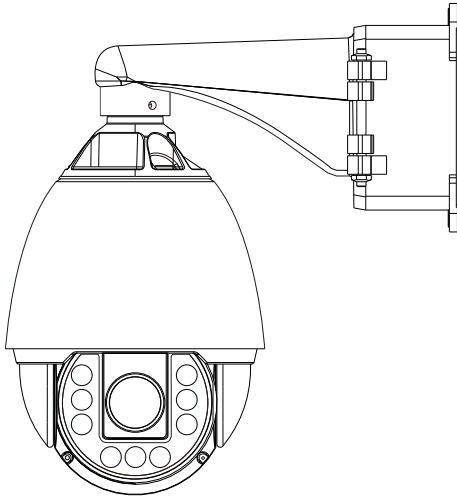


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# IR HD-SDI High Speed Dome Camera



# User Manual

# Contents

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# 1 Before installation

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- Installation should be carried out only by qualified personnel and in accordance with any wiring regulations in force at the time.
- The speed dome is heavy and could cause injuries if not correctly mounted in accordance with these instructions. Use only the fittings supplied with the speed dome and ensure that all lanyard safety cables are connected correctly during installation.
- Adequate protection against lightning strikes and power surges should be installed to prevent damage from the speed dome.
- Any safety warnings on the product and in these instructions must be adhered to.
- If cleaning is necessary, disconnect power to the speed dome first. Do not use abrasive cleaners, as it will cause damage to the cover and cause poor image quality. Use a damp cloth to gently clean the dome cover and dry off with a soft clean cloth.
- Do not use any brackets, mounts or other accessories not specifically designed for using with this speed dome.
- Do not attempt to service or repair the speed dome as opening or removing covers may cause exposure to dangerous voltages or other hazards. Refer all servicing to qualified service personnel.

## Warning

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

## 2 Product features

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### Presets

Up to 254 sets of positional and zoom level information can be stored as presets. These can be called manually by the operator, automatically by an alarm input, or grouped to form a sequence of actions to run automatically. Each preset can also be programmed with the following:

Alarm action - relay outputs can be triggered when particular presets are called

Title - each preset can be titled with up to 10 characters so that zones can easily be identified

### Pattern tours

Any dome movement can be recorded - and subsequently played back - as 4 separate pattern tours. These can be played back individually or grouped to form a sequence of tours.

### Scan function

Scan is a useful feature, for example, when the operator wishes to 'patrol' a perimeter fence. you can choose any two points to define as starting point and ending point, the scan function will smoothly and accurately move from one end to the other and then back again in a repeating sequence. Speed can be adjusted as necessary and up to 8 scan functions can be defined.

### Group function

The group function is a powerful feature which allows the operator to define a sequence of speed dome actions to form an automatic patrol sequence. Actions can be a mix of preset positions, pattern tours and scan functions. Up to 8 groups can be defined and each group can have up to 20 actions which repeat indefinitely until interrupted by the operator or an alarm input. Specific parameters such as preset speed, lasting time and action loop can also be specified.

### Privacy zones

By defining a privacy zone, sensitive scenes such as windows can be masked off so they cannot be viewed by the operator. Up to 8 privacy zones can be defined. Privacy zone size adjusts automatically depending on the speed dome zoom level.

### Alarm inputs and outputs

This speed dome has 8 alarm inputs and 4 alarm outputs. Any alarm input can be set to call a predefined preset, scan function, pattern or group. Any preset can be configured to activate any or all of the alarm outputs. For example, a PIR detector connected to alarm input 1 could call preset 7 to view that particular scene while activating an external device connected to alarm outputs relay.

### On screen display (OSD)

The operator can check if any or all of the following information is displayed on screen during normal speed dome operation.

Preset status and title, Speed dome position coordinates and zoom level, Alarm I/O status, Time and Date, Speed dome ID

The speed dome also has a full on screen menu setup allowing quick and easy configuration of all the speed dome features.

### Two ways to select OSD MENU

You can select OSD menu by pressing "Near/Far" or joystick left/right.

### Parking action function

The speed dome can be configured to run a specified scan function, pattern tour, group or preset after a defined period of inactivity.

### 16 Schedules function

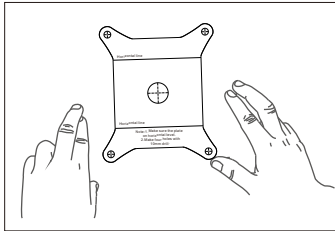
Up to 16 schedules, could be set by Month, Week, Day.

# 3 Installation instruction

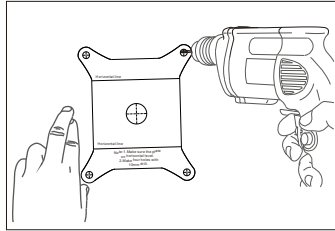
When handling the dome cover, always wear the gloves supplied to avoid getting fingerprints on the outer dome cover.

## Outdoor High Speed Dome System

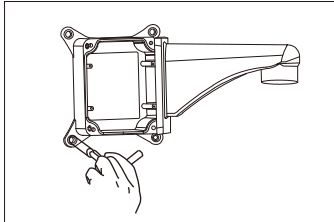
### 1. Fix the bracket Wall Mount



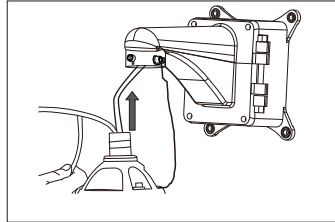
1. Using the mount template sheet, mark the holes on the wall or ceiling.



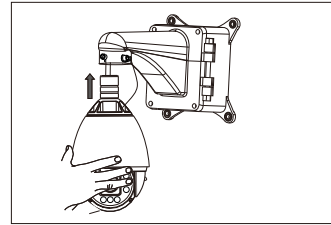
2. After drilling the holes, fix the four anchor bolts into the holes.



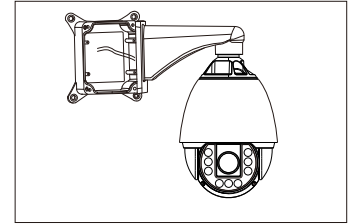
3. Open the junction box cover. Using the supplied bolts and tool, firmly fix the bracket.



4. Hook up the lanyard first, and then draw the speed dome cable through the bracket.



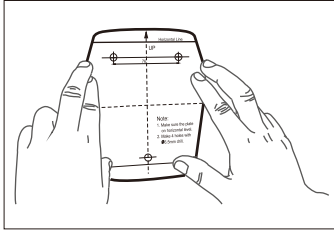
5. Bring the speed dome up to the bracket.



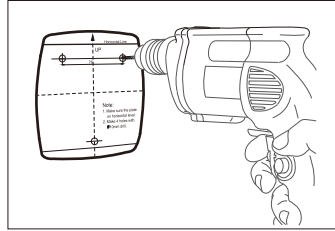
6. Connect the speed dome cable to the PCB.

# 3 Installation instruction

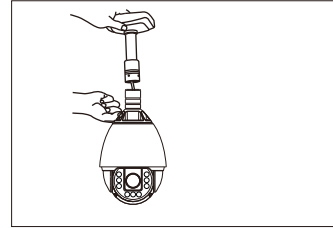
## 2. Fix the bracket Pendant Mount



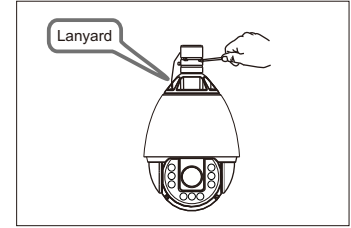
1. Using the mount template sheet, mark the holes on the wall or ceiling.



