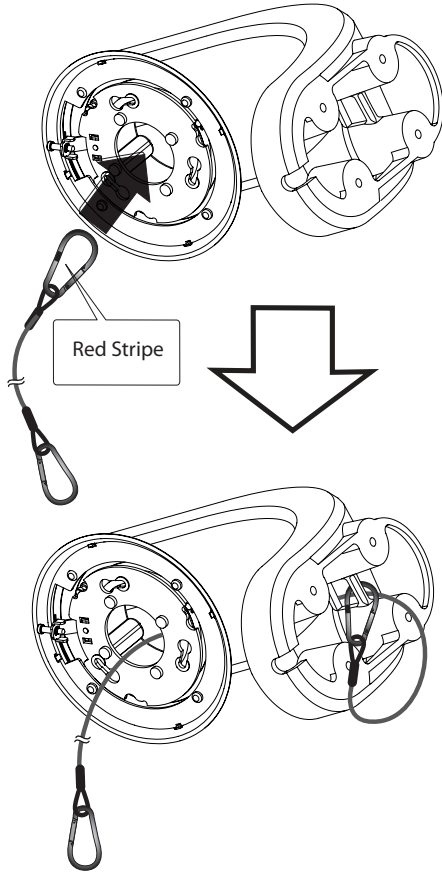
Red Stripe

4. Drill a hole on the wall where you want to install the pipe. Pass the connection cable through the wall mount assembly so that they hang down.
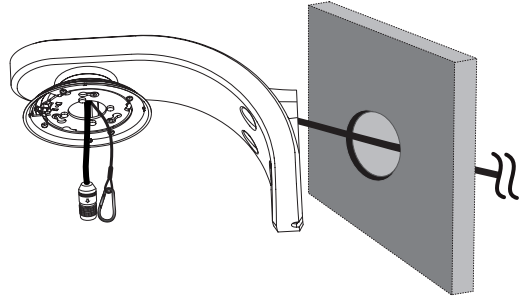
5. Install the wall mount assembly.

6. Connect the connection cable and the safety cable to the camera body.
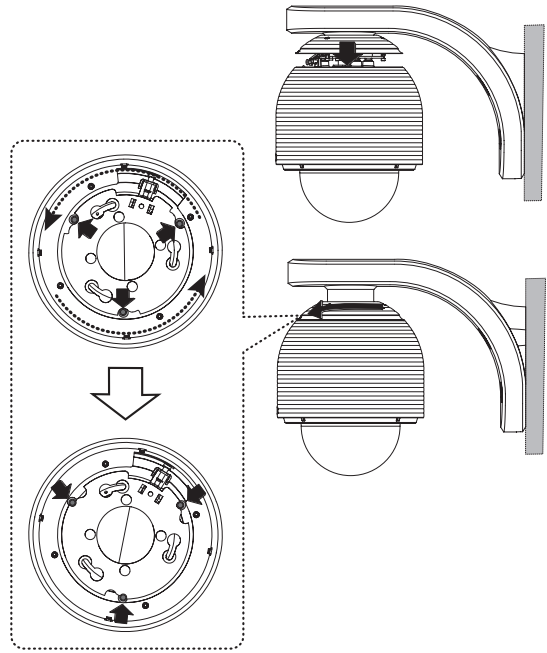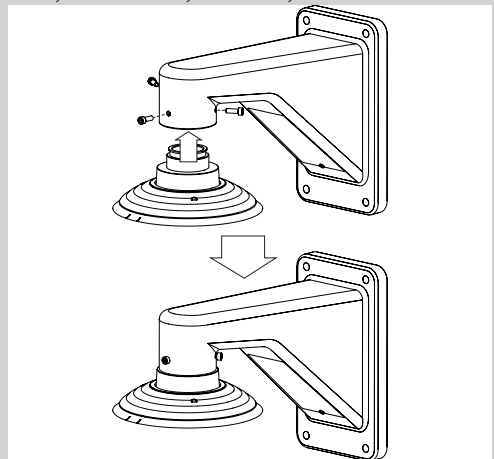
7. Attach the camera to the camera assembly bracket by following step **1** and **2**. Align the locking point of the wall mount assembly and the camera.

8. Tighten the locking screw.

9. Assemble the camera cover as shown below.
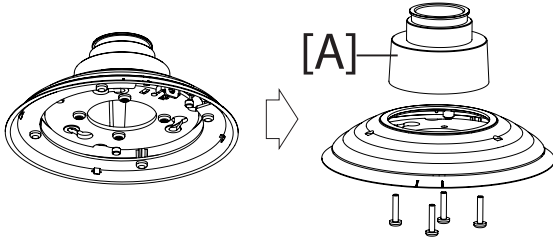

3

Installation

> **! NOTE**
>
> You can install the PIPE Installation Bracket direct to the other type LG Wall Mount assembly. This LG Wall Mount assembly make to easy to install your camera.
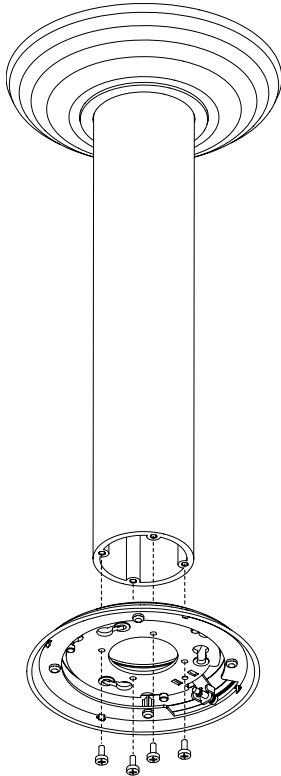
Pendant mount (Optional)

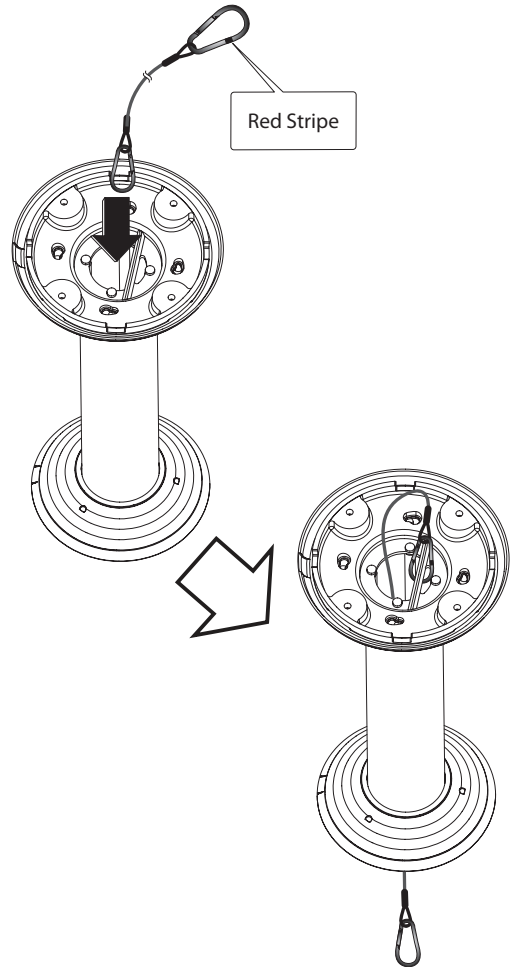Install the camera by the following order.

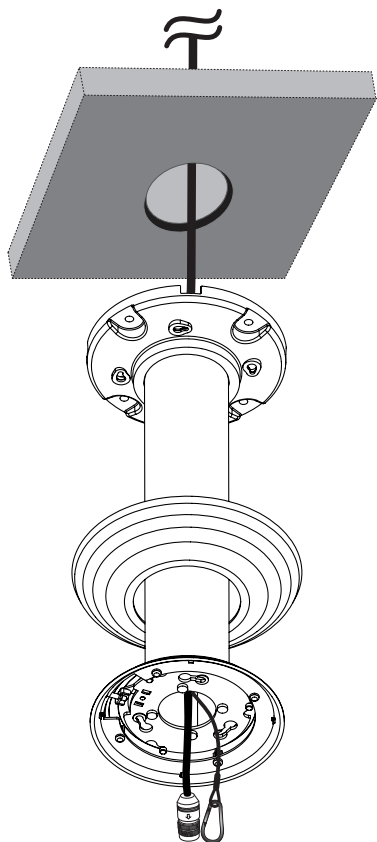1. Disassemble the PIPE Installation Bracket to remove the [A] part.

