

ELMO[®]

PAN • TILT • ZOOM COMMUNICATION CAMERA

PTC-100S



PTC-110R

INSTRUCTION MANUAL

Please read this instruction manual carefully before using the PTC-100S or PTC-110R and keep it for future reference.

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 install near heat sources such as radiators, heat registers, stoves or other apparatus (including amplifiers) that produce heat.
8. Unplug this apparatus during lightning storms or when unused for long periods of time.
9. Refer all servicing to qualified 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 been fallen onto the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

	CAUTION RISK OF ELECTRIC SHOCK DO NOT OPEN	
<p>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.</p>		

The 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 appliance.



CAUTION

- Do not use any power supply other than specified.

WARNING

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

- * The CAUTION label is attached on the base of product.

INFORMATION

This equipment has been tested and found to comply with the limits for 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, use, 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.

USER-INSTALLER

CAUTION: Your authority to operate this FCC verified equipment could be voided if you make changes or modifications not expressly approved by the party responsible for compliance to Part of the FCC Rules.

HANDLING PRECAUTIONS

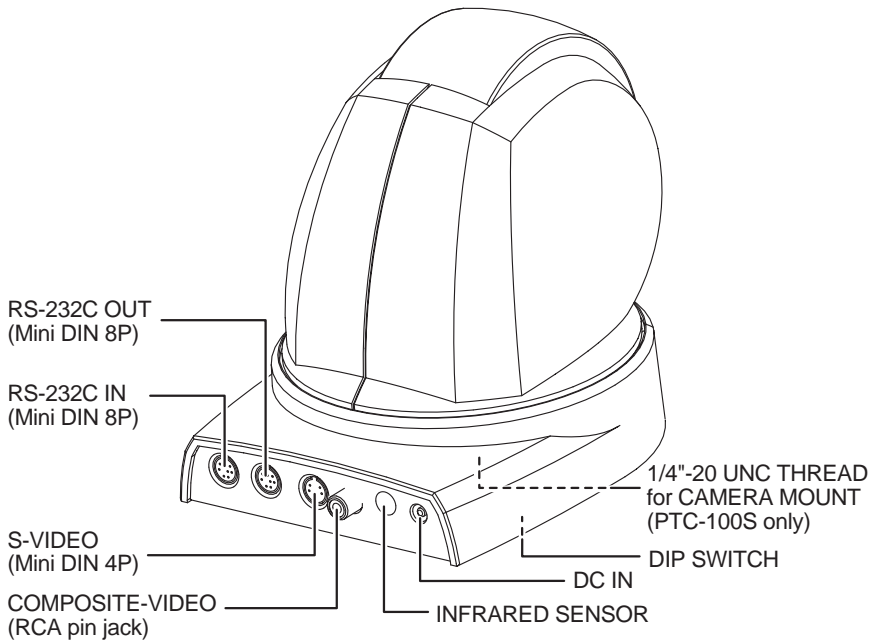
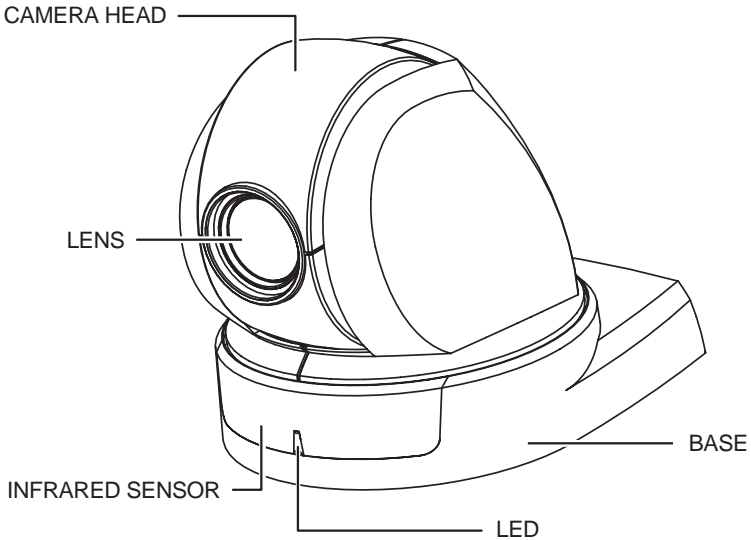
- Be sure to use the provided AC adapter.
- Do not leave the Camera under direct sunlight or by heater, or the Camera may be discolored, or damaged.
- Do not place the Camera in any humid, dusty, windy or vibrating location. Use the Camera in the following environmental condition:
 - Temperature: 0 °C ~ 40 °C (32 ° ~ 104 °F)
 - Humidity: 30% ~ 85% (No condensation)
- Use a soft, dry cloth for cleaning. Do not use any volatile solvent, such as thinner or benzene.
- Do not directly point the camera lens into the sun, or the camera may be damaged.
- Caring for the batteries:
 - If the Camera is not used for long time, remove the batteries from the remote controller.
 - Do not use rechargeable Ni-Cd batteries.
 - Do not use new and old batteries, or batteries of different type together.
 - Do not try to recharge or short-circuit the batteries.
- Do not operate the PAN/TILT motion continuously for a long time, or the life of the Camera will be shortened.

