TOSHIBA

DOME CAMERA

IK-DP30A

Please read this manual thoroughly before use, and keep it handy for future reference.

> Record in space provided below the Model No. and the Serial Number as found on the label on the bottom of the camera.
> Model. No. IK-DP30A   Serial No._____
> Retain this information for future reference.

TABLE OF CONTENTS

IMPORTANT SAFEGUARDS

1. Read Instructions
All the safety and operating instructions should be read before the product is operated.

2. Retain Instructions
The safety instructions and instruction manual should be retained for future reference.

3. Heed Warnings
Comply with all warnings on the product and in the instruction manual.

4. Follow Instructions
Follow all operating and use instructions.

5. Cleaning
Disconnect this video product from the power supply before cleaning.

6. Attachments
Do not use attachments not recommended by the video product manufacturer as they may cause hazards.

7. Water and Moisture
Do not use this video product near water. Some examples are: near a bath tub, wash bowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool.

8. Accessories
Do not place this video product on an unstable cart, stand, tripod, bracket or table. The video product may fall, causing serious injury to a person, or serious damage to the product. Use only with stand, tripod, bracket, or table recommended by the manufacturer, or sold with the video product. Any mounting of the product should follow the manufacturer's instructions, and should use a mounting accessory recommended by the manufacturer.

9. Ventilation
This video product should never be placed near or over a radiator or heat register. If this product is placed in a built in installation verify that there is proper ventilation so that the camera temperature operates within the recommended temperature range.

10. Power Sources
This video product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your location, consult your product dealer.

11. Power-Cord Protection
Power cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them. Pay particular attention to cords at plugs, screws and the point where they exit the product.

12. Installation
Install this video product on a firm and solid part of the ceiling or wall. If installed on a weak place the camera could fall causing injury and damage.

13. Lightning
For additional protection on this video product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the power supply and cable system. This will prevent damage to the video product due to lightning and power-line surges. If lightning occurs, do not touch the unit or any connected cables in order to avoid electric shock.

14. Overloading
Do not overload the power supply or extension cords as this can result in a risk of fire or electric shock.

15. Object and Liquid Entry
Never push objects of any kind into this video product through openings as they may touch dangerous electrical points or short-out parts that could result in a fire or electrical shock. Never spill liquid of kind on the video product.

16. Servicing
Do not attempt to service this video product yourself as opening or removing covers may expose you to dangerous electricity or other hazards. Refer all servicing to qualified service personnel.

17. Damage Requiring service
Disconnect this video product from the power supply and refer servicing to qualified service personnel under the following conditions.
a. When the power-supply cord or plug is damaged.
b. If liquid has been spilled, or objects have fallen into the video product.
c. If the video product has been exposed to rain or water.
d. If the video product does not operate normally by following the operating instructions in the instruction manual. Adjust only those controls that are covered by the instruction manual as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the video product to its normal operation.
e. If the video product has been dropped or the cabinet has been damaged.
f. When the video product exhibits a distinct change in performance-this indicates a need for service.

18. Replacement Parts
When replacement parts be sure the service technician uses replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock or other hazards.

19. Safety Check
Upon completion of any service or repairs to this video product, ask the service technician to perform safety checks to determine that the video product is in proper operating condition.

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

• The CAUTION label, shown on the left, is attached on the camera.

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.

The lightening 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.

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

CAUTION :
CONNECT 24V AC UL LISTED CLASS 2 POWER SUPPLY.

FIELD INSTALLATION MARKING :
THIS INSTALLATION SHOULD BE MADE BY A QUALIFIED SERVICE PERSON AND SHOULD CONFORM TO ALL LOCAL CODES.

FCC (USA)-INFORMATION
NOTE : 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.

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.

1. Features and description

Quick Install Design - Cuts Installation Time in Half
480 Lines Horizontal Resolution
400 Degree/Second Pan
18X Optical/12X Digital Zoom
Privacy Zone Masking
0.01 Lux Minimum Illumination (1/4, IR Cut filter Off)
50dB Signal-To-Noise Ratio
64 Position Preset
Auto-Flip
Proportional Zoom

2. Cautions

(1) In order to protect the camera, avoid placing or using it under direct sunlight, rain or dust.
(2) Avoid touching the zoom lens with your fingers. If necessary, use a soft cloth moistened with alcohol to wipe off any dust.
(3) When the camera is not in use, keep the lens cap attached to protect the zoom lens.
(4) Avoid aiming the camera at the sun.
(5) Intense light such as a spotlight may cause a bloom or smear. A vertical stripe may appear on the screen. However, this is not a malfunction.
(6) Install the camera away from video noise. If cables are wired near electric lighting wires or a TV set, noise may appear in images. In this event, relocate cables or reinstall equipment.

3. Components

(1) Dome base 1
(2) Dome drive 1
(3) Accessories
     Instruction manual 1
     Install screw (3PCS) 1

4. Part names and Locations

Control Terminal (RS-422)

Φ139.8

Power Terminal
(24VAC only)

Video out BNC connector

Installation Brackets (3 legs)

R1.9

RS-422 termination switch

120°

Installation Notch

Installation Label

Dome Base

173.7

223.7

Screw for cover lock
(Reserved)

Dome Drive

X18 Lens

φ134

R10
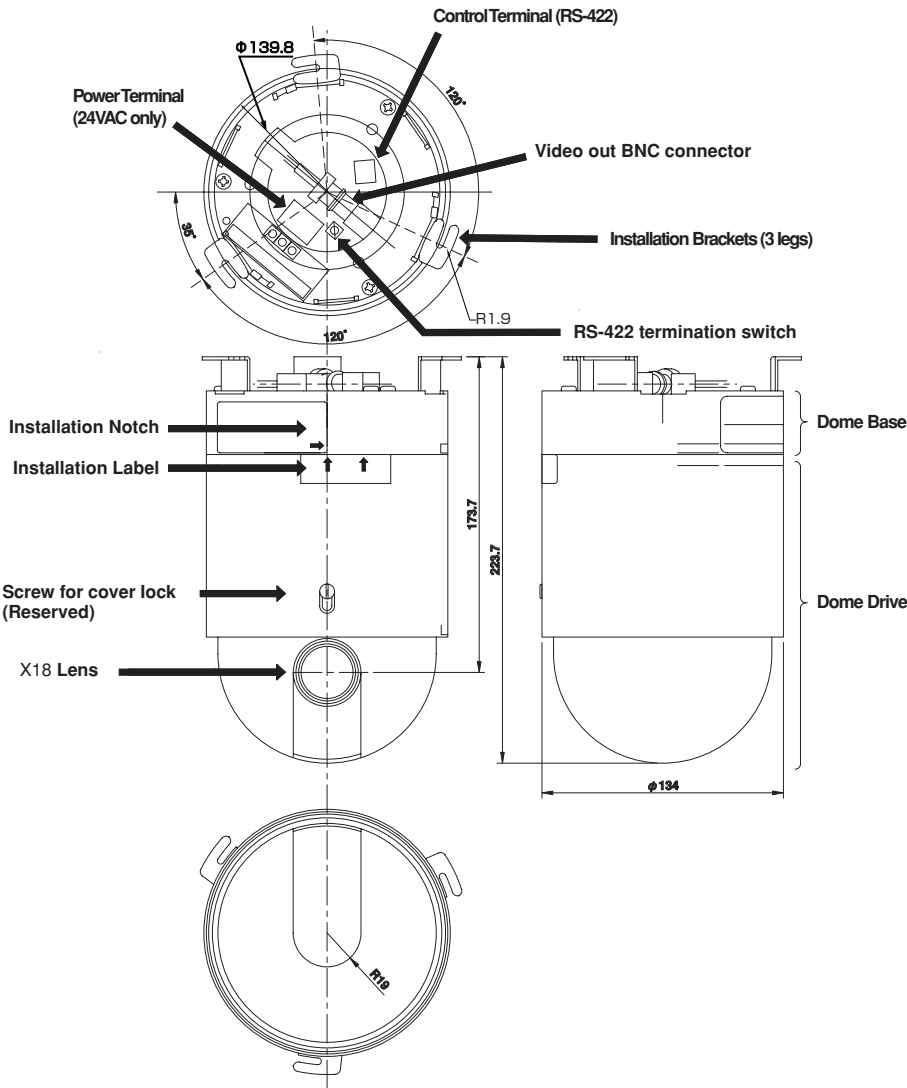
5. Connections

Basic connection (Direct mode)

24V AC UL listed class 2 power supply

RS422
(twisted pair line)

AC Adaptor

Keyboard

Monitor
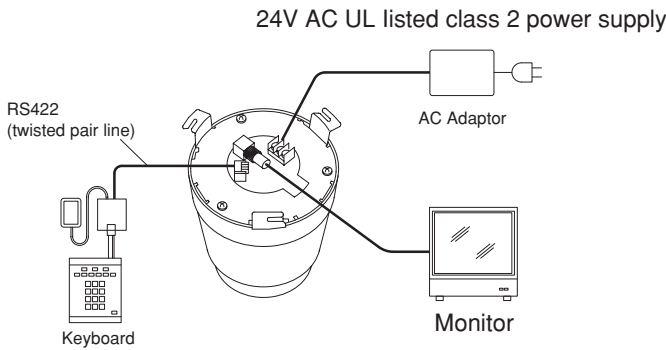
Make sure to connect to a power supply that allows for at least 35W consumption

RS422 Pin Out

	○	■	RX -	RX+	————	TX+	2 wire
	○	■	$\overline{RX}$ -	RX-	————	TX-	controller
	○	■	TX -	TX+	————	RX+	2 nd
	○	■	$\overline{TX}$ -	TX-	————	RX-	Dome Camera
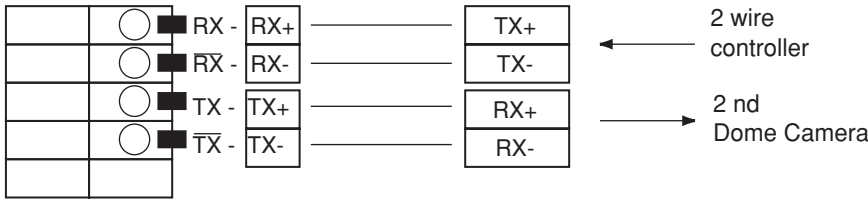
In the direct mode the communication line from the keyboard (TX) where TX+ is connected to RX+ of the dome camera and TX- is connected to RX- of the dome camera. If connecting two or more dome cameras, TX+ from the first camera is connected to RX+ of the second camera and TX- is connected to the RX-.

6.   Operation

(Power On display)

```
TOSHIBA IK-DP30A
VERSION***
PROTOCOL TOSHIBA-P
ADDRESS 1
COMM 4800/N/8/1
```

When the dome camera powers-up, the software version, selected protocol, and other information are displayed on the monitor.

6.1   ACCESSING THE MENU

Accessing the menu varies with the model controller being used. Several controllers are listed below. Please refer to your model's instructions for information on inputting commands.

JK-UC1

Input 95 using the numeric keypad.
Press the PRESET button to display the MENU screen.

VLC485

Input 95# using the numeric keypad.
Press the PRESET button to display the MENU screen.

6.2 Preset Commands

The dome camera can set and perform various preset commands. The following table lists the preset number and whether is can be set (SET) or performed (GO).

Presets 1-32 and 35-66 are user presets. Refer to your model's instructions for information on inputting preset commands.