[A]

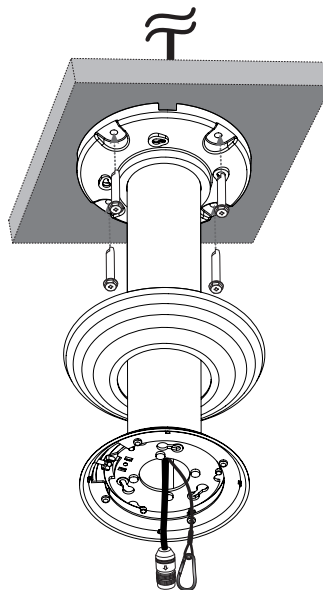2. Install the PIPE Installation Bracket to the Pendant Mount assembly.

3. Connect the safety cable to the pendant mount assembly.
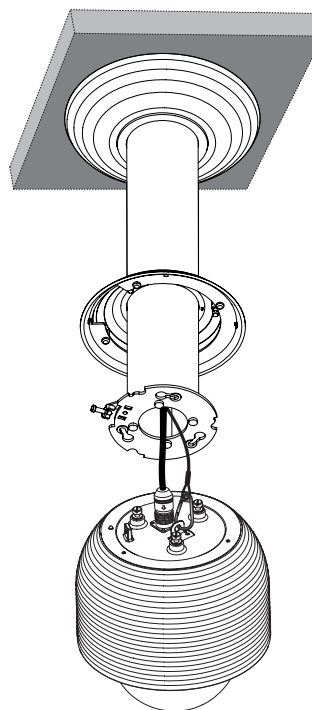
Red Stripe

4. Drill a hole on the wall where you want to install the pipe. Pass the connection cable through the pendant mount assembly so that they hang down.
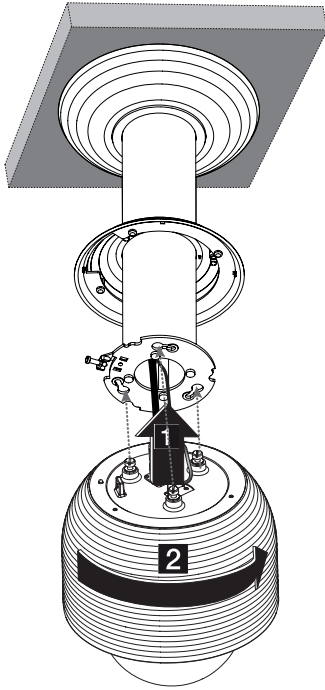

5. Install the pendant mount assembly.

6. Connect the connection cable and the safety cable to the camera body.

7. Attach the camera to the camera assembly bracket by following step **1** and **2**. Align the locking point of the wall mount assembly and the camera.

8. Tighten the locking screw.
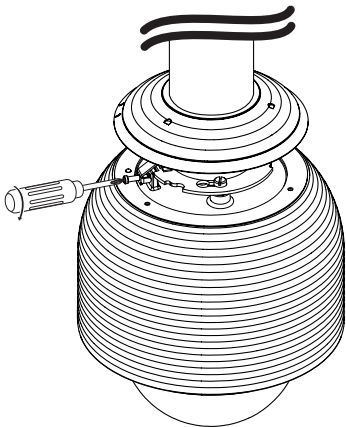
9. Assemble the camera cover as shown below.

> **! NOTE**
>
> You can install the PIPE Installation Bracket direct to the other type LG Wall Mount assembly. This LG Wall Mount assembly make to easy to install your camera.

4
Operation

Setup Menu Overview

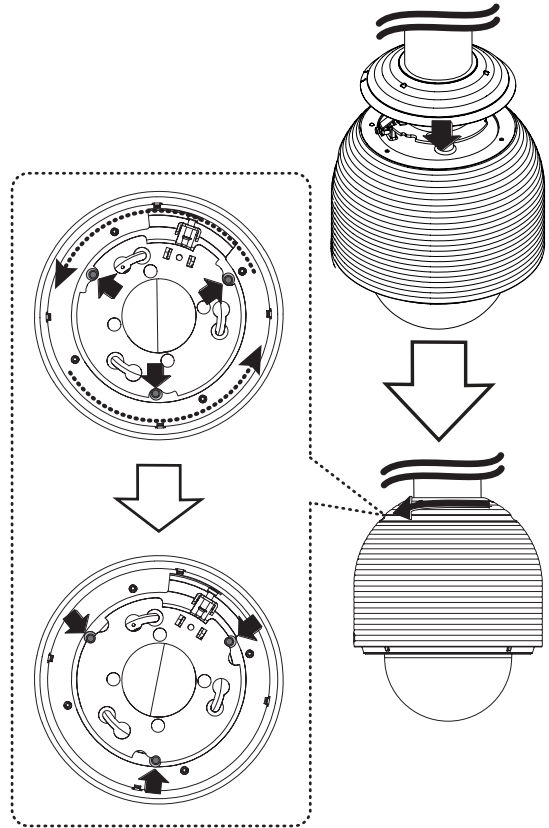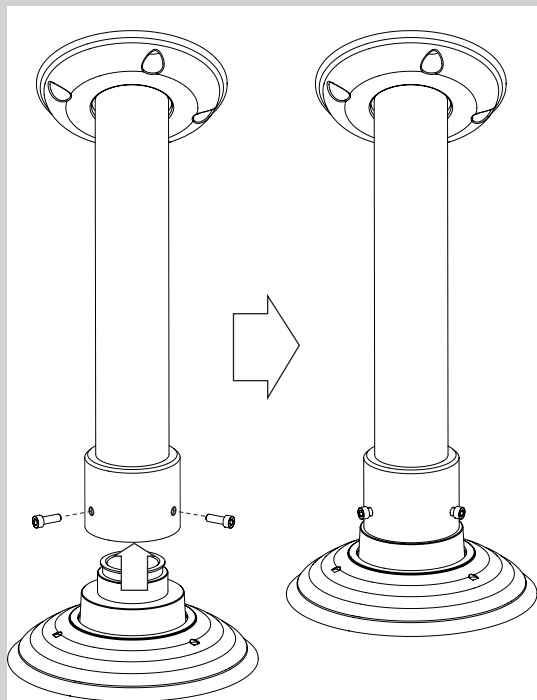The following table shows the list of menu items and options. You can adapt the camera to your requirements by setting up the respective items in these menus.

1st level	2nd level	3rd level	Contents	
CAMERA SET	FOCUS	FOCUS MODE	AUTO/MANUAL/ONE PUSH/ ZOOM TRIG	
		FOCUS DIST	LT923 Series : 50 CM, 1.8 M, 3 M, 6 M LT723 Series : 50 CM, 1 M, 3 M, 5 M	
		RETURN		
	EXPOSURE	IRIS	AUTO/MANUAL	
		AGC	OFF/LOW/MIDDLE/HIGH	
		WDR/BLC	OFF/WDR/BLC/HSBLC	
		BRIGHTNESS	0 to 100	
		SHUTTER	OFF, A.FLK, 1/160, …, X2, AUTO	
		SENS-UP	AUTO X2/AUTO X3/…/AUTO X128/OFF	
		RETURN		
	WHITE BALANCE	ATW		
		AUTO		
		MANUAL	COLOR TEMP	INDOOR/OUTDOOR
			RED	- 100 to +100
			BLUE	- 100 to +100
			RETURN	
		ONE PUSH		

			D/N LEVEL	LOW/MIDDLE/HIGH
	DAY/NIGHT	AUTO	DWELL TIME	5,10,15,30,60 SEC
			RETURN	
		DAY		
		NIGHT		
	3D-DNR	OFF		
		LOW		
		MIDDLE		
		HIGH		
	COLOR	ON	COLOR	-20 to 20
		OFF		
	SHARPNESS	0 to 68		
	RETURN			
PAN/TILT SET	PRESET	SET PRESET	NAME	OFF/ON
			SPEED	1 to 127
			DWELL TIME	1 to 255
			IRIS	AUTO, 20, 40, 60, 80, 100 %
			WDR/BLC/HSBLC	OFF/ LOW WDR/ MID. WDR HIGH WDR/ LOW BLC/ MID. BLC / HIGH BLC/ LOW HSBLC / MID. HSBLC/ HIGH HSBLC
			SHUTTER	X512, ..., x2, AUTO, OFF, A.FLK, 1/160, ..., 1/90 000
			SET POSITION	
			SAVE	
			RETURN	
		GOTO PRESET	0 to 127	
		PRESET TOUR		
		CLEAR PRESET	0 to 127	
		CLEAR ALL		
		FREEZE	ON/OFF	
		RETURN		