CONTENTS

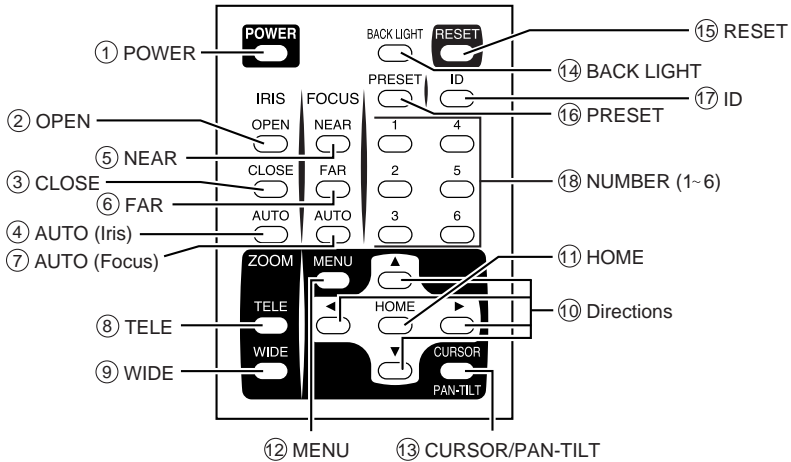
IMPORTANT SAFETY INSTRUCTIONS	1
HANDLING PRECAUTIONS	3
1. PART NAMES AND FUNCTIONS	5
● Overall view	5
● Wireless remote controller	6
2. WIRELESS REMOTE CONTROLLER	7
● Receivable range	7
● Preparation	8
● When multiple Cameras are operated through the wireless remote controller	8
3. SETTING UP	9
● Connection examples for the Camera	9
● Installation for PTC-100S	9
● Installation for PTC-110R	10
4. OPERATION PROCEDURES	14
[1] Power supply to the Camera	14
[2] Turning ON/OFF of the Camera power	14
[3] Operating PAN/TILT	15
[4] Lens operation	16
[5] BLC (Back Light Control)	17
[6] Preset operation	17
5. THE ID NUMBER SETTING	18
6. OSD (On-Screen Display)	19
● OSD Display menu	19
7. DIP SWITCH SETTINGS	22
8. RS-232C SPECIFICATIONS	23
● Transmission specifications	23
● Pin assingment	23
9. TROUBLESHOOTING HINTS	24
10. SPECIFICATIONS	25
● General	25
● Camera	25
● Pan/Tilt	26
● Other	26
11. SUPPLIED ACCESSORIES	26

1. PART NAMES AND FUNCTIONS

● Overall View



● Wireless Remote Controller



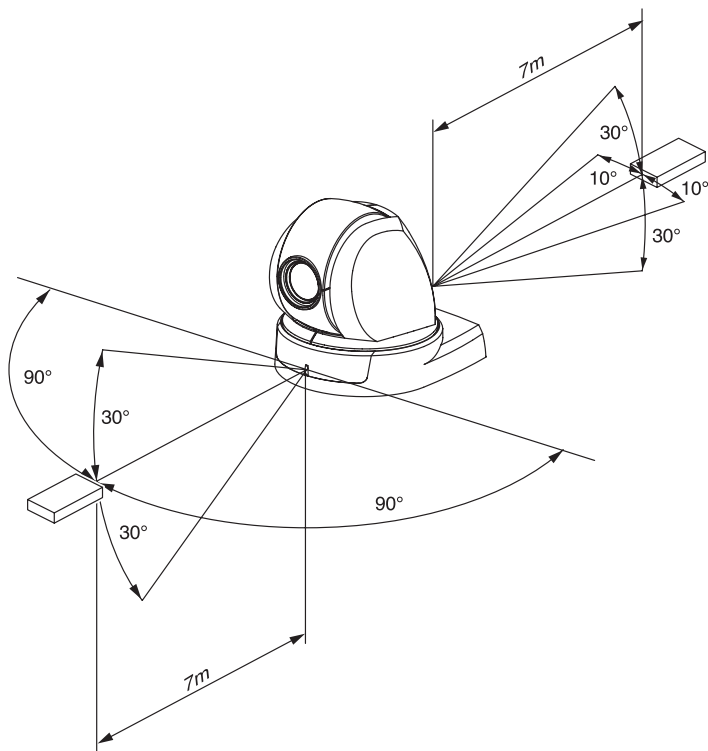
No.	Button Name	Function	Reference Page
①	POWER	To turn ON/OFF the Camera power.	P.14
②	OPEN	To open the iris manually.	P.16
③	CLOSE	To close the iris manually.	P.16
④	AUTO	To iris automatically.	P.16
⑤	NEAR	To move the focus near.	P.16
⑥	FAR	To move the focus far.	P.16
⑦	AUTO	To focus automatically.	P.16
⑧	TELE	To zoom in.	P.16
⑨	WIDE	To zoom out.	P.16
⑩	DIRECTIONS (▲ ▼ ◀ ▶)	To change the Camera head direction. To operate the OSD*1 cursor.	P.15 P.19, P.20, P.21
⑪	HOME	To turn the Camera head to the front. To operate the OSD*1 cursor.	P.15 P.19, P.20, P.21
⑫	MENU	To turn ON/OFF the OSD*1 display.	P.19, P.20, P.21
⑬	CURSOR/ PAN-TILT	To switch the operation mode between the menu operation and the PAN-TILT operation.	P.19
⑭	BACK LIGHT	Back light control.	P.17, P.20
⑮	RESET	To readjust the Camera head and Lens position.	P.15
⑯	PRESET	To register the preset.	P.17
⑰	ID	To operate multiple Cameras individually.	P.18
⑱	NUMBER (1~6)	To set the preset position and the ID No.	P.17, P.18

*1 OSD (On-Screen Display)

2. WIRELESS REMOTE CONTROLLER

Point the infrared emitting part of the wireless remote controller at the infrared sensor of the Camera, located at the front, and the rear panel, and press the button for the desired function.

● Receivable range



Note: The infrared sensors may receive the infrared rays only within a narrower receivable range or may not receive them at all depending on the ambient environment, such as being placed under the sunlight or near an inverter fluorescent lamp. In such case, relocate the installation place of the receiving side or block off the sunlight.

● Preparation

Remove the battery case cover by pressing downward on the [▼] mark part in the direction as indicated by the arrow.

Install 2 pcs. of batteries (type R03,AAA) into the case in the direction as indicated there.

Note: Install the batteries with the proper ⊕ to ⊕ and ⊖ to ⊖ polarity.

Note: For dry cells, be sure to use the size AAA.