Preset Number	Function
1-32 SET/GO	Preset position 1-32
33 GO	Flip
34 GO	Home (return to 0 pan position)
35-66 SET/GO	Preset position 35-66
70 GO	Begin Auto patrol
71 GO	Backlight compensation ON
72 GO	Backlight compensation OFF
73 GO	One push WB
74 GO	One push trigger AF
75 GO	Software version Display
76 GO	P/T Initialize
83 SET	Privacy Zone Setup menu mode
88 GO	Color Mode IR Cut filter ON
89 GO	Monochrome Mode IR Cut filter OFF
90 SET	Set manual left limit stop
91 SET	Set manual Right limit stop
92 SET	Set Scan Left Limit Stop
93 SET	Set Scan Right Limit Stop
95 SET	Enter Menu Mode
96 GO	Stop Scan
97 GO	Begin Random Scan
98 GO	Begin Frame Scan
99 GO	Begin Auto Scan

6.3 PROGRAMMING PRESETS

Programming presets varies with the model controller being used. Several controllers are listed below. Please refer to your model's instructions for information on inputting preset commands.

JK-UC1

Input the desired preset using the numeric keypad.
Press the SHIFT key.
The LED will light up.
Press the PRESET key.

VLC485

Input the desired preset using the numeric keypad.
Press the # key.
Press the PRESET key.

6.4 PERFORMING PRESET OPERATIONS

JK-UC1/VLC485

Input the desired preset using the numeric keypad.
Press the PRESET button to perform the preset.

6.5 PAN/TILT FUNCTIONS

Manual PAN
Manual Pan is controlled from a keyboard and the speed ranges from 0.1 degrees/sec to 90 degrees/sec depending on the joystick position. In turbo mode the speed is 150 degree/sec. However, this speed is limited when Proportional P/T is ON.

Manual TILT
Manual Tilt speed ranges from 0.1 degrees/sec to 45 degrees/sec. However, this speed changes when Proportional P/T is ON.

Pan Range	360 degrees continuous
Tilt Range	85 degrees (Indoor), 92 degrees (Outdoor)
Manual Pan Speeds	0.1° – 90°/s
Manual Pan Speeds (turbo)	150°/s
Manual Tilt Speeds	0.1° – 45°/s
Preset Speeds	Pan: 400°/s max-set in menu Tilt: 200°/s

6.6 SCAN FUNCTIONS

AUTO SCAN

The dome camera can perform an auto scan operation during power-up or by direct control from a keyboard.

Scan limit stops ARE NOT set:

The dome camera will pan continuously until a manual pan, tilt, or zoom operation is performed from the keyboard.

Scan limit stops ARE set:

The dome camera will pan continuously between scan limit stops until a manual pan, tilt, or zoom operation is performed from the keyboard. To set scan limit stops refer to SCAN LIMIT STOPS under PAN/TILT SETUP in the camera menu.

Zoom

At power-up, the zoom is fully zoomed out. When an auto scan is started directly from the keyboard, the zoom will maintain the last magnification.

Tilt

At power-up, the tilt is set up by the menu. To set the tilt angle, refer to SCAN TILT ANGLE under PAN/TILT SETUP. When an auto scan is started directly from the keyboard, the tilt will maintain the last tilt angle.

FRAME SCAN

The dome camera can perform a frame scan operation during power-up and by direct control from the keyboard.
Operation of zoom and tilt is the same as in Auto Scan.

Scan limit stops ARE NOT set:

The dome camera will move in 45-degree increments (called stops) horizontally until a manual pan, tilt, or zoom operation is performed from the keyboard. See figure below.
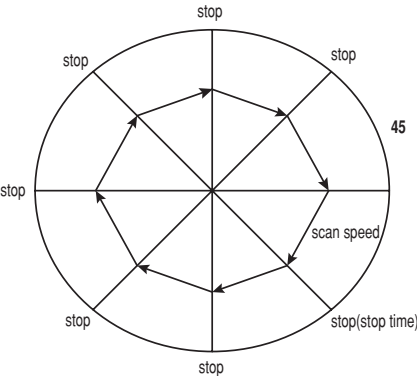
Scan limit stops ARE set:

The dome camera will move in 45-degree increments horizontally within the limit stops until a manual pan, tilt, or zoom operation is performed from the keyboard. See figure below.
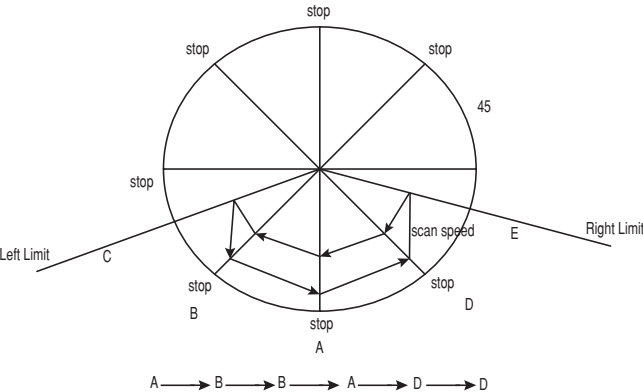
RANDOM SCAN

The dome camera can perform a random scan operation during power-up and by direct control from the keyboard.
Operation of zoom and tilt is the same as in Auto Scan.

Scan limit stops ARE NOT set:

The dome camera will move between random stops and random tilt angles until a manual pan, tilt, or zoom operation is performed from the keyboard. See figure below.
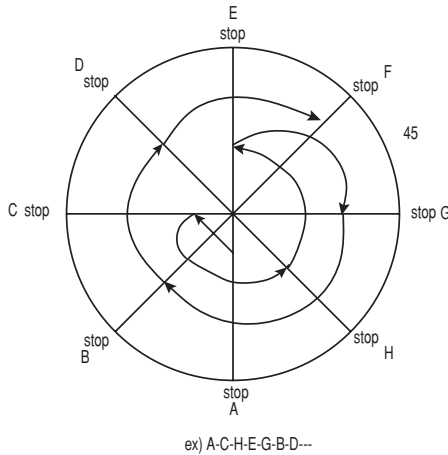
ex) A-C-H-E-G-B-D---

Scan limit stops ARE set:

The dome camera will move between random stops and random tilt angles within the limit stops until a manual pan, tilt, or zoom operation is performed from the keyboard. See figure below.

ex)A-D-B-D--
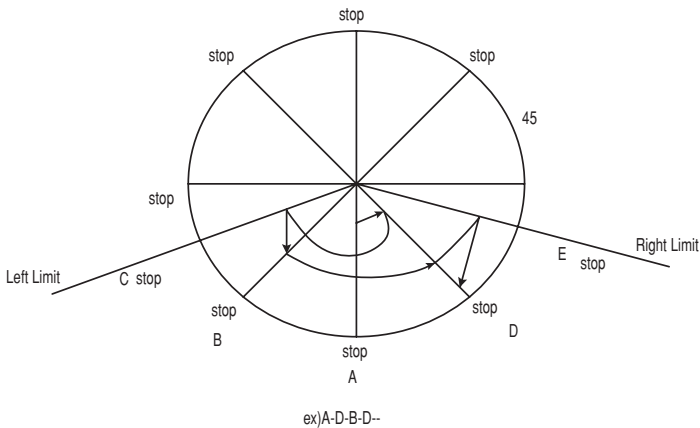
6.7 CAMERA SETUP

6.7.1 FOCUS CONTROL

Direct

• The focus can be controlled directly using near or far focusing controls.
• The focus control has 4 varying speeds.
• One Push Trigger Auto Focus.

Menu

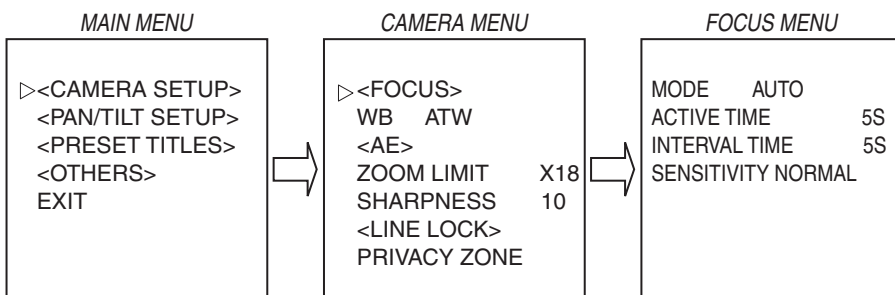| |
| -- |

MAIN MENU   *CAMERA MENU*   *FOCUS MENU*

```
▷<CAMERA SETUP>          ▷<FOCUS>              MODE      AUTO
 <PAN/TILT SETUP>         WB    ATW            ACTIVE TIME      5S
 <PRESET TITLES>          <AE>                 INTERVAL TIME    5S
 <OTHERS>                 ZOOM LIMIT    X18    SENSITIVITY NORMAL
 EXIT                     SHARPNESS     10
                          <LINE LOCK>
                          PRIVACY ZONE
```

• The Focus control has four options: Manual/Auto/Interval/Zoom Trigger
• In the manual mode the IK-DP30A focus is directly controlled with the near and far controls.
• When the camera is in Auto Mode, pressing the near and far controls will place the camera in manual mode until there is a zoom or pan/tilt function.
• In Interval mode, the camera will switch between auto focus and manual focus according to the Active Time and Interval Time respectively. Example: Active Time (auto) – Interval Time (manual) – Active Time (auto) – Interval Time (manual)...
• The interval and active times can be set from 1 s to 255s.
• In Zoom Trigger mode, the camera remains in manual mode unless there is a zoom function. After the zoom function is completed the camera returns to the manual mode.
• The sensitivity of the Auto Focus can be set to NORMAL or LOW.

To change the Focus options:
1. Enter the preset command to access the main menu.
   Refer to section 6.1 for the controller model and preset command.
2. Position the cursor (▷) next to CAMERA SETUP and press the OPEN button to access the Camera menu.
3. Position the cursor next to FOCUS and press the OPEN button to access the Focus menu.
4. Position the cursor next to the desired option and press the OPEN button to move the cursor to the right.
5. Move the joystick up or down to select option setting.
6. To accept the selection, press the OPEN button or to cancel the selection, press the CLOSE button.

6.7.2 WHITE BALANCE CONTROL

Direct

• The White Balance can be set by One Push Trigger operation.

Menu

MAIN MENU

```
▷ <CAMERA SETUP>
  <PAN/TILT SETUP>
  <PRESET TITLES>
  <OTHERS>
  EXIT
```

CAMERA MENU

```
  <FOCUS>
▷ WB    ATW
  <AE>
  ZOOM LIMIT      X18
  SHARPNESS       10
  <LINE LOCK>
  PRIVACY ZONE
```

The White Balance can be set to ATW (Auto Tracking White)/AUTO/ONE PUSHWB.
• ATW automatically adjusts the white balance for color temperatures from 2000K to 10000K.
• AUTO automatically adjusts the white balance for color temperatures from 3000K to 7500K.
• ONE PUSH WB can be set using 73 PRESET from a controller.
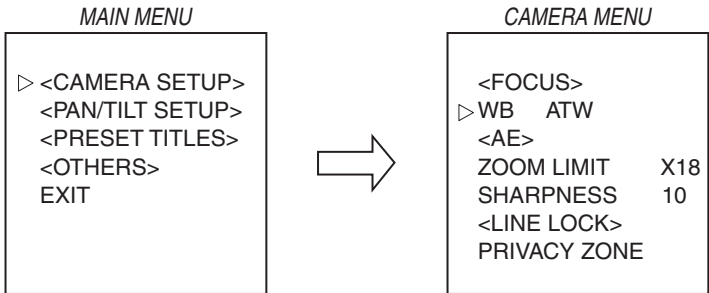
To change the White Balance:
1. Enter the preset command to access the main menu.
   Refer to section 6.1 for the controller model and preset command.
2. Position the cursor (▷) next to CAMERA SETUP and press the OPEN button to access the Camera menu.
3. Position the cursor next to WB and press the OPEN button to move the cursor to the right.
4. Move the joystick up or down to select ATW, AUTO, or ONE PUSH WB.
5. To accept the selection, press the OPEN button or to cancel the selection, press the CLOSE button.

