

SS27HB-V55DN

# Middle Speed Dome Camera Series

USER MANUAL v1.03



# WARNING

# CONTENTS

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE. DO NOT INSERT ANY METALLIC OBJECTS THROUGH THE VENTILATION GRILLS OR OTHER OPENINGS ON THE EQUIPMENT.

### CAUTION

RISK OF ELECTRIC SHOCK.

DO NOT OPEN.

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. JUST QUALIFIED SERVICE PERSONNEL SHOULD SERIVICE THE PRODUCT.



This symbol indicates that dangerous voltage constituting a risk of electric shock is present within this unit.



This symbol indicates that there are important operating and maintenance instructions in the literature accompanying this unit.

### FCC COMPLIANCE STATEMENT

FCC INFORMATION: 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 DESIGHEND TO PROVIDE REASONABLE PROTECTION AGAINST HAMRFUL INTERFERENCE WHEN THE EQUIPMENT IS OPERATED IN A COMMERCIAL ENVIRONMENT. THIS EQUIPMENT GENERATES, USES, AND CAN RADIATE RADIO FREQUENCY ENGERGY 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.

CAUTION: CHANGES OR MODIFICATIONS NOT EXPRESSLY APPROVED BY THE PARTY RESPONSIBLE FOR COMPLIANCE COULD VOID THE USERS'S AUTHORITY TO OPERATE THE EQUIPMENT.

### **CE COMPLIANCE STATEMENT**

WARNING: THIS IS A CLASS A PRODUCT. IN A DOMESTIC ENVIRONMENT THIS PRODUCT MAY CAUSE RADIO INTERFERENCE IN WHICH CASE THE USER MAY BE REQUIRED TO TAKE ADEQUATE MEASURES.

CAUTION: BEFORE ATTEMPTING TO CONECT OR OPERATE THIS PRODUCT, PLEASE READ THE LABEL ON THE BOTTOM AND USER'S MANUAL CAREFULLY

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Technical specification are subjects to change without prior notification. Manual may contain mistakes or print errors. All trade marks mentioned belong to their respective owners.

# **1.PRECAUTION**

# 2.FEATURES

Refer all work related to the installaion of this product to qualified service personnel or system installers.

### Do not attemp to disassemble the appliance.

To prevent electric shock, do not remove screws or cover. There are no userserviceable parts inside. Contact qualified service personnel for maintenance.

### Handle the appliance with care.

Do not strike or shake, as this may damage the appliance. It should be protected against extreme pressure, vibration and humidity during transportation and storage. Damages caused by improper transportation voids the warranty.

## Do not use strong or abrasive detergents when cleaning the appliance body and transparent cover.

Use a dry cloth to clean the appliance when dirty. When the dirt is hard to remove, use a mild detergent and wipe gently.

# Do not operate the apliance beyond its specified temperature, humidity or power source ratings.

Do not use the dome camera in an extreme environment where high temperature or high humidity exists.

Use the **models** within  $-20^{\circ}$ C to  $+50^{\circ}$ C( $-40^{\circ}$ F to  $122^{\circ}$ F) and a humidity below 90%. The input power source is 24V AC, 50/60Hz and requires 1000mA.

# Do not expose the indoor dome cameramodel to water or moisture, do not try to operate it in wet areas.

Take immediate action when the indoor speed dome gets wet. Turn off the power and refer servicing to qualified service personnel. Moisture may damage the appliance and cause eletric shock.

### Do not expose the camera lens directly to sunlight or other strong light sources.

This will cause permanent damage to the camera and voids the warranty.

### Read this user's manual carefully before operating the appliance.

Make sure local electric safty standard are followed when using or installing the appliance.

### Do not install the camera in other orientation as designed.

Do not bend or squeez the sturcture, as this may damage the mechanic sturcture of the appliance and voids the warranty.

### Do not touch the cover with bare hands or any objects.

These will scratch the surface and negatively affect the image qulaity.

The middle speed dome camera series are designed for video surveillance applications. The integrated, motorized pan-tilt mechanic allows users to maneuver the camera to any position (360° horizontal and 180° vertical). Both series can be equipped with digital zoom camera modules, which provide zooming function from 18 to 36 times (optical) and advanced image features.

### Key features:

- 360° Pan and 180° Tilt range (90° with auto-image-flip)
- Support most well-known camera modules
- 128 preset points memory (80 can be used for auto tour function)
- 4 pattern tours
- 1 Scan tour
- Basic setup directly from keyboard
- Advanced setup through OSD (On Screen Display) menu
- Up to 24 privacy masking zones (despends on camera module)
- Multi-protocol through Rs485
- Direction indicator on screen
- Aluminum alloy structure with high intensity and heat-sinking
- High-precision step-motor for flicker-less image during movement

### **Camera Features:**

- -High resolution with 530TVL and Wide-Dynamic\*
- Auto-Focus
- Auto-Iris
- Auto- Brightness control
- Auto-Balance
- IR cutter control, Day-Night mode switching
- Auto Slow-Shutter

### Temperature monitoring and protection:

- Alarm notification will be displayed once the inner temperature exceeds the limit
- At -10°C temperature area, the dome camera will start after the operation temperature is reached
- Cooling fan activity is managed by the CPU (extends the duration)

### Other features:

- Proportional pan for Focus / Speed on different zoom factor
- Auto-resuming user-defined action, such as tour, pattern or scan after selectable idle time
- Power-up Action activates tour or pattern by default

\* depends on camera module type

# **3.PACKING LIST**

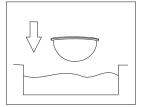
### Outdoor





Instruction and operation manual 1 piece

**WARNING:** The transparent cover part is sensitive and must be handled with care. Do not touch or rub the surface in any way with the protection foil.Inproper cleaning methods will cause permanent scratches on the cover and cause unclear image or focusing error of the camera. For cleaning the cover, replace the original cover with the spare cover, then wash it by immersing it into warm water containing a non-corrosive cleaning agent.