Note: Change the batteries at least once a year or when even necessary.

Note: The batteries supplied with the Camera are only for use in initially confirming the operation of the Camera.

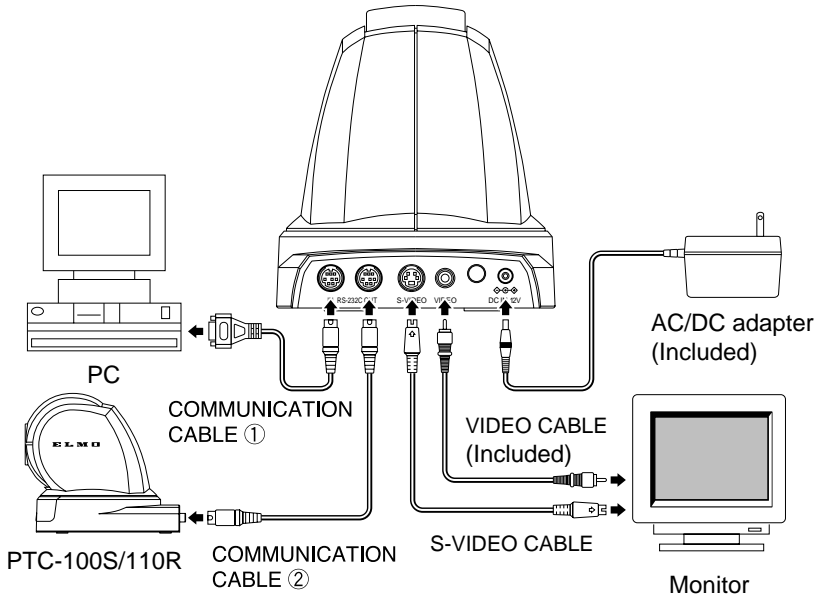
It is not guaranteed that these batteries will work effectively for the indicated period.

● When multiple Cameras are operated through the wireless remote controller

Refer to "5. THE ID NUMBER SETTING" on P. 18.

3. SETTING UP

● Connection examples for the Camera



● Installation for PTC-100S

Install the Camera on a flat, stable place.

Note: Do not install the Camera upside down using the Camera mount (1/4"-20UNC thread), or the screws may be loosened due to the PAN-TILT operation or the like, and the Camera may drop and be damaged.

Note: When the Camera mount (1/4"-20UNC thread) is used, do not fasten the screws too tightly, or the Camera head may not move or other failure may be caused.

Note: When carrying the Camera, be sure to hold the base.

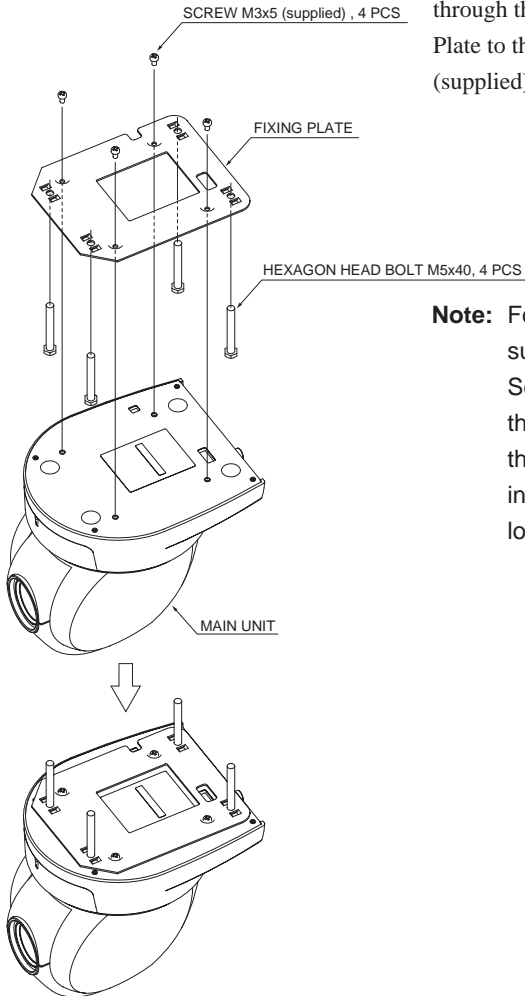
Note: Do not turn the Camera head in the PAN-TILT direction by hand, or the Camera head may be broken.

● Installation for PTC-110R

Note: When carrying the Camera, be sure to hold the base.

Note: Do not turn the Camera head in the PAN-TILT direction by hand, or the Camera head may be broken.

(1) Mounting the Fixing Plate

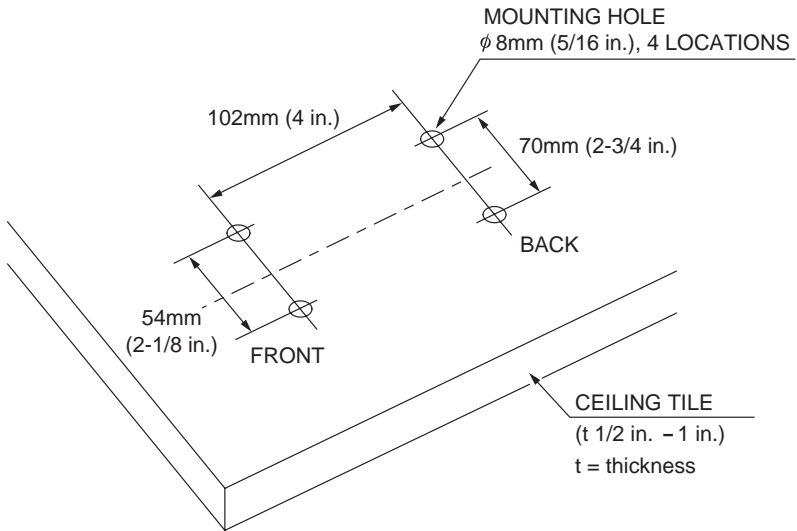


- Put 4 Hexagon Head Bolts M5x40 (supplied) through the Fixing Plate, and screw the Fixing Plate to the Main Unit with 4 Screws M3x5 (supplied).