GROUP TOUR	SET GROUP	1 to 9		
	RUN	1 to 9		
	CLEAR	1 to 9		
	RETURN			
PATTERN	RECORD	1 to 4		
	RUN	1 to 4		
	RETURN			
AUTO PAN	SET AUTO PAN	1 to 8		
	RUN			
	CLEAR			
	RETURN			
PRIVACY MASK	MASK NUMBER	1 to 8		
	SET MASK			
	MASK STATE	ON/OFF		
	MASK COLOR	GRAY, WHITE, BLACK		
	WIDTH	2 to 320		
	HEIGHT	3 to 240		
	RETURN			
SPECIAL	PROPORTIONAL PT	ON/OFF		
	COMPASS	SET/ON/OFF		
	HOME POSITION	ON	SET	
			GO	
			DWELL TIME(0 to 100)	
			RETURN	
		OFF		
	AUTO RETURN	ON	RETURN TIME (1 MIN to 100 MIN)	
		OFF		
	TILT LIMIT	ON/OFF		
	COMMUNICATION	PROTOCOL	LG MULTIX/ PELCO D/ PELCO P	
		BAUDRATE	2 400/ 4 800/ 19 200/ 38 400/ 9 600 BPS	
		SAVE & EXIT		
		RETURN		

		Target Mode	PT/PTZ	
		Target Size	SMALL/MEDIUM/LARGE	
		Camera Height	2.5 / 5 / 8 / 10 / 15 / 20 / 30M	
	Auto Tracking	Lost Mode	ACTION	STAY / RETURN
				10 / 30 S / 1 / 2 / 3 / 4 / 5 MIN
			TIME OUT	
			RETURN	
		Track Time	INF / 10 / 30 S / 1 / 2 / 3 / 4 / 5 MIN	
		Sensitivity	LOW / MIDDLE / HIGH	
		RETURN		
	RETURN			
OSD SET	USER TITLE	ON/OFF		
	ZOOM MAG	ON/OFF		
	FUNCTION	ON/OFF		
	DOME ID	ON/OFF		
	RETURN			
LANGUAGE	The option depends on the model.			
ALARM SET	ALARM IN1 to ALARM IN4	ON	NORMAL	OPEN/CLOSE
			ALARM IN1 to ALARM IN4	PRESET 0 to 127
			DWELL TIME	3 to 255
			RETURN	
		OFF		
	ALARM OUT1 to ALARM OUT2	ON	ALARM OUT1 to ALARM OUT2	ALARM IN1 to ALARM IN4
			DWELL TIME	3 to 255
			RETURN	
		OFF		
RESET	INFORMATION			
	INITIALIZATION			
	FACTORY RESET			
	RETURN			
RETURN				

Menu navigation

We use the LKD1000 controller in this manual to explain the features of the LG Dome camera because of the LKD1000's ability to control all of the LG Dome camera's advanced features. (For detailed controller instructions, refer to the LKD1000 Controller Manual.)

LKD1000 button	Camera OSD operation
Cam OSD button	Displays or removes the setup menu.
ZOOM IN button	Use to move upper direction on the menu screen.
ZOOM OUT button	Use to move lower direction on the menu screen.
FOCUS NEAR button	Use for increase the value of the option.
FOCUS FAR button	Use for decrease the value of the option.
Open/Close(Enter) buttons	Executes selections and displays a submenu for an item with the mark.

Accessing the camera setup menu

To access the setup menus using the keys on a LKD1000 controller, do the following:

1. Select CAM (Camera) icon in the main menu and then press ENTER. The camera ID input menu will be displayed.

2. Enter the connected camera ID to control the camera connected to the LKD1000 controller directly and then press ENTER. The camera control menu will be displayed.
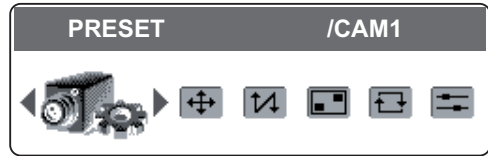
3. Press [Cam OSD] button to display the camera setup menu.

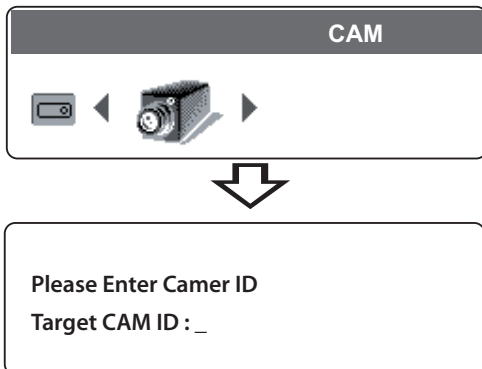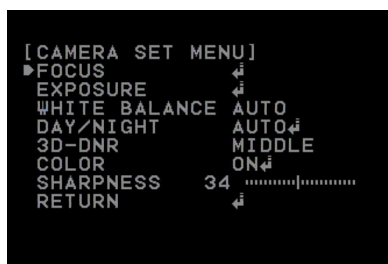At this point, you have access to the camera setup menu.

General operation

1. Use [In] or [Out] button to select an option then press [Open] or [Close] button.
   Submenu appears on the monitor.
2. Use [In] or [Out] button to select a submenu option.
3. Use [Near] or [Far] button to select a value.
4. Select [RETURN] option then press [Open] or [Close] to retur n to the previous menu.
5. Press [Cam OSD] button to exit the setup menu.

Camera menu setti ngs

Focus setting

The camera adjusts the focus automatically by sensing the center of the picture.

```
[CAMERA SET MENU]
▶FOCUS              ↵
 EXPOSURE           ↵
 WHITE BALANCE  AUTO
 DAY/NIGHT      AUTO↵
 3D-DNR         MIDDLE
 COLOR          ON↵
 SHARPNESS      34  ┅┅┅┅┅╷┅┅┅┅┅
 RETURN             ↵
```

⬇

```
[FOCUS MENU]
▶FOCUS MODE     AUTO
 FOCUS DIST     50CM
 RETURN         ↵
```

Focus mode

Select [FOCUS MODE] option on the [FOCUS] menu, then select the following mode.

• AUTO: Auto-focus is activated automatically.

• MANUAL: Focus is activated automatically after the zoom movement is finished. If you want to control the focus manually, press the FOCUS (NEAR or FAR) buttons on the controller.

• ONE PUSH: The focus is activated manually. If the camera is received auto-focus command, the camera is activated auto-focus mode and the focus is set automatically and then the focus mode is automatically changed to manual mode.

• ZOOM TRIG: The focus is activated manually. If you change the zoom, the focus is activated automatically and then the focus mode is automatically changed to manual mode.

Focus Distance setting

Selects the minimum shooting distance for the focus. Select [FOCUS DIST] option on the [FOCUS] menu, then select a focus distance value.

Exposure settings

```
[CAMERA SET MENU]
 FOCUS              ↵
▶EXPOSURE           ↵
 WHITE BALANCE  AUTO
 DAY/NIGHT      AUTO↵
 3D-DNR         MIDDLE
 COLOR          ON↵
 SHARPNESS      34  ┅┅┅┅┅┅╷┅┅┅┅┅
 RETURN             ↵
```

⬇

```
[EXPOSURE MENU]
▶IRIS           AUTO
 AGC            MIDDLE
 WDR/BLC        OFF
 BRIGHTNESS     50  ┅┅┅┅┅┅╷┅┅┅┅┅
 SHUTTER        AUTO
 SENS-UP        OFF
 RETURN         ↵
```

Iris setting

Select the desired lens iris value for camera exposure. Select [IRIS] option on the [EXPOSURE] menu, then select a value.

• AUTO: The lens iris is set automatically.

• MANUAL: Use [Near] or [Far] button to select the DC Iris level. DC Iris level are set by one parameter unit.

AGC (Automatic Gain Control) setting

If the images are too dark, change the maximum [AGC] value to make the images bright.

1. Select [AGC] option on the [EXPOSURE] menu.

2. Use [Near] or [Far] button to select a mode.

WDR/BLC setting

Use WDR/BLC option to set the options for BLC or WDR camera.

1. Select [WDR/BLC] option on the [EXPOSURE] menu.

2. Use [Near] or [Far] button to select a mode then press [Open] or [Close].

   • WDR LEVEL: WDR (Wide dynamic range) feature can be very helpful to cope with very challenging lighting conditions. It is capable of capturing both of the dark part and bright part and combining the differences into a scene to generate a highly realistic image as original scene. Set the WDR level (LOW, MIDDLE, HIGH).

   • BLC LEVEL: Camera's backlight compensation feature helps alleviate issues of visibility in high contrast areas. Set the BLC level (LOW, MIDDLE, HIGH).