# **4.INSTALLATION**

### Safety Instructions before starting

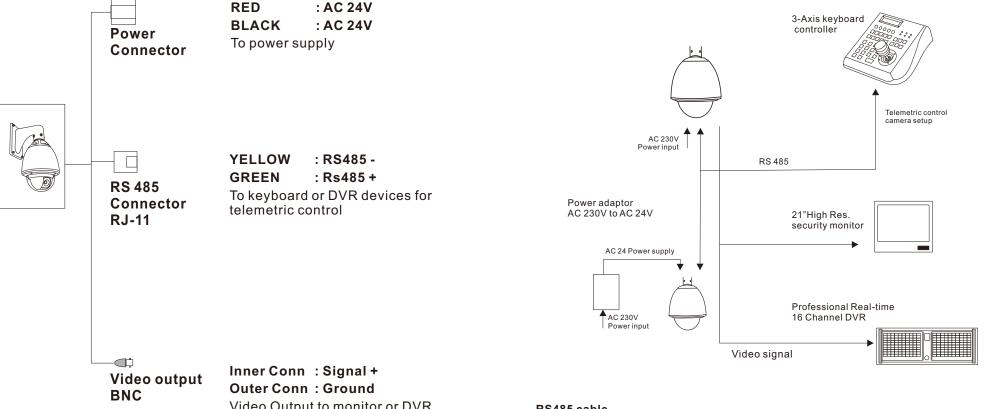
- Do not install and operate this appliance in a flammable and / or explosive environment.
- Make sure that the installation is done according to the local electricity safety regulations of your country.
- Before installation and maintenance, make sure that the appliance is disconnected from the power source.
- Do not use any power source other than 24V AC, in order to prevent damages to the device. Please refer to the section "Precaution" for more details.
- Handle the device during the installation with care. Droping the product or extreme vibration may cause irreparable damages and void the warranty.
- Do not install or operate the appliance close to high-voltage devices or high-voltage cables. The safety distance should remain at least 50 m.
- To archive best image quality, it is recommanded to use underground cables shielded by steel tube. Do not install the cable without any protection.
- In a thunderstorm area or region with high inductive voltage, such as high voltage transformer stations, it is necessary to use additional lightning-proof equipment and/or lightning robs for protection.
- For outdoor installations, lightning protection and grounding of the device should be considered. Please refer to the industrial saftey regulations of your country.
- Grounding of the appliance should include anti-interference and fulfill the safety requirements. Do not connect the ground with short-circuited or other high-voltage electric networks.
- The resistance of down conductor should not exceed 4 Ohm, and its thickness should be at least 25mm<sup>2</sup>.
- This appliance has the lightning-proof function which can prevent damages caused by high-voltage pulse, such as lightning strikes below 1500 V.
- This appliance meets the Ip66 standard for water and dust proof. Do not install the indoor model for out-door applications as the model is not designed withstanding permanent water exposure. Make sure that the installation is protected from long-time water-drop or spatter, which may damage the appliance.
- Make sure that the environment of installation meets the requirements of the appliance, such as holding the weight and providing enough space for bracket and power supply.

# **4.INSTALLATION**

### **Connector description**

### Using optional accessories

The speed dome camera series can be connected to various optional accessories through the standard connector types, which simplify the cable handling and avoid possible mistakes. All accessories are tested for max. Compatibility and best performance.



Video Output to monitor or DVR

### RS485 cable

The telemetric control of the appliance uses RS485 serial communication with halfduplex transmission technology.

Depending on the cable type and baud rate, the transmission distance could vary. The following table shows max. distances based on cable with 0,56mm (24AWG) twisted pair:

| Baud Rate | Max. Distance |
|-----------|---------------|
| 2400 bps  | 1700m         |
| 4800 bps  | 1100 m        |
| 9600 bps  | 700m          |
| 19200 bps | 400m          |

Due the environmental interferences, such as eletromagnetic and induction fields, or number of connected appliance on the RS485 bus, the transmission range may decrease.

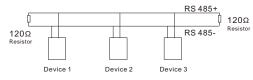
6

# **4.INSTALLATION**

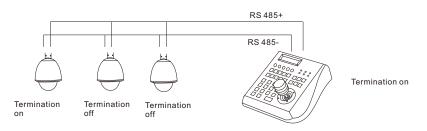
# 4.INSTALLATIO

### **RS485** Termination

Devices using RS485 control are usually connected in daisy-chain which regiuers termination with  $120\Omega$  resistor on both ends. The following graphic illustrates the connection methods. Please note that a daisy-chain connection type shall not exceed 7 meters.



The speed dome series provide an integrated termination switch. It should be turned ON on the dome serving as the last device. If a controller keyboard is used, you also need to turn the termination ON on the keyboard. Please refer to the keyboard's manual for details.

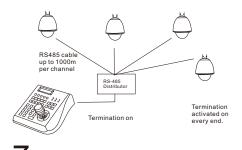


### How to turn termination ON on the Dome

The termination switch is located on the rear side of the connection board. For turning it ON open theconnector board.

### Star-Connection

The star-form connection is a popular way to connect different devices. It enables longer distance connection of different dome cameras. It is recommended to use RS485 distributor to ensure the telemetric data transmission:



The advantage of star-connection is that every channel can work independently and supports a cable length up to 1000 meters (depending on the quality of the cable). In case more dome cameras are installed, the starconnection can be extended with additional RS485 distributors.

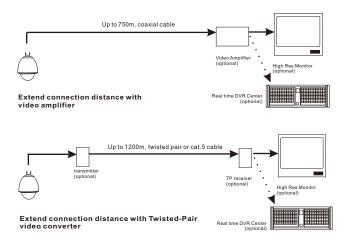
### Video Cable

Coaxial cable with 75 $\Omega$  impedance with copper conductor at the center and shielded with 95% copper. The following table shows different cable types and their maximum length:

| Cable standard | Max. Distance (m/ft) |
|----------------|----------------------|
| RG 59 /U       | 229m / 750 ft        |
| RG 6 /U        | 305m/ 1000 ft        |
| RG 11 /U       | 457m / 1500 ft       |

The values are for reference only. Depending on the qualiy tof the cable and environmental conditions the transmission distance might decrease.