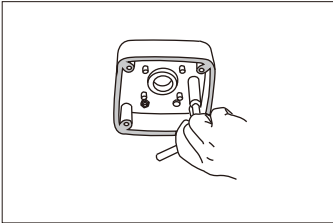
2. After drilling the holes, fix the three anchor bolts into the holes.



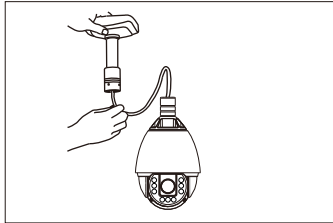
5. Bring the speed dome up to the bracket.



6. Tighten the three screws to fix the speed dome and ensure the lanyard safety chain is properly connected.



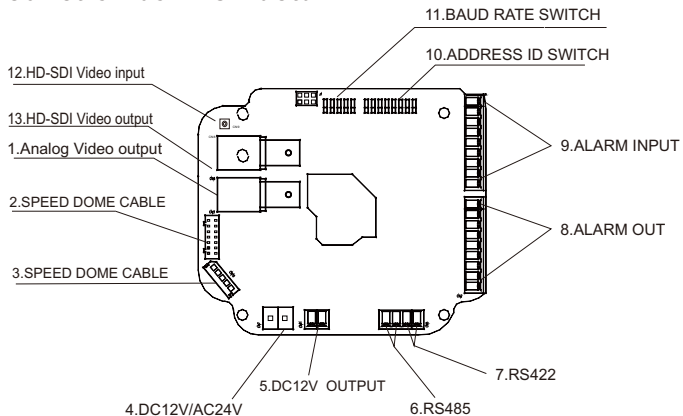
3. Remove the junction box cover. Using the supplied bolts and tool, firmly fix the bracket.



4. Draw the speed dome cable through the bracket.

# 3 Installation instruction

## 3.Junction box PCB detail



(1).(13).**Analog&HD Video output:** Analog&HD Video output, Use good quality 75Ohm cable terminated with a BNC connector.

(2).(3).(12).**Speed Dome Cable:** the interface connected with speed dome.

(4).**Auto Adapt Power:** this can automatically adapt the power supply between DC12V and AC24V. (Recommended power adapter : AC12V/5A,DC24/3A)

(5).**DC12V output:** an extra DC12V power is available for other devices, but please be kindly noted that the maximum power supply output for other devices is 6W and 500mA.

(6).(7).**RS485/422:**Using different communication way according to the RS485/422 switch.

(8).(9).**Alarm Input/Output:**8 alarm inputs and outputs.

## (10).Address ID switch:

1	2	3	4	5	6	7	8	DIP
1	2	4	8	16	32	64	128	Val / ID
ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	1
OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF	2
ON	ON	OFF	OFF	OFF	OFF	OFF	OFF	3
OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF	4
ON	OFF	ON	OFF	OFF	OFF	OFF	OFF	5
OFF	ON	ON	OFF	OFF	OFF	OFF	OFF	6
ON	ON	ON	OFF	OFF	OFF	OFF	OFF	7
OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF	8
---	---	---	---	---	---	---	---	-
ON	ON	ON	ON	ON	ON	ON	ON	255



Factory default switch positions

Speed dome ID is set using standard binary notation

**Note:** ID 0 should not be used. Where multiple speed domes are connected, a unique ID must be assigned to each one.

## (11).SET SWITCHES

The switch No. 1:

On: RS422 Off: RS485

The switch No.2:

On: NTSC Off: PAL

The switch No. 3 and 4 are as following:

Baud rate DIP switch table

3	4	Protocol/Rate
OFF	OFF	2400 bps
ON	OFF	4800 bps
OFF	ON	9600 bps
ON	ON	38400 bps

Factory default switch positions

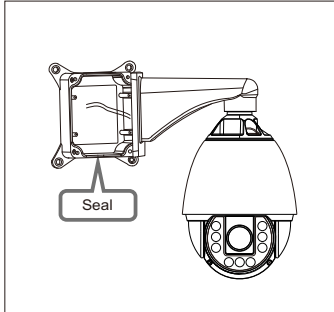


RS485/422  
PAL/NTSC  
BAUD RATE2  
BAUD RATE1  
RS485(120R)

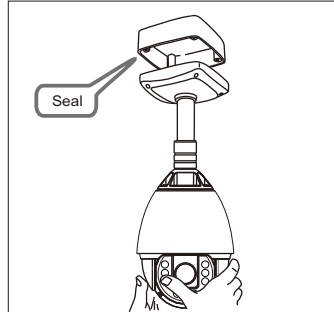
The switch No.5: RS485 matching resistance switch, the default setup is off. (The matching resistance value is 120Ω)

# 3 Installation instruction

## 4. Complete the installation



No.1 -wall bracket. After making all the connections to the PCB, close the junction box cover and fit four screws.



No.2 - pendent bracket . After making all the connections to the PCB, raise the dome assembly to the junction box, connect the dome cable to the PCB and fix with four screws.

**Note:** when fixing the cover to the junction box, ensure that the seal is also fitted properly and that none of the cables are trapped.

## Basic speed dome operation

There are many different PTZ keyboards and DVR systems capable of controlling this speed dome, and it would be impossible to describe them all here. Therefore, examples given in the following pages are based on the more popular control equipment available. While the principles of operation are the same, regardless of the control equipment used, reference may need to be made to the manual supplied with your particular control equipment.

## Understanding the On Screen Display (OSD)

**DATE/CLOCK:** Shows current time and date

**PTZ INFORMATION:** The current pan/tilt position in degrees and the current zoom level

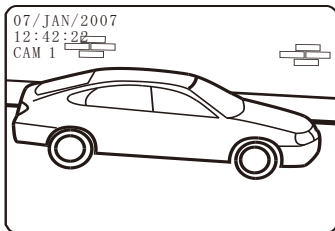
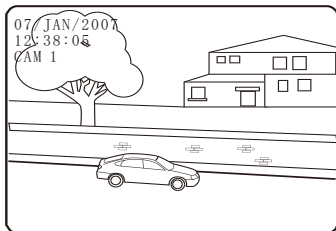
```
18/APR/2015      28/121/x1
09/40/44         0:----
CAM 73          I:-----
```

**CAMERA ID:** Shows the current ID defined by the dip switch settings

**ALARM I/O:** Shows which alarm inputs and outputs status



# 4 The keyboard shortcuts of speed dome operation



Please use "PRESET" key on keyboard to call preset.

To program a preset position, move the speed dome to the desired scene and zoom level and press:

**SET - XXX - ENTER**

Where **XXX** is a preset number between 1 & 254 (but preset 95 and No. 133~199 are reserved and cannot be used). Confirmation is displayed on the OSD.

To delete a preset position, press:

**CLEAR - XXX - ENTER**

Where **XXX** is a preset number between 1 & 254. The preset position is cleared from memory.

