Speed Dome

EPTZ3000/EPTZ3000I

USER MANUAL

Date: Nov 2008

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1. EPTZ3000/EPTZ3000I OVERVIEW

1.1. Introduction

EPTZ3000/EPTZ3000I, an intelligent high-speed dome camera is ready to secure your property with its omni-directional and exact monitoring. A 30X optical and 8X digital zoom combining with a high-performance chip makes captured images clear and vivid. The other powerful camera functions EPTZ3000/EPTZ3000I equips with:

- ➢ Wide Dynamic makes objects clear in a high illumination background.
- ➢ Vertical double density interline CCD with a slower shutter and true Day/Night function.
- ➢ Electronics flip, no mechanical flip is necessary.
- ➢ 520 color/570 B&W TVL; PAL/NTSC image formats support.
- ➢ Auto and fast focus increases the searching speed and precision.
- ➢ Auto Iris adjusts the monitoring image to the best brightness.
- ➢ White Balance function makes the shades of color more natural in different light conditions.
- ➢ Color / B&W images auto switching to enhance the sensitivity in a low light condition or at night.
- ➢ Private zone protects your privacy.

Furthermore, the micro control unit enables camera a nimble and exact movement from minimal 0.01°/sec to maximal 360°/sec. It can go to every preset position in 1 second. It also has other advantages such as:

➢ 192 preset positions are available.

➢ 16 cruise tours can be set, and each tour contains up to 16 positions.

➢ Up to 256 speed domes can be supported on a RS-485 bus when all speed domes are controlled by keyboard EKB500.

➢ Auto heater and fan to fit all kinds of temperature (outdoor models).

➢ Built-in 4 alarm inputs and 1 alarm output.

All of the features make the intelligent high-speed dome camera works for a wide range and demanding application such as banks, airports, stations, casinos, streets of cities, intelligent buildings, and etc.
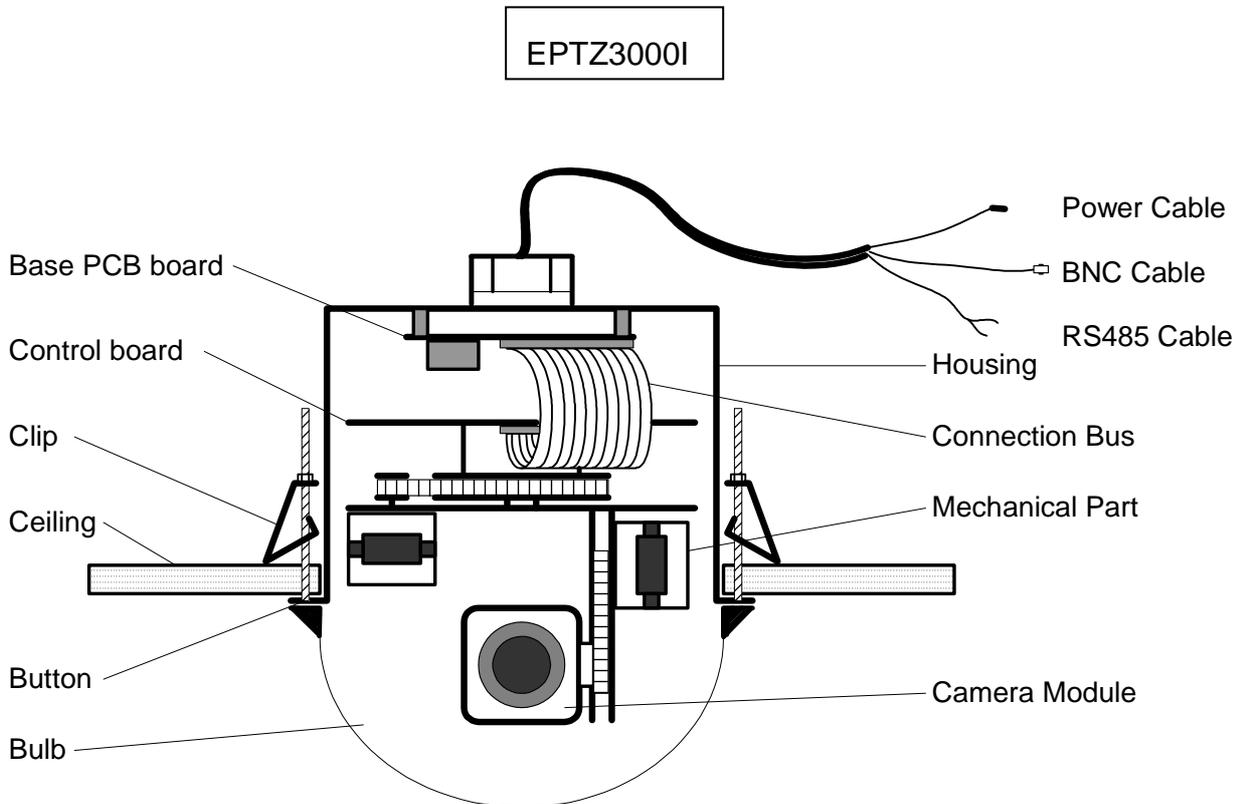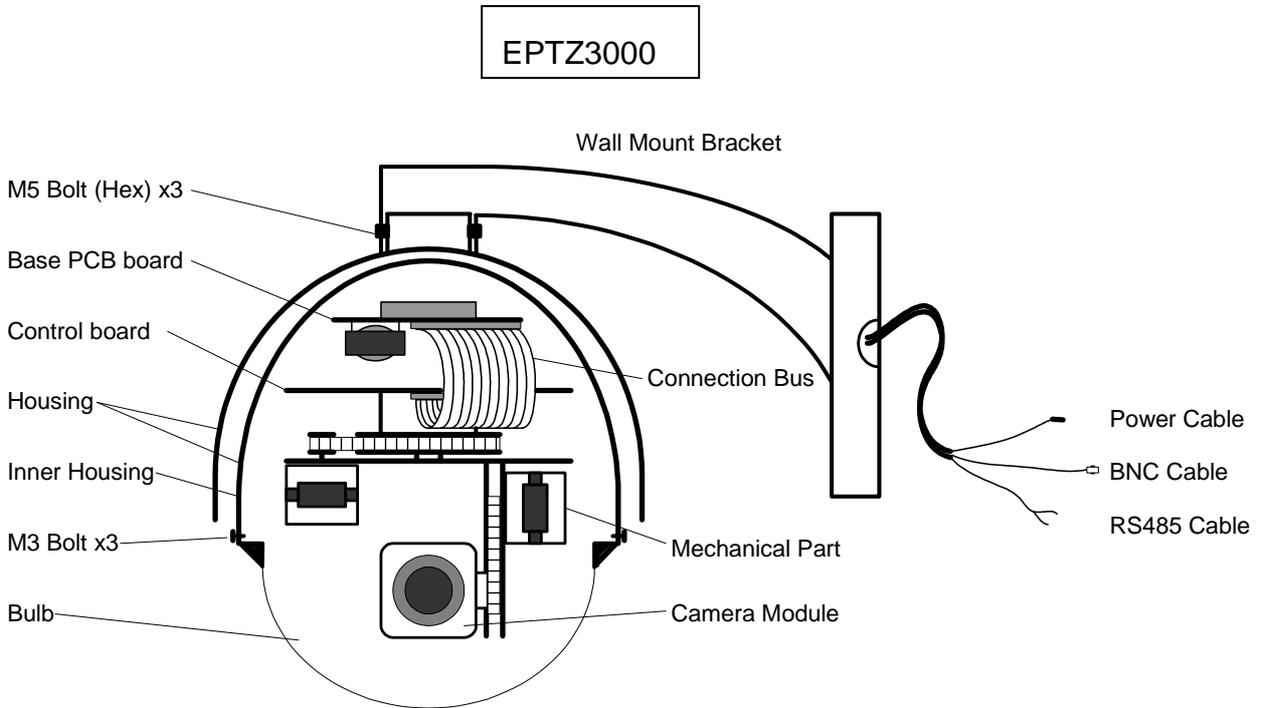
1.2. Specifications

