



High Speed dome Camera Series

USER'S MANUAL

v 2.66



WARNING

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.



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

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



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 DESIGNED TO PROVIDE REASONABLE PROTECTION AGAINST HARMFUL INTERFERENCE WHEN THE EQUIPMENT IS OPERATED IN A COMMERCIAL ENVIRONMENT. THIS EQUIPMENT GENERATES, USES, AND CAN RADIATE RADIO FREQUENCY ENERGY AND IF NOT INSTALLED AND USED IN ACCORDANCE WITH THE INSTRUCTION MANUAL, MAY CAUSE HARMFUL INTERFERENCE TO RADIO COMMUNICATIONS. OPERATION OF THIS EQUIPMENT IN A RESIDENTIAL AREA IS LIKELY TO CAUSE HARMFUL INTERFERENCE IN WHICH CASE THE USER WILL BE REQUIRED TO CORRECT THE INTERFERENCE AT HIS OWN EXPENSE.

CAUTION: CHANGES OR MODIFICATIONS NOT EXPRESSLY APPROVED BY THE PARTY RESPONSIBLE FOR COMPLIANCE COULD VOID THE USER'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 CONNECT OR OPERATE THIS PRODUCT, PLEASE READ THE LABEL ON THE BOTTOM AND USER'S MANUAL CAREFULLY

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1. PRECAUTION

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

Do not attempt to disassemble the appliance

To prevent electric shock, do not remove screws or cover. There are no user-serviceable 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 avoid 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 it is dirty. When the dirt is hard to remove, use a mild detergent and wipe gently.

Do not operate the appliance 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 **indoor models** within -10°C to +50°C (14°F to 122°F) and a humidity below 90%. The input power source is 24V AC, 50/60Hz and requires 1000mA.

Use the **outdoor models** within -20°C to +60°C (-4°F to 140°F) and a humidity below 90%. The input power source is 24V AC, 50/60Hz and requires 2500mA.

Do not expose the indoor model of dome camera to water or moisture, not try to operate it in wet areas.

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

Do not point the camera lens directly to sunlight or any strong light source.

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

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

Make sure that local electric safety standards are followed when using or installing the appliance.

Do not install the camera in other orientation as designed.

And do not bend or squeeze the structure, as this may damage the mechanical structure of the appliance and voids the warranty.

Do not touch the Cover with bare hands or any object.

These will scratch the surface and affect the image quality.

2. FEATURES

The high speed dome camera series are designed for in- and outdoor video surveillance application. The integrated, motorized pan-tilt mechanism allows user to point 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 (depends on camera module)
- 7 alarm input & 2 output (4 input & 1 output pre-wired)
- Multi-Protocol through RS485 or coaxial cable.
- 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 560TVL and Wide-Dynamic*
- Interlace and Progressive Scan*
- Auto-Focus
- Auto-Iris
- Auto-Brightness control
- Auto-Balance
- IR cutter control, Day-Night mode switching.
- Auto Slow-Shutter
- Electric Image Stabilization
- Stablezoom*

Temperature monitoring and protection

- Alarm notification will be displayed once the inner temperature exceeds the limit
- In low temperature area, the dome camera will only 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.

3. PACKING LIST

Indoor Series



Core Unit
1 Piece



Indoor Roof-Mount
base plate
1 piece



Instruction and
operation manual
1 piece

Outdoor Series



Core Unit
1 Piece



Out-Door housing
with sun shield and
cover
1 piece



Spare dome cover
1 piece



Instruction and
operation manual
1 piece

Outdoor Series



Core Unit
1 Piece



Out-Door housing
with sun shield and
cover
1 piece

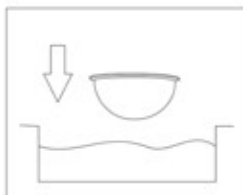


Spare dome cover
1 piece



Instruction and
operation manual
1 piece

WARNING: The transparent cover part is sensitive and should be handled with care. Do not touch or rub the surface in any way with the protection foil. Improper cleaning method will cause permanent scratches on the cover and cause unclear image or focusing error of the camera. For Cleaning the cover, please replace the original first with the spare cover, and wash it by diving into warm water with non-corrosive cleaning solution.



Unpacking

The speed dome is packed with protection. please take out the core unit carefully. In case of transportation please use the original packing box.

4. INSTALLATION

Safety Instructions before starting

- Do not install and operate this appliance in a flammable and explosive environment.
- Make sure that the installation is done according to the local electricity safety regulation 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 this device. For details, please refer to the section "Precaution" in previous chapter for more details.
- Handle the device during the installation carefully. Falls or extreme vibration may cause irreparable damages and avoid the warranty.
- Do not install or operate the appliance near any high-voltage devices or high-voltage cable. The safety distance should remain at least 50 m.
- To archive best image quality, its recommended to use underground cable shielded with 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 equipments or lightning rod for protection.
- For outdoor installation, lightning-proof and grounding of the device should be considered. Please refer to the industrial safety regulation and request of your country.
- Grounding of the appliance should consider anti-interference and fulfill the safety requirements. Do not connect the ground with short-circuited or other high-voltage electric network.