To go to a preset position which have been programmed, press:

**PRESET - XXX - ENTER**

Where **XXX** is a preset number between 1 & 254 (but that preset 95 and No. 133~199 are reserved and cannot be used). The speed dome moves to the preset position. Confirmation and preset title (if defined) is

To reprogramme a preset position, follow the steps for programming a preset - it is not necessary to delete the old preset position first

Once the pattern tours, scan functions and groups have been programmed in the speed dome setup menu, they can all be accessed directly from the PTZ control equipment by using the following sequences.

1. To start a **PATTERN** tour press:

**PRESET - 13X - ENTER**

Where **X** is a **PATTERN** tour number between 1 & 4  
The selected **PATTERN** tour will run indefinitely until a manual interference is made by the operator or an alarm input is received.

2. To start a **SCAN** function, press:

**PRESET - 14X - ENTER**

Where **X** is a **SCAN** function number between 1 & 8  
The selected **SCAN** function will run indefinitely until a manual interference is made by the operator or an alarm input is received.

3. To start a group, press:

**PRESET - 15X - ENTER**

Where **X** is a **GROUP** number between 1 & 8  
The selected **GROUP** will run indefinitely until a manual movement is made by the operator or an alarm input is received.

Other shortcuts please see below table:

ShutCuts	Function
Preset - 95 - Enter	Call OSD Menu
Preset - 171 - Enter	Call WDR
Preset - 172 - Enter	Call BLC
Preset - 173 - Enter	Call Auto WhiteBalance
Preset - 174 - Enter	Call Brightness
Preset - 175 - Enter	Call Digital Slow Shutter
Preset - 176 - Enter	Call DNR
Preset - 177 - Enter	Call Jog Max Speed
Preset - 179 - Enter	Call High Light Control
Preset - 180 - Enter	Call Day/Night
Preset - 190 - Enter	Switch Focus modes among Auto, Semiauto, Manual.
Preset - 191 - Enter	DISPLAY AUTO
Preset - 192 - Enter	DISPLAY OFF
Preset - 193 - Enter	DISPLAY ON
Preset - 194 - Enter	MASK DISPLAY OFF
Preset - 195 - Enter	MASK DISPLAY ON

# 5 Menu operation

The speed dome setup menu allows the operator to customise and program all aspects of speed dome operation. All menu settings are retained in non-volatile memory so if power is cut off for any reasons, all settings will be retained.

ROOT MENU	
-----	
-> <SYSTEM INFORMATION>	
<DISPLAY SETUP>	
<MOTION SETUP>	
<CAMERA SETUP>	
<FUNCTION SETUP>	
<SYSTEM SETUP>	
<HELP>	
EXIT	

To access the speed dome setup menu, key:

## SHOT - 95 - ENTER

To navigate the main menu, move the joystick up / down to choose a menu item or change settings within a menu item.

To enter a menu item or confirm a new setting, key **NEAR** or joystick right.  
To exit a menu item or cancel a new setting, key "**FAR**" or joystick left.

Where a menu item is surrounded by brackets, it indicates that there is a sub menu.

Where a menu screen shows **EXIT**, selecting this option will exit the menu and the speed dome will return to normal operation. Where a menu screen shows **BACK**, selecting this option will return to the higher menu level.

The main menu has seven options:

<**SYSTEM INFORMATION**> - Provides information such as firmware version, protocol and ID values as defined by the dip switch settings.

<**DISPLAY SETUP**> - Allows the operator to specify which On Screen Display information

is shown during normal operation. Also it allows privacy zones to be defined.

<**MOTION SETUP**> - Set the general functions of pan/tilt motion, for example, preset lock, power up action, auto flip and jog speed etc.

<**CAMERA SETUP**> - Allows all operating features of the speed dome to be programmed and managed. Also allows settings for the camera module to be changed

<**FUNCTION SETUP**> - Set the Preset/Scan/Pattern/Group/Schedule function.

<**SYSTEM SETUP**> - Allows various speed dome settings to be reset to factory defaults

## System information

SYSTEM INFORMATION	
-----	
FIRMWARE VER	1.86WXXS
ANALOG OUT	NTSC
HD-SDI OUT	1080P25
PROTOCOL	AUTO
BAUD RATE	2400
ADDRESS	
->BACK	
EXIT	

Shows information and current configuration.

From the main menu, use the joystick to select **SYSTEM INFORMATION** and press key **NEAR** or joystick right to confirm.  
To return to the main menu, select **BACK** and press key **NEAR** or joystick right to confirm.  
To exit the setup menu completely, select **EXIT** and press key **NEAR** or joystick right.

## Display setup

DISPLAY SETUP	
-----	
->CAMERA ID	ON
PTZ INFORMATION	AUTO
ACTION TITLE	AUTO
PRESET LABEL	AUTO
ALARM I/O	ON
DATE/TIME	ON
<PRIVACY ZONE>	ON
<IMAGE SETUP>	
BACK	
EXIT	

From the main menu, use the joystick to select **DISPLAY SETUP** and press key **NEAR** or joystick right to confirm.

**CAMERA ID (ON / OFF)** - shows camera ID according to the DIP switch settings, eg CAM1.

**PTZ INFORMATION (ON / OFF / AUTO)** - shows the current pan / tilt position in degrees and the current zoom level.

**ACTION TITLE (ON / OFF / AUTO)** - shows current speed dome action, eg PRESET3.

**PRESET LABEL (ON / OFF / AUTO)** - shows preset title (if defined) when a preset is called.

**ALARM I/O (ON/OFF)** - shows real time status of the alarm inputs and outputs.

**DATE/TIME(ON/OFF)** -show date and time

<**PRIVACY ZONE**> - sub menu to setup the speed dome privacy zones

<**IMAGE SETUP**> - sub menu to setup the image parameters.

Select the item to modify and press key **NEAR** or joystick right to confirm. Use the joystick to change the setting and press key **NEAR** or joystick right to save, key **FAR** or joystick left to cancel.

*Note: If the auto option is chosen, the relevant information is displayed for a few seconds before disappearing.*

## Privacy zone

PRIVACY ZONE	
-----	
->MASK NO.	1
	UNDEFINED
DISPLAY	OFF
CLEAR	OFF
<EDIT MASK>	CANCEL
BACK	
EXIT	

From the display setup menu, use the joystick to select **PRIVACY ZONE** and press key **NEAR** or joystick right to confirm.

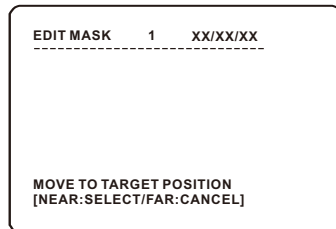
**MASK No.(1-8)** - shows the privacy zone currently being modified.

**DISPLAY** - determines whether the privacy zone is displayed during normal operation.

<**EDIT MASK**> - allows the operator to define the privacy zone.  
select the item to modify and press key **NEAR** or joystick right to confirm. Use the joystick to change the setting and press key **NEAR** or joystick right to save, press key **FAR** or joystick right to cancel.

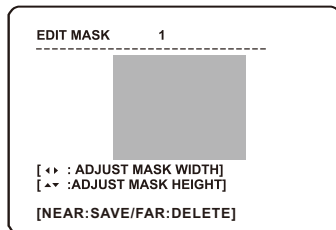
# 5 Menu operation

## Edit mask



From the privacy zone menu, use the joystick to select **EDIT MASK** and press key **NEAR** or joystick right to confirm.