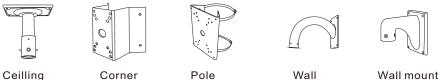
If the cable length is more than 400 m, it is recommended to use optional accessories, such as video amlifiersor twisted-pair video converters, to amplify the video signal.



### **Optional bracket accessories**

mount

The speed dome can be equipped with various bracket accessories for indoor and outdoor installation. Please contact your distributor for further details.



mount

mount

Wall mount

# **5.OPERATING THE SPEED DOME**



### Initial Screen

After powering up, the camera will enter into the self-test mode and display the status screen (see picture left). It contains information about the model and current settings.

- "FIRMWARE ": Model number
- V1.03: Current firmware version
- Protocol: Control protocol which currently used
- Dome address: Address ID of speed dome. Please refer to the section "Protocol setup " for details
- Comm 9600,N,8,1: Current setting of the serial communication interface 9600: Baud rate. Please refer to section "Baud-Rate setup" for details *N*, *8*, *1*: No parity bit, 8 bit length, 1 stop bit. This setting cannot be changed

The initial screen will remain on until any user action is taken. If the power-up action is set, the initial info wil vanish immediately.

### **Operation Screen**

The operation screen can display additional information.

Temperature: Current temperature inside the speed dome( °C)

Cam title:User definable camera titleZone:Current zone namePan deg.:Pan angle, 0-359°Tilt deg.:Tilt angle, 0-90°Zoom Factor:Zoom factor

Display of the information can be activated or deactivated through the OSD menu.Pplease refer to the system setting for detais.

# CAM TITLE 32.0

### PTZ operation

For the surveillance operation, the dome can be controlled from a keyboard device, Multiplexer or DVR through RS485 interface. Make sure that the cable is connected and the settings (baud rate, Address ID and protocol) of both, keyboard and the dome, are correctly configurated. For further details on operating the PTZ, please refer to the user's manual of the keyboard.

# 6.OSD

### OSD Menu

The dome camera are equipped with the new OSD Menu function. All operational functions and camera related settings can be controlled here. In order to use the OSD function, a telemetric controller device, such as keyboard, DVR or other devices with similiar functions, is required. Please make sure that the device used is properly physically connected to the dome and all connection parameters are set.

### How to start the OSD Menu

To start the OSD Menu, you need to press the following sequence on the keyboard:



In case a DVR is used for operating the OSD, select "go to preset 95" or 2 X "go to preset 9". Please refer to the DVR's operation manual for more details.

Note that in some situations, it is not possible to access the OSD menu:

- 1. The dome is running a tour
- 2. Performing PTZ operations
- 3. Dome is receiving a command other than OSD-request from the keyboard

RIGHT:

LEFT:

to

To solve this inability stop the operation and try again.

### Main menu and navigation

| Main Menu  |
|--|
| <ul> <li>&gt; SYSTEM SETTING →<br/>CAMERA SETTING →<br/>FUNCTION SETTING →<br/>WINDOW BLANKING →<br/>ALARM →<br/>EXIT</li> </ul> |

After entering the OSD Menu, the screen will show menu items. Use the controller's joystick to navigate the menu's main and sub items by moving in the desired direction. The angle mark on the beginning of every item indicates the selection.

UP, DOWN: - Moving between current menu items

- Changing the value in sub items
- Enter the selected menu item
  - Confirm the value change and return
  - item selection
- Exit from sub menu

For more inforamtion, please refer to the illustration on

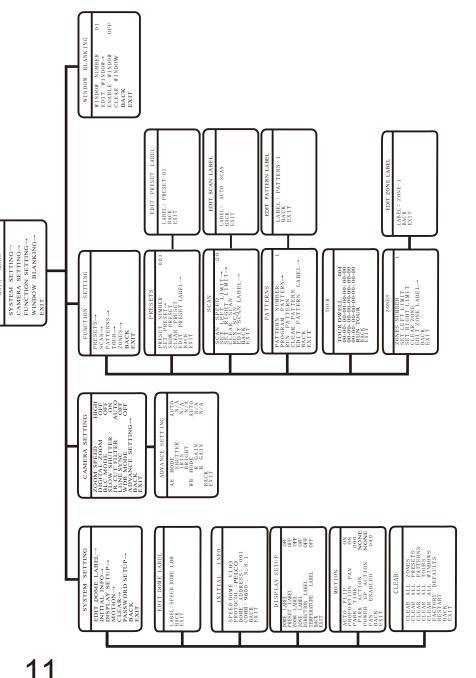
### Symbols and indicator

- Cursor.
- Sub item is selected. use up or down to change value
- → This item has subitem(s)

Some products may not be available in your country, please contact our distributor for more details

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# 6.OSD - Map



# 6.OSD - System Setting

### SYSTEM SETTING

EDIT DOME LABEL INITIAL INFO DISPLAY SETUP MOTION CLEAR PASSWORD SETUP BACK EXIT



### System Setting

In the system setting menu, you can modify operation and display settings, such as dome label, temperature and display of various values on the operational screen.

### Dome Label:

1. use UP or DOWN to change the character.

2. use RIGHT to move to next character.

3. use RIGHT to move to last char. and to save.

4. use Left to go to first char. and to cancel.

INITIAL INFO FIRMWARE V1.03 PROTOCOL: PLECO DOME ADDRESS: 001 COMM: 4800, N, 8, 1 BACK EXIT

### DISPLAY SETUP

DISTERT OFF DOME LABEL OFF ZOOM LABEL OFF ZOOM LABEL OFF ZONE LABEL OFF DIRECTION LABEL OFF TEMPERATURE LABEL OFF BACK

### Initial Info:

Shows the information about current settings.

### **Display Setup**

Enables the display for the on-screen info during operaton mode.