   • HSBLC: Use for masking brightness of the specific area to view the subject more clearly.

      - HSBLC LEVEL: Select the HSBLC level. (LOW, MIDDLE, HIGH).

      - COLOR: Use [Near] or [Far] button to select a color.

   • OFF: Not used.

BRIGHTNESS setting

You can increase the brightness of the darkened video. If you set the brightness to lower value, the image is darkened. If you set the brightness to higher value, the image gets bright.

1. Select [BRIGHTNESS] option on the [EXPOSURE] menu.

2. Use [Near] or [Far] button to set the bright level.

SHUTTER (Shutter Speed) setting

Select the desired shutter speed for camera exposure. You can change the shutter speed to higher speed to capture fast-moving subjects, though the image becomes darker.

1. Select [SHUTTER] option on the [EXPOSURE] menu.

2. Use [Near] or [Far] button to set shutter speed.

SENS-UP setting

If pictures are not clear due to darkness, use this function to increase the sensitivity of picture.

1. Select [SENS-UP] option on the [EXPOSURE] menu.

2. Use [Near] or [Far] button to set the SENS-UP limit. To set the SENS-UP function, select the [AUTO] on the [SHUTTER].

> ⓘ **NOTE**
>
> If you set to one of the SHUTTER options except AUTO on the [SHUTTER] menu, the [SENS-UP] setting is not available and [---] mark is displayed.

White Balance setting

Select the method by which the camera shifts its output colors to compensate for the color of a light source.
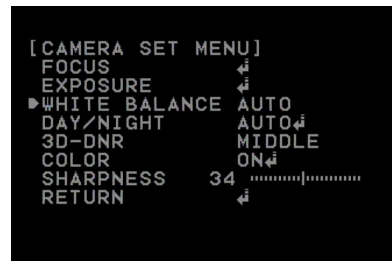
1. Select [WHITE BALANCE] option on the [CAMERA SET] menu.

2. Use [Near] or [Far] button to select a mode then press [Open] or [Close].

   • ATW (Auto-Tracing White Balance): In this mode, the color temperature range for the proper white balance is approximately from 1 800 K to 10 500 K. Proper white balance may not be obtained under the following conditions:

      - When the color temperature is out of the 1 800 K to 10 500 K range.

      - When the scene mostly contains high color

temperature objects, such as a blue sky or sunset.

- When the scene is dim.

• AUTO: In this mode, the color temperature range for the proper white balance is approximately 2 700 K to 5 400 K. Proper white balance may not be obtained under the following conditions:

- When the color temperature is out of the 2 700 K to 5 400 K range.

- When the scene mostly contains high color temperature objects, such as a blue sky or sun set.

- When the scene is dim.

• ONE PUSH: If you select the ONE PUSH mode, you will be able to set up the White Balance automatically using [Open] or [Close] button.

• MANUAL: You can set the white balance options manually.

- COLOR TEMP: Use [Near] or [Far] button to select a function.

   › INDOOR: The color temperature range for the proper white balance is approximately 3 200 K.

   › OUTDOOR: The color temperature range for the proper white balance is approximately 5 100 K.

- RED: Set the desired red value. (-100 to 100)

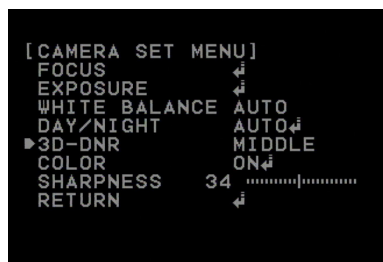- BLUE: Set the desired blue value. (-100 to 100)

Day/Night setting

1. Select [DAY/NIGHT] option on the [CAMERA SET] menu.
2. Use [Near] or [Far] button to select the mode.

   • AUTO: You will be able to change the Day/Night mode automatically.

- D/N LEVEL: Use [Near] or [Far] button to select a level.

- DWELL TIME: Use [Near] or [Far] button to select a dwell time.

NOTE

If you set the AGC to [OFF] or the SHUTTER is set to one of the SHUTTER options except AUTO on the [EXPOSURE] menu, the AUTO mode of the DAY/NIGHT function is not available and [---] mark is displayed.

• DAY: Color mode enabled.
• NIGHT: Black-and-white mode enabled.
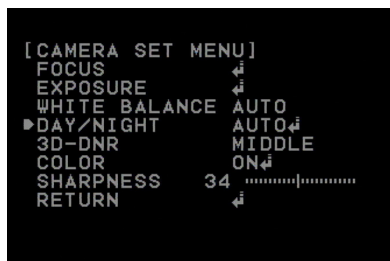
3D-DNR setting

1. Select [3D-DNR] option. If pictures are not clear due to brightness, use this function to reduce the noise of picture.
2. Use [Near] or [Far] button to select a option.

NOTE

• If you set the AGC to [OFF] on the [EXPOSURE] menu, the [3D-DNR] function is not available.

• When you use this function, the afterimage may occur.

Color setting

You can switch the displayed picture to grayscale or color.
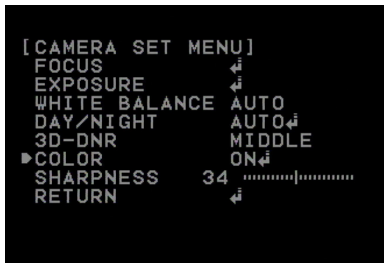
1. Select [COLOR] option on the [CAMERA SET] menu.
2. Use [Near] or [Far] button to change a color effect.
   - ON: To display the picture with color. Select ON and press [Open] or [Close] to display the submenu. You can adjust the color level using the [Near] or [Far] button.
   - OFF: To display the picture with grayscale.

## Sharpness setting

Sharpens the image outline.
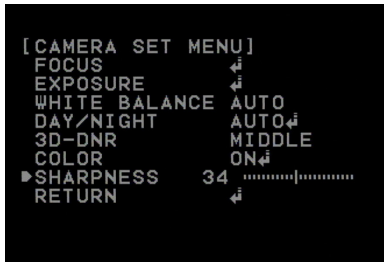
1. Select [SHARPNESS] option on the [CAMERA SET] menu.
2. Use [Near] or [Far] button to adjust the option. If you set the sharpness value to higher, the image outline becomes sharp. If you set to lower value, the image outline becomes dim.

PAN/TILT Settings

Preset setting

Preset position is the function to register camera monitoring positions (preset positions) associated with position numbers. By entering the position numbers, you can move cameras to the preset positions.
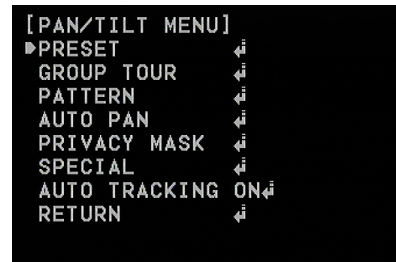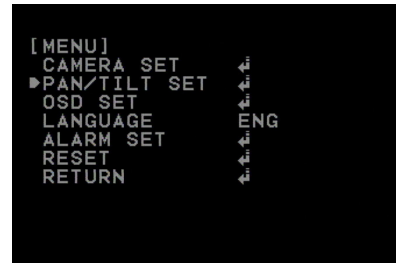
To register preset positions

1. Select the [SET PRESET] option on the [PRESET] menu.
2. Use the [Near] or [Far] button to select the preset number you wish to register and press the [Open] or [Close] button.
3. Set the preset name.

   How to set the preset name.

   1. Set the NAME option to [ON] and press [Open] or [Close] button.
   2. Use [In], [Out], [Near] or [Far] button to select a character, number, symbol mark or option item.
      - </>: Moves cursor to left or right.
      - (Blank): Insert a space at the cursor position.

- • CLR: If you enter the wrong code, select [CLR] then press [Open] or [Close] to delete. All letters will be erased at once.
  - • SAVE: Select this option to confirm the settings.
  - • EXIT: Select this option to exit the settings.
3. Press [Open] or [Close] button to confirm your selection.
4. Select the speed to move to the preset position.
5. Select the preset tour dwell time.
6. Set the IRIS option. IRIS LEVEL are set by 20 % unit (20 %, 40 %, 60 %, 80 %, 100 %)
7. Set the WDR/BLC/HSBLC option.
8. Set the SHUTTER option.
9. Select the [SET POSITION] option and press [Open] or [Close] button.
10. Move the camera to a point you wish by using the joystick and then press [Open] or [Close] button to save it.
11. Select [SAVE] option and press [Open] or [Close] button to confirm the settings.
The position and its number are memorized.
12. Repeat steps 1 to 11 to add additional positions.
13. Select [RETURN] option and press [Open] or [Close] button to exit the setting menu.