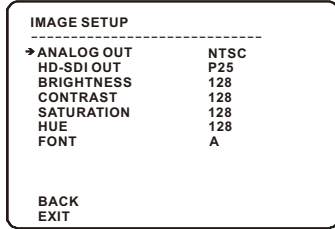
Use the joystick to move the speed dome to the approximate position and zoom level for the privacy zone and press key **NEAR** to select or press key **FAR** to cancel and return.



Move the joystick left and right to finely adjust the width of the privacy zone and up and down to finely adjust the height.

Press key **NEAR** to save the privacy zone, or press key **FAR** to cancel.

## Video out setup



From the display setup menu, use the joystick to highlight **IMAGE SETUP** and key **NEAR** or joystick right to confirm.

**ANALOG** - allows user to set the analog out as PAL or NTSC.

**HD-SDI OUT** - allows user to set the P25/P30 of the HD-SDI output signal.

**BRIGHTNESS** - allows user to set the brightness parameters.

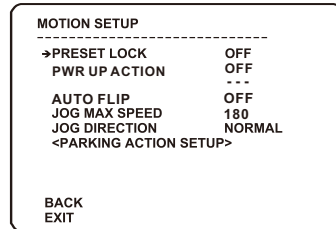
**CONTRAST**- allows user to set the contrast parameters.

**SATURATION** - allows user to set the saturation parameters.

**HUE** - allows user to set the hue parameters.

**FONT** - allows user to set the FONT size, A means 14pt,B means 20pt.

## Motion setup



From the dome camera setup menu, use the joystick to select **MOTION SETUP** and press key **NEAR** or joystick right to confirm.

**PRESET LOCK** - when set to ON, preset programming directly from the keyboard is disabled to prevent tampering.

**PWR UP ACTION** - you can set this with LASTACT/PRESET/SCAN/PATTERN/ GROUP/OFF, the speed dome will resume the setting operation when power is restored after a power failure.

**AUTO FLIP (ON / OFF)** - when set to ON, the dome will flip 180 degrees when the tilt position reaches 90 degrees.

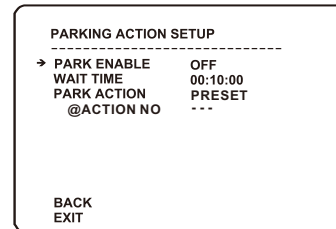
**JOG MAX SPEED** - determines the maximum speed in degrees / second the dome will move during manual operation.

**JOG DIRECTION (INVERSE / NORMAL)** - when set to normal, the pan direction is opposite to the joystick movement.when set to inverse, the scan direction is the same with the joystick movement.

**<PARKING ACTION SETUP>** - Configure actions that run automatically after a defined period of inactivity.

Select the item to modify and press key **NEAR** or joystick right to confirm, Use the joystick to change the setting and press key **NEAR** or joystick right to save, key **FAR** or joystick left to cancel.

## Parking action setup



From the motion setup menu, use the joystick to select **PARKING ACTION SETUP** and press key **NEAR** or joystick right to confirm.

**PARK ENABLE** - when set to ON, the speed dome will run the specified park action after the wait time has elapsed.

**WAIT TIME** - can be set between one minute and 4 hours. If no manual control occurs during this time, the park action will run.

**PARK ACTION** - choose the action to run after the wait time has elapsed. This can be return to home position, go to a preset or run a scan, pattern or group.

Select the item to modify and press key **NEAR** or joystick right to confirm. Use the joystick to change the setting and press key **NEAR** or joystick right to save, key **FAR** or joystick left to cancel.

# 5 Menu operation

## Zoom camera setup

ZOOM CAMERA SETUP	
→ FOCUS MODE	SEMIAUTO
DIGITAL ZOOM	OFF
FLICKERLESS	OFF
COLOUR	14
DEFOG	OFF
DETIAL	8
ACE	OFF
<NEXT PAGE>	
BACK	
EXIT	

From the dome camera setup menu, use the joystick to highlight **CAMERA SETUP** and key **NEAR** or joystick right to confirm.

### FOCUS MODE

**MANUAL** - the operator must focus the camera manually using the NEAR and FAR keys.  
**SEMIAUTO** - the camera automatically focuses, but it could switch to "Manual" mode by pressing "Near" or "Far", and it could be switched back to "Auto" mode by move the joystick up/down, right/left, or zoom in/out, and the factory default is in "Semioauto" mode.the camera automatically focuses during normal PTZ movement but preset focus information is stored when a preset is programmed and recalled each time the preset is called.  
**AUTO** - the module auto focuses continuallyset the digital zoom as ON or OFF.

**FLICKERLESS (ON / OFF)** - should be set to ON when used in certain lighting conditions (EG Fluorescent lighting) to prevent picture flicker.

**DEFOG**:switches the defog function.

**Detail** - this function adjusts the enhancement of the edge of objects in the picture.

**ACE** - Adaptive Contrast enhancement.

## Zoom camera setup

ZOOM CAMERA SETUP	
→<LAST PAGE>	
IMAGE FREEZE	OFF
IMAGE FLIP	OFF
ZOOM SPEED	7
GAMMA	OFF
3DDNR	3
<WHITE BALANCE SETUP>	
<AUTO EXPOSURE SETUP>	
BACK	
EXIT	

**IMAGE FREEZE(ON/OFF)** - this function is used for running preset, when dome runs between two presets, the video will change directly from one to another.

**IMAGE FLIP(ON/OFF)** - this function reverses the video output from the camera upside/down /left/right and etc.

**ZOOM SPEED** - this function can adjust the zoom speed level of the camera.

**GAMMA** - 1,2,3,4

**3D DNR** - this function adapts 3D filter reducing noise caused by movement,it's time based.

**<WHITE BALANCE SETUP>** - sub menu to change the white balance settings

**<AUTO EXPOSURE SETUP>** - sub menu to change the auto exposure settings

## White balance setup

WB SETUP	
→ WB MODE	
@RED ADJUST	AUTO
@BLUE ADJUST	---
BACK	
EXIT	

From the zoom camera setup menu, use the joystick to select **WHITE BALANCE SETUP** and press key **NEAR** or joystick right to confirm.

### WB MODE (AUTO/MANUAL/ATW/ OUTDOOR/INDOOR)

**AUTO** - the speed dome determines the optimum white balance settings for a given scene.  
**MANUAL** - the operator can adjust white balance settings manually.

**RED ADJUST** - in manual mode, the red colour content can be adjusted.

**BLUE ADJUST** - in manual mode, the blue colour content can be adjusted.

Select the item to modify and press key **NEAR** or joystick right to confirm. Use the joystick to change the setting and press key **NEAR** to save, press key **FAR** or joystick left to cancel.