Model	EPTZ3000 (outdoor)	EPTZ3000I (indoor)
Pickup Device	1/4" Vertical double density interline CCD	
Video Format	NTSC or PAL	
Scanning System	NTSC: 525 TV lines, 60 fields/sec PAL: 625 TV lines, 50 fields/sec	
Picture Elements	768 x 494 (NTSC) , 752 x 582 (PAL)	
Horizontal Resolution	520 TVL:Color ; 570TVL:B/W	
Sensitivity	0.3 Lux/F=1.6 Color ; 0.05 Lux/F=1.6 B/W	
S/N Ratio	Over 52dB	
Electronic Shutter	128x (Slow Shutter ON)~1/60~1/120,000 sec (NTSC) 128x (Slow Shutter ON)~1/50~1/120,000 sec (PAL)	
Digital Slow Shutter	OFF/4x/8x/12x/16x/32x/64x/128x selectable	
Shutter Selection	AUTO/A.FLK/Manual (x8~1/120000) selectable	
Lens Type	30x optical zoom , f=3.3 mm (wide) to 99mm (tele) , F1.6 to F3.2	
Zoom Ratio	240x max (30x Optical and 8x Digital Zoom)	
True Day/Night	Auto/Manual ICR	
Black Light Comp.	No	
Auto Gain Control	Auto/Manual	
White Balance	Auto Indoor/Auto Outdoor/One push/Man 2000K,3200K,5100K selectable	
Video Output	BNC 1.0Vp-p , 75ohm	
Sync. Mode	Line Lock/Internal Sync	
Power Source	24VAC	
Power Consumption	24VAC 18W Max. (without heater) 18W 24VAC 66W Max. (with heater) 70W	24VAC 18W Max.
Operating Temperature	-40℃~50℃ ; -40℉~122℉	0℃~ 50℃ ; 32℉~122℉
Focus Control	One push/Auto/Manual	
Horizontal Rotation Speed	0.1°/s~360°/s (1-239 grade shift gears)	
Horizontal Rotation Range	360°unlimited rotation	
Tilt Rotation Range	180°pendulum motion	
Auto Zoom Speed Control	Control speed auto-adjusted according to zoom length changing	
Auto Pan, 2 Points Scanning	Can set freely	
Auto Pan Speed	1~239 grades available	

Dwell Time (2 points)	1~127 seconds available	
Preset Positions	128 positions	
Running to Position Speed	1~239 grades available	
Dwell Time at Preset Position	1~239 seconds available	
Tour	16 groups	
Tour Point per Group	16 preset positions	
Fan & Heater	Fan & Heater auto starts	No
Position Accuracy	±0.1°	
Alarm	4 in 1 out with tour/position auto triggering	
Built-in Menu for Functions	Yes	
Communication	RS-485	
Communication Speed	1200/2400/4800/9600 bps	
Built-in Protocols	EVF-1 ; Pelco-P ; Pelco-D ; A –type ; Plus-D	
Address Editable	Yes (through DIP switch)	
Speed Dome Address	0-255	
Manual Pan/Tilt Speed	Pan: 0.01º ~ 360º/s ; Tilt: 0.01º ~ 360º/s	
Weatherproof Ratings	IP66	Indoor
Safety	CE ; FCC	
Dimensions	330mm(W) x 365mm(H) x 220mm(O.D) / 13"(W) x 14.4" (H) x 8.7"(O.D)	208mm(W) x 215mm(H) x 208mm(O.D) / 8.7"(W) x 12.2" (H) x 8.7"(O.D)
Weight	4.2kg/9.25lbs	2.15kg/4.8lbs

1.3. Feature

1.3.1. Profile of EPTZ3000/EPTZ3000I

EPTZ3000

Wall Mount Bracket

M5 Bolt (Hex) x3

Base PCB board

Control board

Housing

Inner Housing

M3 Bolt x3

Bulb

Connection Bus

Power Cable

BNC Cable

RS485 Cable

Mechanical Part

Camera Module

EPTZ3000I

Power Cable

BNC Cable

RS485 Cable

Base PCB board

Control board

Clip

Ceiling

Button

Bulb

Housing

Connection Bus

Mechanical Part

Camera Module
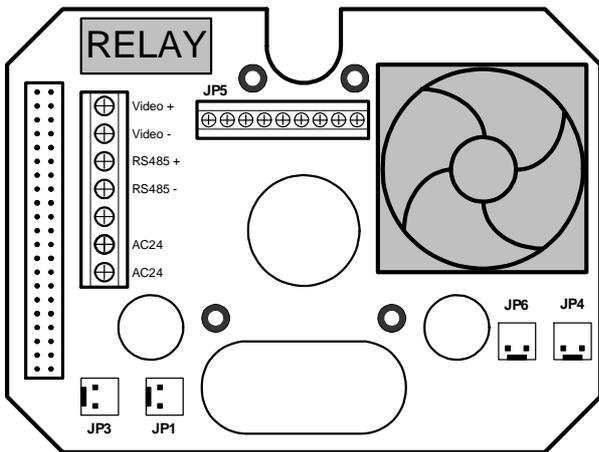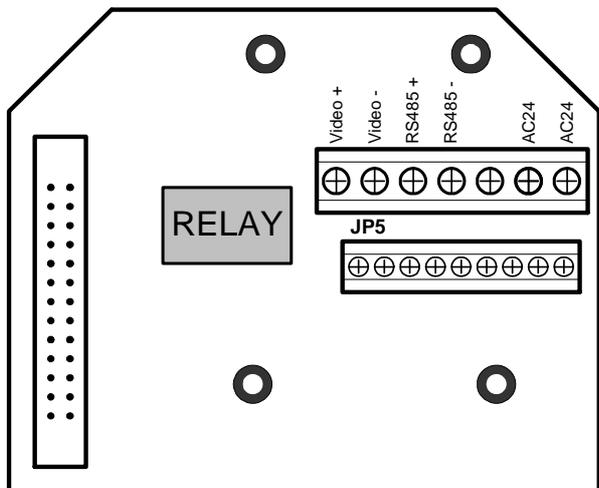
1.3.2. EPTZ3000/EPTZ3000I Base Board

The base board that is on the bottom of the housing connects to power cable, video cable, control cable, alarm cable, fan and heater. In order to connect to cables, the board needs to be taken off, and put back after finishing connecting to all cables. The connectors of cable names are marked on the board in white text. The details of the alarm connector (JP5) are shown on the APPENDIX A.

For EPTZ3000 outdoor model, JP1, JP3 and JP6 that are two-pin connectors need to be taken off during installing. JP1 and JP3 are connectors for heater, and they can be switched. JP6 is a fan controller connector that turns on/off of the fan. The 3 cables are too short to be connected to a wrong connector when putting them back.

EPTZ3000 Baseboard

EPTZ3000I Baseboard

1.3.3. EPTZ3000/EPTZ3000I Control Board

The PCB board with two dipswitches is the control board of EPTZ3000/EPTZ3000I. The two switches are used to set address, protocol, Baud Rate, video format and terminal resistance.
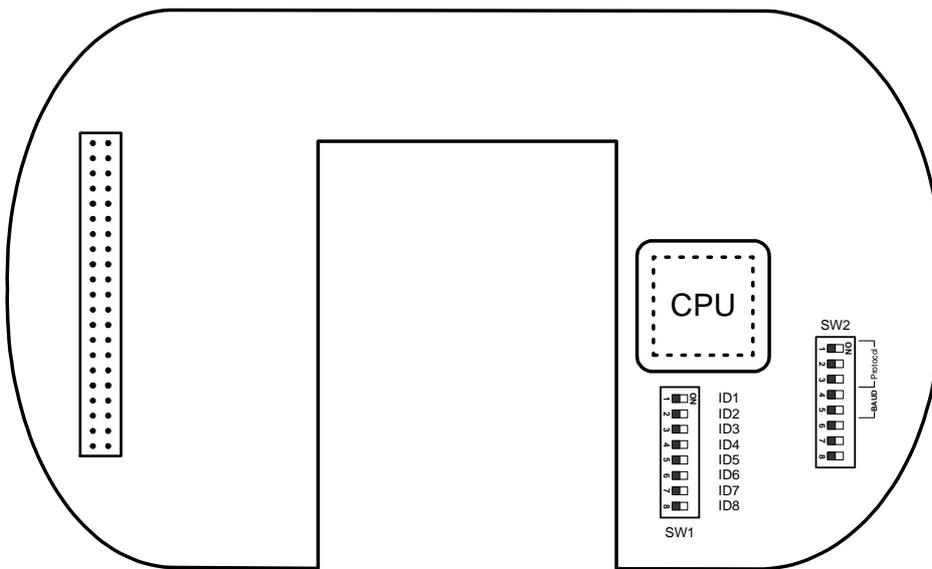
1.4. EPTZ3000/EPTZ3000I Connection