Note: For fastening the Fixing Plate, be sure to use the 4 Phillips-head Screw M3x5 (supplied). Be careful that using any screws other than the supplied may damage the inside of the Main Unit. (Do not use longer screws)

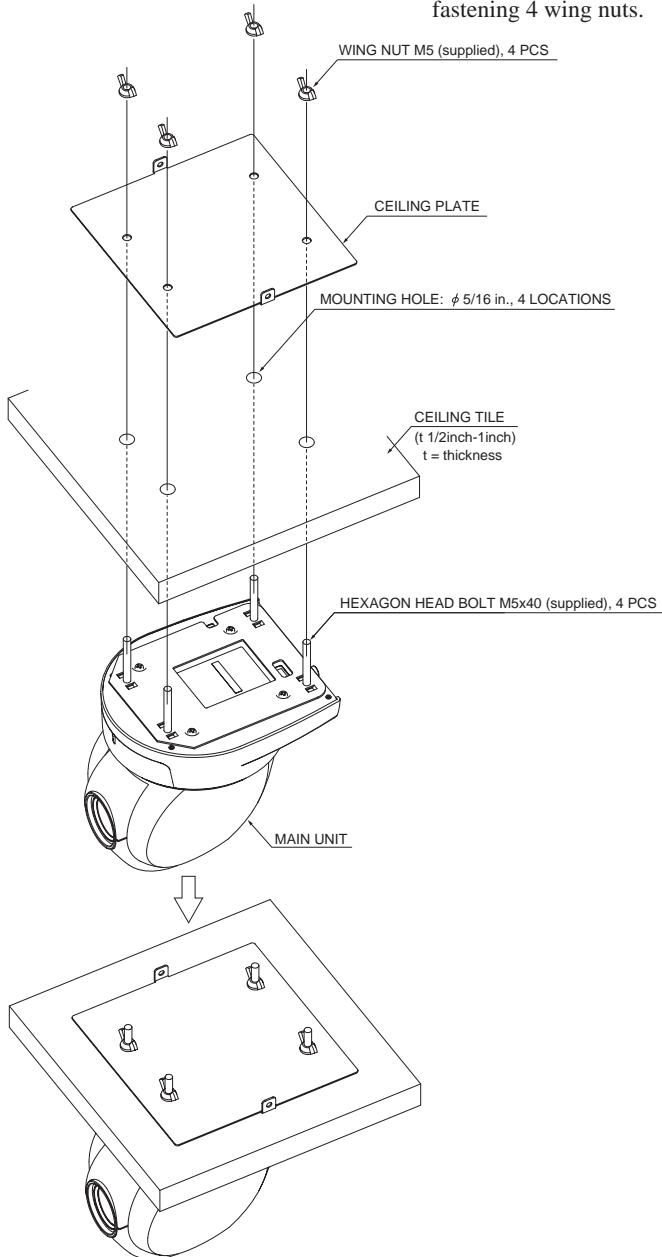
(2) Making mounting holes to the Ceiling Tile

- Make 4 holes of $\phi 8\text{mm}$ ($5/16\text{ in.}$) to the Ceiling Tile as shown.



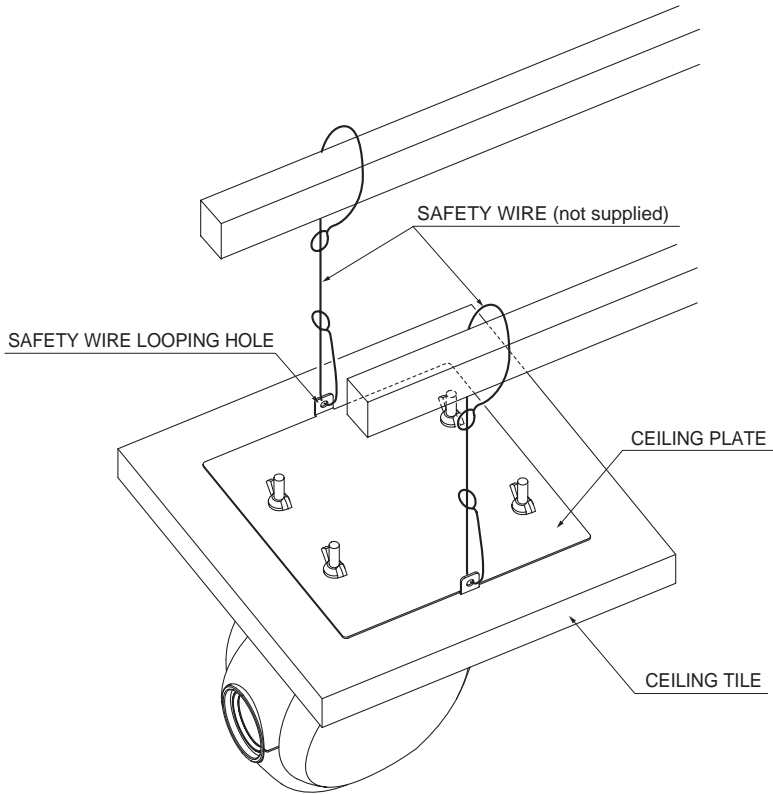
(3) Fixing the Main Unit

- Put the Ceiling Tile between the Main Unit and the Ceiling Plate, and fix the Main Unit by fastening 4 wing nuts.



(4) Mounting the Safety Wires

- Loop up one end of the Safety Wires through the respective safety wire looping holes made on the Ceiling Plate, and then loop up the other end of the same around the beams or anything that is used to mount ceiling tile channel for structure safety.