## Auto exposure setup

AE SETUP	
→WDR/BLC	ALL OFF
DAY/NIGHT	AUTO
SLOW SHUTTER	OFF
AE MODE	AUTO
@IRIS LEVEL	---
@GAIN LEVEL	---
@SHUTTER SPD	---
BRIGHTNESS	7
BACK	
EXIT	

From the zoom camera setup menu, use the joystick to highlight **AUTO EXPOSURE SETUP** and key: **NEAR**

**WDR/BLC (ON/OFF)** - switches WDR/BLC compensation ON or OFF

**DAY/NIGHT (AUTO/DAY/NIGHT)** - the operator can choose to fix the camera in to DAY (colour) or NIGHT (B&W with IR cut filter mode). In AUTO mode, the camera switches between DAY and NIGHT depending on the surrounding light level

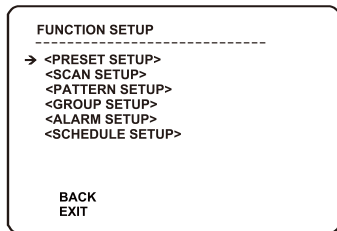
**AE MODE** - in AUTO mode, the speed dome determines optimum camera exposure settings for a given scene. In modes other than AUTO, the operator can adjust specific exposure characteristics to suit a particular scene.

**BRIGHTNESS**-allows users to set the brightness of the video.

Select the item to modify and press key **NEAR** or joystick right to confirm. Use the joystick to change the setting and press key **NEAR** to save, press key **FAR** or joystick left to cancel.

# 5 Menu operation

## Function setup



From the main menu, use the joystick to select **DOME CAMERA SETUP** and press key **NEAR** or joystick right to confirm.

**<PRESET SETUP>** - full management and programming of individual presets.

**<SCAN SETUP>** - full management and programming of scan functions.

**<PATTERN SETUP>** - full management and programming of pattern tours.

**<GROUP SETUP>** - full management and programming of group functions.

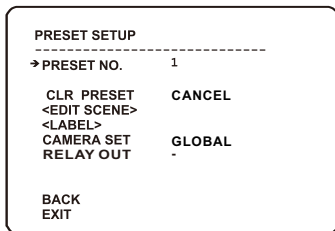
**<ALARM SETUP>** - full management and programming of alarm functions.

**<SCHEDULE SETUP>** - full management and programming of schedule functions.

Select the item to modify and press key **NEAR** or joystick right to confirm. Use the joystick to change the setting and press key **NEAR** to save, press key **FAR** or joystick left to cancel.

*Remember: A menu item surrounded by brackets shows it has a sub menu.*

## Preset setup



From the dome camera setup menu, use the joystick to select **PRESET SETUP** and press key **NEAR** or joystick right to confirm.

**PRESET NO. (1 - 254)** - The preset number currently is modified ( note that preset 95 and 131~199 is reserved and cannot be used). If the preset number is already defined, the speed dome will move to that preset position, otherwise UNDEFINED is displayed under the preset number.

**CLR PRESET** - use this option to delete the current preset position

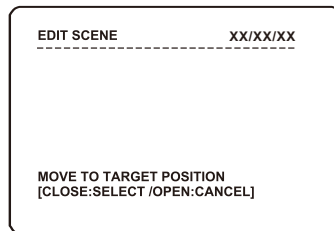
**<EDIT SCENE>** - use this option to program the preset position.

**<LABEL>** - use to edit the preset label. ***This option is only available when the selected preset position is already programmed.***

**<CAMERA SET>** - use to set the unique camera parameters for the specific preset.

**<RELAY OUT>** - use to program the relay outputs required (if any) when the preset is called. ***This option is only available when the selected preset position is already programmed.***

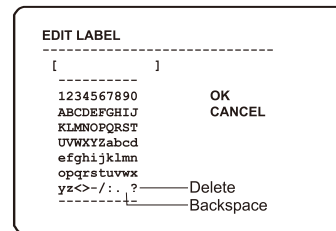
## Edit scene



From the preset setup menu, use the joystick to select **EDIT SCENE** and press key **NEAR** or joystick right to confirm.

Use the joystick, move the speed dome to the desired position and zoom level and then press key **CLOSE** to save, press key **OPEN** to cancel.

## Edit label



From the preset setup menu, use the joystick to select **EDIT LABEL** and press key **NEAR** or joystick right to confirm.

The solid white square shows the current cursor position. The flashing white square shows the currently selected character.

Move the joystick up / down / left / right to choose the required character and press key **NEAR** to insert it in the preset label. The solid white square moves to the next cursor position. Repeat until the preset label is complete.

If a mistake is made, use the joystick to select the delete ( ? ) and press key **NEAR** to confirm. The symbol " ? " is delete key

Select **OK** to save the preset label or **CANCEL** to lose changes, and key: **NEAR** to exit

# 5 Menu operation

## Scan setup

```
SCAN SETUP
-----
-> SCAN NO.      1

CLEAR SCAN      CANCEL
<EDIT SCAN>
<LABEL>
RUN SCAN
SCAN SPEED     60
JOG DIRECTION  INVERSE
BACK
EXIT
```

From the dome camera setup menu, use the joystick to select **Scan SETUP** and press key **NEAR** or joystick right to confirm.

**SCAN NO. (1-8)** - shows the **SCAN** number currently being modified.

**CLEAR SCAN** - deletes the currently selected scan function.

**<EDIT SCAN>** - use this option to program the scan function.

**<LABEL>** - use to edit the scan label.  
*This option is only available when the selected scan is already programmed.*

**RUN SCAN** - runs the currently selected scan function for testing purposes.

**SCAN SPEED** - use this option to set the speed in degrees / second the dome will move during the scan run time.

**JOG DIRECTION (INVERSE / NORMAL)** - when set to normal, the scan direction is opposite to the joystick movement. when set to inverse, the scan direction is the same with the joystick movement.  
Select the item to modify and press key **NEAR** or joystick right to confirm. Use the joystick to change the setting and press key **NEAR** or joystick right to save, press key **FAR** to cancel.

## Edit scan

```
EDIT SCENE - SCAN   XX/XX/XX
-----

MOVE TO START POSITION
CLOSE:START/OPEN:CANCEL
```

From the dome camera setup menu, use the joystick to select **EDIT SCAN** and press key **NEAR** or joystick right to confirm.

Move the speed camera to any desired position and press key **CLOSE** to confirm start position or press key **OPEN** to cancel, and then move the speed camera to another any desired position, press key **CLOSE** to confirm end position or key **OPEN** to cancel.

## Edit label

```
SCAN - LABEL
-----
[      ]

1234567890      OK
ABCDEFGHIJ      CANCEL
KLMNOPQRST
UVWXYZabcd
efghijklmn
opqrstuvwxy
yz<- / : ?      Delete
-----      Backspace
```

From the scan setup menu, use the joystick to select **EDIT LABEL** and press key **NEAR** or joystick right to confirm.

The solid white square shows the current cursor position.  
The flashing white square shows the currently selected character.

Move the joystick up / down / left / right to choose the required character and key: **NEAR** to insert it in the scan label. The solid white square moves to the next cursor position. Repeat until the scan label is complete.

If a mistake is made, use the joystick to select the backspace ( ? ) and key: **NEAR**. The cursor moves back one square. The symbol “?” is delete key

Select **OK** to save the scan label or **CANCEL** to lose changes, and key: **NEAR** to exit

## Pattern setup

```
PATTERN SETUP
-----
-> PATTERN NO.    1

CLEAR PATTERN    CANCEL
<EDIT PATTERN>
RUN PATTERN

BACK
EXIT
```

From the dome camera setup menu, use the joystick to select **PATTERN SETUP** and press key **NEAR** or joystick right to confirm.