Dome label: Name of the dome Preset label: Shows the label of every preset Zoom label: Shows zoom factor on screen Zone label: Shows the zone name Direction label: Shows the coordinates Temperature label: Shows the current temp. in the dome

### Some products may not be available in your country, please contact our distributor for more details

# 6.OSD - Motion, Clear

### MOTION

| 🗘 AUTO FLIP     | ON   |
|-----------------|------|
| PROPORTION PAN  | ON   |
| PARK TIME       | 000  |
| PARK ACTION     | NONE |
| POWER UP ACTION | NONE |
| FAN ENABLED     | 040  |
| BACK            |      |
| EXIT            |      |
|                 |      |

### Motion control

AUTO FLIP: Auto. image flip, tilt range from 90° to 180°.

**PROPORTIONAL PAN:** Depending on the zoom factor, the dome will adjust the pan and tilt speed automatically for comfortable viewing.

**PARK TIME:** Defines the idle time prior to start a custom defined action (park action).The duration can vary from 1 to 240 minutes. This function can bedisabled by setting the minute to 0.

**PARK ACTION:** The action which will be started after the idle time (park time). Selectable between Preset, Scan, Pattern (Nr), Tour or None.

**POWER UP ACTION:** Action which starts after power up and self test. Selectable between Auto, Preset 1, Scan, Pattern (Nr), Tour or None. By selecting Auto, the dome will resume the last action before power off.

**FAN ENABLED**: Defines the temperature limit (in °C) at which the internal cooling starts operating. The standard limit is 40°C.

### CLEAR

CLEAR ALL ZONES CLEAR ALL PRESETS CLEAR ALL PATTERNS CLEAR ALL TOURS CLEAR ALL WINDOWS FACTORY DEFAULTS RESTART BACK EXIT

### Clear

You can clear setting's memory or reset the camera to factory default. The follwing functions are supported:

- Clear all zones
- Clear all presets
- Clear all patterns
- Clear all tours
- Clear all windows
- Factory defaults

**Warning**: The clear action cannot be undone. Once an item is cleared it is impossible to retrieve the deleted setting. Please make sure that the requested clear action is desired.

|  | 6.OSD - | Camera | Setting |
|--|---------|--------|---------|
|--|---------|--------|---------|

### CAMERA SETTING

C ZOOM SPEED HIGH DIGITAL ZOOM OFF BLC MODE OFF SLOW SHUTTER ON IR CUT FILTER AUTO LINE SYNC OFF WDR MODE OFF ADVANCE SETTING BACK EXIT

### Camera Setting

In the camera setting menu, you can access camera module related settings. Please note that depending on module's capability, some functions may not be available. Please contact your local sales representative for detailed information.

**ZOOM SPEED:** Defines the speed whith which zoom functions are performed.

**DIGITAL ZOOM:** Activates or deactivates the camera module's digital zoom function.

**BLC MODE:** Selects the Back Light Compensation mode which improves the image when an object has strong back light.

**SLOW SHUTTER:** Activates the Slow Shutter function of the camera, which provides a higher light sensibility in low-lit environments.

**IR CUT FILTER:** Enables the removal of Infrared Cutter Filter (IRC), also known as "DAY/NIGHT" mode. Enabling the IRC the camera turns into Black/White mode and has higher sensibility to low-light situations or turns on the IRlight, depending on the light condition. Selectable between On, Off or Auto. Only available on camera modules with IRC function.

LINE SYNC: Enables and disables Line Synchronization.

| AE MODE AUTO   |  |
|--|--|
| IRIS N/A<br>BRIGHT N/A<br>WB MODE AUTO<br>R GAIN N/A<br>B GAIN N/A<br>BACK<br>EXIT |  |

### **Advanced Setting**

Under the advanced setting, you can make improvements to the image quality depending on different environmental conditions.

**AE MODE:** Auto Exposure mode. Depends on the light condition in the surveillance area, you can set the AE in different modes and adjust the parameters, such as shutter speed, iris factor and brightness for the best image quality.

**WB MODE:** White Balance mode, an image improvement based on DSP processing. You can also adjust the Red-Gain or Blue-Gain to change the color tone.

Hi-RESOLUTION: Switch between 470-530 TVL (only with FCB-1010P)

# 6.OSD - Preset, Scan

PRESETS → SCAN→ PATTERNS→ TOUR → ZONES→ BACK EXIT

FUNCTION SETTING

### **Function Setting**

In function setting menu, you can define and activate different PTZ funcitons, such as preset points, auto scan, tours and patterns. Presets and tour functions can also be set or activated directly from the keyboard without entering the OSD Menu. Please refer to the keyboard's manual for operation details.

### Presets

PRESETS

PRESET NUMBER 001 SET PRESET→ SHOW PRESET CLEAR PRESET EDIT PRESET LABEL → B A C K EXIT **PRESET NUMBER:** supports up to 128 presets. The number can be selected from 0 to 128.

**SET PRESET:** Defining the preset points directly in OSD by entering this menu item and move the PTZ. Press IRIS-OPEN key on the keyboard to save. If the preset is pointed within digital zoom, it will automatically go back to the max. optical zoom range in order to provide the best image quality.

SHOW PRESET: Moves to the current preset point.

EDIT PRESET LABEL: For the current preset, you

operation screen once the preset is called. Please

can define a name which will be displayed on the

**CLEAR PRESET:** Clears the current preset.

choose the preset number first. The avaiable

characters are: 0-9, A-Z, <,>,. and space.

EDIT PRESET LABEL

LABEL : MAIN ENTR BACK EXIT

Scan

### SCAN SCAN SPEED 20 SET LEFT LIMIT

SET RIGHT LIMIT→ CLEAR SCAN → RUN SCAN EDIT SCAN LABEL BACK → EXIT The SCAN function moves the PTZ between 2predefined points with constant speed. The following parameters can be set:

SCAN NUMBER: Supports up to 4 scans. SCAN SPEED: Cruising speed between the points. SET LEFT LIMIT: Defines the left point. SET RIGHT LIMIT: Defines the right point. CLEAR SCAN: Deletes the scan setting. RUN SCAN: Starts the scan function. EDIT SCAN LABEL:Sets the name for the scan.