Changing a picture in a preset position

The preset function makes the combination camera move to the programmed preset position. It is necessary to program preset positions for the combination camera beforehand.
1. Select [GOTO PRESET] option on the [PRESET] menu.
2. Select the memorized preset position's index number then press [Open] or [Close] button. The camera moves to the preset position and the picture of the camera in that position appears on the monitor.

To tour the preset positions

You can tour all preset positions.
1. Select [PRESET TOUR] option on the [PRESET] menu. All registered preset positions in the camera will be selected and the camera position image will be switched on the active monitor.
2. You can stop the tour by moving the joystick or pressing any button.

To clear the preset position
You can clear a memorized preset position.
1. Select [CLEAR PRESET] option on the [PRESET] menu.
2. Selects the memorized preset index number then press [Open] or [Close] button to clear the preset positions.

To clear all the preset positions
You can clear all of the memorized preset positions at once.
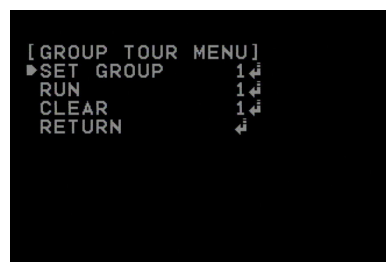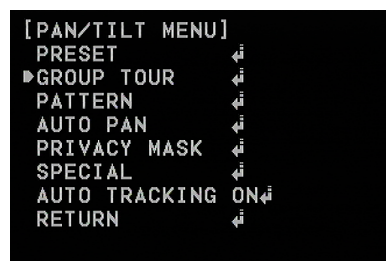1. Select [CLEAR ALL] option on the [PRESET] menu.
2. Press [Open] or [Close] button to clear the all preset positions.

Freeze function
1. Select [FREEZE] option on the [PRESET] menu.
2. Use [Near] or [Far] button to set up the [ON] or [OFF].

Group tour setting
You can create a group using preset positions that are registered already. A maximum of 9 groups is available.

To set the group

1. Select [SET GROUP] option on the [GROUP TOUR] menu.
2. Select the group number and press [Open] or [Close] button.
3. Set the group item. You can set the group item up to 8.
4. Select [SAVE] option and press [Open] or [Close] button to confirm the settings.
5. Select [RETURN] option and press [Open] or [Close] button to exit the setting menu.

To tour the group

You can tour the group that is registered already.

1. Select [RUN] option on the [GROUP TOUR] menu.
2. Select the group number and press [Open] or [Close] button.
   The camera moves to the preset position in the group and the picture of the camera in that position appears on the monitor.

To delete a group

You can delete a memorized group.

1. Select [CLEAR] option on the [GROUP TOUR] menu.
2. Select the group number and press [Open] or [Close] button. The group will be deleted.

Pattern setting

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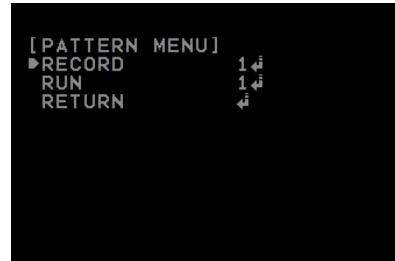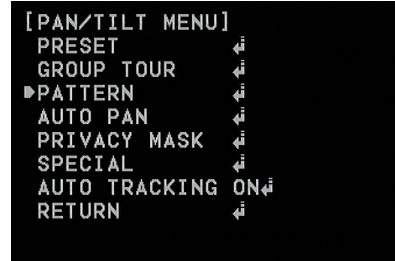
To record the pattern

1. Select [RECORD] option on the [PATTERN] menu.
2. Select the recording number and press [Open] or [Close] button. The pattern recording is started
3. Move the camera through the desired movement.
4. Press [Open] or [Close] button to stop the pattern recording.
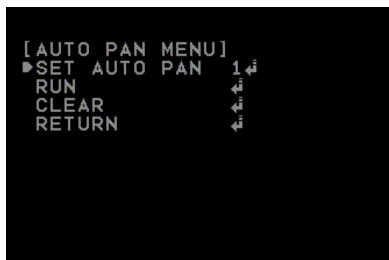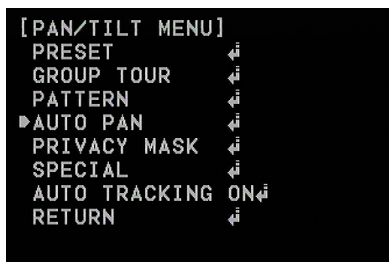
> **! NOTE**
>
> The available total time of pattern differs depending on operation.

To play the pattern

1. Select [RUN] option on the [PATTERN] menu.
2. Select the recording number and then press [Open] or [Close] button to play the programmed pattern. The tour will play indefinitely until you stop it by moving the joystick or pressing any button.

Auto Pan setting

By selecting the Auto Pan number, the camera pans automatically.

```
[PAN/TILT MENU]
 PRESET          ↵
 GROUP TOUR      ↵
 PATTERN         ↵
▶AUTO PAN        ↵
 PRIVACY MASK    ↵
 SPECIAL         ↵
 AUTO TRACKING ON↵
 RETURN          ↵
```

⬇

```
[AUTO PAN MENU]
▶SET AUTO PAN  1↵
 RUN            ↵
 CLEAR          ↵
 RETURN         ↵
```

To set the Auto Pan position

1. Select [SET AUTO PAN] option on the [AUTO PAN] menu.
2. Select the number you wish to register and press [Open] or [Close] button.
3. Select the moving speed.
4. Select the Auto pan dwell time.
5. Move the camera to the desired start point by using the joystick.
6. Select the [SET POSITION] option and press [Open] or [Close] button.
7. Move the camera to the desired end point by using the joystick and then press [Open] or [Close] button.
8. Repeat steps 1 to 7 to add additional positions.
9. Select [RETURN] option and press [Open] or [Close] button to exit the setting menu.

> **ⓘ NOTE**
>
> If you press the [CLEAR] Option during the Auto paning, All of AUTO PAN position will be deleted.

To play the auto pan

You can play the camera with auto pan function.

1. Select [RUN] option on the [AUTO PAN] menu.
2. You can stop the Auto pan function by moving the joystick or pressing any button.

To delete the auto pan position

You can delete the memorized auto pan position.

1. Select [AUTO PAN] option on the [PAN/TILT] menu.
2. Select [CLEAR] option then press [Open] or [Close] button to delete the Auto pan position.

Privacy Mask setting

This function is aiming at the protection of personal privacy, the mask zone is not displayed on the screen. Up to 8 zones can be registered.

```
[PAN/TILT MENU]
 PRESET          ↵
 GROUP TOUR      ↵
 PATTERN         ↵
 AUTO PAN        ↵
▶PRIVACY MASK    ↵
 SPECIAL         ↵
 AUTO TRACKING ON↵
 RETURN          ↵
```

⬇

```
[PRIVACY MASK MENU]
▶MASK NUMBER    1
 SET MASK       ↵
 MASK STATE    ON
 MASK COLOR  BLACK
 WIDTH      320 |⋯⋯⋯⋯⋯|
 HEIGHT     240 |⋯⋯⋯⋯⋯|
 RETURN         ↵
```
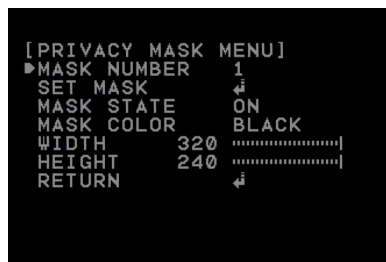
1. Select [PRIVACY MASK] option on the [PAN/TILT MENU].
2. Press [Open] or [Close] button to display the PRIVACY MASK MENU.
3. Use [Near] or [Far] button to select a zone number on the [MASK NUMBER] option.
4. Select the [SET MASK] option and press [Open] or [Close] button.

5. Select the mask zone using the joystick and then press [Open] or [Close] button to save it.

6. Use [Near] or [Far] button to set up the [ON] or [OFF] on the [MASK STATE] option. If you already registered the mask zone and set to ON, the mask zone box appears on the monitor.