110V AC		24V AC	POWER 24V AC / 3.5 A
Adapter			
Video Out			BNC 1.0Vpp ± 0.2V, 75Ω
RS485 Tx(+)			RS485 Control Line
RS485 Tx(-)			
	Alarm 1		EPTZ3000/ EPTZ3000I
	Alarm 2		
	Alarm 3		4 ALARM INPUTS
	Alarm 4		
	GROUND		
			ALARM OUTPUTS
N.C.			
N.O.			
COM			
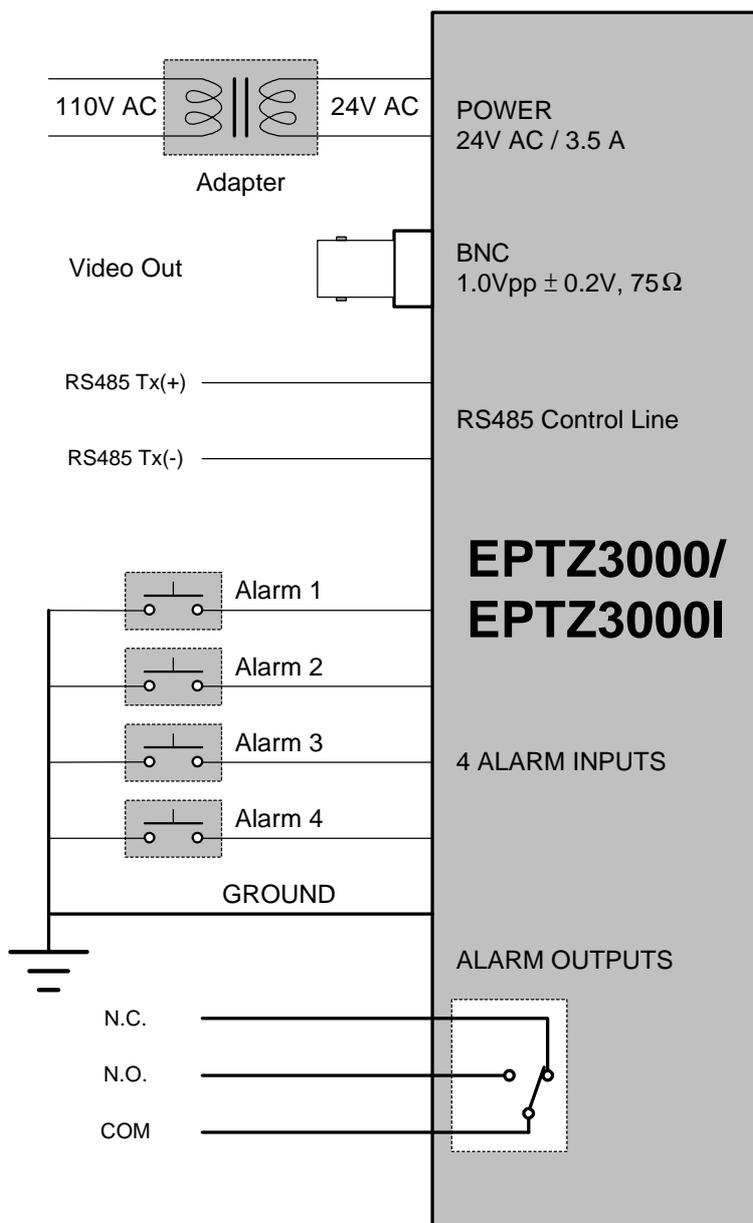
1.5. EPTZ3000/EPTZ3000I Quick Operation Guide (Work with EKB500)

EPTZ3000/EPTZ3000I and EKB500 (Keyboard) can work together by using factory default setting. You just need to connect cables by the following steps:

1. Connect the RS-485 cable to EPTZ3000/EPTZ3000I and a keyboard (EKB500).

2. Connect a video cable from EPTZ3000/EPTZ3000I to a monitor.

3. Connect the power to the EPTZ3000/EPTZ3000I and a keyboard (EKB500).

After the EPTZ3000/EPTZ3000I finishes the self-test mode, you can start to operate the EPTZ3000/EPTZ3000I via the keyboard.

To operate the EPTZ3000/EPTZ3000I:

1. Shift the Joystick up/down or right/left to view from camera.

2. Turn the top of the Joystick to zoom in/out.

3. Press Zoom In/Out, Focus F. /N. and IRIS +/- function keys to operate the EPTZ3000/EPTZ3000I.

2. EPTZ3000/EPTZ3000I INSTALLATION

2.1. Packing List

There are 3 boxes that are housing, bulb and mechanical part with a camera module, one wall mount bracket, one power adapter and one tool packet in the package. The detail accessories list below:

- ➢ Housing x1
- ➢ Bulb x1
- ➢ Mechanical part with a camera module x1
- ➢ Wall mount bracket x1
- ➢ Adapter x1
- ➢ Tool packet
    - ✧ Glove x2
    - ✧ M5 Hex Allen wrench x1
    - ✧ Pin connector x1
    - ✧ M5 screw (Hex) x3 for wall mount bracket fixing
    - ✧ M3 screw x3 for bulb fixing

2.2. Cable Needed

Power Cable

An adapter with 24V AC/3.5A output provides the power to the EPTZ3000/EPTZ3000I. An extension power line may be needed.

Note: The input AC voltage range of an adapter depends on different area.

Please make sure the voltage range before installing.

Video Cable

A BNC cable is used for connecting an EPTZ3000/EPTZ3000I to a DVR or a monitor. An amplifier may be needed if the video cable is too long.

Control Cable

Basically, EPTZ3000/EPTZ3000I uses a differential pair to connect to other devices by cascading. A cable that has low signal decline can be used as a control cable.

Alarm Cable

An alarm cable is not included in the packing list. A suitable wire that has low signal decline can be used as an alarm cable.

2.3. Initial Setup

Initial setup includes dome address, communication protocol, transmission speed, video format, and terminal resistance settings. All of the settings should be confirmed before the dome is installed. The control-related setting that is address, communication protocol and transmission speed have to be set consistently with the control device such as a keyboard or a DVR.

Notice: Please make sure the power is off before setting, and restart the EPTZ3000/EPTZ3000I to enable a new value after changing.

2.3.1. Address Setting

The address code of the EPTZ3000/EPTZ3000I should be set to correspond properly with a control device to control multiple dome cameras. The address codes are made up by the dipswitch SW1 (8 bits) on the PCB board. The 8 bits dipswitch indicates the binary coded of the address, and there are 256 addresses can be selected (0 ~ 255, 2^8 = 256). It also means that there are up to 256 dome cameras that can cascade on the RS-485 bus. The dipswitch setting and the indicated address are represented in the following chart.

Note: The factory default address is 1.

Notice: Please make sure the power is off before setting, and restart the EPTZ3000/EPTZ3000I to enable a new value after changing.
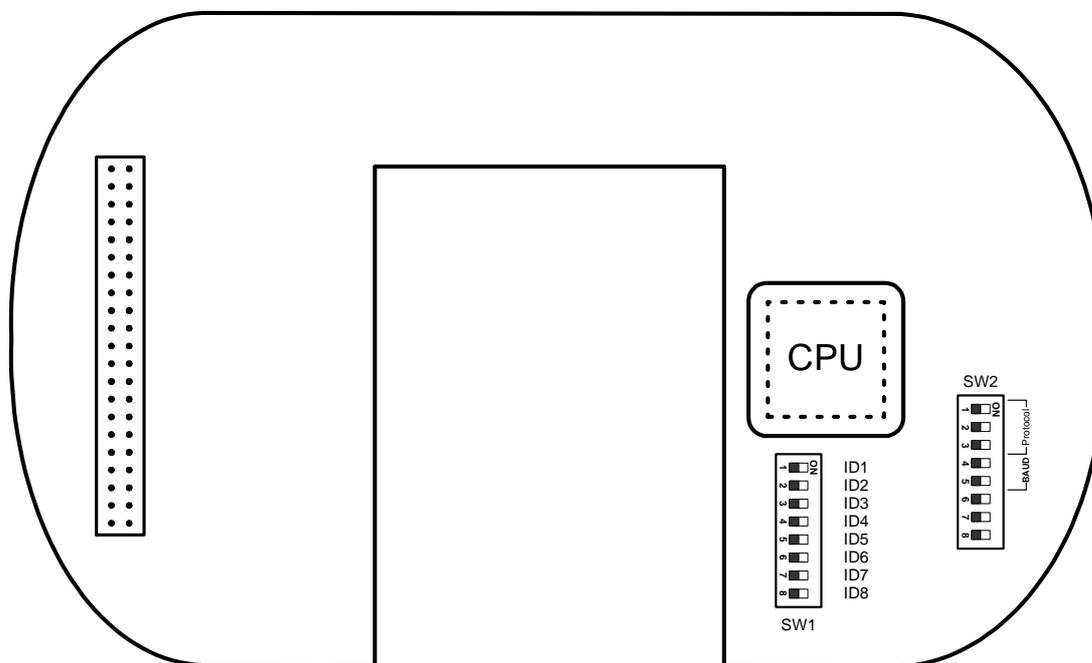
Switch	Address	Switch	Address	Switch	Address	Switch	Address
	0		32		64		96
	1		33		65		97
	2		34		66		98
	3		35		67		99
	4		36		68		100
	5		37		69		101
	6		38		70		102
	7		39		71		103
	8		40		72		104
	9		41		73		105
	10		42		74		106
	11		43		75		107
	12		44		76		108
	13		45		77		109
	14		46		78		110
	15		47		79		111
	16		48		80		112
	17		49		81		113
	18		50		82		114
	19		51		83		115
	20		52		84		116
	21		53		85		117
	22		54		86		118
	23		55		87		119
	24		56		88		120
	25		57		89		121
	26		58		90		122
	27		59		91		123
	28		60		92		124
	29		61		93		125
	30		62		94		126
	31		63		95		127