# 6.OSD - Patterns, Tours

### PATTERNS

PATTERN NUMBER 1 PROGRAM PATTERN→ RUN PATTERN CLEAR PATTERN EDIT PATTERN LABEL→ BACK EXIT

TOUR

00-00-00-00-00-00-00

00-00-00-00-00-00-00

00-00-00-00-00-00-00

004

TOUR DWELL

RUN TOUR

BACK

EXIT

### Patterns

Patterns record the user's movement while performing PTZ operations and stores them as a track. The Speed Dome can record up to 4 tracks with max. 180 sec. each.

PATTERN NUMBER: Supports up to 4 patterns.

**PROGRAM PATTERN:** Starts recording the pattern when selected. You can perfom PTZ movements for recording (not exceeding 180 sec.). Press IRIS-OPEN to save the track.

RUN PATTERN: Starts the current pattern.

CLEAR PATTERN: Deletes the current pattern.

EDIT PATTERN LABEL : Sets the name for the current pattern.

### Tour

Tour is an auto-operation running through selected preset points with definable pause time. A tour can store up to 24 preset points.

**TOUR DWELL (TM):** Pause duration after reaching a preset point. Duration can be set between 00-255(s).

**RUN TOUR:** Starts the tour and exits the OSD Menu.

# 6.OSD - Zones and Privacy Mask

| ZONES   |
|---|
| ZONE NUMBER 1<br>SET LEFT LIMIT →<br>SET RIGHT LIMIT →<br>CLEAR ZONE<br>EDIT ZONE LABEL →<br>BACK<br>EXIT |

### Zones

You can define the zones in the whole PT range up to 8 zones. When the display setting "Zone Label" is activated, its label will be displayed on the screen. The defined ranges of the zones should not be overlapping.

**ZONE NUMBER:** Supports up to 8 zones.

SET LEFT LIMIT: Left boarder of the current zone.

**SET RIGHT LIMIT:** Right boarder of the current zone.

CLEAR ZONE: Delet the current zone.

**EDIT ZONE LABEL :** Changes the label (name) of the current zone.

### WINDOW BLANKING

WINDOW NUMBER 01 EDIT WINDOW → ENABLE WINDOW OFF CLEAR WINDOW BACK EXIT

### Privacy Mask (Window Blanking)

Privacy Mask is used to protect the privacy area that should not be displayed once the camera is pointed on it, such as lavatory areas or the operation desk of an ATM machine. This might be mandatory required by local law regulations. The Speed Dome supports up to 24 private masks (depending on the installed camera module; please contact your local sales representative for more information).

Hitachi camera modules: 8 masking areas

<u>Sony Camera modules:</u> up to 24 masking areas (except the 45 series provides only 8)

LG, CNB Camera modules: no masking function

### WINDOW NUMBER: Mask number.

**EDIT WINDOW:** Edit position of the mask using the keyboard's joystick. Presse IRIS-OPEN to save.

**ENABLE WINDOW:** Shows the mask on the screen.

**CLEAR WINDOW:** Deletes the mask.

# **7.PROTOCOL SETTING**

Represents the dome's address in binary form.

Please refer to the list on the next pages for

Used for protocol settting and baud rate.

DIP 7

0

1

0

1

DIP8

0

0

1

1

DIP 1 to 6 : Protocol settings

DIP 7 and 8:Baud rate settings

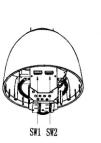
### **Protocol Setting**

This procedure is needed if a connection of the telemetric control with the keyboard device is desired. You need to setup the dome address and protocol settings.

The speed dome support multiple communication protocols. The settings can be changed by rearranging the DIP-Switches on the rear side of the connector board as illustrated.

Please use the following table for detailed information.

| Protocol / DIP | 123456 |
|----------------|--------|
| B02            | 001100 |
| DIAMOND        | 100100 |
| HUNDA          | 101100 |
| KALATEL        | 010100 |
| LILIN          | 110100 |
| MOLYNX         | 001000 |
| PANASONIC      | 111000 |
| PELCO (D/P)    | 100000 |
| PHILIPS        | 000001 |
| SAE            | 010000 |
| SAMSUNG        | 000100 |
| SANTACHI       | 011000 |
| UNIVISION      | 010001 |
| VCL            | 110000 |
| VICON          | 101000 |
| AD             | 001100 |



SW 1:

SW 2:

reference.