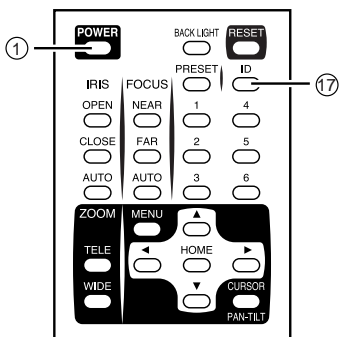
4. OPERATION PROCEDURES

[1] Power supply to the Camera

The Camera has no POWER switch. Power is supplied to the Camera when the AC adapter is connected to the wall socket and the Camera.

When power is supplied to the Camera, the Camera turns to the lower left (in case of PTC-100S) or right (PTC-110R) and then to the front automatically (viewed from the front), returning the Camera position to the initially set position.

[2] Turning ON/OFF of the Camera power



(1) Turning OFF the Camera

- When the Camera is ready for operation through the wireless remote controller and ① **POWER** button is pressed, the Camera power is turned OFF. (However, even after the Camera is turned OFF, power is still being supplied to the Camera as power supply to the Camera is not OFF.)
- The image disappears, and the LED on the Camera lights up in red. Now, no buttons on the wireless remote controller are abled other

① **POWER** button and ⑰ **ID** button.

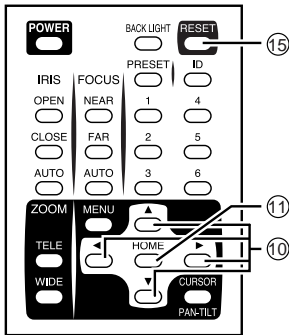
- When the TIMER OFF function is ON (refer to the settings in the OSD menu screen), Camera power is turned OFF automatically upon the lapse of the set time.


Note: When the Camera is not in use, make it a rule to keep the Camera OFF. This will save power consumption. When the Camera is not to be used for a long time, it is advisable to unplug the AC adapter to render the Camera OFF.

(2) Turning ON the Camera

- When the Camera is OFF and ① **POWER** button is pressed, the Camera power is turned ON.
- The image appears, and the LED on the Camera goes out. Now, the Camera is ready for operation of all functions through the wireless remote controller.
- If the ID number is changed (Refer to "5. THE ID NUMBER SETTING"), the Camera power may not be turned ON. In such case, redo the ID number setting, and press ① **POWER** button.

[3] Operating PAN/TILT

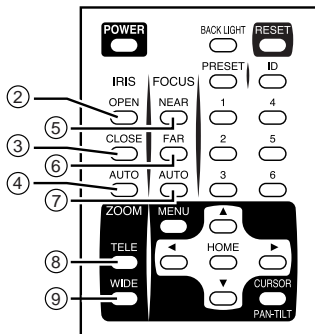


- While watching the screen, press any of ⑩  (UP, DOWN, LEFT, RIGHT) direction buttons for the direction in which you want to watch the image.
- To change the direction minutely, jog the direction button. To change the direction largely, hold down the direction button.
- Two operation modes are available according to the speed: AUTO mode changing the speed according to the zoom position, and MANUAL mode setting the

speed manually. (Refer to the settings in the OSD Menu screen.)

- When ⑪ **HOME** button is pressed, the Camera turns to the front (and the lens moves to the WIDE side).
- If the Camera direction is changed manually by mistake, press ⑮ **RESET** button. Then, the Camera matches the PAN/TILT position in memory with the actual position.

[4] Lens operation



(1) Zoom operation

- The object is zoomed in (appears larger in the screen) when ⑧ **TELE** button of ZOOM is pressed, or zoomed out (appears smaller in the screen) when ⑨ **WIDE** button of ZOOM is pressed.
- When ⑧ **TELE** button or ⑨ **WIDE** button is held down for over one second, the zoom speed increases.

(2) Focus operation

- When ⑦ **AUTO** button of the FOCUS is pressed,

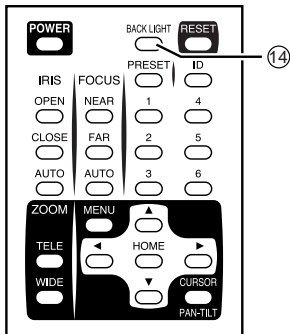
FULL AUTO FOCUS status is established. (However, focusing may be difficult for such objects as listed below.)

- Objects with no contrast between light and dark, such as white walls and night views
 - Objects reflecting an intensive light
 - Objects moving fast
 - Objects with many horizontal stripes, such as blinds
 - Objects viewed through a glass pane with water drops or stains
- To adjust the focus manually, press ⑤ **NEAR** button or ⑥ **FAR** button.
 - When ⑤ **NEAR** button is pressed, the focus shifts near to you.
 - When ⑥ **FAR** button is pressed, the focus shifts far away from you.

(3) Iris operation

- When ④ **AUTO** button of the IRIS, the AUTO IRIS status (the brightness remains unchanged even if the object is changed) is established.
- To adjust the iris manually, press ② **OPEN** button or ③ **CLOSE** button.
- When ② **OPEN** button is pressed, the iris opens.
- When ③ **CLOSE** button is pressed, the iris closes.

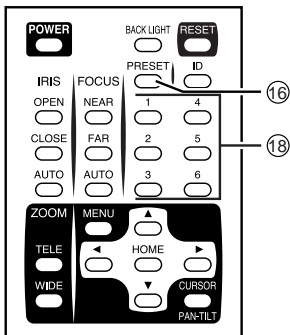
[5] BLC (Back Light Control)



In case the back lighting is too bright to shoot the main object clearly, press ⑭ **BACK LIGHT** button.

To cancel this mode, press the button.

[6] Preset operation



The Camera head direction, the zoom position, the focus status and the brightness level can be registered for as many as six settings.

The registration contents will be retained even if the Camera power is turned OFF.

(1) Registration of preset

- Set the Camera head direction, the zoom position, the focus status and the brightness level.
- When ⑯ **PRESET** button is pressed, the LED on the Camera blinks in green (for 0.4

sec). To cancel this, press ⑯ **PRESET** button again.