**PATTERN NO. (1 - 4)** - The pattern number currently being modified.

**CLEAR PATTERN** - the currently selected pattern can be deleted.

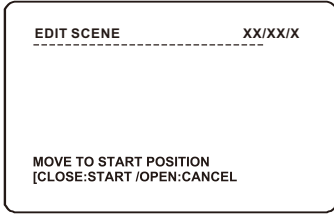
**<EDIT PATTERN>** - allows the operator to program a pattern tour.

**RUN PATTERN** - runs the currently selected pattern for testing purposes.

Select the item to modify and press key **NEAR** or joystick right to confirm. Use the joystick to change the setting and press key **NEAR** to save, press key **FAR** or joystick left to cancel.

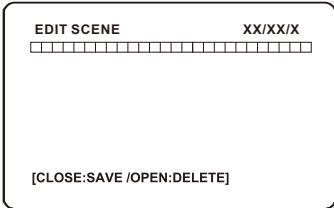
# 5 Menu operation

## Edit pattern



From the pattern setup menu, use the joystick to select **EDIT PATTERN** and press key **NEAR** or joystick right to confirm.

Move the speed dome to the desired starting point and press key **CLOSE** to select.

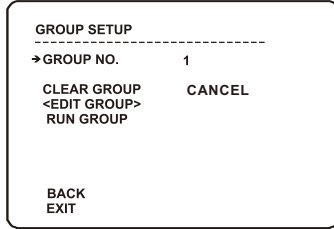


Move the dome to the various positions and zoom levels required for the pattern. The white squares at the top of the display show remaining storage and disappear as the pattern is recorded.

To save the pattern, key: **CLOSE**  
To abandon pattern programming, key: **OPEN**

*Note: Pattern tour memory is only used when movements are recorded. Pauses between movements, regardless of time, do not use pattern tour memory*

## Group setup



From the dome camera setup menu, use the joystick to highlight **GROUP SETUP** and press key **NEAR** or joystick right to confirm.

**GROUP NO. (1-8)** - shows the group number currently being modified.

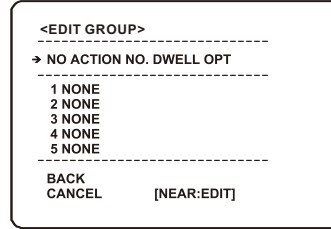
**CLEAR GROUP** - the currently selected group can be deleted.

**<EDIT GROUP>** - allows the operator to program the group functions.

**RUN GROUP** - runs the currently selected group for testing purposes

Highlight the item to modify and key: **NEAR**  
Use the joystick to change the setting and key: **NEAR** to save or: **FAR** to cancel.

## Edit group



From the group setup menu, use the joystick to highlight **EDIT GROUP** and press key **NEAR** or joystick right to confirm.

Header explanation:  
**NO** - the item number (between 1 & 20)

**ACTION** - the specific action for this item

**NO.** - the action number (eg if ACTION is set to PRESET, this value can be between 1 & 255)

**DWELL** - the amount of time before the next action in the list is called

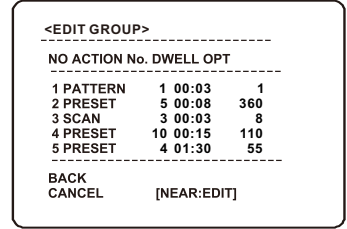
**OPT** - for PRESET actions, this value is the speed at which the dome moves to the preset. For SCAN and PATTERN, this value is the number of times the action is repeated before the next action is called

Move the joystick up and down to choose the group item to modify and press key **NEAR**. The ACTION is selected in white

Move the joystick up and down to change the action type between NONE, PRESET, SWING and PATTERN.

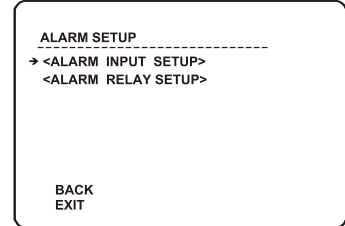
Move the joystick left and right to select and edit values for NO., DWELL & OPT.

## Edit group



Key **NEAR** to save this item and continue adding more items as necessary, or key **FAR** to exit.

## Alarm setup



From the function setup menu, use the joystick to highlight **ALARM SETUP** and press key **NEAR** or joystick right to confirm.

**<ALARM INPUT SETUP>** - allows the operator to program the alarm input function.

**<ALARM RELAY SETUP>** - allows the operator to program the alarm relay function.

Highlight the item to modify and key: **NEAR**  
Use the joystick to change the setting and key:

# 5 Menu operation

## Alarm input setup

ALARM INPUT SETUP			
→ALARM I/O	1		
ALARM ENABLE	OFF		
ALARM TYPE	---		
ALARM ACTION	NONE		
@ ACTION NO	---		
RELAY OUT	-		
RELAY RETAIN	3SEC		
BACK			
EXIT			

From the alarm setup menu, use the joystick to highlight **ALARM INPUT SETUP** and press key **NEAR** or joystick right to confirm.

**ALARM I/O** - shows the alarm I/O number.

**ALARM ENABLE** - allows the operator to set the enable/disable of the alarm I/O.

**ALARM TYPE** - allows the operator to set the alarm type of the alarm I/O.

**ALARM ACTION** - allows the operator to set the alarm action and the action number for the alarm I/O.

**RELAY OUT** - allows the operator to set the relay out option for the alarm I/O.

**RELAY RETAIN** - allows the operator to set the relay retain time for the alarm I/O.

## Relay setup

RELAY TYPE SETUP			
→RELAY1	N.O		
RELAY2	N.O		
RELAY3	N.O		
RELAY4	N.O		
BACK			
EXIT			

From the alarm setup menu, use the joystick to highlight **ALARM RELAY SETUP** and press key **NEAR** or joystick right to confirm.

**RELAY 1...4(N.O/N.C)** - allows the operator to set the alarm relay type as N.O or N.C.

Select the item to modify and press key **NEAR** or joystick right to confirm. Use the joystick to change the setting and press key **NEAR** or joystick right to save, press key **FAR** to cancel.

## Schedule setup

SCHEDULE SETUP			
→SCHEDULE NO.	1		
SCHEDULE ENABLE	OFF		
ACTION	NONE		
ACTION NO	-----		
RELAY OUT	-		
MONTH/WEEK	MONTH		
START TIME	JAN:01:00:00		
END TIME	JAN:01:00:00		
BACK			
EXIT			

From the function setup menu, use the joystick to highlight **SCHEDULE SETUP** and press key **NEAR** or joystick right to confirm.

**SCHEDULE NO.** -shows the schedule number.

**SCHEDULE ENABLE** - allows the operator to set the enable/disable of the schedule.

**ACTION** - allows the operator to set the action and the action number for the schedule.

**RELAY OUT** - allows the operator to set the relay out option for the schedule.

**MONTH/WEEK** - allows the operator to set the month/week/day of the schedule.

**START TIME** - allows the operator to set the start time for the schedule, the time format depends on the parameter of **MONTH/WEEK/DAY**, the time can precise to minute.

**END TIME** - allows the operator to set the end time for the schedule, the time format depends on the parameter of **MONTH/WEEK/DAY**, the time can precise to minute.

Select the item to modify and press key **NEAR** or joystick right to confirm. Use the joystick to change the setting and press key **NEAR** or joystick right to save, press key **FAR** to cancel.