Switch	Address	Switch	Address	Switch	Address	Switch	Address
	128		160		192		224
	129		161		193		225
	130		162		194		226
	131		163		195		227
	132		164		196		228
	133		165		197		229
	134		166		198		230
	135		167		199		231
	136		168		200		232
	137		169		201		233
	138		170		202		234
	139		171		203		235
	140		172		204		236
	141		173		205		237
	142		174		206		238
	143		175		207		239
	144		176		208		240
	145		177		209		241
	146		178		210		242
	147		179		211		243
	148		180		212		244
	149		181		213		245
	150		182		214		246
	151		183		215		247
	152		184		216		248
	153		185		217		249
	154		186		218		250
	155		187		219		251
	156		188		220		252
	157		189		221		253
	158		190		222		254
	159		191		223		255

2.3.2. Communication Protocol Setting

The 1st, 2nd and 3rd bits of the SW2 are used to set communication protocol. The factory default protocol is EVF.
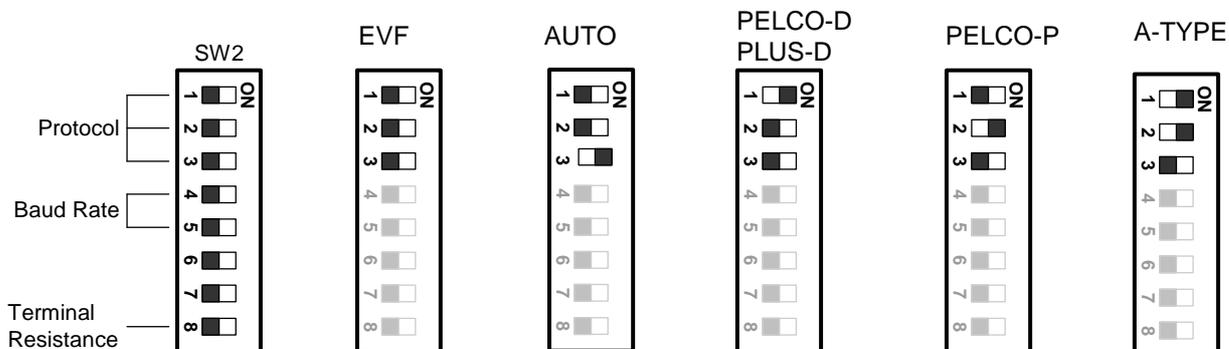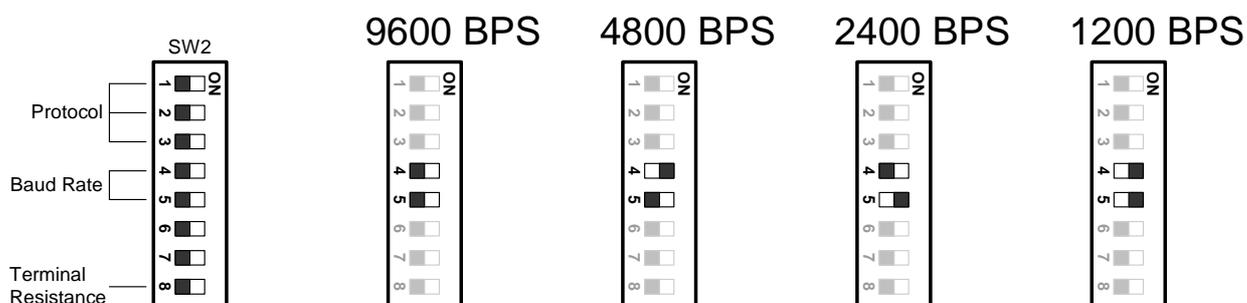

Notice: Please make sure the power is off before setting, and restart the

EPTZ3000/EPTZ3000I to enable a new value after changing.

Set all of protocol switches to ON; the speed EPTZ3000/EPTZ3000I will enter a

self-test mode.

2.3.3. Transmission Speed Setting (Baud Rate Setting)

The 4th and 5th bits of the SW2 on the PCB board are used to set the Baud Rate. The default baud rate setting is 9600.

Notice: Please make sure the power is off before setting, and restart the EPTZ3000/EPTZ3000I to enable a new value after changing.

## 2.4. Rack and Speed Dome Installation

2.4.1. Installation Requirements

1. Installation should be handled by a qualified service agent and should comply with all local regulations. Service personnel should expect potential problems such as surface strength, surface material, falling objects, outer breaches, building vibration or other similar conditions.

2. Check for all necessary materials, and ensure if the selected installation location is suitable for the EPTZ3000/EPTZ3000I.

2.4.2. EPTZ3000 Dome Camera Wall Mount Installation

Note: Installation location that is a wall, a pole or a ceiling needs to support above five times the total weight of the camera assembly (about 16 kg) to avoid shaken images, and dropping.

1. Set wall mount bracket on the wall. Mark the center of the holes on the wall against the bracket holes. Use a drill to make 4 holes that can be nailed 4 0.25" X 1.25" screws at the marks.
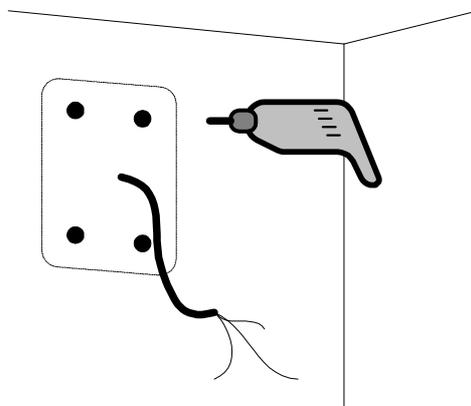
Note: The length of the screws depends on the surface material. The mentioned screws are used in the normal concrete surface.

2. Thread the cable through the hole in the wall mount bracket, and screw in 4 M8 nuts for mounting the bracket.

3. Take off the housing from the packing, and take off the PCB board (4 bolts on it.) inside the housing. Thread the cable through the top of the housing. Fix the housing on the wall mount bracket, and screw in 3 M5 bolts (Hex) on the top of the bracket with the attached Hex Allen wrench to fix the housing.
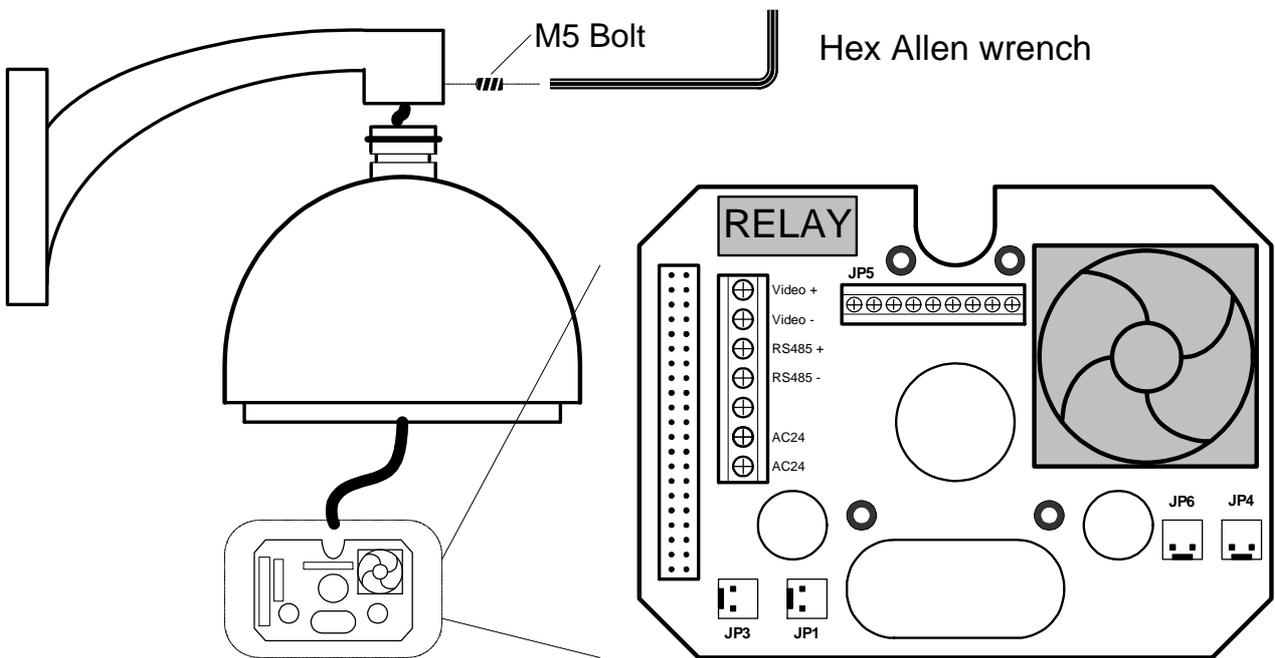
4. Connect the cable connectors to the nodes on the PCB board, and then fix the PCB board in the housing by screwing 4 bolts on it.