- The resistance of down conductor should not exceed 4 Ohm, and its thickness should be at least 25mm²

- This appliance has the lightning-proof function which can prevent damages caused by high-voltage pulse, such as lightning strike below 1500.

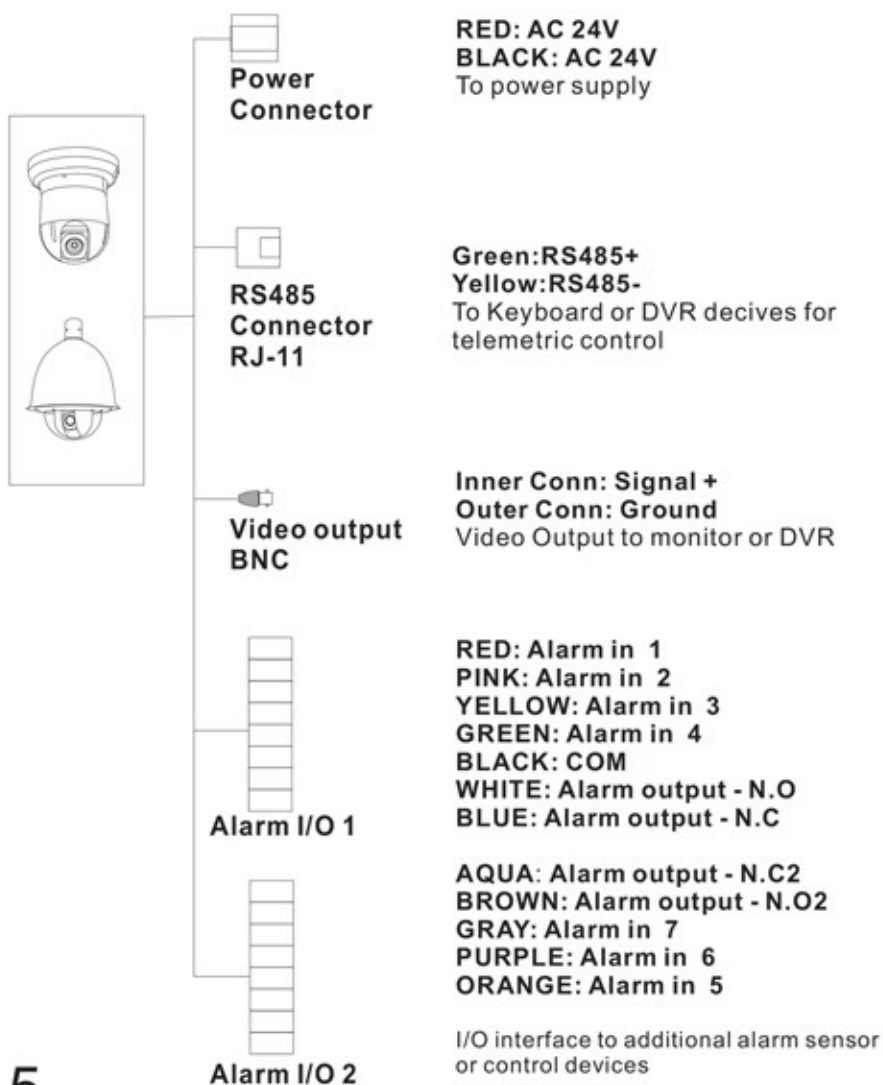
- This appliance meets the Ip66 standard for water and dust proof. Do not install the in-door model for out-door application which is not designed with water protection. Make sure that the installation is protected from long-time water-drop or spatter, which may damage the appliance.

- Make sure that the environment of installation meets the requirement of the appliance, such as holding the weight, enough spaces for bracket and power supply.