## IR setup

IR SETUP			
→SENSI	-3		
IR MODE	AUTO		
•IR NEAR	---		
•IR MIDDLE	---		
•IR FAR	---		
BACK			
EXIT			

From the function setup menu, use the joystick to highlight **IR SETUP** and press key **NEAR** or joystick right to confirm.

**SENSI** - allows the operator to choose suited levels of sensitivity

**IR MODE** - allows the operator to choose suited IR MODE.

**IR NEAR** - allows the operator to adjust intensity of near IR LEDS.

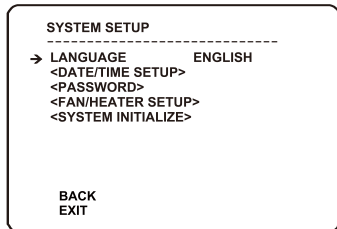
**IR MIDDLE** - allows the operator to adjust intensity for middle IR LEDS.

**IR FAR** - allows the operator to adjust intensity of far IR LEDS.



# 5 Menu operation

## System setup



From the main menu, use the joystick to highlight **SYSTEM SETUP** and press key **NEAR** or joystick right to confirm.

**LANGUAGE** - you can select different language.the system provide 8 kind language.

**<DATE/TIME SETUP>** - allows user to set the date/time.

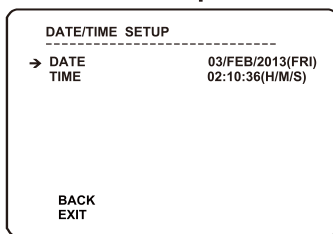
**<PASSWORD>** - allows user to set the password of the dome, then nobody can modify the dome information without the password.

**<FAN/HEATER SETUP>** - allows user to set the fan/heater working information.

**<SYSTEM INITIALIZE>** - allows user to set the different part of dome back to factory setting.

Select the item to modify and press key **NEAR** or joystick right to confirm. Use the joystick to change the setting and press key **NEAR** or joystick right to save, press key **FAR** to cancel.

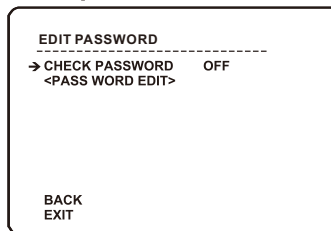
## Date/Time setup



From the system setup menu, use the joystick to highlight **DATE/TIME SETUP** and press key **NEAR** or joystick right to confirm.

Move the highlight to **DATE**, you can setup current year, month, day. After completing adjustment, key **NEAR** to confirm or key **FAR** to cancel.and the **TIME** setup is just like the **DATE**.

## Edit password

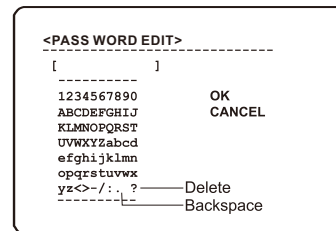


From the system setup menu, use the joystick to highlight **PASSWORD SETUP** and press key **NEAR** or joystick right to confirm.

**CHECK PASSWORD (ON/OFF)** - when set to ON, the correct password must be entered to access the speed dome setup menus

**<EDIT PASSWORD>** - allows the current password to be changed

## Password edit



From the password setup menu, use the joystick to highlight **EDIT PASSWORD** and press key **NEAR** or joystick right to confirm.

The solid white square shows the current cursor position. This flashing white square shows the currently selected character.

Move the joystick up / down / left / right to choose the required character and key: **NEAR** to insert it in the password. The solid white square moves to the next cursor position. Repeat until password entry is complete.

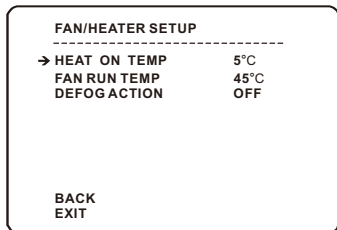
If a mistake is made, use the joystick to select the backspace ( ? ) and key: **NEAR**. The cursor moves back one square.

Select **OK** to save the password or **CANCEL** to lose changes and key: **NEAR** to exit

*Remember: When CHECK PASSWORD is set to ON, each time the operator attempts to enter the speed dome setup menu, the above screen will be displayed. The correct password must be entered to continue with menu setup*

# 5 Menu operation

## Fan/Heater setup



From the system setup menu, use the joystick to highlight **FAN/HEATER SETUP** and press key **NEAR** or joystick right to confirm.

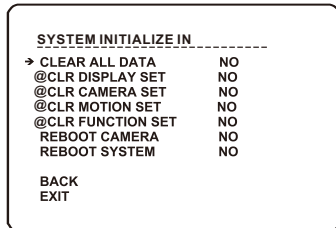
**HEAT ON TEMP** - allows users to set the lowest heater working temp.

**FAN RUN TEMP** - allows users to set the lowest fan working temp.

**DEFOG ACTION** - allows users to set the ON/OFF of the defog function.

Select the item to modify and press key **NEAR** or joystick right to confirm. Use the joystick to change the setting and press key **NEAR** or joystick right to save, press key **FAR** to cancel.

## System initialize



From the system setup menu, use the joystick to highlight **SYSTEM INITIALIZE** and press key **NEAR** or joystick right to confirm.

**CLEAR ALL DATA** - selecting this option will perform a full factory reset on the speed dome. All presets, swing functions, patterns, groups and privacy zones will be erased

**CLR DISPLAY SET** - this option will reset the on screen display settings to factory default and erase all privacy zones

**CLR CAMERA SET** - this option will reset the camera module settings to factory default

**CLR MOTION SET** - this option will reset the motion menu settings to factory default

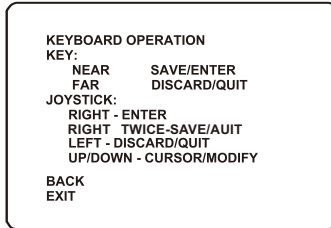
**CLR FUNCTION SET** - this option will erase all presets, scans, patterns and groups data.

**REBOOT CAMERA** - this option will reboot the camera zoom module.

**REBOOT SYSTEM** - this option will reboot the speed dome.

Select the item to modify and press key **NEAR** or joystick right to confirm. Use the joystick to change the setting and press key **NEAR** or joystick right to save, press key **FAR** to cancel.

## Help



From the main menu, use the joystick to highlight **HELP** and press key **NEAR** or joystick right to confirm.

**NEAR** - this 'near' means the key working as 'near' function, in our keyboard, it calls 'NEAR', so we defined this function as 'NEAR', press this key, it will work as SAVE or ENTER in our OSD menu.

**FAR** - this 'far' means the key working as 'far' function, in our keyboard, it calls 'FAR', so we defined this function as 'FAR', press this key, it will work as DISCARD or QUIT.