Note: Please notice the polarity of control line. The EPTZ3000 will not work if the polarity of control line is mis-connected.

5. Align the two screw holes on the bottom of mechanical part to the two bolts on the base of the housing, and twist the mechanical part clockwise a little bit in order to engage it with the base. Screw the two bolts on the base, and then connect and fix the connection bus to the PCB board on the mechanical part.
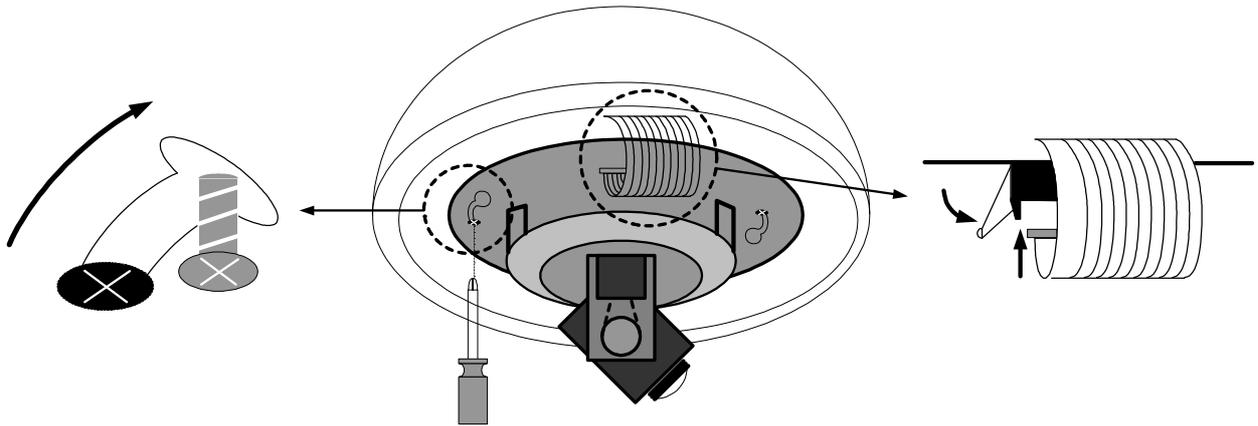
Note: The camera module on the mechanical part is very sensitive. Please be careful when installing this part.

6. Remove the lens protection cover before installing the bulb. Align the 3 bolt holes into the 3 housing bolt holes, and screw three M3 bolts with the attached small screw driver to fix the bulb.
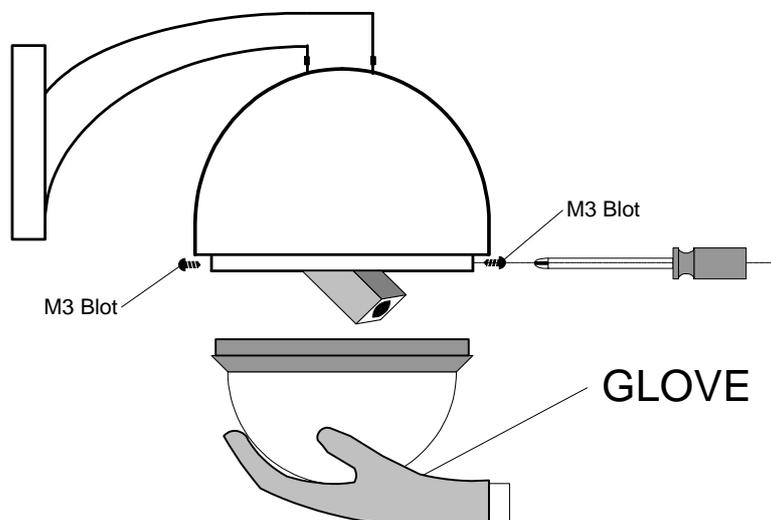
Note: In order to protect the bulb from dirt and scrape, please put on the gloves before installing the bulb.

7. Turn on the power, and start to operate the EPTZ3000.

Note: When turning on the power, EPTZ3000 will enter self-inspection mode, and carry out a self-testing program. After finishing self-inspection, you can start to operate the EPTZ3000.

2.4.3. EPTZ3000I Dome Camera Installation

1. Take off the housing from the packing, and take off the PCB board (4 bolts on it) inside the housing.
2. Cut the ceiling against the housing's shape with a saw.
   The exact diameter for cutting circle is 202 mm. It cannot exceed 213 mm, because speed dome housing may across the ceiling without any support. Please leave a profound space of 144.5 mm, so that the housing can be perfectly inserted to the ceiling.
3. Thread the cable through the screw and the hole on the top of the housing, and tighten up the screw to fix the cable
4. Place the housing into the hole that you just made. Fix the housing on the ceiling with two clips, adjust the screws of clips to make the housing perfectly fit to the ceiling.
5. Connect the cable connectors to the nodes on the base board, and then fix the base board in the housing by screwing 4 bolts on it.

Cut the ceiling

---- 202 mm ----

Video +
Video -
RS485 +
RS485 -
AC24
AC24

RELAY   JP5
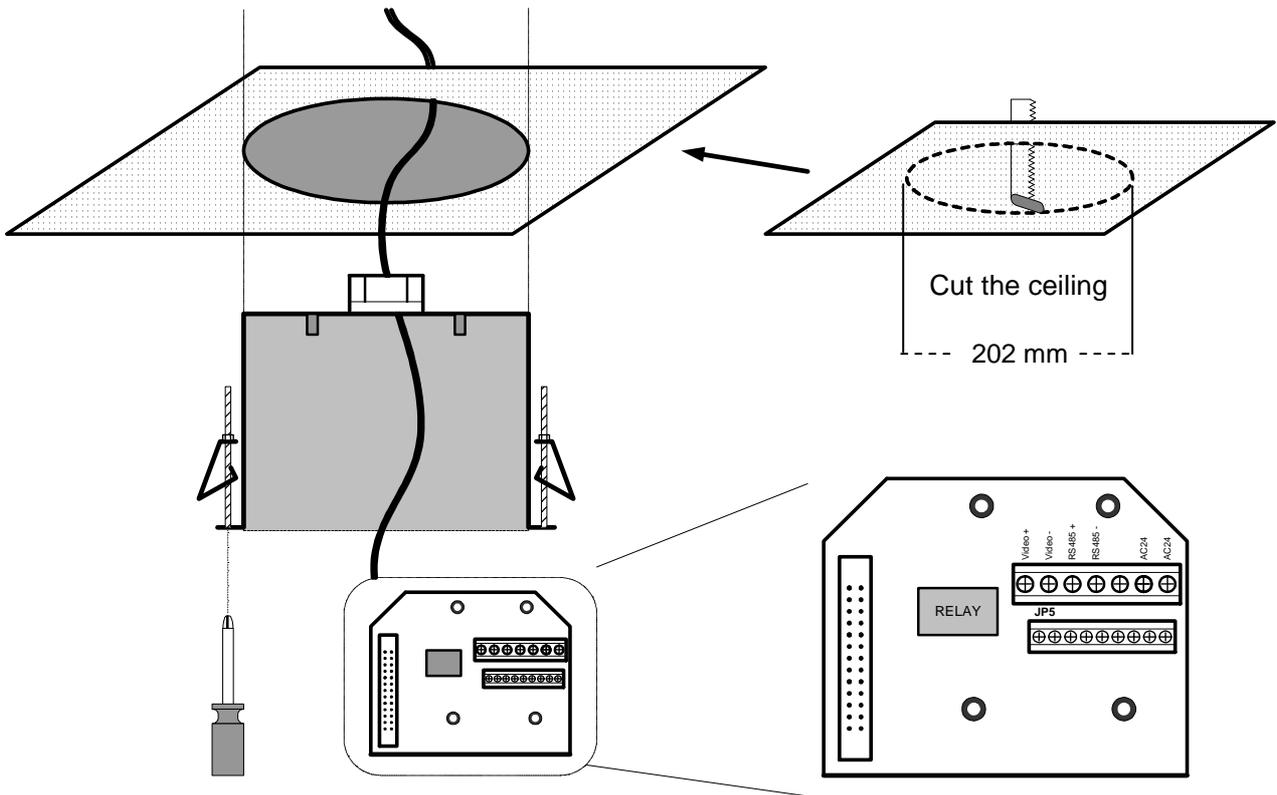
Note: Please notice the polarity of control line. The EPTZ3000I will not work if the polarity of control line is mis-connected.