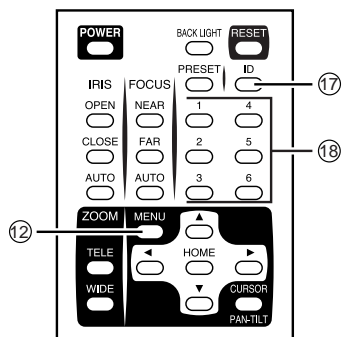
- Then, press ⑱ **1** through **6** buttons. Now, the registration is over, and the LED on the Camera goes out. (The preset contents, if already registered, are erased and overwritten.)

(2) Execution of preset

- When ⑲ **1** through **6** buttons are pressed, the Camera head direction, the zoom position, the focus status and the brightness level are set to the registered contents.

5. THE ID NUMBER SETTING

When multiple Cameras are laid out adjacently and operated via the wireless remote controller, the Cameras receiving the infrared rays operate in unison in the same way. When each Camera is allocated with a different ID No., the Camera can be controlled independently when its ID No. is specified via the wireless remote controller. The ID Nos. can be allocated for up to 6 Cameras.



(1) Setting an ID No.

- Turn ON only the camera to be set with an ID No. Leave other adjacent Cameras in the OFF position. (Unplug their AC adapters from the Cameras or wall socket).
- Set the remote ID No. to the Camera. (See "6. OSD (On-Screen Display)" on P. 19.) After setting, close the Menu screen by pressing ⑫ **MENU** button. Then, repeat the ID No. setting for all other Cameras in the same way.

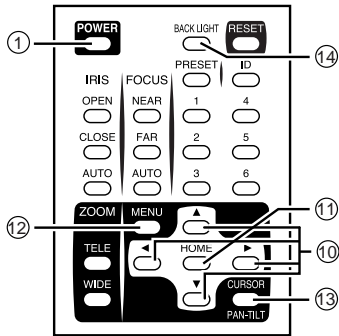
(2) Operating the Cameras selectively

- Press ⑰ **ID** button, and the LED's of all adjacent Cameras will start blinking (at intervals of 0.2 sec). (To cancel this, press ⑰ **ID** button again.) Then, press ⑱ **1** through **6** buttons, and the LED's will go out, and selective operation by specifying the ID No. will be ready. Now, only the selected Camera can be operated via the wireless remote controller.

(3) Canceling the selective operation of the Cameras

- Hold down ⑰ **ID** button for over 2 sec, and the blinking LED on the Camera will light up. Then, unhand ⑰ **ID** button. Now, the selective operation has been cancelled, and all adjacent Cameras start operation via the wireless remote controller.
- Alternatively, the selective operation by specifying the ID No. can also be cancelled by unplugging the DC jack from the Camera and turning ON the Camera power again.

6. OSD (On-Screen Display)



The ⑫ **MENU** button is used to turn ON/OFF the OSD display. When the hierarchy menu is displayed, the screen goes back to the previous screen.

When the OSD display is available, ⑩ ▲ ▼ ◀ ▶ direction buttons and ⑪ **HOME** button function as the menu operation keys.

To halt the menu operation and perform the PAN-TILT operation, press ⑬ **CURSOR/PAN-TILT** button. To resume the menu operation, press ⑬ **CURSOR/PAN-TILT** button again.

● OSD display menu

<<MAIN MENU>>	
(1) MAIN CONTROL	▲ ▼ SELECT ⇒ ► ENTER (Return to ⑫ MENU)
(2) CAMERA SETUP	
(3) TITLE SET	
(4) PAN TILT MOTOR	
(1) MAIN CONTROL	▲ ▼ SELECT ⇒ ◀ ► ADJUST (Return to ⑫ MENU)
<1> TITLE	ON/OFF: To change the ON/OFF of the character in the bottom of the screen.
<2> SELECT	PRESET/CAMERA: To change the title to be displayed. (This setting is enabled only when the above TITLE is ON.) PRESET: To display preset position names from 1 to 6. CAMERA: To display the name of the Camera.
<3> SET INDICATE	ON/OFF: To display the preset position in the screen upon its registration (for about 2 sec).
<4> REMOTE ID	1-6: To set the ID No. of the Camera for the selective operation via the wireless remote controller. If the ID No. is not to be set, set this to "0." (This has been factory set to "0.")
<5> OFF TIMER	OFF, 5min, 10min, 30min 1h, 2h, 5h: To set the time for the Low Power Consumption mode. If no operation status continues longer than the above set time, the Camera power will be turned OFF automatically. To turn ON the Camera power again, press ① POWER button. (This has been factory set to "OFF.")