7. Use [Near] or [Far] button to select the color of the mask zone box on the [MASK COLOR] option.

8. Select the [WIDTH] option and use [Near] or [Far] button to adjust the horizontal size of the mask zone box.

9. Select the [HEIGHT] option and use [Near] or [Far] button to adjust the vertical size of the mask zone box.

10. Repeat steps 3 to 9 to add additional positions.

> ## ! NOTE
>
> • The parts with the registered mask numbers from 1 to 4 have the same color. (So do the parts with the numbers from 5 to 8). If you change the mask color, the registered mask color will be changed automatically with the same color for each of group (1 to 4, 5 to 8).
>
> • The initial PRIVACY MASK color is set to black . After setting, the PRIVACY MASK position on [SET MASK] option, it`ll be changed to gray color.
> Be sure, you have to press [Open] or [Close] button on the [SET MASK] option to confirm the privacy mask color.
>
> • If you need a Privacy Mask for a Preset, set the Privacy Mask first.

Special setting
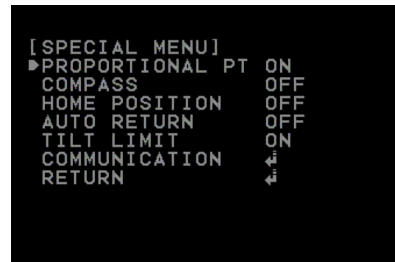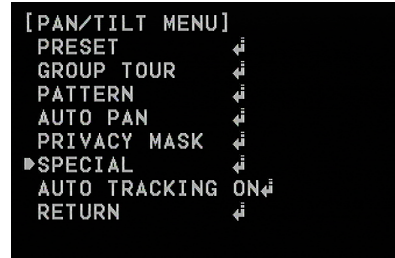
Proportional PT

This function optimizes the image by automatically adjusting the PAN/TILT (horizontal/vertical rotation) speed according to the zoom ratio.

1. Select [PROPORTIONAL PT] option on the [SPECIAL] menu.

2. Use [Near] or [Far] button to toggle it on and off.

   • ON : Pan/tilt speed is in inverse proportion to the zoom ratio.

   • OFF : The speed is constant at the fastest level regardless of the zoom ratio.

Compass

You can display the north, south, east and west information on the screen.

1. Select [COMPASS] option on the [SPECIAL] menu.

2. Set the [COMPASS] option to [SET] and then press [Open] or [Close] button.

3. Select north point using the joystick and then press [Open] or [Close] button.

4. Set the [COMPASS] option to [ON].

Home position

The home position is the camera's basic position.
The camera returns to this position whenever you want.

Use the following procedure to make the home position.

1. Select [HOME POSITION] option on the [SPECIAL] menu.
2. Use [Near] or [Far] button to set it ON.
3. Press [Open] or [Close] button.
4. Select [SET] option and then press [Open] or [Close] button.
5. Select the home position where you want and then press [Open] or [Close] button.
6. Select [DWELL TIME] option and then select the dwell time.
7. Select [RETURN] option and press [Open] or [Close] button to exit the setting menu.

Go to Home position

1. Select [HOME POSITION] option on the [SPECIAL] menu.
2. Use [Near] or [Far] button to set it ON.
3. Press [Open] or [Close] button.
4. Select [GO] option and then press [Open] or [Close] button. The camera will move to the home position.

> **! NOTE**
>
> • If you do not want to use the home position function, set the [HOME POSITION] option to [OFF].
> • If you set the [HOME POSITION] to [ON], the [AUTO RETURN] option is set to [OFF] automatically and you can not use it.

Auto return

This function can be used to specify automatic return to a particular mode if a certain amount of time elapses without any operation being performed.

1. Select [AUTO RETURN] option on the [SPECIAL] menu.
2. Use [Near] or [Far] button to set it [ON] and then press [Open] or [Close] button.
3. Select [RETURN TIME] option and then select the auto return time.
4. Select [RETURN] option and press [Open] or [Close] button to exit the setting menu.

> **! NOTE**
>
> If you set [AUTO RETURN] to [ON], the [HOME POSITION] option is set to [OFF] automatically and you can not use it.

Tilt limit

You can specify the tilt range. If you set this function, the camera is able to tilt from 15º to 165º.

1. Select [TILT LIMIT] option on the [SPECIAL] menu.
2. Use [Near] or [Far] button to set it [ON]. If you do not want to use this function, set it to [OFF].

Communication

This setting is required to establish a connection between the system controller and the camera.

1. Select [COMMUNICATION] option on the [SPECIAL] menu.
2. Press [Open] or [Close] button.
3. Set the below options.

    • Protocol: This item lets you set a protocol for RS-485 communication. Select the desired protocol.

    • Baud Rate: Select the desired speed of communication between the system controller and the camera. Confirm selected parameter to the baud rate of the system controller.

    • SAVE & EXIT: Select this option and then press [Open] or [Close] button to save the communication settings and exit the setting menu.

Auto Tracking setting

Configure Auto Tracking MENU options. These options are used for tracking the displayed object in motion on the screen. If you want to use the [Auto Tracking] option, use [Near] or [Far] button to set it ON.

4

Operation
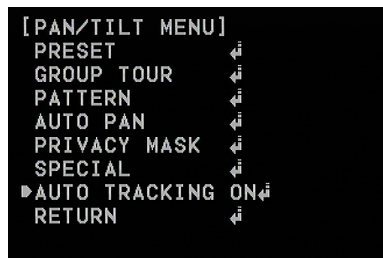
```
           ↓

[AUTO TRACKING MENU]
▶TRACK MODE     PTZ
 TARGET SIZE    MEDIUM
 CAMERA HEIGHT  8M
 LOST MODE      ↵
 TRACK TIME     1MIN
 SENSITIVITY    MIDDLE
 RETURN         ↵
```

> ! **NOTE**
>
> **Environmental conditions**
> In the case of following installation conditions, object tracking errors may occur.
> - Contrast between object and background is low.
> - Dome cover is contaminated by raindrops or snow etc.
> - Illumination is changing dynamically.
> - There are a lot of movement except tracking object.
> - An object moves vertically on the optic angle of the camera.
> - An object moves under an installed camera.
> - An object that there are a lot of changes of light levels, e.g. shining or flickering.
> - Environment that reflection is on dome inside by window reflection, road surface reflection, backlight.
> - Object moves behind large and tall objects, e.g. telegraph pole etc.
> - The motion of object is fast.
> - Occasion that camera is vibrating.

Track Mode
Use [Near] or [Far] button to select a mode.

- PT : This mode uses Pan/Tilt and tracks an object while Auto Tracking is conducted.
- PTZ : This mode uses Pan/Tilt/Zoom and tracks an object while Auto Tracking is conducted.

Target Size
Configuration of how large the object being tracked is actually displayed on the screen.

- SMALL : This mode zooms in and magnifies the object until it occupies a quarter size of the screen.
- MEDIUM : This mode zooms in and magnifies the object until it occupies a half size of the screen.
- LARGE: This mode zooms in and magnifies the object until it occupies three-fourths of the screen.

> ! **NOTE**
>
> If you set the [TRACK MODE] to PT, you can not set the [TARGET SIZE] and [---] is displayed.

Camera Height
Use [Near] or [Far] button to select how high the camera is installed.

Lost Mode
You can configure what the camera will execute when the camera loses the object.

- Action
  - STAY : When the camera loses the object, it doesn't come back to its initial position, but stays where the object has been just lost.
  - RETURN : When the camera loses the object, it returns to its initial position and gets ready to detect a new object.
- Time Out : When the camera loses the object for the first time, it zooms out twice and tries to track the object. You can configure that after the camera zooms out twice, how long the camera maintains the status of the object detection to re-detect it.

Track Time
You can configure maximum time duration of tracking. The system starts tracking when it detects objects in motion. As the time reaches the maximum time duration configured by user, the tracking is disabled and the camera returns to its initial position. The system will be reset for tracking new objects. You should be aware not to set up the time duration too short since it may cause tracking failure.

Sensitivity

You can configure the sensitivity of detection. Choosing proper sensitivity will enhance the performance of the Auto Tracking since the environmental condition may influence the accuracy of the detection. For instance, rain, snow, or swaying branches may cause malfunction of auto tracking.

- LOW : The sensitivity of the object detection is low. In this case, if the object is too small or very similar to the background, it may not be detected.

- MEDIUM : The sensitivity of the object detection is middle. The camera detects the object more accurately than the case of low sensitivity. It may detect swaying branches or flags, but not frequently.