6. Align the two screw holes on the bottom of mechanical part to the two bolts on the base of the housing, and twist the mechanical part clockwise a little bit in order to engage it with the base. Screw the two bolts on the base, and then connect and fix the connection bus to the PCB board on the mechanical part.
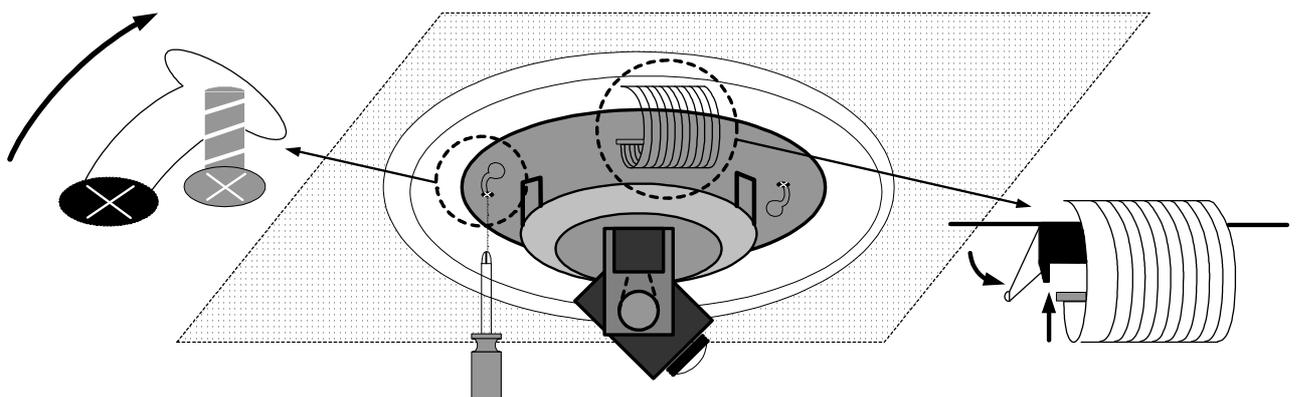
Note: The camera module on the mechanical part is very sensitive. Please be careful when installing this part.

7. Remove the lens protection cover before installing the bulb.   Screw the connection wire to the housing in order to prevent the bulb from being drop down.   Align the 2 buttons on the bulb base with the 2 buttons on the housing, and push bulb base to clip the housing.
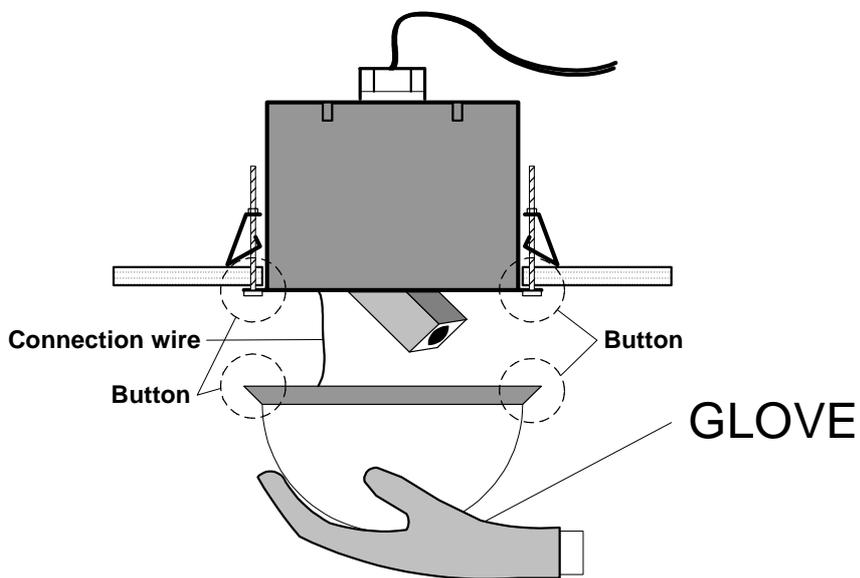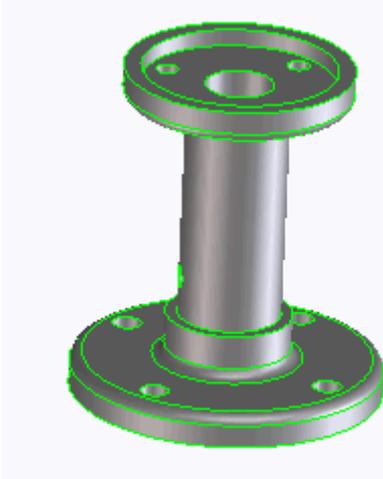

Note: In order to protect the bulb from dirt and scrape, please put on the gloves before installing the bulb.

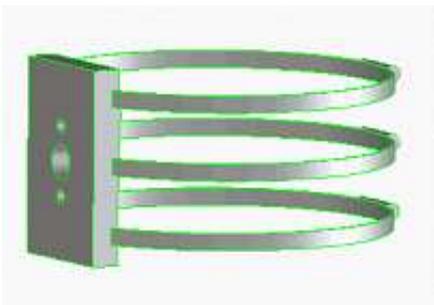8. Turn on the power, and start to operate the EPTZ3000I.

2.5. Accessories

2.5.1. EPTZ-CPMA: Ceiling Pendant Mount Adapter

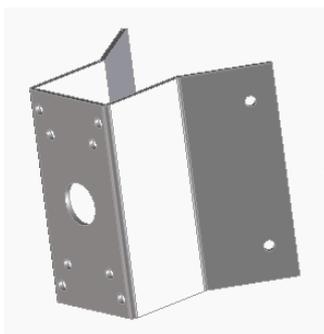The pole mount is used for installing a speed dome on the ceiling indoors or outdoors.

The extension poles are available for the pole mount.

2.5.2. EPTZ-PMA: Pole Mount Adapter

The pole adapter is used for installing a wall mount bracket to a pole indoors or outdoors.

2.5.3. EPTZ- CMA: Corner Mount Adapter

The corner mount are used for installing a wall mount bracket to a 270° corner of walls indoors or outdoors.

3. EPTZ3000/EPTZ3000I CAMERA SETUP MENU

In this section, setup and operation guide of EPTZ3000/EPTZ3000I will be introduced.

There are 25 items of the setting menu. However, there is only one line on the line

display, so using some combination keys to operate is necessary.

3.1. Structure of the Setup Menu

Press MENU to enter camera setup menu.

Press Shift + Joystick up/down to change subentries, and right/left to change the setting.

Items	Option
1. CAM ID	-----------------
2. DZOOM	OFF / ON
3. FOCUS	ONE PUSH / AUTO / MAN
4. IRIS	AUTO / MAN
5. DAY/NIGHT	AUTO / DAY / NIGHT
6. S.SHUTTER	x 4 / x8 / x12 / x16 / x32 / x64 / x128 / OFF
7. DISPLAY	OFF / ON
8. WBC MODE	AUTO OUTDOOR / AUTO INDOOR / ONE PUSH / MAN 2000K / MAN 3200K / MAN 5100K
9. TITLE DISP	OFF / ON
10. ALM-IN1	OFF / N.C. / N.O. / NIGHT N.O. / NIGHT N.C.
11. ALM-IN2	OFF / N.C. / N.O.
12. ALM-IN3	OFF / N.C. / N.O.
13. ALM-IN4	OFF / N.C. / N.O.
14. ALM-IN PRIO	1234 / 2341 / 3412 / 4123
15. ALM-OUT	OFF / LATCH / 3 / 5 / 10 / 20 / 30 / 60 SEC
16. WDR	LOW / MIDDLE / HIGH / OFF
17. SHUTTER	AUTO / A.FLK/ 1/60 / 1/160 / 1/250 / 1/1000 / 1/2500 / 1/10000 / 1/120000 / X2 / X4 / X6 / X8
18. AGC	OFF / LOW / MIDDLE / HIGH
19. DNR	OFF / LOW / MIDDLE / HIGH
20. PRIVATE ZONE	OFF / ON
21. AUTO REGRESS	OFF / ON
22. MOTION	OFF / LIMIT
23. TOUR	ENT
24. X CNT	0000000001
25. Y CNT	0000000006
26. PO CNT	0000000000
27. LOAD DEFAULT	
28. EXIT MENU	

3.1.1. Camera Setup Menu

Press Menu to enter camera setup menu.