6.7.3 AE CONTROL

Direct

• The Iris can be controlled directly using OPEN or CLOSE controls.

Menu

MAIN MENU

```
▷<CAMERA SETUP>
  <PAN/TILT SETUP>
  <PRESET TITLES>
  <OTHERS>
  EXIT
```

CAMERA MENU

```
  <FOCUS>
  WB    ATW
▷ <AE>
  ZOOM LIMIT      X18
  SHARPNESS       10
  <LINE LOCK>
  PRIVACY ZONE
```

AE MENU

```
MODE      FULL AUTO
AUTO SLOW SHUTTEROFF
SHUTTER SPEED     1/60
AE COMPENSATION   0
BACK LIGHT COMP   OFF
DAY/NIGHT        AUTO
```

MODE

• AE mode can be set to FULL AUTO or SHUTTER PRIORITY.
• FULL AUTO mode:
  The shutter is fixed at 1/60 sec and the camera will automatically adjust the iris according to the level. The iris can be controlled manually but will return to FULL AUTO if there is a zoom or pan/tilt operation.
• SHUTTER PRIORITY:
  The shutter can be varied from 1 sec ?1 /10000 in 22 steps. The camera will automatically adjust the iris according to the level., If the shutter speed is set to 1/1 or 1/2 sec the iris must be controlled manually.

AUTO SLOW SHUTTER

• In the FULL AUTO mode the AUTO SLOW SHUTTER feature can be set to ON or OFF. A camera will automatically set the shutter slower than 1/60 sec according to the level of brightness.

> **Note**
>
> In the SHUTTER PRIORITY mode the AUTO SLOW SHUTTER cannot be set.

SHUTTER SPEED

• In the SHUTTER PRIORITY mode the shutter can be varied from 1 sec ~ 1/ 10000 in 22 steps. The camera will automatically adjust the iris according to the level. The iris cannot be controlled automatically if the shutter speed is set to 1/1 or 1/2 sec. The iris must be controlled manually.

> **Note**
>
> In the FULL AUTO mode SHUTTER SPEED cannot be set.

AE COMPENSATION

• AE COMPENSATION can be set from -7 to +7. As the numerical value becomes larger the screen becomes brighter.

BACK LIGHT COMP

• In the FULL AUTO mode the, BACK LIGHT COMPENSATION feature can be set to ON or OFF. BACK LIGHT COMPENSATION can be set directly using JK-UC1 Controller (71 PRESET = ON, 72 PRESET = OFF).

> **Note**
>
> In the SHUTTER PRIORITY mode the BACK LIGHT COMPENSATION feature cannot be set.

Day/Night

• In the FULL AUTO mode the DAY/NIGHT feature can be set AUTO or MANUAL.
• MANUAL mode can be set directly using a JK- UC1 Controller (88 PRESET = Color mode,89 PRESET = monochrome mode).
• An infrared (IR) Cut-Filter can be disengaged from the image path for increased sensitivity in low light environments. This function will automatically engage depending on the ambient light, allowing the camera to be effective in DAY/NIGHT environments.

Note

At the time of SHUTTER PRIORITY mode choice, DAY/NIGHT mode is fixed in MANUAL.
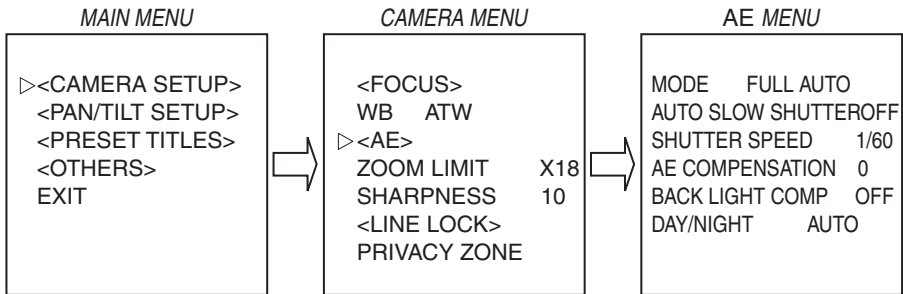

To change the AE options:

1. Enter the preset command to access the main menu.
   Refer to section 6.1 for the controller model and preset command.
2. Position the cursor (▷) next to CAMERA SETUP and press the OPEN button to access the Camera menu.
3. Position the cursor next to AE and press the OPEN button to access the AE menu.
4. Position the cursor next to the desired option and press the OPEN button to move the cursor to the right.
5. Move the joystick up or down to select option setting.
6. To accept the selection, press the OPEN button or to cancel the selection, press the CLOSE button.

6.7.4   ZOOM CONTROL

Direct

• The zoom feature has 4 varying speeds.
• The zoom feature can be controlled directly for Wide angle or Telephoto angle.

Menu

MAIN MENU

```
▷<CAMERA SETUP>
  <PAN/TILT SETUP>
  <PRESET TITLES>
  <OTHERS>
  EXIT
```

CAMERA MENU

```
  <FOCUS>
  WB     ATW
  <AE>
▷ ZOOM LIMIT     X18
  SHARPNESS      10
  <LINE LOCK>
  PRIVACY ZONE
```
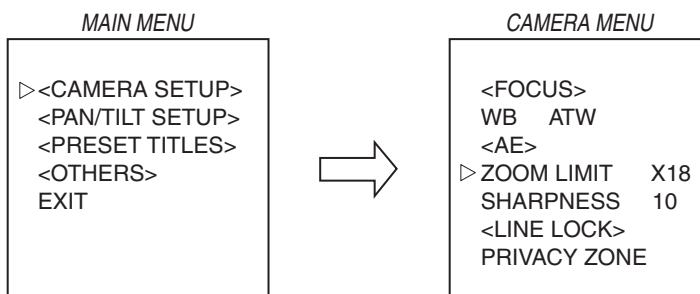
• A zoom limit can be set to x18, x36, x72, x144, and x216.
• The maximum optical zoom is x18, x36 to x216 are the values for electronic zoom.

To change the zoom limit:

1. Enter the preset command to access the main menu.
   Refer to section 6.1 for the controller model and preset command.
2. Position the cursor (▷) next to CAMERA SETUP and press the OPEN button to access the Camera menu.
3. Position the cursor next to ZOOM LIMIT and press the OPEN button to move the cursor to the right.
4. Move the joystick up or down to toggle between zoom limits.
5. To accept the selection, press the OPEN button or to cancel the selection, press the CLOSE button.

6.7.5 SHARPNESS

Menu

MAIN MENU

▷<CAMERA SETUP>
　<PAN/TILT SETUP>
　<PRESET TITLES>
　<OTHERS>
　EXIT

CAMERA MENU

　<FOCUS>
　WB　ATW
　<AE>
　ZOOM LIMIT　　X18
▷ SHARPNESS　　10
　<LINE LOCK>
　PRIVACY ZONE
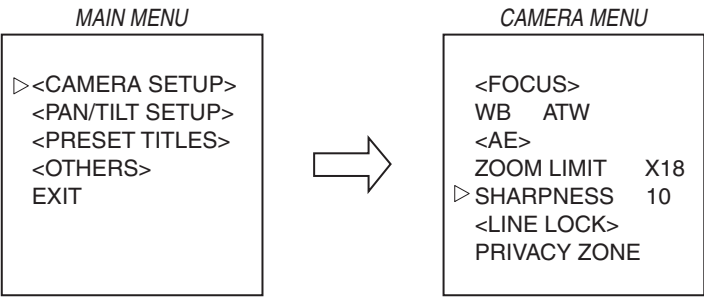
The sharpness can be controlled from 0-15, with 15 being the sharpest.

To change the SHARPNESS:
1. Enter the preset command to access the main menu.
   Refer to section 6.1 for the controller model and preset command.
2. Position the cursor (▷) next to CAMERA SETUP and press the OPEN button to access the Camera menu.
3. Position the cursor next to SHARPNESS and press the OPEN button to move the cursor to the right.
4. Move the joystick up or down to select the sharpness level.
5. To accept the selection, press the OPEN button or to cancel the selection, press the CLOSE buttons.

6.7.6 LINE LOCK CONTROL

The dome camera can be synchronized with the power supply frequency.

Menu

• Line Lock can be set to ON or OFF
• The Line Lock Phase can be set from 40 to 250 degrees.

MAIN MENU

▷<CAMERA SETUP>
　<PAN/TILT SETUP>
　<PRESET TITLES>
　<OTHERS>
　EXIT

CAMERA MENU

　<FOCUS>
　WB　ATW
　<AE>
　ZOOM LIMIT　　X18
　SHARPNESS　　10
▷<LINE LOCK>
　PRIVACY ZONE

LINE LOCK

MODE　　　　　OFF
LINE PHASE　　　180

To change the LINE LOCK options:
1. Enter the preset command to access the main menu.
   Refer to section 6.1 for the controller model and preset command.
2. Position the cursor (▷) next to CAMERA SETUP and press the OPEN button to access the Camera menu.
3. Position the cursor next to LINE LOCK and press the OPEN button to access the Line Lock menu.
4. Position the cursor next to the desired option and press the OPEN button to move the cursor to the right.
5. Move the joystick up or down to select the option setting.
6. To accept the selection, press the OPEN button or to cancel the selection, press the   CLOSE button.

6.7.7 PRIVACY ZONE MASKING

This function masks a user defined area that cannot be viewed by the operator. The mask adjusts with the pan, tilt and zoom of the camera.