- HIGH : The sensitivity of the object detection is high. The camera can detect a small object, but it can also detect swaying branches or flags, rain or snow.
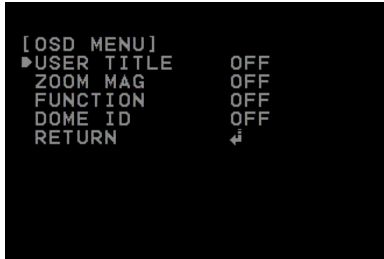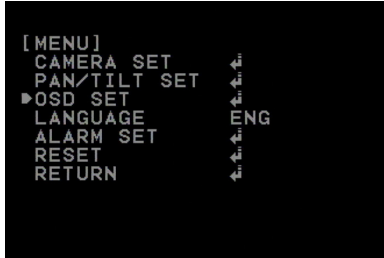
> ### ! NOTE
>
> - When connected to Preset, Auto Tracking feature can be used in conjunction with Alarm function.
> - Under low light circumstances, tracking function may not work.
> - Tracking error may occur by the headlight of vehicle.
> - Auto PTZ tr acking is used by single intruder watch of access limitation area. Therefore, when there are many moving objects, it may not be suitable to use.
> - Tracking errors may occur in case of camera was not fixed well.
> - To the time when the long shadow occurs in sunrise and sunset etc, tracking errors will be able to occur.
> - Under flickering lights or dome internal reflections, tracking function may not work correctly.
> - Object tracking may malfunction about object passed very fast.
> - When contrast between object and background is low, tracking fail may occur.
> - If tracking object is so big or small, tracking fail may occur.

- The camera may detect and track unintended movements – tree branches, hanging banner, flag, color change by sudden lighting change, luminous intensity change by cloud – tracking errors can be occurred by bright light sources, flickering lights and dome internal reflections. To prevent and correct such errors, adjust the direction and angle of the camera.

- Tracking errors and degradation by raindrops, snow, fog, smoke or heat can be occurred.

- If the camera lens is smeared with foreign substances or is scratched, tracking errors may occur.

- Adjust the tracking object size to 1/4 of screen at initial position.

- Smeared and dusty dome covers can decrease the tracking performance so it is necessary to clean the dome cover and camera lens regularly.

- This feature may not perform as expected depending on the situation and circumstance.
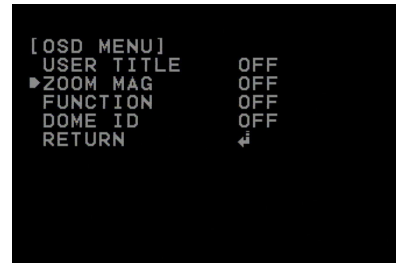
OSD Settings

User title setting

You can use the camera identification to assign a number and character to the camera.

1. Select [USER TITLE] option on the [OSD] menu.
2. Use [Near] or [Far] button to set it [ON].
3. Press [Open] or [Close] button. The USER TITLE menu appears.
4. Use [In], [Out], [Near] or [Far] button to select a character, number, symbol mark or option item.

- </>: Moves cursor to left or right.
- [1] (Blank): Insert a space at the cursor position.

- CLR: If you enter the wrong code, select [CLR] then press [Open] or [Close]. All letters will be erased at once.
- POS: Move the USER TITLE position on the screen using the [Near] or [Far] buttons.
- END: Select this option to exit the settings.

ZOOM MAG setting

Displays or removes the zoom OSD on the screen.

1. Select [ZOOM MAG] option on the [OSD] menu.
2. Use [Near] or [Far] button to set it [ON] or [OFF].
3. Select [RETURN] option and press [Open] or [Close] button to exit the setting menu.

FUNCTION setting

Displays or removes the Function OSD on the screen.
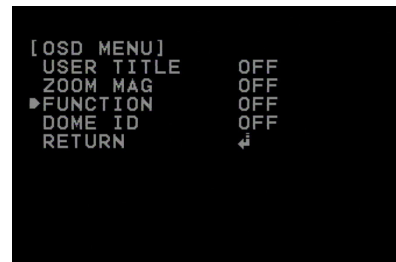
1. Select [FUNCTION] option on the [OSD] menu.
2. Use [Near] or [Far] button to set it [ON] or [OFF].
3. Select [RETURN] option and press [Open] or [Close] button to exit the setting menu.

DOME ID setting

Displays or removes the Camera ID OSD on the screen.

```
[OSD MENU]
 USER TITLE    OFF
 ZOOM MAG      OFF
 FUNCTION      OFF
▶DOME ID       OFF
 RETURN        ↵
```
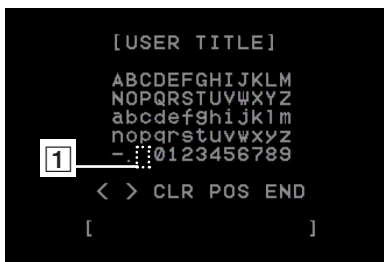
1. Select [DOME ID] option on the [OSD] menu.
2. Use [Near] or [Far] button to set it [ON] or [OFF]
3. Select [RETURN] option and press [Open] or [Close] button to exit the setting menu.

LANGUAGE Setting

Select a language for the setup menu and OSD display.

```
[MENU]
 CAMERA SET    ↵
 PAN/TILT SET  ↵
 OSD SET       ↵
▶LANGUAGE      ENG
 ALARM SET     ↵
 RESET         ↵
 RETURN        ↵
```

ALARM Setting

This camera has a terminal that can sense the alarm signals. The camera can be programmed to go to a preset with a signal from any connected alarm device.

```
[MENU]
 CAMERA SET    ↵
 PAN/TILT SET  ↵
 OSD SET       ↵
 LANGUAGE      ENG
▶ALARM SET     ↵
 RESET         ↵
 RETURN        ↵
```

```
[ALARM MENU]
▶ALARM IN1     OFF↵
 ALARM IN2     OFF↵
 ALARM IN3     OFF↵
 ALARM IN4     OFF↵
 ALARM OUT1    OFF↵
 ALARM OUT2    OFF↵
 RETURN        ↵
```
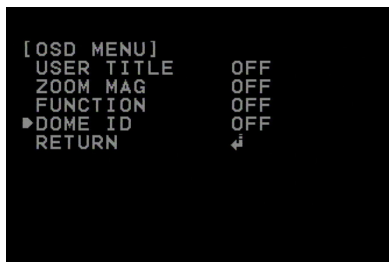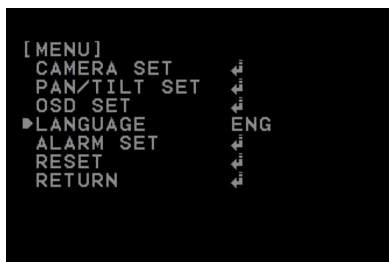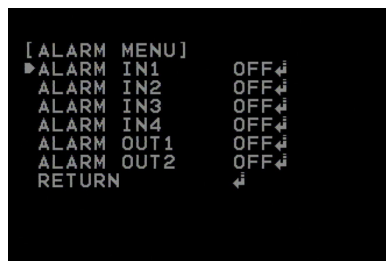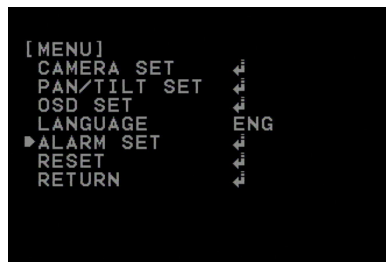
Alarm In setting

1. Select one of the alarms in option on the [ALARM SET] menu.
2. Use [Near] or [Far] button to set it [ON].
3. Press [Open] or [Close] button.
4. Select [NORMAL] option and select [Open] or [Close] option.
   - OPEN: Activate the alarm in the close position.
   - CLOSE: Activate the alarm in the open position.
5. Select [ALARM IN(1 to 4)] option and select preset number. When the alarm is triggered, the camera moves to the selected preset position. The presets run continuously until alarm source is off.
6. Select [DWELL TIME] option and then set the alarm dwell time. The alarm is stopped after selected dwell time.

4

Operation

Alarm Out setting

1. Select one of the alarm out options on the [ALARM SET] menu.
2. Use [Near] or [Far] button to set it [ON].
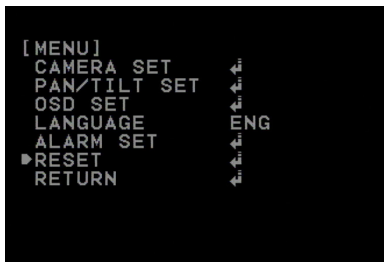3. Press [Open] or [Close] button.
4. Select alarm input number. When the selected alarm input is triggered, the alarm signal is outputted.
5. Select [DWELL TIME] option and then set the alarm dwell time. The alarm output is stopped after selected dwell time.

RESET Setting

```
[MENU]
 CAMERA SET     ↵
 PAN/TILT SET   ↵
 OSD SET        ↵
 LANGUAGE       ENG
 ALARM SET      ↵
▶RESET          ↵
 RETURN         ↵
```

⬇

```
[RESET MENU]
▶INFORMATION    ↵
 INITIALIZATION ↵
 FACTORY RESET  ↵
 RETURN         ↵
```

Information

You can view the current camera information such as PTZ software version, camera software version, camera ID, Protocol and Baud Rate.