4.INSTALLATION

Connector description

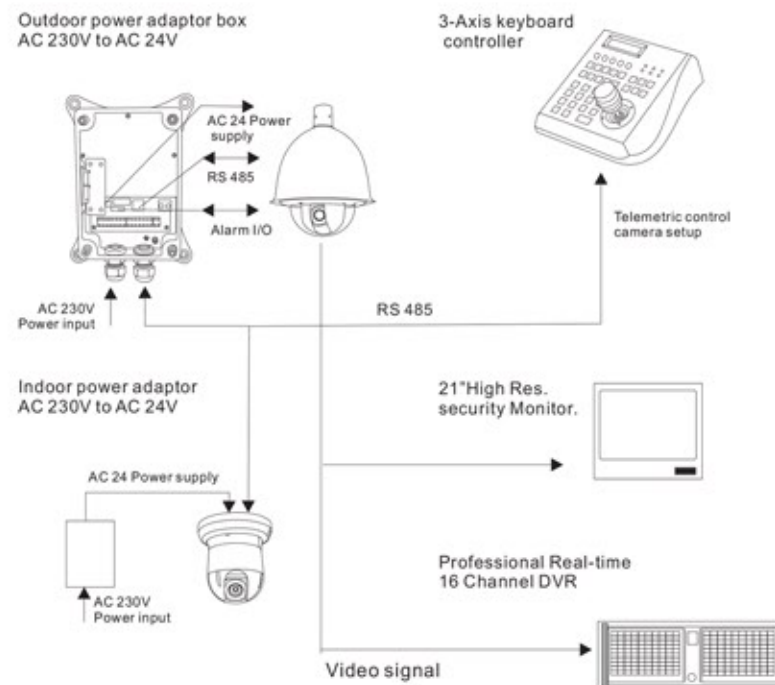
The wiring cable of the PTZ camera provides connectors for power supply, video and I/O interface



4.INSTALLATION

Using optional accessories

The speed dome cameras can be connected to various optional accessories through the standard connector types, which simplifiy the cable handling and avoids possible mistakes. All accessories are tested for max. compatibility and best performance.



RS 485 cable

The telemetric control of the appliance uses Rs485 serial communication with half-duplex transmission technology. Depends on the cable typeand baud rate, the transmission distance could vary. The following table shows max. distances based on cable with 0,56mm (24AWG) twisted pair:

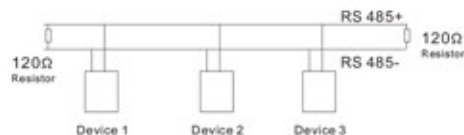
Baud Rate	Max. Distance
2400 bps	1700m
4800 bps	1100 m
9600 bps	700m
19200 bps	400m

Due the environmental interferences, such as eletromagnetic and induction fields, or number of connected appliance on the RS-485 bus, the transmission range may be less, e.g with cable thinner than 24AWG.

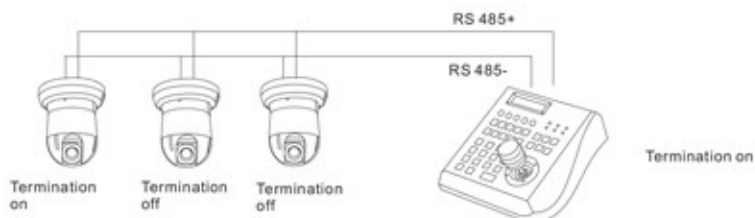
4.INSTALLATION

RS-485 Termination

Devices using RS485 control are usually connected in daisy-chain, which requires termination with 120Ω resistor on both ends. Following picture illustrates the connection methods. please note that a daisy-chain connection type shall not exceed 7 meters.

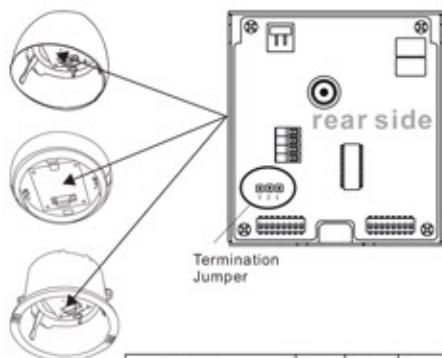


The PTZ cameras provide integrated termination switch. It should be turned on when the dome is installed as the last device. If the controller keyboard is used, you need also to turn on the termination on it. please refer to the keyboard's manual for details.

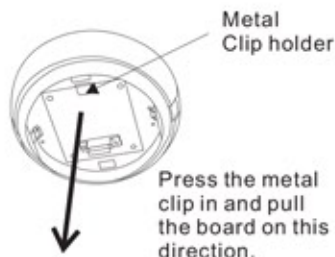


How to turn on termination on the high speed dome camera

The termination switch is located on the rear side of the connection board. For switching on, you need to open the



How to open the connector board
The connector board can be easily opened by holding the metal clip and pull.



Jumper	1	2	3
Term. On	ON	ON	OFF
Term. Off (default)	OFF	ON	ON

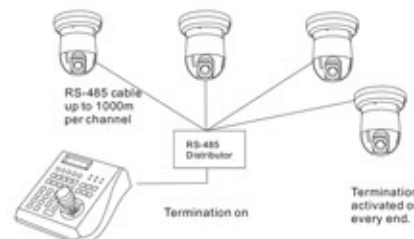
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4.INSTALLATION

Star-Connection

The star-form connection is mostly used. It enables the connection of different dome cameras in longer distance. It is recommended to use RS-485 distributor to ensure the telemetric data transmission:



The advantage of star-connection is that every channel can work independently and take a cable length up to 1000 meters (depends on cable quality). In case more dome camera are installed, the star-connection can be extended with additional RS-485 distributors.