Menu

```
        MAIN MENU                          CAMERA MENU
┌──────────────────────┐          ┌──────────────────────┐
│                      │          │                      │
│ ▷<CAMERA SETUP>      │          │  <FOCUS>             │
│  <PAN/TILT SETUP>    │   ====>  │  WB    ATW           │
│  <PRESET TITLES>     │          │  <AE>                │
│  <OTHERS>            │          │  ZOOM LIMIT    X18   │
│  EXIT               │          │  SHARPNESS     10    │
│                      │          │  <LINE LOCK>         │
│                      │          │ ▷ PRIVACY ZONE       │
└──────────────────────┘          └──────────────────────┘
```

Privacy Masking ON/OFF:
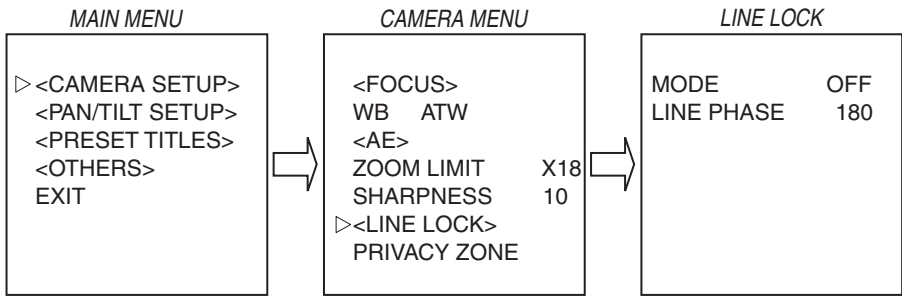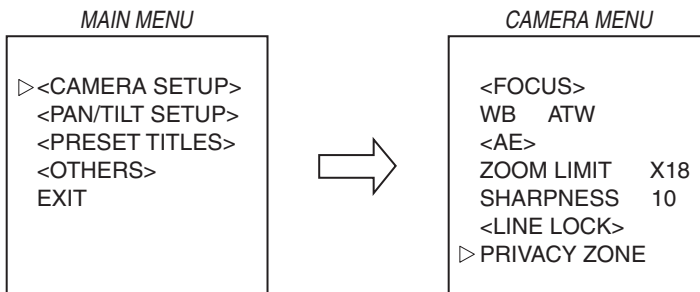A maximum of 8 zones can be set.
1. Enter the preset command to access the main menu.
   Refer to section 6.1 for the controller model and preset command.
2. Position the cursor (▷) next to CAMERA SETUP and press the OPEN button to access the menu.
3. Position the cursor next to PRIVACY ZONE and press the OPEN button to move the cursor to the right.
4. Move the joystick up or down to set P1 to P8 ON/OFF separately.
5. To accept the selection, press the OPEN button or to cancel the selection, press the CLOSE button.

Privacy zone setup:
1. Use a joystick to move where you want to set a privacy zone.
2. Enter 83 preset to access the setup screen.
   Displays PRIVACY ZONE > ▷ 1
   1: the number indicates zone(8 zone can be set.)
3. Press the OPEN button to set ZONE SIZE
   Use a joystick to create the privacy zone to mask.
4. Press the OPEN button to set ZONE COLOR
   Use a joystick to select the MASK COLOR to either Black/Gray.
5. Press the CLOSE button.

Notes:
1) Masking areas are only rectangles.
2) When using the PTZ function the privacy zone expands 2x vertically and 4x horizontally.
3) Although the privacy zone works in digital zoom, the zone setting is only available in a non-digital zoom area.
4) It is recommended to set privacy zone bigger than actual masking area.
5) During turbo panning or tilting, the privacy zone may shift depending on the location of the zone.

6.8 PAN/TILT SETUP

6.8.1 AUTO FLIP

The Auto Flip feature allows the tilt to rotate 180 degrees and reposition itself for continuous viewing of a moving object directly beneath the dome.

Menu

MAIN MENU

```
   <CAMERA SETUP>
 ▷ <PAN/TILT SETUP>
   <PRESET TITLES>
   <OTHERS>
   EXIT
```

PAN/TILT MENU

```
▷ AUTO FLIP          ON
  PROPORTIONALP/T    ON
  SCAN LIMIT STOPS   OFF
  MANUAL LIMIT STOPS OFF
  PARK TIME MIN     0MIN
  AUTO PATROL  P1→OFF
  SCAN SPEED      5DEG./S
  SCAN TILT ANGLE 30DEG.
  STOP TIME      10SEC
  MAX SPEED    400DEG/S
```
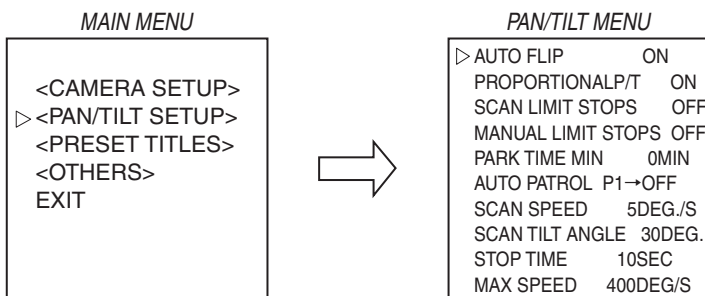
To enable AUTO FLIP:
1. Enter the preset command to access the main menu.
   Refer to section 6.1 for the controller model and preset command.
2. Position the cursor (▷) next to PAN/TILT SETUP and press the OPEN button to access the Pan/Tilt menu.
3. Position the cursor next to AUTO FLIP and press the OPEN button to move the cursor to the right.
4. Move the joystick up or down to select ON or OFF.
5. To accept the selection, press the OPEN button or to cancel the selection, press the CLOSE button.

6.8.2 PROPORTIONAL P/T

Proportional P/T controls the pan and tilt speeds according to the amount of zoom.
At telephoto settings, the pan and tilt speeds will be slower to keep the image from moving too fast on the monitor.

Menu

```
        MAIN MENU                              PAN/TILT MENU

  ┌────────────────────────┐          ┌────────────────────────────┐
  │                        │          │ AUTO FLIP         ON        │
  │   <CAMERA SETUP>       │          │▷PROPORTIONALP/T    ON        │
  │ ▷ <PAN/TILT SETUP>     │   ⟹      │ SCAN LIMIT STOPS   OFF       │
  │   <PRESET TITLES>      │          │ MANUAL LIMIT STOPS OFF       │
  │   <OTHERS>             │          │ PARK TIME MIN      0MIN      │
  │   EXIT                 │          │ AUTO PATROL  P1→OFF          │
  │                        │          │ SCAN SPEED      5DEG./S      │
  │                        │          │ SCAN TILT ANGLE  30DEG.      │
  │                        │          │ STOP TIME       10SEC        │
  │                        │          │ MAX SPEED     400DEG/S       │
  └────────────────────────┘          └────────────────────────────┘
```
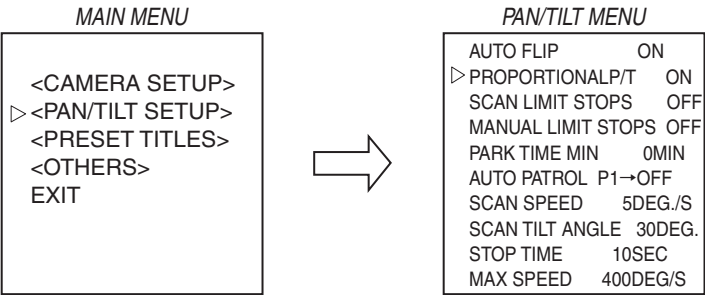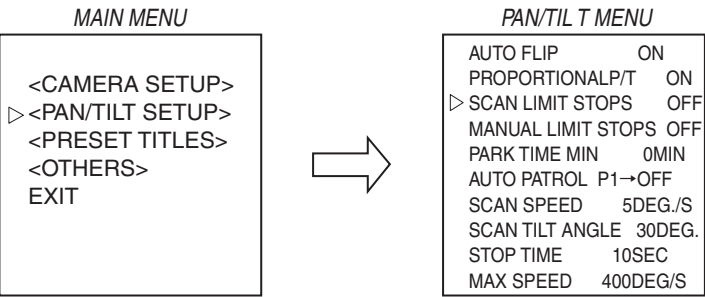
To enable PROPORTIONAL P/T:
1. Enter the preset command to access the main menu.
   Refer to section 6.1 for the controller model and preset command.
2. Position the cursor (▷) next to PAN/TILT SETUP and press the OPEN button to access the Pan/Tilt menu.
3. Position the cursor next to PROPORTIONAL P/T and press the OPEN button to move the cursor to the right.
4. Move the joystick up or down to select ON or OFF.
5. To accept the selection, press the OPEN button or to cancel the selection, press the CLOSE button.

6.8.3 SCAN LIMIT STOPS

When a Scan Limit Stop is reached during random, frame or auto scan, the dome camera will reverse direction. A Left Scan Limit Stop and Right Scan Limit Stop can be set. The limit stops must be greater than 10 degrees apart.

Menu

```
        MAIN MENU                              PAN/TIL T MENU

  ┌────────────────────────┐          ┌────────────────────────────┐
  │                        │          │ AUTO FLIP         ON        │
  │   <CAMERA SETUP>       │          │ PROPORTIONALP/T    ON        │
  │ ▷ <PAN/TILT SETUP>     │   ⟹      │▷SCAN LIMIT STOPS   OFF       │
  │   <PRESET TITLES>      │          │ MANUAL LIMIT STOPS OFF       │
  │   <OTHERS>             │          │ PARK TIME MIN      0MIN      │
  │   EXIT                 │          │ AUTO PATROL  P1→OFF          │
  │                        │          │ SCAN SPEED      5DEG./S      │
  │                        │          │ SCAN TILT ANGLE  30DEG.      │
  │                        │          │ STOP TIME       10SEC        │
  │                        │          │ MAX SPEED     400DEG/S       │
  └────────────────────────┘          └────────────────────────────┘
```

To enable SCAN LIMIT STOPS:
1. Enter the preset command to access the main menu.
   Refer to section 6.1 for the controller model and preset command.
2. Position the cursor (▷) next to PAN/TILT SETUP and press the OPEN button to access the Pan/Tilt menu.
3. Position the cursor next to SCAN LIMIT STOPS and press the OPEN button to move the cursor to the right.
4. Move the joystick up or down to select ON or OFF.
5. To accept the selection, press the OPEN button or to cancel the selection, press the CLOSE button.
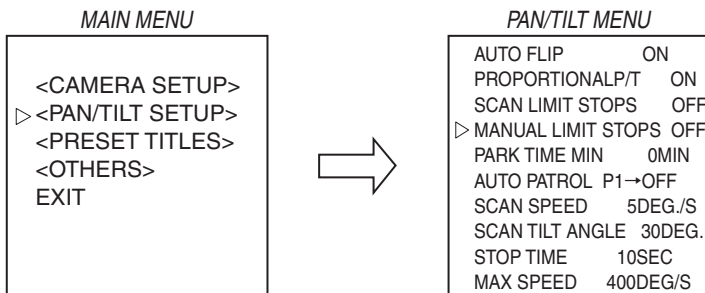
To set SCAN LIMIT STOPS:
1. Set SCAN LIMIT STOPS to ON and exit menu.
2. Position the camera for the LEFT LIMIT STOP.
3. Enter 92 preset. SCAN LEFT LIMIT will be displayed on screen.
4. Position the camera for the RIGHT LIMIT STOP. If the right limit stop is less than 10 degrees from the left limit stop, NOT ACCEPT will be displayed on screen,
5. Enter 93 preset. SCAN RIGHT LIMIT will be displayed on screen.

6.8.4 MANUAL LIMIT STOPS

When a Manual Limit Stop is reached during a manual (joystick) pan, the camera will stop. A Left Manual Limit Stop and Right Manual Limit Stop can be set. The limit stops must be greater than 10 degrees apart.