(1) CAMERA SETUP		▲ ▼ SELECT ⇒ ◀ ▶ ADJUST (Return to ⑫ MENU)
<1> BLC		ON/OFF: To prevent the object from being darkened when an intensive light is in the background. This function can also be operated easily by pressing ⑭ BACK LIGHT button on the wireless remote controller.
<2> AGC		0dB, 4dB, 8dB, 12dB, 16dB, 20dB, 24dB: To adjust the maximum AGC gain.
<3> AP GAIN		-6 to +9: To adjust the contour correction level between.
<4> FL		ON/OFF: To change the ON/OFF of the flicker correction.
<5> NEXT PAGE		To go to the next screen.
<6> MEMORY		To save the current settings of the Camera by pressing ⑪ HOME button.
<7> CLEAR		To reset the settings of the Camera to the factory-settings by pressing ⑪ HOME button.
<8> WB To change the White Balance mode.	1. ATW	To adjust the white balance by way of the automatic following. (The white balance may not be matched due to single color or other cause.)
	2. AWC	To adjust the white balance by way of one-push of button. The white balance is adjusted once by selecting the AWC mode and pressing ⑪ HOME button. When the WB mode has been changed or the R-SHIFT or B-SHIFT function has been changed, the white balance must be adjusted again by pressing ⑪ HOME button.
	3. INDOOR	To be used indoors. The color temperature is 3,200K.
	4. OUTDOOR	To be used outdoors. The color temperature is 6,300K.
	5. LIGHT	To be used under fluorescent lamps. The color temperature is 4,200K.
<9> R SHIFT *1		±30: The larger this value is, the screen is more reddish.
<10> B SHIFT *2		±30: The larger this value is, the screen is more bluish.
<11> COLOR To adjust the color.	1. R GAIN	To adjust the intensity of red.
	2. B GAIN	To adjust the intensity of blue.
	3. RY HUE	To adjust the hue of red.
	4. BY HUE	To adjust the hue to blue.
<12> PREVIOUS PAGE		To return to the previous screen.
<p>*1: <9> "R SHIFT" and <10> "B SHIFT" are available in 2 types, respectively: one for the ATW and AWC functions, and the other for the INDOOR, OUTDOOR and LIGHT functions. For example, it is possible to set "R SHIFT" to +10 in the ATW mode and to ± 0 in the INDOOR mode.</p> <p>*2: <11> "COLOR" is available for all modes irrespective of the mode of "WB".</p> <p>*3: To change and save the Camera settings, be sure to press ⑪ HOME button in the >MEMORY display on the 1st page of the OSD display</p>		

<p>(3) TITLE SET ▲ ▼ SELECT ⇒ ◀ ▶ ADJUST (Return to ⑫ MENU)</p>	<ul style="list-style-type: none"> • To set the title for each preset position and Camera. Make the title to be set blink, and press ⑩ ► direction button to go to the set character. Then, set the character one by one by using ⑩ ▲ ▼ ◀ ▶ direction buttons. The types of characters that can be set are alphabetic characters in capital and small ("A" through "Z" and "a" through "z") and symbols (e.g., < > - / . :). After setting all, press ⑪ HOME button to save the settings.
<p>(4) TITLE SET ▲ ▼ SELECT ⇒ ◀ ▶ ADJUST (Return to ⑫ MENU)</p>	
<p><1> MOTOR SPEED</p>	<ul style="list-style-type: none"> • To set the motor speed when the PAN-TILT function is in operation. • AUTO: The operation speed can be changed automatically according to the zoom position. • MANUAL: The operation speed can be selected freely.
<p><2> SPEED</p>	<ul style="list-style-type: none"> • To set the motor speed when "MANUAL" has been selected for the motor speed. The motor speed can be changed in 8 steps from 0 to 7.
<p><3> L/R DIRECTION</p>	<ul style="list-style-type: none"> • STANDARD/REVERSE: To change the PAN direction.

7. DIP SWITCH SETTINGS

The PAN-TILT settings, the LENS settings, the preset settings, the ID settings and the Camera settings by means of the OSD can be reset to the factory-settings by turning ON Switch No. 2 on the bottom of the Camera before turning ON the power supply to the Camera and then turning OFF the same switch after turning ON the power supply to the Camera.

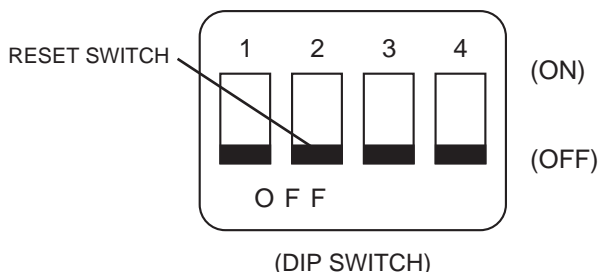
* For most popular Video Conference codecs / system, we suggest following switch settings.

Switch No. 3 and No. 4 ON.

Switch No. 3 ON and No. 4 OFF.

Switch No. 3 and No. 4 OFF are default.

Note: Be sure to keep Switch No. 1 OFF, or operation with the supplied IR remote controller will not work.



Switch No.	Normal	Operation	Function
1	OFF	None	—
2	OFF	ON → OFF	RESET
3	OFF	*	Video Conference codecs
4	OFF		

8. RS-232C SPECIFICATIONS

The Camera can be controlled from the PC by connecting the RS-232C terminal to the PC.

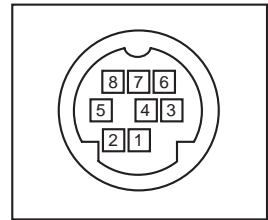
Note: Before starting the connection work, be sure to turn OFF the power supply to all equipment to protect the Camera and the PC.

● Transmission specifications

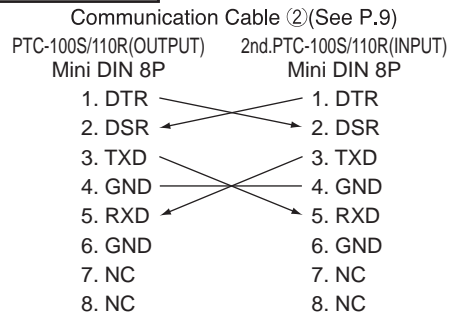
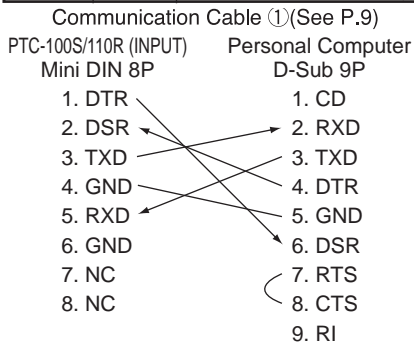
- Full duplex start-stop sync.mode.
- Start bit :1 bit
- Data bit :8 bits
- Stop bit :1 bit
- Parity bit :None
- X parameter :None
- Baud rate (Communication speed) :9600bps
- Electric interface :RS-232C (Mini DIN 8P connector)
- Flow control :None
- Cable specifications :Dedicated cable