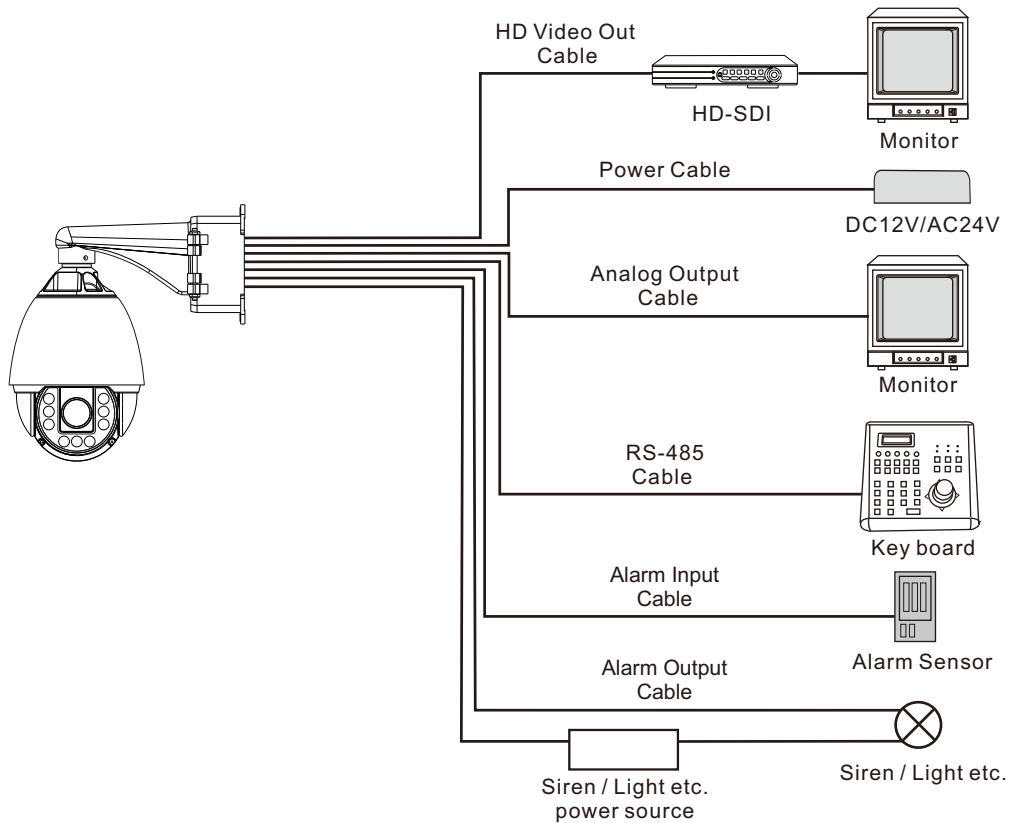
**RIGHT** - in OSD menu, when you move the joystick right, it will work as ENTER or SAVE function. it just like the key NEAR.

**LEFT** - in OSD menu, when you move the joystick left, it will work as DISCARD or QUIT function, it just like the key FAR.

**UP/DOWN** - in OSD menu, when you move the joystick up/down, it will move the cursor up/down or modify the parameters.

you can see the help information about keyboard operation and joystick.

# 6 Wiring schematic



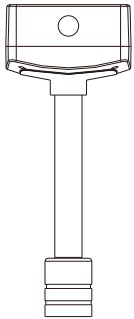
## 7 Optional bracket & parts

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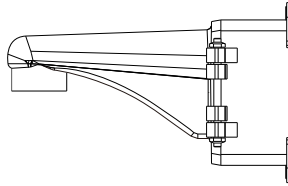
### Fan

	Fan
Current(A)	0.1A
Voltage (V)	12V
Power consumption	1.2W
Trigger Temperature	More than 45°C

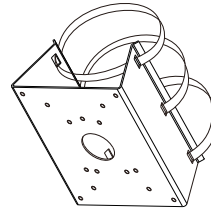
### Brackets for option



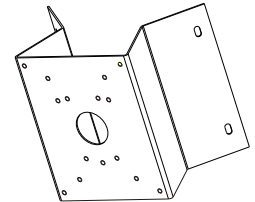
Pendent Bracket



Wall bracket



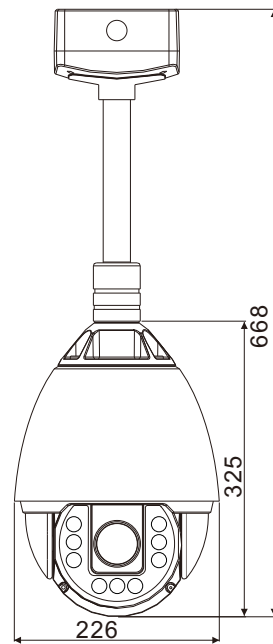
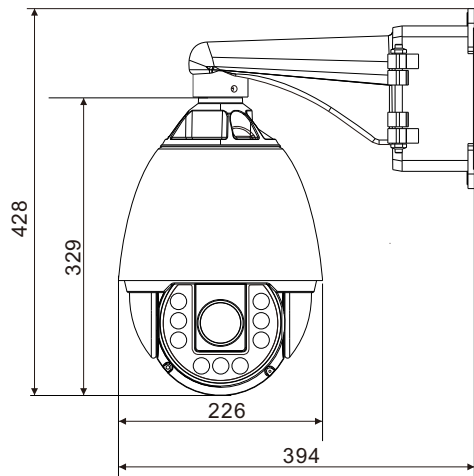
Pole Bracket



Corner Bracket

# 8 Dimensions

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# 8 Specifications

Camera		
Model No.	<input type="checkbox"/> 20X	<input type="checkbox"/> 30X
Image Sensor	1/3" Panasonic CMOS Sensor	
Total Pixels	2010x1108 2.2M Pixels	
Effective Pixels	1944x1092 2.1M Pixels	
Zoom	20x optical zoom,32x Digital zoom	30x optical zoom,32x Digital zoom
Focal Length	F=1.6(wide)~3.5(tele); f=4.7~94mm	F=1.6(wide)~5.0(tele); f=4.3~129mm
Minimum Illumination	Color:0.5Lux, BW:0.1Lux; Color DSS:0.001Lux,BW DSS :0.004Lux	
Day & Night	Auto / Day / Night (ICR)	
Focus	Auto/Manual/Semiauto	
Iris	0---20	
Shutter Speed	Auto(x 128~1/50sec---1/120000sec.)	
AGC	Auto	
White Balance	Auto / Manual / ATW / Outdoor / Indoor	
Mirror	None/Horizontal/Vertical/Horizontal & Vertical	
WDR/BLC	ALL OFF/WDR ON/BLC ON	
Privacy Zone	8 privacy zones are programmable	

## PTZ Function

Pan/Tilt Range	Pan: 360° endless, Tilt: 90°(Auto-Flip Off), 180°(Auto-Flip On)
Speed	Max.180°/sec
Preset	Up to 254 Preset with labels
Auto Scan	8
Pattern	4(ten minutes for each)
Group	8 Groups(Max 20 Entities per Group)
Other PTZ Functions	Auto Flip, Parking Action, Power up Action,Schedule
Protocol	Pelco D/P

## 8 Specifications

### IR Function

Irradiation distance	100m
Infrared mode	Auto/Manual/Semiauto
Lamp layout	Array IR LEDS for 9.Near:3,Middle:3,Far:3.
Lamp power	Max 3W
Brightness level	ON/OFF
Sensitivity	-10~10
Lamp current	2.5A

### I/O

Video Out	HD-SDI Video output and analog video output
Alarm In	8CH
Alarm Out	4CH
RS485	Yes

### General

Dome Dimension	Φ226mm*428Hmm
Net Weight	3.9 kg
Working Temp.	-10°C to 50°C
Working Humidity	90%
Fan	Yes
Power Supply	DC12V/AC24V
Power Consumption	DC12V: Max 56W AC24V: Max 68W
Waterproof Level	IP65
Certificate	CE, FCC