Press Shift + Joystick up/down to change subentries, and right/left to change the setting.

1. CAM ID： The name assigned to the camera.

2. DZOOM： Digital zoom enable or disable.

  ON: Enable a digital zoom.

  OFF: Disable a digital zoom.

3. FOCUS： Focus type, auto focus, manual focus and one push focus are available.

  AUTO: Auto focus is enabled.

  MAN: Manual focus is enabled.

  ONE PUSH: Enable the one push trigger focus mode. The focus lens holds the same position until the next trigger command is received. This function prevents the wrong focus in dark. This option is the default value.

4. IRIS： Iris type, auto iris and manual iris are available.

  AUTO: Auto iris is enabled.

  MAN: Manual iris is enabled.

5. Day/Night: IR cut setting.

  AUTO: Auto ICR mode is enabled. IR cut filter will open automatically in low lux.

  NIGHT: IR cut filter is always open (No IR cut). (for true day/night model only)

  DAY: IR cut filter is always close.

6. S.SHUTTER ： Slow electrical shutter. In order to enhance the view in the low lux environment, slow shutter allows more light go through the shutter.

X4: 4-time slow shutter.

X8: 8-time slow shutter.

X12: 12-time slow shutter.

X16: 16-time slow shutter.

X32: 32-time slow shutter.

X64: 64-time slow shutter.

X128: 128-time slow shutter.

OFF: Disable auto slow shutter.

7. DISPLAY : Display the zoom multiple.

ON: Display the zoom multiple.

OFF: Disable the zoom multiple display.

8. WBC MODE : White balance control mode.

AUTO OUTDOOR: Auto white balance compensation with wider range (Default value).

AUTO INDOOR: Auto white balance compensation.

ONE PUSH: One Push Auto White Balance Mode.

MAN 2000K: Manual white balance compensation in 2000K color temperature.

MAN 3200K: Manual white balance compensation in 3200K color temperature.

MAN 5100K: Manual white balance compensation in 5100K color temperature.

Note: WBC setting will affect the wide dynamic range, or other image performance. To adjust a proper value is important.

9. TITLE DISP: Display the title.

　ON: Display the title.

　OFF: Disable the title display.

10. ALM-IN1： The status of input alarm 1.

　N.O.: Enable a normal open alarm input.

　N.C.: Enable a normal close alarm input.

　NIGHT N.O.: Dome turns to "Night mode" if external contact open. Dome turns to "Day mode" if external contact closed.

　NIGHT N.C.: Dome turns to "Night mode" if external contact closed. Dome turns to "Day mode" if external contact open.

　OFF: Disable alarm input.

11. ALM-IN2： The status of input alarm 2.

　N.O.: Enable a normal open alarm input.

　N.C.: Enable a normal close alarm input.

　OFF: Disable alarm input.

12. ALM-IN3： The status of input alarm 3.

　N.O.: Enable a normal open alarm input.

　N.C.: Enable a normal close alarm input.

　OFF: Disable alarm input.

13. ALM-IN4： The status of input alarm 4.

　N.O.: Enable a normal open alarm input.

　N.C.: Enable a normal close alarm input.

OFF: Disable alarm input.

14. ALM-IN PRIO： The priority of alarms.

1234: The alarm priority is 1>2>3>4.

2341: The alarm priority is 2>3>4>1.

3412: The alarm priority is 3>4>1>2.

4123: The alarm priority is 4>1>2>3.

15. ALM-OUT： Duration time of the alarm output.

OFF: Disable alarm output.

3 / 5 / 10 / 20 / 30 / 60 SEC: select alarm output's duration time.

LATCH: The alarm output will not stop until there is any operation on keyboard.

16. WDR : Wide Dynamic Range.

LOW: Low wide dynamic range.

MIDDLE: Middle wide dynamic range.

HIGH: High wide dynamic range.

OFF: Disable wide dynamic range.

17. SHUTTER : Electrical shutter mode.

AUTO: Auto electrical shutter

A.FLK: Anti-Flicker. Camera will auto adjust the shutter to reduce the flicker caused by fluorescent light.

1/60 (NTSC) and 1/50 (PAL): default manual shutter.

1/160: 1/160 sec shutter for both NTSC and PAL

1/250: 1/250 sec shutter for both NTSC and PAL

1/1000: 1/1000 sec shutter for both NTSC and PAL

1/2500: 1/2500 sec shutter for both NTSC and PAL

1/10000: 1/10000 sec shutter for both NTSC and PAL

1/120000: 1/120000 sec shutter for both NTSC and PAL

x2: two-time default manual shutter

x4: four-time default manual shutter

x6: six-time default manual shutter

x8: eight-time default manual shutter

18. AGC : Auto Gain Control

OFF: Auto Gain Control Off

LOW: Low Auto Gain Control

MIDDLE: Middle Auto Gain Control

HIGH: High Auto Gain Control

Note: AGC setting will affect the wide dynamic range, or other image performance. To adjust a proper value is important.

19. DNR: Dynamic Noise Reduction

OFF: Dynamic Noise Reduction Off

LOW: Low Dynamic Noise Reduction

MIDDLE: Middle Dynamic Noise Reduction

HIGH: High Dynamic Noise Reduction

20. PRIVATE ZONE： Private zone masking.

ON: Enable the private zone masking.

OFF: Disable the private zone masking.

Press "Enter" to enter private zone setup mode, and the masking will turn into red. You

can set the masking size and position in the private zone setup mode.

In this mode, you can press

"Shift" + "6" to increase masking horizontal size;

"Shift" + "4" to decrease masking horizontal size;

"Shift" + "2" to increase masking vertical size;

"Shift" + "8" to decrease masking vertical size;

Shift Joystick to select the position where the masking is located.

"Enter" to confirm the size and position, and then the masking will turn into green again.

If you use Pelco protocol keyboard, command of private zone setting will be different.

Press "IRIS +" to enter private zone setup mode, and the masking will turn into red. You

can set the masking size and position in the private zone setup mode.

In this mode, you can press

"Focus F." to decrease masking size;

"Focus N." to increase masking size;

"IRIS -." to switch the mask horizontal or vertical direction;

Shift Joystick to select the position where the masking is located.

"IRIS +" to confirm the size and position, and then the masking will turn into green

again.

21. AUTO REGRESS：Auto regress to the shortest path during set a position. It can shorten the response delay, and increase the response performance and speed dome lifetime.

   ON: Enable the auto regress function.

   OFF: Disable the auto regress function.

22. MOTION: This is used to set a limitation for Auto Pan function. When Motion is ON, you can use Auto Pan function simply by pressing "Shift"+ "A.Pan "of the keyboard (according to A. Pan position you have set).

   OFF: Motion limitation function is disabled.

   LIMIT: Press "Enter" first.

   The message NOW LIMIT OFF shows up, press "Enter" again.

   The message CHANGE ON shows up, press "Enter" to change.

   To change the value back to OFF, simply follow the same steps again.

   If you need to reset, press "IRIS –" of the keyboard to exit.

23. TOUR：Tour setting or tour run option. Press "Enter" first to enter tour mode. Shift joystick to right and left (< >), shift SET or RUN option. (Shift the joystick up for returning to previous setting). Press "Enter" to confirm.

For Tour setting: Shift joystick to right and left (< >) for changing Set Numeral (T01A~T16A), then press "Enter" to confirm.

Shift joystick to right and left for selecting PRE Numeral (position) from 01~99, then press "Enter" to confirm.

Shift joystick up and down to adjust DWL (dwell) time from 0~99 sec, then press "Enter" to confirm.

Shift joystick to right and left for adjusting speed (5~235, with an interval of 5), then press

"Enter" to confirm.

For Tour Run:

Shift joystick to right and left for selecting RUN NUM (T01A~T16A) of the tour that you

previously set. Press "Enter" to start running the tour.

Alternatively, you could run the tour without entering MENU. Press "Position + 97" to run

the tour that you have previously set, please be informed that this function is only valid for

T01A.

If you need to reset, press "IRIS –" of the keyboard to exit.

24. X CNT ： X-axis counter. This counter counts the x axis movement, and 1 is counted

when the speed dome pans 360°.

25. Y CNT ： Y-axis counter. This counter counts the y axis movement, and 1 is counted

when the speed dome tilts 180°.