**Baud rate** 

2400 bps

4800 bps

9600 bps

19200 bps

# 8. Address ID, 1 to 67

| ID  | Switchnumber (Sw1)          |     | ID  | Switchnumber (Sw1)              |
|-----|-----------------------------|-----|-----|---------------------------------|
| 1 D | Bit 1 2 3 4 5 6 7 8         |     | 1 D | Bit 1 2 3 4 5 6 7 8             |
|     | 0 0 0 0 0 0 0 0             |     | 34  | 0 1 0 0 0 1 0 0                 |
| 1   | 1000000                     |     | 35  | 1 1 0 0 0 1 0 0                 |
| 2   | 0 1 0 0 0 0 0 0             |     | 36  | 00100100                        |
| 3   | 1 1 0 0 0 0 0 0             |     | 37  | $1 \ 0 \ 1 \ 0 \ 0 \ 1 \ 0 \ 0$ |
| 4   | 0 0 1 0 0 0 0 0             |     | 38  | 0 1 1 0 0 1 0 0                 |
| 5   | 1010000                     |     | 39  | $1 \ 1 \ 1 \ 0 \ 0 \ 1 \ 0 \ 0$ |
| 6   | 0 1 1 0 0 0 0 0             |     | 40  | 0 0 0 1 0 1 0 0                 |
| 7   | 1 1 1 0 0 0 0 0             |     | 41  | $1 \ 0 \ 0 \ 1 \ 0 \ 1 \ 0 \ 0$ |
| 8   | 0 0 0 1 0 0 0 0             |     | 42  | 0 1 0 1 0 1 0 0                 |
| 9   | 1001000                     |     | 43  | $1 \ 1 \ 0 \ 1 \ 0 \ 1 \ 0 \ 0$ |
| 10  | 0 1 0 1 0 0 0 0             |     | 44  | 00110100                        |
| 11  | 1 1 0 1 0 0 0 0             |     | 45  | $1 \ 0 \ 1 \ 1 \ 0 \ 1 \ 0 \ 0$ |
| 12  | 0 0 1 1 0 0 0 0             |     | 46  | 0 1 1 1 0 1 0 0                 |
| 13  | 10110000                    | L   | 47  | 1 1 1 1 0 1 0 0                 |
| 14  | 0 1 1 1 0 0 0 0             |     | 48  | 00001100                        |
| 15  | 1 1 1 1 0 0 0 0             |     | 49  | 10001100                        |
| 16  | 0 0 0 0 1 0 0 0             |     | 50  | 0 1 0 0 1 1 0 0                 |
| 17  | 10001000                    |     | 51  | 1 1 0 0 1 1 0 0                 |
| 18  | 0 1 0 0 1 0 0 0             |     | 52  | 00101100                        |
| 19  | 1 1 0 0 1 0 0 0             |     | 53  | 10101100                        |
| 20  | 0 0 1 0 1 0 0 0             |     | 54  | 0 1 1 0 1 1 0 0                 |
| 21  | 10101000                    |     | 55  | 1 1 1 0 1 1 0 0                 |
| 22  | 0 1 1 0 1 0 0 0             | , L | 56  | 0 0 0 1 1 1 0 0                 |
| 23  | 1 1 1 0 1 0 0 0             | , L | 57  | 10011100                        |
| 24  | 0 0 0 1 1 0 0 0             | , L | 58  | 0 1 0 1 1 1 0 0                 |
| 25  | 10011000                    | , L | 59  | 1 1 0 1 1 1 0 0                 |
| 26  | 0 1 0 1 1 0 0 0             | , L | 60  | 0 0 1 1 1 1 0 0                 |
| 27  | 1 1 0 1 1 0 0 0             | , L | 61  | 10111100                        |
| 28  | 0 0 1 1 1 0 0 0             | , L | 62  | 0 1 1 1 1 1 0 0                 |
| 29  | 10111000                    | , L | 63  | 1 1 1 1 1 1 0 0                 |
| 30  | 0 1 1 1 1 0 0 0             | L L | 64  | 0 0 0 0 0 0 1 0                 |
| 31  | 1 1 1 1 1 0 0 0             | L L | 65  | 1000010                         |
| 32  | 0 0 0 0 0 1 0 0             | L L | 66  | 0 1 0 0 0 0 1 0                 |
| 33  | $1 \ 0 \ 0 \ 0 \ 1 \ 0 \ 0$ |     | 67  | 1 1 0 0 0 0 1 0                 |
|     |                             |     |     |                                 |

| ID              | Switchnumber (Sw1)                          |                   | ID                 | Switchnumber (Sw1)          |
|-----------------|---|-------------------|--------------------|-----------------------------|
|                 | Bit 1 2 3 4 5 6 7 8                         |                   |                    | Bit 1 2 3 4 5 6 7 8         |
| 68              | 00100010                                    |                   | 102                | 0 1 1 0 0 1 1 0             |
| 69              | 10100010                                    |                   | 103                | 1 1 1 0 0 1 1 0             |
| 70              | 0 1 1 0 0 0 1 0                             |                   | 104                | 0 0 0 1 0 1 1 0             |
| 71              | 1 1 1 0 0 0 1 0                             |                   | 105                | 1 0 0 1 0 1 1 0             |
| 72              | 0 0 0 1 0 0 1 0                             |                   | 106                | 0 1 0 1 0 1 1 0             |
| 73              | 1 0 0 1 0 0 1 0                             |                   | 107                | 1 1 0 1 0 1 1 0             |
| 74              | 0 1 0 1 0 0 1 0                             |                   | 108                | 0 0 1 1 0 1 1 0             |
| 75              | 1 1 0 1 0 0 1 0                             |                   | 109                | 10110110                    |
| 76              | 0 0 1 1 0 0 1 0                             |                   | 110                | 0 1 1 1 0 1 1 0             |
| 77              | 10110010                                    | Γ                 | 111                | 1 1 1 1 0 1 1 0             |
| 78              | 0 1 1 1 0 0 1 0                             | Γ                 | 112                | 0 0 0 0 1 1 1 0             |
| 79              | 1 1 1 1 0 0 1 0                             | Γ                 | 113                | 10001110                    |
| 80              | 0 0 0 0 1 0 1 0                             | Γ                 | 114                | 0 1 0 0 1 1 1 0             |
| 81              | 1 0 0 0 1 0 1 0                             | Γ                 | 115                | 1 1 0 0 1 1 1 0             |
| 82              | 0 1 0 0 1 0 1 0                             | Γ                 | 116                | 0 0 1 0 1 1 1 0             |
| 83              | 1 1 0 0 1 0 1 0                             | Γ                 | 117                | 10101110                    |
| 84              | 0 0 1 0 1 0 1 0                             | Γ                 | 118                | 0 1 1 0 1 1 1 0             |
| 85              | 10101010                                    |                   | 119                | 1 1 1 0 1 1 1 0             |
| 86              | 0 1 1 0 1 0 1 0                             | Γ                 | 120                | 0 0 0 1 1 1 1 0             |
| 87              | 1 1 1 0 1 0 1 0                             |                   | 121                | 10011110                    |
| 88              | 0 0 0 1 1 0 1 0                             |                   | 122                | 0 1 0 1 1 1 1 0             |
| 89              |   |                   | 123                | 1 1 0 1 1 1 1 0             |
| 90              | 0 1 0 1 1 0 1 0                             | Γ                 | 124                | 0 0 1 1 1 1 1 0             |
| 91              | 1 1 0 1 1 0 1 0                             |                   | 125                | 10111110                    |
| 92              | 0 0 1 1 1 0 1 0                             |                   | 126                | 0 1 1 1 1 1 1 0             |
| 93              | 1 0 1 1 1 0 1 0                             |                   | 127                | 1 1 1 1 1 1 1 0             |
| 94              | 0 1 1 1 1 0 1 0                             |                   | 128                | 00000001                    |
| 95              | 1 1 1 1 1 0 1 0                             |                   | 129                | $1 \ 0 \ 0 \ 0 \ 0 \ 0 \ 1$ |
| 96              | 0 0 0 0 0 1 1 0                             |                   | 130                | 0 1 0 0 0 0 0 1             |
| 97              | 1 0 0 0 0 1 1 0                             |                   | 131                | 1 1 0 0 0 0 0 1             |
| 98              | 0 1 0 0 0 1 1 0                             |                   | 132                | 00100001                    |
| 99              | 1 1 0 0 0 1 1 0                             |                   | 133                | 10100001                    |
| 100             | 0 0 1 0 0 1 1 0                             | Γ                 | 134                | 0 1 1 0 0 0 0 1             |
| 101             | 10100110                                    |                   | 135                | 1 1 1 0 0 0 0 1             |
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# 8.Address ID, 68 to 135