● Pin assignment

Pin No.	Code	Name	Direction of data	
			Camera	PC
1	DTR	Data Terminal Ready	→	
2	DSR	Data Set Ready	←	
3	TXD	Transmitted Data	→	
4	GND	Ground	—	
5	RXD	Received Data	←	
6	GND	Ground	—	
7	NC	—	—	
8	NC	—	—	



RS-232C IN



9. TROUBLESHOOTING HINTS

Symptom	Possible cause/remedy
No images on TV monitor	<ul style="list-style-type: none"> • Cable is not properly connected to the video-in terminal of monitor. • The AC adapter is disconnected from the wall AC outlet. • The AC adapter output plug is disconnected from the DC jack of the Camera. • Zoom is set at TELE to display only white/black part of the material. • The LED is lit in red, and the Camera is in the OFF position. • The LED is lighting, and the OFF Timer mode of the Camera power is working. (See P.19) • The cable is not connected to each output terminal. • The iris is not in the proper position. (If the iris is fully closed, the image cannot be seen.) • The chosen video output type (NTSC) is different from the system of the monitor .
Out of focus	<ul style="list-style-type: none"> • The focus is in the Manual mode. Set the focus to the Auto mode by pressing the AF button. (See P.16) • The light/shade contrast of the object is too low. (See P.16) • The object is moving too fast. (See P.16)
No operation via the wireless remote controller	<ul style="list-style-type: none"> • Operation is made with wrong ID settings. (See P.18) • Operate within the operation range of the wireless remote controller. (See P.7) • Check the remaining battery life of the wireless remote controller. • The sunlight or the light from the inverter fluorescent lamp or the like is received by the infrared sensor on the Camera. Relocate the Camera or block the light. (See P.7) • The pin No.1 of the DIP Switch(4) is ON.
Matching failure of the preset position	<ul style="list-style-type: none"> • The Camera head has been moved directly due to some cause. Adjust the Camera direction by setting the "RESET" button to the normal position. (See P.15)

If the trouble still remains after checking the above, consult your nearest dealer or authorized ELMO service center.

10. SPECIFICATIONS

● General

Item	Specifications		
Power source	12V DC		
Current consumption	Max. 1A		
Outside dimensions	124mm(W) X 153mm(D) X 136mm(H) (4.9in X 6.0in X 5.4in)		
Weight /mass	790g (main body only) (1.7lbs)		
Television system	NTSC compatible		
Output terminal	Composite-video output	RCA pinjack/75 ohm unbalanced	1
	S-video output	Mini DIN 4P connector/ 75Ω unbalanced	1
	RS-232C	Mini DIN 8P connector	1
Input control terminal	RS-232C	Mini DIN 8P connector	1
Power terminal	EIAJ type4		

● Camera

Item	Specifications
Lens	f = 4.0 - 88.0 (22-times zoom) F1.6-3.8
Zoom	22-times powered (with double speed function) optical zoom
Field of view (Horizontal)	2.3°- 47.5°
Lens filter diameter	37mm (1 15/32 in), pitch = 0.75mm (1/34 in)
Focusing	Full-auto/manual
Image pick-up element	1/4" CCD
Effective picture element	768(H) X 494(V)
Total picture element	811(H) X 508(V)
Minimum illumination	2 lx
Backlight control	ON/OFF
Iris	Auto/manual
White balance	ATW/push-set/manual
Picture adjustment	Color balance, AGC gain, Edge enhancement
Sync. system	Internal
Resolution	More than 460 TV lines (Y signal with horizontal) More than 350 TV lines (Vertical)
S/N ratio	49 dB

●Pan/Tilt

Item	Specifications
Pan mechanism	Left 150° Right150°
Tilt mechanism (PTC-100S)	Up 90° Down30°
(PTC-110R)	Up 30° Down90°
Pan Tilt Speed	Auto/manual (8 speed)

●Other

Item	Specifications
Title setting	Provided (Camera/preset selection)
Daisy chain connection	Max 7 (PTC-100S/110R) cameras

11. SUPPLIED ACCESSORIES

Item	Quantity
AC adapter Model NO: D12-10-1000 (5Z0494) (rated input AC120V 60Hz)	1
Wireless remote controller (RCW-PTZS)	1
Video RCA cable	1
Batteries (Type R03,AAA)	2
Fixing Plate (with PTC-110R only)	1
Screw M3x5 (with PTC-110R only)	4
Ceiling Plate (with PTC-110R only)	1
Wing Nut M5 (with PTC-110R only)	4
Hexagon head bolt M5x40 (with PTC-110R only)	4
Instruction manual	1

*Weight and dimensions are approximate.

*Design and specification are subject to change without prior notice.

Trademark Acknowledgements

ELMO, ELMO are registered trademarks of ELMO CO.,Ltd.

WARNING:

- Unauthorized recording of copyrighted, materials, photographs, etc. may infringe on the rights of copyright owners and be contrary to copyright laws.



ELMO CO., LTD.

6-14, Meizen-cho, Mizuho-ku,
Nagoya, 467-8567, Japan

OVERSEAS SUBSIDIARY COMPANIES

U.S.A

Elmo Mfg. Corp.

1478 Old Country Road, Plainview, NY 11803-5034

Tel:(516)501-1400 Fax:(516)501-0429

E-mail:elmo@elmousa.com

Web : <http://www.elmousa.com>

Canada

Elmo Canada Mfg. Corp.

44 West Drive, Brampton, Ontario L6T 3T6

Tel:(905)453-7880 Fax:(905)453-2391

E-mail : info@elmocanada.com

Web : <http://www.elmocanada.com>

Germany

Elmo (Europe) G.m.b.H

Neanderstr. 18, 40233 Düsseldorf

Tel:(0211)376051 Fax:(0211)376630

E-mail : elmoeurope@AOL.com

Web : <http://www.elmo.de>

Printed in Japan
6X1PTZS02