26. PO CNT ： Position counter. This counter counts the go-position times, 1 is counted

when speed dome goes to a position once.

27. LOAD DEFAULT ： Load default setting.

Select this item, and then press "Enter" to load default setting.

Press "Clr" + "Menu" whenever you want to quit menu setting.

28. EXIT : To exit.

Select this item, and then press "Enter" to quit setting.

Press "Clr" + "Menu" whenever you want to quit menu setting.

4. EPTZ3000/3000I FUNCTION SETUP AND OPERATION

4.1. Manual Control Mode

➢ **Manual control:** Shift Joystick Up/Down/Left/Right, and turn it Clockwise/Counterclockwise to control speed dome.

Use the control keys which are Zoom, Focus and IRIS function keys on the keyboard to Zoom In/Out, focus N (near)/F (Far), or IRIS +/-.

Note: Zoom In/Out control keys will be disabled when entering to OSD menu mode.

➢ **HOME Mode:** The camera view will go back to the home position when there is no keyboard operation in a specific time. The home position and the specific time can be set by pressing Set + Home.

If you set the time to 0 minute, then the camera will go back to home if there is no keyboard operation in 5 seconds. This is the minimum no action time for HOME mode.

Note: If "HOME" function is enabled, dome will go to home immediately after powering on.

4.2. Auto Pan Mode

➢ **Two point auto pan**: Press A.Pan to enter the auto pan mode, and then the system will ask you to enter the auto pan speed (1~239). Press Enter to start auto pan.

In order to set the two points, press Set + A.Pan, and then enter the dwell time (1~127 seconds) of each point. EPTZ3000 begins to pan from point A to point B clockwise.

➢ **360°auto pan:** Press Shift + A.Pan to enter the 360°auto pan. Sy stem will ask you to enter 360°auto pan speed (1~239). The camera wi ll turn 360°automatically, but

not tilt.

4.3. Position Setting

➢ **Focus on a preset position:** Press the number key, and then press Position to
focus on the number of preset position; or you can press Position, then enter the
preset position number, and then press Enter to focus on the number of preset
position.

➢ **Preset a position:** Shift the Joystick to the position you would like to preset, and
then press Shift + Position. The system will ask you to enter the preset position
number (1~192), and then press Enter to save the position. There are up to 192
positions can be preset.

Three specific preset positions can be set as follows:

92 => Set Left Limit Stop (A position)

93 => Set Right Limit Stop (B position)

95 => Enter Menu mode (Use keyboard control keys to control OSD items; Focus F.
to go downward, Focus N. to go upward. IRIS + go to previous setting and IRIS –
to exit).

You can directly go to the following specific preset positions:

33 => Rotation of 180 degree

34 => Go to Home position (if Home Position is set by EVF Keyboard)

96 => Stop Scan

97 => Start running tour

98 => Frame scan (60 degree / step)

Default speed is 32. It can be changed by EVF Keyboard (Shift + A.Pan setting
speed.

Dwell time: default is 2 sec; It can be changed by EVF Keyboard Set + A.Pan setting dwell time of A pos or B pos.

99 => Auto scan (360 degree)

Default speed is 32. It can be changed by EVF Keyboard (Shift + A.Pan setting speed).

We can even set camera's ICR Day/Night function with RS-485 command via keyboard. How to do this? Press Position + **88** to link to Day mode or Position + **89** to link to Night mode, "ICR AUTO" message will be shown on the right-bottom part of the screen. If OSD Day/Night ICR mode is "AUTO", it cannot be controlled by preset position setting.

➢ **Set the parameter of a preset position:** Press Set + Position to set the parameter of a preset position. You can set the going-to speed (1~239), dwell time (1~239 seconds), and the title of the position. Shift the joystick Right/Left to change bits, and shift the Joystick Up/Down to change the alphanumeric characteristic. The available alphanumeric characteristics are 0~9, A~Z, &, ?, !, :, ', ., ,, /, -, and a space.

➢ **Delete a preset position:** Press Clr + Position to delete a preset position. The system will ask you to enter the position number that you would like to delete, and then press Enter.

4.4. Tour Mode

In the tour mode, you can set a tour for viewing. There are 16 tours can be set, and 16 preset positions in a tour.

➢ **One-way tour Mode:** Press Tour to enter the tour mode. The system will ask you

to enter the tour number you would like to run, and starts the tour after pressing

Enter. To preset a tour before running is necessary.

Preset a one-way tour: Press Set + Tour to preset a one-way tour. The system will

ask you to enter preset position numbers (The positions need to be preset). After

finish entering all positions, press Stop to quit, and then press Enter to save the

tour.

➢ **To-and-fro tour mode:** Press Shift + Tour to run a to-and-fro tour. The system will

ask you to enter the tour number you would like to run, and starts the tour after

pressing Enter. To preset a tour before running it is necessary.

Note 1: The difference between the One-way tour mode and To-and-fro tour mode is that

the return modes are different. For example: There is a tour with 3 preset positions 1, 2

and 3. The camera runs 1→2→3→1→2→3 in the One-way tour mode, and 1→2→3→2→

1 in the To-and-fro tour mode.

Note 2: You could set a pattern tour. Press Set + Tour, and input 0, press Enter. Sway the

joystick to record the entire tour. Press Stop to stop recording tour. To view this pattern

tour, simply press Tour, and input tour number 0.

4.5. Alarm Link to a Position/Tour

EPTZ3000/EPTZ3000I have 4 alarm inputs that can be set to link to a position or a tour

when an alarm is triggered.

➢ **Set an alarm link:**

Press **F1** to set an alarm link. Enter the alarm number, and then press **Enter**.

Switch the Joystick up/down to select a position or a tour, enter a position or tour

number, and then press **Enter** to confirm the alarm link setting.

If you set the position number to 99, the dome will do a 360 degree auto scan or

AB two point pan if limit is ON. If you set the position number to 98, the dome will do a frame scan.

➢ **Delete an alarm link:**

Press `Clr` + `F1` to delete a link of alarm to position/tour.

Note 1: After alarm output signal is terminated, the speed dome will resume action or return to its original position.

**Note 2:** After powering on the speed dome, it will detect alarm status automatically.

4.6. Other Operations

The EPTZ3000/EPTZ3000I can work with a DVR that has PTZ control functions, and a matching protocol. The available control functions depend on different DVRs.

The EPTZ3000/EPTZ3000I can work with a keyboard that has PTZ control functions, and a matching protocol. The available control functions depend on different keyboards.

APPENDIX : The Alarm I/O Connection

There are 4 alarm inputs and 1 alarm output available. The alarm I/O connector that is marked as **JP5** is a nine-pin connector. It is located on the PCB board of the housing.
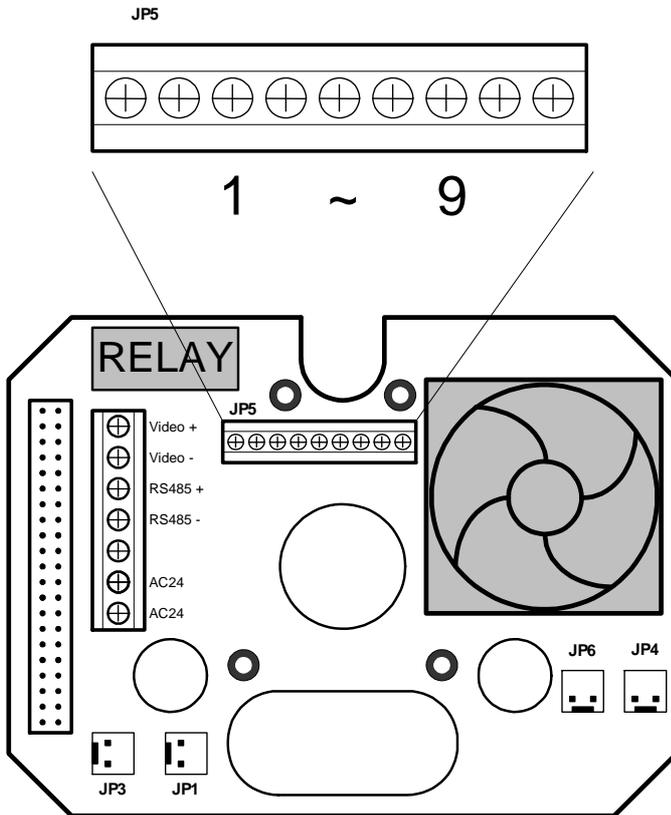
Pin #	Function
1	Alarm Input 3
2	Ground
3	Alarm Input 2
4	Alarm Input 1
5	Ground
6	Alarm Input 0
7	Normal Open (N.O.)
8	Common (COM)
9	Normal Close (N.C.)

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