(Sw1)

# 8. Address ID, 136 to 203

| ID  | Switchnumber (Sw1)          | Ι   |
|---|-----------------------------|---|
|   | Bit 1 2 3 4 5 6 7 8         |   |
| 136   | 0 0 0 1 0 0 0 1             | 170   |
| 137   | $1 \ 0 \ 0 \ 1 \ 0 \ 0 \ 1$ | 171   |
| 138   | 0 1 0 1 0 0 0 1             | 172   |
| 139   | 1 1 0 1 0 0 0 1             | 173   |
| 140   | 00110001                    | $\frac{172}{173}$   |
| 141   | $1 \ 0 \ 1 \ 1 \ 0 \ 0 \ 1$ | 175   |
| 142   | 0 1 1 1 0 0 0 1             | 176   |
| $\frac{142}{143}$   | 1 1 1 1 0 0 0 1             | $     \begin{array}{r}       175 \\       176 \\       177     \end{array} $  |
| 144   | 0 0 0 0 1 0 0 1             | 178   |
| 145   | $1 \ 0 \ 0 \ 1 \ 0 \ 0 \ 1$ | 179   |
| 146   | 0 1 0 0 1 0 0 1             | 180   |
| 147   | 1 1 0 0 1 0 0 1             | 181   |
| 148   | 00101001                    | 182   |
| 149   | 10101001                    | 183   |
| 150   | 0 1 1 0 1 0 0 1             | 184   |
| 151   | 1 1 1 0 1 0 0 1             | 185   |
| 152   | 0 0 0 1 1 0 0 1             | 186   |
| 153   | 10011001                    | 187   |
| $\begin{array}{r}154\\155\end{array}$   | 0 1 0 1 1 0 0 1             | 188   |
| 155   | 1 1 0 1 1 0 0 1             | 189   |
| 156   | 0 0 1 1 1 0 0 1             | 190   |
| $     \begin{array}{r}       157 \\       158 \\       159 \\       160     \end{array} $ | 10111001                    | 191   |
| 158   | 0 1 1 1 1 0 0 1             | 192   |
| 159   | 1 1 1 1 1 0 0 1             | 193   |
|   | 0 0 0 0 0 1 0 1             | 194   |
| 161   | 10000101                    | 195   |
| 162   | 0 1 0 0 0 1 0 1             | 196   |
| 162<br>163  | $1 \ 1 \ 0 \ 0 \ 1 \ 0 \ 1$ | 197   |
| 164   | 00100101                    | 198   |
| 165   | 10100101                    | 199   |
| 166   | 0 1 1 0 0 1 0 1             | 200   |
| 167   | 1 1 1 0 0 1 0 1             | 201   |
| 168   | 0 0 0 1 0 1 0 1             | $     \begin{array}{r}       179 \\       180 \\       181 \\       182 \\       192 \\       192 \\       192 \\       192 \\       192 \\       192 \\       192 \\       192 \\       192 \\       192 \\       192 \\       192 \\       192 \\       192 \\       200 \\       $ |
| 169   | 10010101                    | 203   |
|   |                             |   |

| ID                | Switchnumber (Sw1)                     |
|-------------------|--|
|                   | Bit 1 2 3 4 5 6 7 8<br>0 1 0 1 0 1 0 1 |
| 170               | 0 1 0 1 0 1 0 1                        |
| 171               | 1 1 0 1 0 1 0 1                        |
| 172<br>173        | 00110101                               |
| 173               | 10110101                               |
| 174               | 0 1 1 1 0 1 0 1                        |
| 175               | 1 1 1 1 0 1 0 1                        |
| 176               | 0 0 0 0 1 1 0 1                        |
| 177               | 10001101                               |
| 178               | 0 1 0 0 1 1 0 1                        |
| 178<br>179<br>180 | 1 1 0 0 1 1 0 1                        |
|                   | 0 0 1 0 1 1 0 1                        |
| 181<br>182        | 10101101                               |
| 182               | 0 1 1 0 1 1 0 1                        |
| 183               | 1 1 1 0 1 1 0 1                        |
| 184               | 0 0 0 1 1 1 0 1                        |
| 185               | 10011101                               |
| 186               | 0 1 0 1 1 1 0 1                        |
| 187               | 1 1 0 1 1 1 0 1                        |
| 188               | 0 0 1 1 1 1 0 1                        |
| 189               | 10111101                               |
| 189<br>190        | 0 1 1 1 1 1 0 1                        |
| 191               | 1 1 1 1 1 1 0 1                        |
| 192               | 0 0 0 0 0 0 1 1                        |
| 192<br>193<br>194 | 1000011                                |
| 194               | 0 1 0 0 0 0 1 1                        |
| 195<br>196        | 1 1 0 0 0 0 1 1                        |
| 196               | 0 0 1 0 0 0 1 1                        |
| 197               | 10100011                               |
| 198               | 0 1 1 0 0 0 1 1                        |
| 199               | 1 1 1 0 0 0 1 1                        |
| 200               | 0 0 0 1 0 0 1 1                        |
| 201               | 10010011                               |
| 201<br>202<br>203 | 0 1 0 1 0 0 1 1                        |
| 202<br>203        | 1 1 0 1 0 0 1 1                        |