Menu

MAIN MENU

```
  <CAMERA SETUP>
▷ <PAN/TILT SETUP>
  <PRESET TITLES>
  <OTHERS>
  EXIT
```

PAN/TILT MENU

```
  AUTO FLIP         ON
  PROPORTIONALP/T   ON
  SCAN LIMIT STOPS     OFF
▷ MANUAL LIMIT STOPS  OFF
  PARK TIME MIN      0MIN
  AUTO PATROL P1→OFF
  SCAN SPEED      5DEG./S
  SCAN TILT ANGLE  30DEG.
  STOP TIME       10SEC
  MAX SPEED     400DEG/S
```

To enable MANUAL LIMIT STOPS:
1. Enter the preset command to access the main menu.
   Refer to section 6.1 for the controller model and preset command.
2. Position the cursor (▷) next to PAN/TILT SETUP and press the OPEN button to access the Pan/Tilt menu.
3. Position the cursor next to MANUAL LIMIT STOPS and press the OPEN button to move the cursor to the right.
4. Move the joystick up or down to select ON or OFF.
5. To accept the selection, press the OPEN button or to cancel the selection, press the CLOSE button.
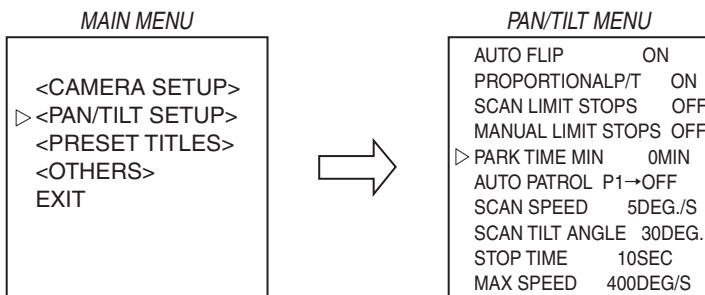
To set MANUAL LIMIT STOPS:
1. Set MANUAL LIMIT STOPS to ON and exit menu.
2. Position the camera for the LEFT LIMIT STOP.
3. Enter 90 preset. MANUAL LEFT LIMIT will be displayed on screen.

4. Position the camera for the RIGHT LIMIT STOP. If the right limit stop is less than 10 degrees from the left limit stop, NOT ACCEPT will be displayed on screen.
5. Enter 91 preset. MANUAL RIGHT LIMIT will be displayed on screen.

6.8.5 PARK TIME MINUTES

After a programmed number of minutes of inactivity, the dome camera will park to preset 1. T h e Park Time Minutes can be set from 1 to 720 minutes. Setting it to 0 will disable the feature.

Menu

<table>
<tr><td align="center">MAIN MENU</td><td></td><td align="center">PAN/TILT MENU</td></tr>
<tr><td>
<CAMERA SETUP>
▷ <PAN/TILT SETUP>
  <PRESET TITLES>
  <OTHERS>
  EXIT
</td><td>⟹</td><td>
AUTO FLIP   ON
PROPORTIONALP/T   ON
SCAN LIMIT STOPS   OFF
MANUAL LIMIT STOPS OFF
▷ PARK TIME MIN   0MIN
  AUTO PATROL P1→OFF
  SCAN SPEED   5DEG./S
  SCAN TILT ANGLE   30DEG.
  STOP TIME   10SEC
  MAX SPEED   400DEG/S
</td></tr>
</table>
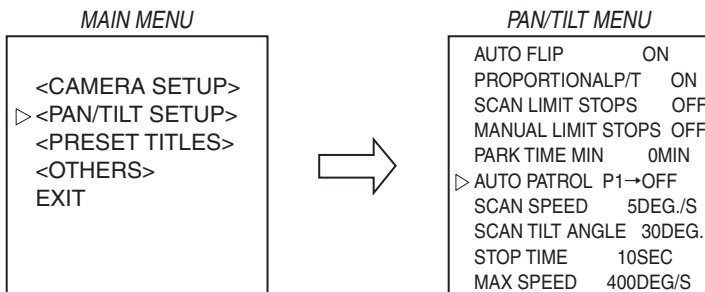
To set PARK TIME MIN:
1. Enter the preset command to access the main menu.
   Refer to section 6.1 for the controller model and preset command.
2. Position the cursor (▷) next to PAN/TILT SETUP and press the OPEN button to access the Pan/ Tilt menu.
3. Position the cursor next to PARK TIME MIN and press the OPEN button to move the cursor to the right.
4. Move the joystick up or down to set the number of minutes.
5. To accept the selection, press the OPEN button or to cancel the selection, press the CLOSE button.

6.8.6 AUTO PATROL

The Auto Patrol feature will repeat a pattern of up to 64 presets. Limit stops are ignored during Auto Patrol.
The moving speed is fixed at 400 deg/s when the STOP TIME is 10 seconds or more.
However, it will become 90 deg/s if a STOP time is less than 10 seconds.

Menu

<table>
<tr><td align="center">MAIN MENU</td><td></td><td align="center">PAN/TILT MENU</td></tr>
<tr><td>
  <CAMERA SETUP>
▷ <PAN/TILT SETUP>
  <PRESET TITLES>
  <OTHERS>
  EXIT
</td><td>⟹</td><td>
AUTO FLIP   ON
PROPORTIONALP/T   ON
SCAN LIMIT STOPS   OFF
MANUAL LIMIT STOPS OFF
PARK TIME MIN   0MIN
▷ AUTO PATROL P1→OFF
  SCAN SPEED   5DEG./S
  SCAN TILT ANGLE   30DEG.
  STOP TIME   10SEC
  MAX SPEED   400DEG/S
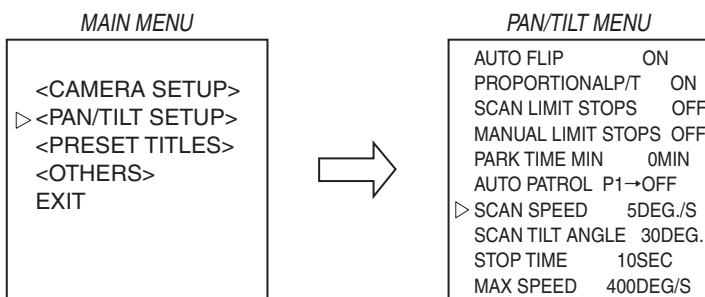</td></tr>
</table>

To enable AUTO PATROL:

1. Enter the preset command to access the main menu.
   Refer to section 6.1 for the controller model and preset command.
2. Position the cursor (▷) next to PAN/TILT SETUP and press the OPEN button to access the Pan/
   Tilt menu.
3. Position the cursor next to AUTO PATROL and press the OPEN button to move the cursor to the
   right.
4. Move the joystick up or down to scroll through the presets. Move the joystick left or right to turn
   the preset ON or OFF.
5. To accept the selection, press the OPEN button or to cancel the selection, press the CLOSE
   button.

6.8.7 SCAN SPEED

The SCAN SPEED for auto scan, random scan and frame scan can be set from 1-90 degrees/sec.
However, this speed is limited by MAX SPEED setting.

Menu

MAIN MENU

```
  <CAMERA SETUP>
▷ <PAN/TILT SETUP>
  <PRESET TITLES>
  <OTHERS>
  EXIT
```

PAN/TILT MENU

```
AUTO FLIP          ON
PROPORTIONALP/T    ON
SCAN LIMIT STOPS      OFF
MANUAL LIMIT STOPS  OFF
PARK TIME MIN      0MIN
AUTO PATROL  P1→OFF
▷ SCAN SPEED      5DEG./S
  SCAN TILT ANGLE  30DEG.
  STOP TIME      10SEC
  MAX SPEED     400DEG/S
```
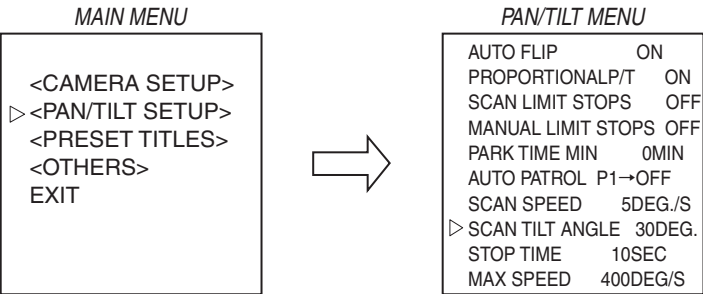
To set SCAN SPEED:

1. Enter the preset command to access the main menu.
   Refer to section 6.1 for the controller model and preset command.
2. Position the cursor (▷) next to PAN/TILT SETUP and press the OPEN button to access the Pan/
   Tilt menu.
3. Position the cursor next to SCAN SPEED and press the OPEN button to move the cursor to the
   right.
4. Move the joystick up or down to set the speed.
5. To accept the selection, press the OPEN button or to cancel the selection, press the CLOSE
   button.

6.8.8 SCAN TILT ANGLE

The tilt angle of the dome camera for auto scan, random scan and frame scan can be set from 0 to 85 degrees or 92 degrees (0 degree is straight down).

Menu

MAIN MENU

```
 <CAMERA SETUP>
▷<PAN/TILT SETUP>
 <PRESET TITLES>
 <OTHERS>
 EXIT
```

PAN/TILT MENU

```
 AUTO FLIP          ON
 PROPORTIONALP/T    ON
 SCAN LIMIT STOPS     OFF
 MANUAL LIMIT STOPS OFF
 PARK TIME MIN      0MIN
 AUTO PATROL  P1→OFF
 SCAN SPEED      5DEG./S
▷SCAN TILT ANGLE  30DEG.
 STOP TIME       10SEC
 MAX SPEED      400DEG/S
```
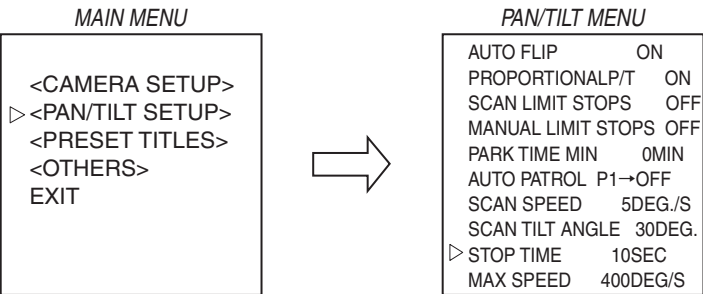
To set SCAN TILT ANGLE:
1. Enter the preset command to access the main menu.
   Refer to section 6.1 for the controller model and preset command.
2. Position the cursor (▷) next to PAN/TILT SETUP and press the OPEN button to access the Pan/Tilt menu.
3. Position the cursor next to SCAN TILT ANGLE and press the OPEN button to move the cursor to the right.
4. Move the joystick up or down to set the tilt angle.
5. To accept the selection, press the OPEN button or to cancel the selection, press the CLOSE button.

6.8.9 STOP TIME

During frame scan, random scan or auto patrol, a stop time from 1 sec to 60 sec can be set. During scanning, the camera will not move for the specified time at each stop.

Menu

MAIN MENU

```
 <CAMERA SETUP>
▷<PAN/TILT SETUP>
 <PRESET TITLES>
 <OTHERS>
 EXIT
```

PAN/TILT MENU

```
 AUTO FLIP          ON
 PROPORTIONALP/T    ON
 SCAN LIMIT STOPS     OFF
 MANUAL LIMIT STOPS OFF
 PARK TIME MIN      0MIN
 AUTO PATROL  P1→OFF
 SCAN SPEED      5DEG./S
 SCAN TILT ANGLE  30DEG.
▷STOP TIME       10SEC
 MAX SPEED      400DEG/S
```
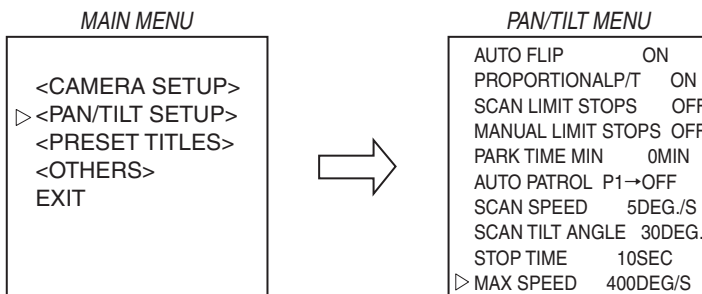
To set STOP TIME:

1. Enter the preset command to access the main menu.
   Refer to section 6.1 for the controller model and preset command.
2. Position the cursor (▷) next to PAN/TILT SETUP and press the OPEN button to access the Pan/Tilt menu.
3. Position the cursor next to STOP TIME and press the OPEN button to move the cursor to the right.
4. Move the joystick up or down to set the stop time.
5. To accept the selection, press the OPEN button or to cancel the selection, press the CLOSE button.