1. Select [INFORMATION] option on the [RESET] menu.
2. Press [Open] or [Close] button to display the current camera information.

Initialization

You can initialize the camera settings.

1. Select [INITIALIZATION] option on the [RESET] menu.
2. Press [Open] or [Close] button then confirmation window is displayed.
3. Select [YES] and press [Open] or [Close] button.

Factory reset

Clear certain settings and information and return to factory default settings.

1. Select [FACTORY RESET] option on the [RESET] menu.
2. Press [Open] or [Close] button then confirmation window is displayed.
3. Select [YES] and press [Open] or [Close] button.The camera will return to the factory default settings.

5
Appendix

Specifications

LT923N/P series

Model	LT923N	LT923P
Signal System	NTSC (High Resolution)	PAL (High Resolution)
Pick-Up Device	4.5 mm EX-view HAD CCD	
Total Pixels No	410 000 Pixels	470 000 Pixels
Horizontal Resolution	More Than 540 TV Lines	
Lens	x37 Zoom (F1.5 (Wide Angle), F4.1 (Tele)), f = 3.5 mm to 129 mm	
S/N Ratio	More Than 50 dB (AGC Off)	
Day & Night	Day / Night / Auto	
Minimum Illumination(lx)	Color: 0.003 lx (0.6, Sens-up Off), B/W: 0.000 1 lx (0.1, Sens-up Off)	
Digital Zoom	X 12	
Sync System	Internal	
White Balance	AUTO / ONE PUSH / MANUAL / ATW	
Control method	RS-485 Control	
Alarm Input	4 Channel	
Alarm Output	2 Channel	
Video Output	Composite Output 1 Vp-p (75 Ω Terminated)	
Electronic Shutter	1/60 to 1/90 000 second	1/50 to 1/90 000 second
Iris Control	Auto / Manual	
Wide Dynamic Range	Dual Shutter Control (62 dB)	

5

Appendix

Panning Range (Speed)	0º to 360º (Endless), Maximum 400º/second
Tilting Range (Speed)	0º to 180º, Maximum 400º/second
Privacy Zone	8 area active programmable zone
Preset/ID	128 position / 256
Auto Panning	2 to 8 points
Pattern	4
Group Tour	Maximum 9 groups
Operating Temperature	-20 ºC to 50 ºC (Humidity: 0 % RH to 80 % RH)
Safekeeping Temperature	-30 ºC to 60 ºC (Humidity: 0 % RH to 90 % RH)
Power Supply	AC 24 V
Power Consumption	25 W
Dimension(Ø x H)	234.6 mm X 269.9 mm
Weight	4.17kg

LT923NI/PI series

Model	LT923NI	LT923PI
Signal System	NTSC (High Resolution)	PAL (High Resolution)
Pick-Up Device	4.5 mm EX-view HAD CCD	
Total Pixels No	410 000 Pixels	470 000 Pixels
Horizontal Resolution	More Than 540 TV Lines	
Lens	x37 Zoom (F1.5(Wide Angle), F4.1(Tele)), f = 3.5 mm to 129 mm	
S/N Ratio	More Than 50 dB (AGC Off)	
Day & Night	Day / Night / Auto	
Minimum Illumination(lx)	Color: 0.003 lx (0.6, Sens-up Off), B/W: 0.000 1 lx (0.1, Sens-up Off)	
Digital Zoom	X 12	
Sync System	Internal	
White Balance	AUTO / ONE PUSH / MANUAL / ATW	
Control method	RS-485 Control	

Alarm Input	4 Channel	
Alarm Output	2 Channel	
Video Output	Composite Output 1 Vp-p (75 Ω Terminated)	
Electronic Shutter	1/60 to 1/90 000 second	1/50 to 1/90 000 second
Iris Control	Auto / Manual	
Wide Dynamic Range	Dual Shutter Control (62 dB)	
Panning Range (Speed)	0º to 360º (Endless), Maximum 400º/second	
Tilting Range (Speed)	0º to 180º, Maximum 400º/second	
Privacy Zone	8 area active programmable zone	
Preset/ID	128 position / 256	
Auto Panning	2 to 8 points	
Pattern	4	
Group Tour	Maximum 9 groups	
Operating Temperature	-10 ºC to 50 ºC (Humidity: 0 % RH to 80 % RH)	
Safekeeping Temperature	-30 ºC to 60 ºC (Humidity: 0 % RH to 90 % RH)	
Power Supply	AC 24 V	
Power Consumption	19 W	
Dimension(Ø x H)	205.8 mm X 247.4 mm	
Weight	2.5kg	

5

Appendix

LT723N/P series

Model	LT723N	LT723P
Signal System	NTSC (High Resolution)	PAL (High Resolution)
Pick-Up Device	4.5 mm EX-view HAD CCD	
Total Pixels No	410 000 Pixels	470 000 Pixels
Horizontal Resolution	More than 540 TV Lines	
Lens	x27 Zoom (F1.5 (Wide Angle), F3.8 (Tele Photo)), f = 3.25 mm to 88 mm	
S/N Ratio	More Than 50 dB (AGC Off)	
Day & Night	Day / Night / Auto	
Minimum Illumination(lx)	Color: 0.003 lx (0.6, Sens-up Off), B/W: 0.000 1 lx (0.1, Sens-up Off)	
Digital Zoom	X 12	
Sync System	Internal	
White Balance	AUTO / ONE PUSH / MANUAL / ATW	
Control method	RS-485 Control	
Alarm Input	4 Channel	
Alarm Output	2 Channel	
Video Output	Composite Output 1 Vp-p (75 Ω Terminated)	
Electronic Shutter	1/60 to 1/90 000 second	1/50 to 1/90 000 second
Iris Control	Auto / Manual	
Wide Dynamic Range	Dual Shutter Control (62 dB)	
Panning Range (Speed)	0° to 360° (Endless), Maximum 400°/second	
Tilting Range (Speed)	0° to 180°, Maximum 400°/second	
Privacy Zone	8 area active programmable zone	
Preset/ID	128 position / 256	
Auto Panning	2 to 8 points	
Pattern	4	
Group Tour	Maximum 9 groups	
Operating Temperature	-20 ℃ to 50 ℃ (Humidity: 0 % RH to 80 % RH)	
Safekeeping Temperature	-30 ℃ to 60 ℃ (Humidity: 0 % RH to 90 % RH)	
Power Supply	AC 24 V	
Power Consumption	25 W	
Dimension(Øx H)	234.6 mm X 269.9 mm	
Weight	4.17kg	

LT723NI/PI series

Model	LT723NI	LT723PI
Signal System	NTSC (High Resolution)	PAL (High Resolution)
Pick-Up Device	4.5 mm EX-view HAD CCD	
Total Pixels No	410 000 Pixels	470 000 Pixels
Horizontal Resolution	More than 540 TV Lines	
Lens	x27 Zoom (F1.5 (Wide Angle), F3.8 (Tele Photo)), f = 3.25 mm to 88 mm	
S/N Ratio	More Than 50 dB (AGC Off)	
Day & Night	Day / Night / Auto	
Minimum Illumination(lx)	Color: 0.003 lx (0.6, Sens-up Off), B/W: 0.000 1 lx (0.1, Sens-up Off)	
Digital Zoom	X 12	
Sync System	Internal	
White Balance	AUTO / ONE PUSH / MANUAL / ATW	
Control method	RS-485 Control	
Alarm Input	4 Channel	
Alarm Output	2 Channel	
Video Output	Composite Output 1 Vp-p (75 Ω Terminated)	
Electronic Shutter	1/60 to 1/90 000 second	1/50 to 1/90 000 second
Iris Control	Auto / Manual	
Wide Dynamic Range	Dual Shutter Control (62 dB)	
Panning Range (Speed)	0º to 360º (Endless), Maximum 400º/second	
Tilting Range (Speed)	0º to 180º, Maximum 400º/second	
Privacy Zone	8 area active programmable zone	
Preset/ID	128 position / 256	
Auto Panning	2 to 8 points	
Pattern	4	
Group Tour	Maximum 9 groups	
Operating Temperature	-10 ºC to 50 ºC (Humidity: 0 % RH to 80 % RH)	
Safekeeping Temperature	-30 ºC to 60 ºC (Humidity: 0 % RH to 90 % RH)	
Power Supply	AC 24 V	
Power Consumption	19 W	
Dimension(Ø x H)	205.8 mm X 247.4 mm	
Weight	2.5kg	