# 8. Address ID, 204 to 255

| ID   | Switchnumber (Sw1)                             |
|--|--|
|  | (Bit)12345678                                  |
| 204  | 00110011                                       |
| 205  | 10110011                                       |
| 206  | 0 1 1 1 0 0 1 1                                |
| $     \begin{array}{r}       204 \\       205 \\       206 \\       207 \\       208 \\     \end{array} $  | 1 1 1 1 0 0 1 1                                |
| 208  | 0 0 0 0 1 0 1 1                                |
| 209  | $1 \ 0 \ 0 \ 1 \ 0 \ 1 \ 1$                    |
| 210  | 0 1 0 0 1 0 1 1                                |
| 211  | $1 \ 1 \ 0 \ 0 \ 1 \ 0 \ 1 \ 1$                |
| 212  | 0 0 1 0 1 0 1 1                                |
| 213  | 10101011                                       |
| 209<br>210<br>211<br>212<br>213<br>214   | 0 1 1 0 1 0 1 1                                |
| 215  | 1 1 1 0 1 0 1 1                                |
| $     \begin{array}{r}       211 \\       215 \\       216 \\       217 \\       218 \\       \hline       218 \\       \hline       212 \\       218 \\       \hline       218 \\       212 \\       218 \\       212 \\       $ | 0 0 0 1 1 0 1 1                                |
| 217  | 10011011                                       |
| 218  | 0 1 0 1 1 0 1 1                                |
| 219  | 1 1 0 1 1 0 1 1                                |
| $ \begin{array}{r} 220 \\ 221 \\ 222 \\ 223 \\ 224 \\ 225 \\ \end{array} $   | 0 0 1 1 1 0 1 1                                |
| 221  | 10111011                                       |
| 222  | 0 1 1 1 1 0 1 1                                |
| 223  | 1 1 1 1 1 0 1 1                                |
| 224  | 0 0 0 0 0 1 1 1                                |
| 225  | 10000111                                       |
| 226  | 0 1 0 0 0 1 1 1                                |
| 227<br>228   | 1 1 0 0 0 1 1 1                                |
| 228  | 00100111                                       |
| 229  | 10100111                                       |
| 230  | 0 1 1 0 0 1 1 1                                |
| 231  | 1 1 1 0 0 1 1 1                                |
| 232  | 0 0 0 1 0 1 1 1                                |
| 229<br>230<br>231<br>232<br>233<br>233<br>234  | 10010111                                       |
| 234  | 0 1 0 1 0 1 1 1                                |
| 235  | 1 1 0 1 0 1 1 1                                |
| 236  | 00110111                                       |
| 237  | 10110111                                       |
| 0  | av not he available in your country, places as |

| ID         | Switchnumber (Sw1) |
|------------|--------------------|
|            | (Bit)12345678      |
| 238        | 0 1 1 1 0 1 1 1    |
| 238<br>239 | 1 1 1 1 0 1 1 1    |
| 240        | 0 0 0 0 1 1 1 1    |
| 241        | 1 0 0 0 1 1 1 1    |
| 242        | 0 1 0 0 1 1 1 1    |
| 243        | 1 1 0 0 1 1 1 1    |
| 244        | 0 0 1 0 1 1 1 1    |
| 245        | 10101111           |
| 246        | 0 1 1 0 1 1 1 1    |
| 247        | 1 1 1 0 1 1 1 1    |
| 248        | 0 0 0 1 1 1 1 1    |
| 249        | 1 0 0 1 1 1 1 1    |
| 250        | 0 1 0 1 1 1 1 1    |
| 251        | 1 1 0 1 1 1 1 1    |
| 252        | 0 0 1 1 1 1 1 1    |
| 253        | 10111111           |
| 254        | 0 1 1 1 1 1 1 1    |
| 255        | 11111111           |

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# 9.SPECIFICATION

| P.I.C.            | P-041   |
|-------------------|---|
| Model             | SS27HB-V55DN  |
| Signal Format     | PAL / NTSC  |
| Scanning          | 2:1 Interlace   |
| Image Sensor      | 1/4" Sony Super HAD Color CCD   |
| H. Resolution     | Color: 550 TV Lines (Min.) / B&W: 680 TV Lines (Min.)                             |
| Viewing Angle     | H: Approx. 55.5° (wide) to 2.24° (tele)<br>V: Approx. 55.5° (wide to 1.79° (tele) |
| Zoom              | 27x Optical Zoom / 12× Digital Zoom   |
| Min. Illumination | 0.4 Lux/F1.6 (50 IRE) : Color / 0.02 Lux/F1.6 (50 IRE): B/W                       |
| Focus             | Auto / Manual   |
| White Balance     | Auto / Manual (ATW, Indoor, Outdoor, One Push WB, Manual WB)                      |
| Shutter Speed     | 1 to 1/10,000 Sec.  |
| Iris Control      | Auto / Manua/ Auto Slow Shutter   |
| Gain Control      | LOW / MEDIUN / HIGH / MANUAL / OFF  |
| Video Output      | CVBS : 1.0Vp-p/75Ω  |
| S/N Ratio         | More than 50 dB   |
| Pan Speed         | 0° ~ 100° per sec.  |
| Tilt Speed        | 0° ~ 100° per sec.  |
| Pan Range         | 360°  |
| Tilt Range        | 0° ~ 90°  |
| Communication     | RS485, multiple-protocol, coax  |
| Preset Positions  | 128 Presets   |
| Auto Pan          | Yes, between 2 presets  |
| Tour / Sequence   | 4 Programmable Tours w/ max. 24 presets / 4 Pattern up to 180s                    |
| Operating Temp.   | -20°C to 50°C   |
| Power             | 24V AC / 24 -60 VA  |
|                   |   |