6.8.10 MAX SPEED

The maximum speed of Pan/Tilt functions can be set from 30 degrees/sec to 400 degrees/sec. The max speed controls global Pan/Tilt speeds. To reduce rotation noise use a lower speed.

Menu

MAIN MENU

```
  <CAMERA SETUP>
▷ <PAN/TILT SETUP>
  <PRESET TITLES>
  <OTHERS>
  EXIT
```

PAN/TILT MENU

```
  AUTO FLIP          ON
  PROPORTIONALP/T    ON
  SCAN LIMIT STOPS      OFF
  MANUAL LIMIT STOPS  OFF
  PARK TIME MIN      0MIN
  AUTO PATROL  P1→OFF
  SCAN SPEED      5DEG./S
  SCAN TILT ANGLE  30DEG.
  STOP TIME      10SEC
▷ MAX SPEED      400DEG/S
```
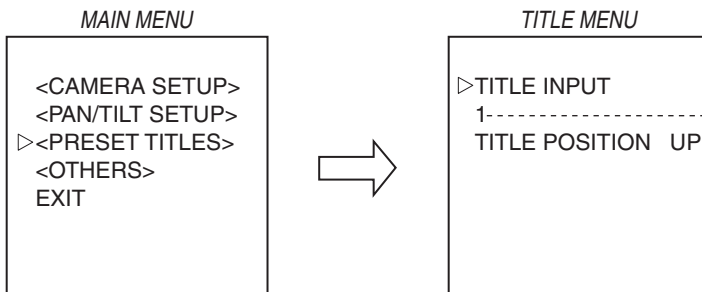
To set MAX SPEED:

1. Enter the preset command to access the main menu.
   Refer to section 6.1 for the controller model and preset command.
2. Position the cursor (▷) next to PAN/TILT SETUP and press the OPEN button to access the Pan/Tilt menu.
3. Position the cursor next to MAX SPEED and press the OPEN button to move the cursor to the right.
4. Move the joystick up or down to set the maximum speed.
5. To accept the selection, press the OPEN button or to cancel the selection, press the CLOSE button.

6.9 PRESET TITLES SETUP

Titles can be set for up to 64 presets (pan/tilt position and zoom). Titles can be up to 20 characters in length and can be displayed at the top or bottom of the screen.

Menu

MAIN MENU

```
    <CAMERA SETUP>
    <PAN/TILT SETUP>
 ▷<PRESET TITLES>
    <OTHERS>
    EXIT
```

TITLE MENU

```
 ▷TITLE INPUT
    1 - - - - - - - - - - - - - - - - - - - -
    TITLE POSITION   UP
```

To set PRESET TITLES:
1. Enter the preset command to access the main menu.
   Refer to section 6.1 for the controller model and preset command.
2. Position the cursor (▷) next to PRESET TITLES and press the OPEN button to access the Title menu.
3. Press the OPEN button to move the cursor down to the title number. Move the joystick up or down to scroll through title numbers.
4. Move the joystick to the right to input the title. Move the joystick up or down to scroll through characters.
5. To accept the selection, press the OPEN button or to cancel the selection, press the CLOSE button.
6. Move the joystick down to TITLE POSITION and press open to choose UP or DOWN position of the title. UP will display the title at the top of the screen and DOWN will display the title at the bottom of the screen.
7. To accept the selection, press the OPEN button or to cancel the selection, press the CLOSE button.
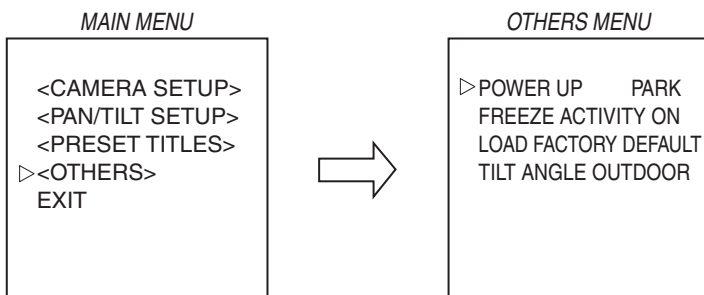
6.10 OTHERS MENU

6.10.1 POWER UP

During Power-Up, the dome camera can be set to start in various modes.

PARK: The dome camera moves to Preset 1 position.
AUTO SCAN: The dome camera performs an auto scan operation.
FRAME SCAN: The dome camera performs a frame scan operation.
RANDOM SCAN: The dome camera performs a random scan operation.
AUTO PATROL: The dome camera performs an auto patrol operation.
DEFAULT: The dome camera moves to the mechanical reset point.

Menu

MAIN MENU

```
  <CAMERA SETUP>
  <PAN/TILT SETUP>
  <PRESET TITLES>
▷<OTHERS>
  EXIT
```

OTHERS MENU

```
▷POWER UP      PARK
  FREEZE ACTIVITY ON
  LOAD FACTORY DEFAULT
  TILT ANGLE OUTDOOR
```
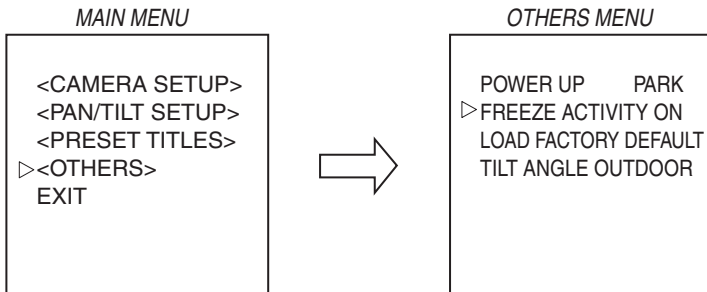
To set POWER UP MODE:
1. Enter the preset command to access the main menu.
   Refer to section 6.1 for the controller model and preset command.
2. Position the cursor (▷) next to OTHERS and press the OPEN button to access the menu.
3. Position the cursor next to POWER UP and press the OPEN button to move the cursor to the right.
4. Move the joystick up or down to set the power up mode.
5. To accept the selection, press the OPEN button or to cancel the selection, press the CLOSE button.

6.10.2 FREEZE ACTIVITY

During frame scan, random scan or auto patrol, camera images will not be shown while the dome camera moves from the current position to the next position.

Menu

MAIN MENU

```
    <CAMERA SETUP>
    <PAN/TILT SETUP>
    <PRESET TITLES>
  ▷<OTHERS>
    EXIT
```

OTHERS MENU

```
    POWER UP      PARK
  ▷FREEZE ACTIVITY ON
    LOAD FACTORY DEFAULT
    TILT ANGLE OUTDOOR
```
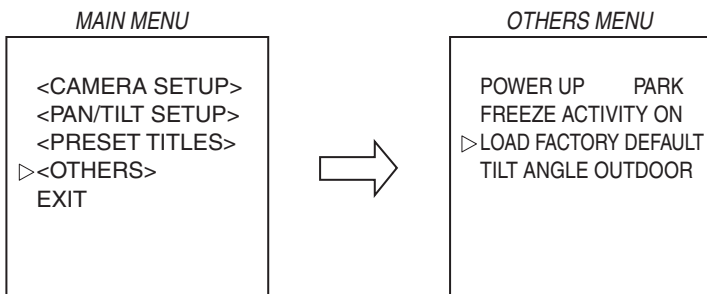
To set STOP TIME:
1. Enter the preset command to access the main menu.
   Refer to section 6.1 for the controller model and preset command.
2. Position the cursor (▷) next to OTHERS and press the OPEN button to access the menu.
3. Position the cursor next to FREEZE ACTIVITY and press the OPEN button to move the cursor to the right.
4. Move the joystick up or down to set freeze activity to ON or OFF.
5. To accept the selection, press the OPEN button or to cancel the selection, press the CLOSE button.

6.10.3 LOAD FACTORY DEFAULTS

The factory default settings can be loaded.

Menu

MAIN MENU

```
    <CAMERA SETUP>
    <PAN/TILT SETUP>
    <PRESET TITLES>
  ▷<OTHERS>
    EXIT
```

OTHERS MENU

```
    POWER UP      PARK
    FREEZE ACTIVITY ON
  ▷LOAD FACTORY DEFAULT
    TILT ANGLE OUTDOOR
```

To set LOAD FACTORY DEFAULT:
1. Enter the preset command to access the main menu.
   Refer to section 6.1 for the controller model and preset command.
2. Position the cursor (▷) next to OTHERS and press the OPEN button to access the menu.
3. Position the cursor next to LOAD FACTORY DEFAULT and press the OPEN button twice to load factory default settings.
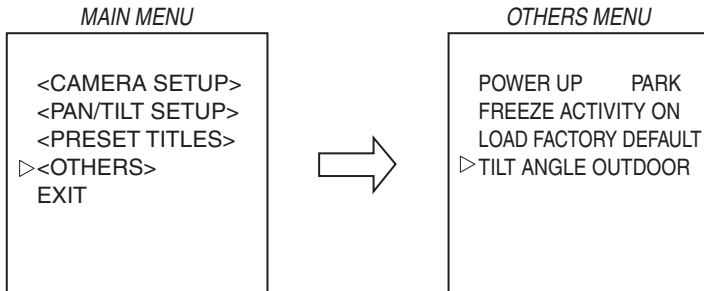
6.10.4 TILT ANGLE

Set up the Tilt angle according to the housing used and the purpose.
Indoor - 85 degrees MAX
Outdoor - 92 degrees MAX

Menu

MAIN MENU

```
 <CAMERA SETUP>
 <PAN/TILT SETUP>
 <PRESET TITLES>
▷<OTHERS>
 EXIT
```

OTHERS MENU

```
 POWER UP      PARK
 FREEZE ACTIVITY ON
 LOAD FACTORY DEFAULT
▷TILT ANGLE OUTDOOR
```
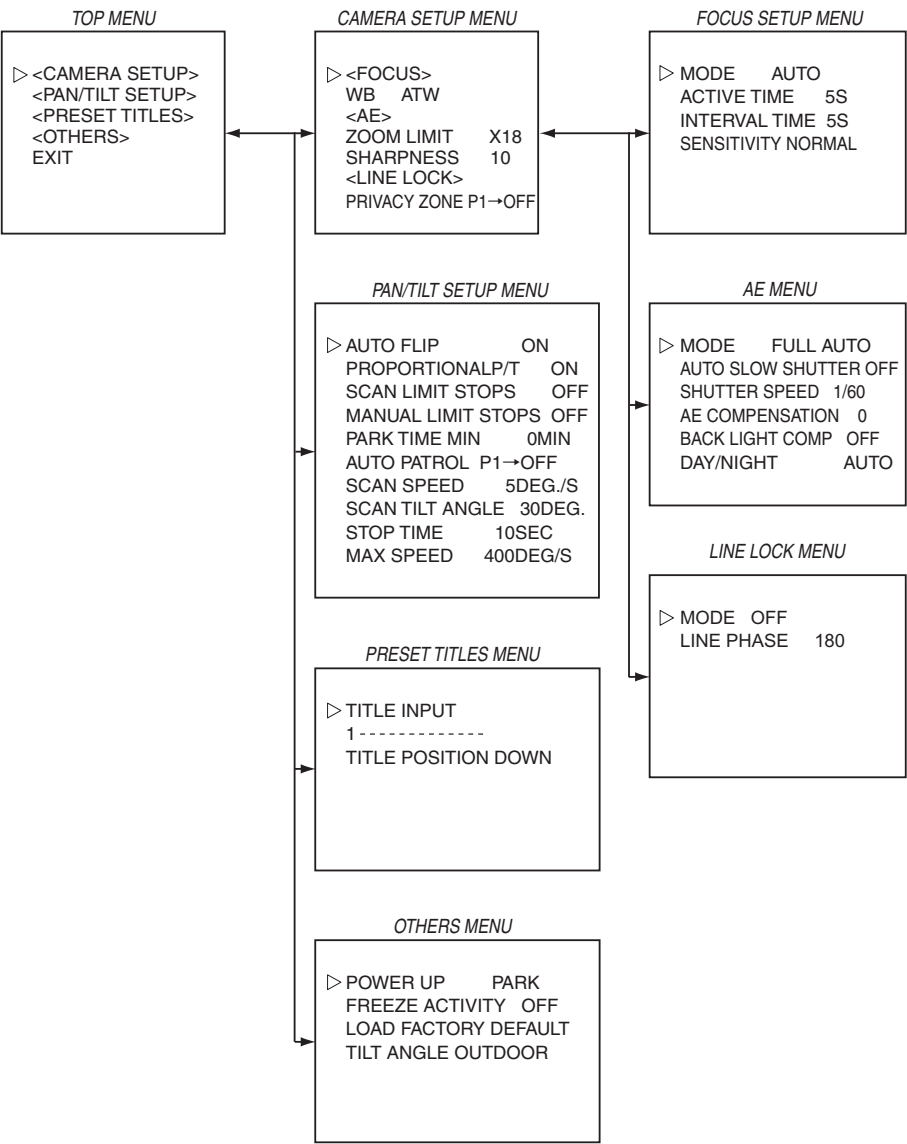
To set TILT ANGLE:
1. Enter the preset command to access the main menu.
   Refer to section 6.1 for the controller model and preset command.
2. Position the cursor (▷) next to OTHERS and press the OPEN button to access the menu.
3. Position the cursor next to TILT ANGLE and press the OPEN button to move the cursor to the right.
4. Move the joystick up or down to set the tilt angle mode.
5. To accept the selection, press the OPEN button or to cancel the selection, press the CLOSE button.

7. Menu Directory

TOP MENU

```
▷ <CAMERA SETUP>
  <PAN/TILT SETUP>
  <PRESET TITLES>
  <OTHERS>
  EXIT
```

CAMERA SETUP MENU

```
▷ <FOCUS>
  WB    ATW
  <AE>
  ZOOM LIMIT    X18
  SHARPNESS     10
  <LINE LOCK>
  PRIVACY ZONE P1→OFF
```

FOCUS SETUP MENU

```
▷ MODE      AUTO
  ACTIVE TIME    5S
  INTERVAL TIME  5S
  SENSITIVITY NORMAL
```

PAN/TILT SETUP MENU

```
▷ AUTO FLIP         ON
  PROPORTIONALP/T    ON
  SCAN LIMIT STOPS      OFF
  MANUAL LIMIT STOPS  OFF
  PARK TIME MIN      0MIN
  AUTO PATROL P1→OFF
  SCAN SPEED      5DEG./S
  SCAN TILT ANGLE 30DEG.
  STOP TIME      10SEC
  MAX SPEED     400DEG/S
```

AE MENU

```
▷ MODE      FULL AUTO
  AUTO SLOW SHUTTER OFF
  SHUTTER SPEED  1/60
  AE COMPENSATION  0
  BACK LIGHT COMP   OFF
  DAY/NIGHT         AUTO
```

LINE LOCK MENU

```
▷ MODE   OFF
  LINE PHASE    180
```

PRESET TITLES MENU

```
▷ TITLE INPUT
  1 - - - - - - - - - - - - -
  TITLE POSITION DOWN
```

OTHERS MENU

```
▷ POWER UP      PARK
  FREEZE ACTIVITY   OFF
  LOAD FACTORY DEFAULT
  TILT ANGLE OUTDOOR
```

7.1 MENU LIST AND SETTINGS

Top Menu	Sub Menu 1	Sub Menu 2	Contents	Default
CAMERA SETUP	FOCUS	MODE	AUTO / MANUAL / ZOOM TRIGGER / INTERVAL	AUTO
		ACTIVE TIME	1～255S	5S
		INTERVAL TIME	1～255S	5S
		SENSITIVITY	NORMAL / LOW	NORMAL
	WHITE BALANCE	- - - -	AUTO / ATW / ONE PUSH WB	ATW
	AUTO EXPOSURE	MODE	FULL AUTO / SHUTTER PRIORITY	FULL AUTO
		AUTO SLOW SHUTTER	ON / OFF	OFF
		SHUTTER SPEED	1 / 1～1 / 10000 (22 step)	1 / 60
		AE COMPENSATION	-7～+7	0
		BACK LIGHT COMP.	ON / OFF	OFF
		DAY / NIGHT	AUTO /MANUAL	AUTO
	ZOOM LIMIT	- - - -	x18 / 36 / 72 / 144 / 216	x18
	SHARPNESS	- - - -	0～15	10
	LINE LOCK	MODE	ON / OFF	OFF
		LINE PHASE	40～250	180
	PRIVACY ZONE	- - - -	P1～P8	P1→OFF
PAN / TILT SETUP	AUTO FLIP	- - - -	ON / OFF	ON
	PROPORTIONAL P/T	- - - -	ON / OFF	ON
	SCAN LIMIT STOPS	- - - -	ON / OFF	OFF
	MANUAL LIMITS STOPS	- - - -	ON / OFF	OFF
	PARK TIME MINUTES	- - - -	0～720MIN	0
	AUTO PATROL	- - - -	PRESET1=ON / OFF PRESET2=ON / OFF PRESET66=ON / OFF	ALL OFF
	SCAN SPEED	- - - -	1～90 DEGREE / S	5
	SCAN TILT ANGLE	- - - -	0～92 DEGREE	30
	STOP TIME	- - - -	1～60 SEC	10
	MAX SPEED	- - - -	30～400 DEGREE / S	400
PRESET TITLES	TITLE INPUT	- - - -	It is to 20 characters to each Preset number.	All Blank
	TITLE POSITION	- - - -	UP / DOWN	DOWN
OTHERS	POWER UP	- - - -	DEFAULT / PARK / AUTO SCAN / FRAME SCAN / RANDOM SCAN / AUTO PATROL	PARK
	FREEZE ACTIVITY	- - - -	ON / OFF	OFF
	LOAD FACTORY DEFAULT	- - - -		
	TILT ANGLE		INDOOR/OUTDOOR	OUTDOOR

8. Switch Setting

There are three switches which must be set up. Switch 1 sets the camera address. Switch 2 sets the protocol and bit rate. Switch 301 sets the termination – only used on the last daisy chained camera.
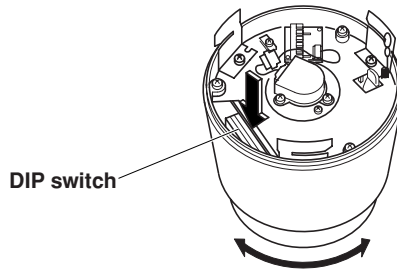
DIP switch

Dip switch (SW1 & SW2)
It is necessary to set a unique camera address and protocol.
Set up a camera address according the following table.

(1) SWI : Camera Address

Camera Address	bit1	bit2	bit3	bit4	bit5	bit6	bit7	bit8
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
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
SWValue	1	2	4	8	16	32	64	128

Camera Address = 1 × bit 1 Status + 2 x bit 2 Status + 4 × bit 3 Status + 8 × bit 4
Status + 16 × bit 5 Status +32 × bit 6 Status + 64 × bit 7
Status + 128 × bit 8 Status

* bit Status: On = 1, Off = 0
ex) Camera Address 228 = 1 × 0 (Off) + 2 × 0 (Off) + 4 × 1 (On) + 8 × 0 (Off) + 16 × 0
(Off) + 32 × 1 (On) + 64 × 1 (On) + 128 × 1 (On)
= 4 + 32+ 64 + 128 + 228 → Off/Off/On/Off/Off/On/On/On

Set up the protocol and bit rate to match the controllers settings.

(2) SW2 (bit 1 - 2) Protocol

Protocol	bit1	bit2
TOSHIBA-P	Off	Off
TOSHIBA-D	On	Off
Reserve1	Off	On
Reserve2	On	On

(3) SW2 (bit3 - 4) Bit Rate

Protocol	bit3	bit4
1200bps	Off	Off
2400bps	On	Off
4800bps	Off	On
9600bps	On	On

(Dome base switch:S301)
This is RS422 termination switch located near the BNC connector.
In daisy chain operation system, the farthest dome from the controller is turned ON.
For example, when the controller is connected with three dome cameras in the direct mode,
the only furthest dome camera from a controller is turned ON. The other dome camera is
turned OFF. (It is OFF at the time of shipment.)
ON and OFF are as in a figure.

POWER
TERMINAL

S301
ON   OFF

○ BNC Connector
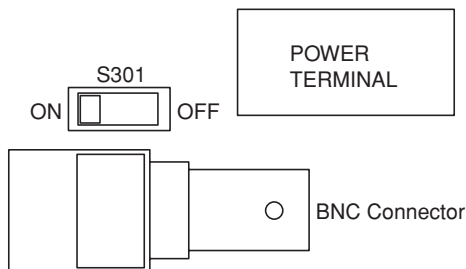
9.   Installation

JK-H01A is a housing for ceiling mount of the Toshiba dome camera.

1. IK-DP30A Installation procedure
    (1) Carefully inspect to insure all parts are present and remove all parts from the box.
    (2) A template is included for ease in cutting the mounting hole. First, locate a position in the ceiling for a 9.020.08" (2292mm) hole to be drilled. Trace around the template, then cut a hole in the ceiling following the trace lines. [Note: The thickness of a ceiling to which this housing can be attached is 0.08-1.77" (2-45mm).]
    (3) Remove the dome cover. To separate the dome cover from the housing, turn the cover to the left with both hands. This dome cover is connected to the top housing with the wire. Fig-1
    (4) Loosen the lock screw according to ceiling board thickness for attaching to the ceiling.
    (5) Install the camera mounting screws that came with the camera. Do not fully tighten the screws.

Lock screw

Lock screw
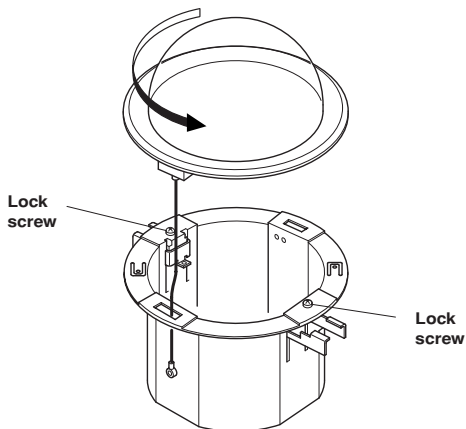
Fig-1

(JK-H01A top housing install)
    (6) Move the two support arms inside. Fig-2
    (7) Remove knockout in the center of the housing
        and let the cable pass through.

Lock screw

Lock screw
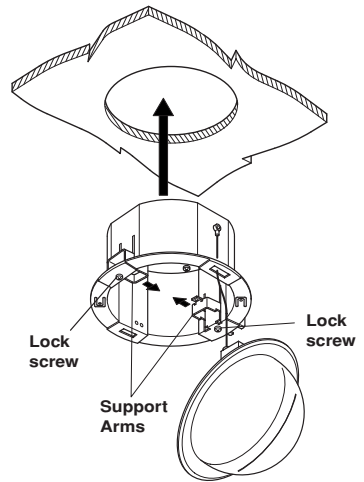
Support Arms

Fig-2

    (8) Put the video cable, power cable, and the
        communication cable inside the housing from
        the hole on the topside.
    (9) Insert the camera housing into the ceiling. Push
        out the support arms so that they hold onto the
        ceiling. Fig-3

Support wire is fixed here
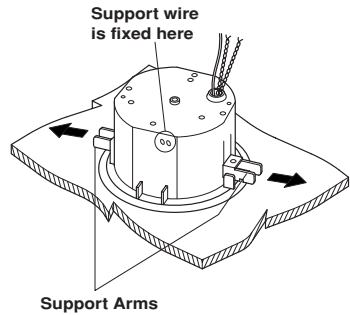
Support Arms

Fig-3

    (10) Tighten the two support arm screws to secure
         the camera housing to the ceiling. Fig-4
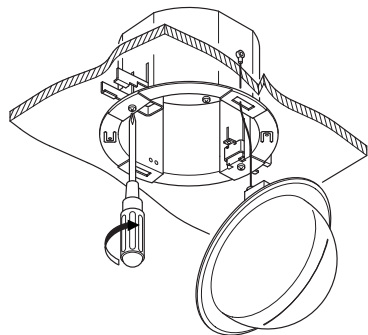
Fig-4

(IK-DP30A dome base install)

(11) Attach the video cable (included with the dome accessories) to the video connector of a dome base. [Note: Do not connect a thick coaxial cable to a dome camera. There is a possibility of damaging a connector. Be sure to use the cable included in the dome accessories.]

(12) Communication cables are directly inserted in the terminal of the dome base.

(13) Tighten the screw to secure the dome base to the housing. Fig-5 ①②③
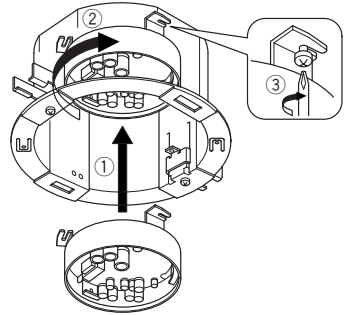
FIg-5

(IK-DP30A dome drive install)

(14) After setting up DIP-SW in the top of the dome (See 8.Switch setting), connect the support wire to the hook of the dome base. Fig-6 ①

(15) To lock the dome drive to the dome base, line up the notch with the label and turn to the right with both hands. Fig-6 ②

Ensure that the location of the notch (position of yellow paint) on the dome base and the location of the installation label on the dome drive are aligned.
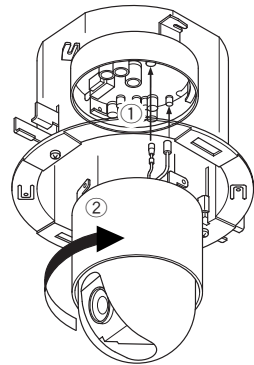
Fig-6

(JK-H01A dome cover install)

(16) To lock the dome cover, insert the support wire and turn to the right with both hands. Fig-7, Fig-8
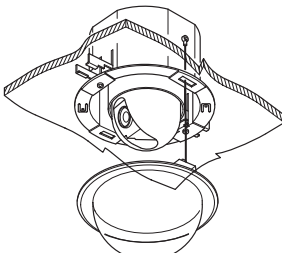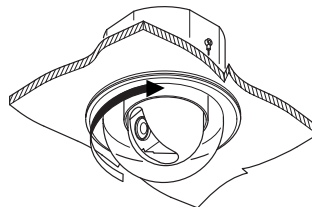
Fig-7

Fig-8

(17) The installation is complete.

10. Specifications

Overall

Temperature of operation	32° to 122°F (0° to 50°C)
Preservation temperature	–4° to 140°F (–20° to 60°C)
Weight	1.8 kg
Power supply	AC24 V ±10% 60 Hz
Power consumption	20 W

Camera

Image Sensor	1/4 type IT CCD (High Sensitive CCD)
Number of Effective Pixels	768(H) × 494(V)
Lens	18 × Zoom f = 4.1 to 73.8 mm (F1.4 to F3.0)
Digital Zoom	12 × (216 × with optical zoom)
Angle of View (H)	approx. 48degree (wide limit) approx. 2.7degree (tele limit)
Sync. System	Internal/Line lock (AC Line lock phase adjustable)
Min. Illumination	0.7 lux typ. (1/60), 0.05 lux typ (1/4) 0.01 lux (1/4, IR Cut OFF)
S/N Ratio	more than 50 dB
Resolution	480 TV lines (typ)
Electronic Shutter	1/4 to 1/10000 sec.
White Balance	Auto, ATW, One Push WB
Gain	Auto
AE Control	Full Auto, Shutter Priority, Manual
Back Light Compensation	On/Off
Auto Slow Shutter	On/Off (On: max 1/4sec.)
Focusing System	Auto, Interval, Zoom Trigger, Manual
Video Output	NTSC, VBS: 1.0 Vp-p (Sync Negative), 75 ohm
Privacy Zone Masking	8 positions

Mechanical

Pan Range	360 degrees continuous
Tilt Range	92 degrees (Outdoor)
Manual Pan Speeds	0.1° - 90°/s
Manual Pan Speeds (turbo)	150°/s
Manual Tilt Speeds	0.1° - 45°/s
Preset Speeds	Pan: 400°/s Tilt: 200°/s
Proportional P/T	Provided

Remote Control

I/F	RS-422 (receive only)
Protocol	Toshiba-P/D (Dip sw selectable)
Data rate	1200, 2400, 4800, 9600bps (Dip sw selectable)

LIMITED WARRANTY
CCD SECURITY DOME CAMERA IK-DP30A

The Imaging System Division ("ISD") of Toshiba America Information Systems, Inc makes the following limited warranties with regard to this CCD Camera model IK-DP30A("Product"). These limited warranties extend to the Original End-User ("You[r]").

Three (3) Year Limited Warranty of Labor and Parts ISD warrants that this Product will perform in accordance with specifications for a period of three (3) years from the date of purchase by the Original End-User. During this three (3) year period, ISD will repair or replace the Product, if it does not perform as warranted. In order to take advantage of this Limited Warranty. You must: (a) call (877) 855-1349 to receive a RMA number: and (b) pay all transportation and insurance charges for shipment of the Product to the ASP or Toshiba Exchange Center. ISD reserves the right to substitute factory refurbished parts in place of those in need of repair.

Instruction Manual (Owner's Manual): You should read the Instruction Manual (Owner's Manual) thoroughly before operating this Product. Before seeking warranty service, you should check the troubleshooting guide in the Instruction Manual (Owner's Manual) and follow the instructions to correct the problem.

How to Obtain Warranty Service Step-by-step Procedures: To obtain warranty service. You should:
1. Contact Toshiba at (877) 855-1349 to first verify operation or installation assistance. (877) 855-1FIX
2. If technical support determines that the unit is defective, an RMA will be issued with return instructions for repair.
3. Securely pack the Product in the original carton and external shipping pack, include a letter explaining the problem with a copy of the bill of sale or proof of purchase.
4. Prepay all transportation and insurance costs.

Your Responsibilities: This Limited Warranty is subject to the following conditions:
1. You must provide the bill of sale or proof of purchase at the time that warranty service is required.
2. You must notify (877) 855 1349 within (30) days after you discover that the product does not perform in accordance with specifications during the Limited Warranty period.
3. You must pack the Product in its original carton using the original packing material. Then insert the original carton containing the Product into another carton with additional packing material before shipping the Product to an ASP or Toshiba Exchange Center.

DISCLAIMERS:
ALL OTHER EXPRESS OR IMPLIED WARRANTIES ON THIS PRODUCT, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE HEREBY DISCLAIMED. SOME STATES DO NOT ALLOW THE EXCLUSION OF IMPLIED WARRANTIES OR LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS. SO THE ABOVE LIMITATIONS MAY NOT APPLY TO YOU.

IF THIS PRODUCT IS NOT IN GOOD WORKING ORDER AS WARRANTED ABOVE, YOUR SOLE AND EXCLUSIVE REMEDY SHALL BE THE REPAIR OF REPLACEMENT OF THE PRODUCT. IN NO EVENT WILL ISD OR ITS PARENT COMPANY OR ANY ASP BE LIABLE TO YOU OR ANY THIRD PARTY FOR ANY DAMAGES IN EXCESS OF THE PURCHASE PRICE OF THE PRODUCT. THIS LIMITATION APPLIES TO DAMAGES OF ANY KIND, INCLUDING ANY DIRECT OR INDIRECT DAMAGES, LOST PROFITS, LOST SAVINGS OR OTHER SPECIAL, INCIDENTAL, EXEMPLARY OR CONSEQUENTIAL DAMAGES, WHETHER FOR BREACH OF CONTRACT, TORT OR OTHERWISE, OR WHETHER ARISING OUT OF THE USE OF OR INABILITY TO USE SUCH PRODUCT, EVEN IF TAIS, ITS PARENT COMPANY, OR AN ASP HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES OR OF ANY CLAIM BY ANY OTHER PARTY. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR SOME PRODUCTS, SO THE ABOVE LIMITATIONS OR EXCLUSIONS MAY NOT APPLY TO YOU.

THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH MAY VARY FROM STATE TO STATE.

THIS LIMITED WARRANTY SHALL BE VOID IF THE PRODUCT OR PARTS HAVE BEEN SUBJECTED TO MISUSE, ABUSE, ACCIDENT, IMPROPER INSTALLATION, IMPROPER MAINTENANCE, OR USE IN VIOLATION OF ISD'S WRITTEN INSTRUCTIONS, OR WHERE THE PRODUCT HAS BEEN ALTERED OR MODIFIED WITHOUT ISD'S PRIOR AUTHORIZATION, OR UPON THE REMOVAL OR ALTERATION OF ISD'S FACTORY SERIAL NUMBER. LABOR SERVICE CHARGES FOR PRODUCT INSTALLATION, SET UP AND ADJUSTMENT OF CONTROLS ARE NOT COVERED BY THIS LIMITED WARRANTY

No person, agent, distributor, dealer, authorized service provider, or company is authorized to change, modify, or extend the terms of this Limited Warranty in any manner whatsoever. The time within which an action must be commenced to enforce any obligation of ISD arising under this Limited Warranty or under any statute, or law of the United States or any state thereof, is hereby limited to one (1) year from the date You discovered or should have discovered the problem. This limitation does not apply to implied warranties arising under state law. Some states do not permit limitation of the time within which You may bring an action beyond the limits provided by state law, so the above provision may not apply to You. This Limited Warranty gives You specific legal rights and You may also have other rights which vary from state to state.

TOSHIBA AMERICA INFORMATION SYSTEMS, INC.
Imaging Systems Division

TOSHIBA

V2.0