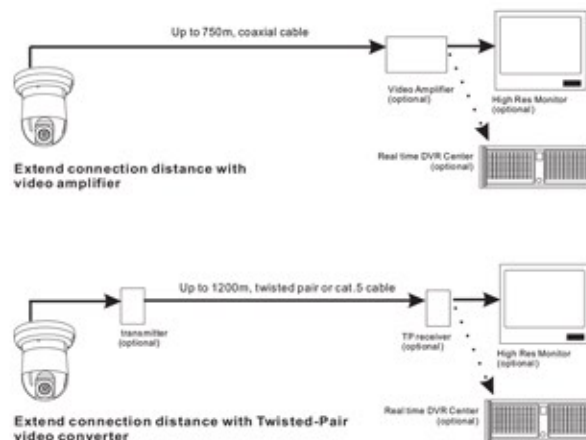
Video Cable

coaxial cable with 75Ω impedance with copper conductor at center conductor, and shielded with 95% copper. The following table shows different cable type and its 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. Depends on the cable quality and environmental condition, the transmission distance might be less.

If the cable length is more than 400 m, it is recommended to use optional accessories, such as video amplifier or twisted-pair video converter, for boost the video signal.



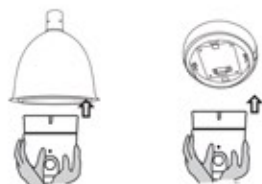
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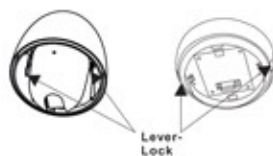
4. INSTALLATION

Installing the core unit to base board.

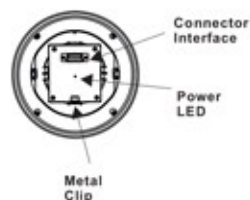
The PTZ camera core unit and base board are packed separately, in order to be protected through the transportation. After unpacking and during the installation, the core unit should be installed as following:



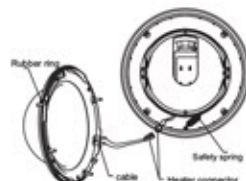
Installing the core unit by pushing into the housing. please note the position of connector. For releasing, please press the lever-lock to core and pull off the unit.



Once the base board is connected to power, the power LED will light.



Heater connector on outdoor housing

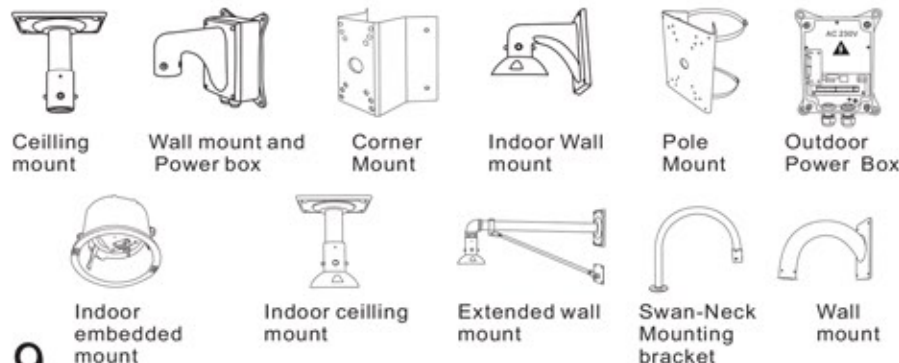


Outdoor housing cover

WARNING:
Do not pull or hold the connector interface with force. It is design only to connect the core unit and the base board. Any pressure on connector will cause damage and voids the warranty.

Optional bracket accessories

The PTZ cameras can be equipped with various bracket accessories for indoor and outdoor installation. please contact your distributor for further details.



5. OPERATING THE SPEED DOME



Initial Screen

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

- **V2.61:** 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 can not be changed

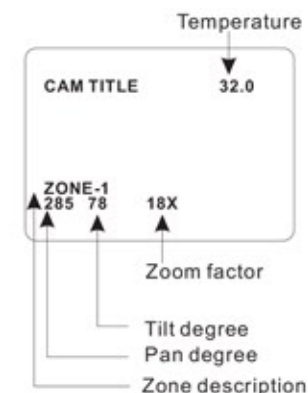
The initial screen will stay remain on until any user action is being taken. If the power-up action is set, the initial info will vanish immediately.

Operation Screen

The operation screen can display additional information.

Temperature: current temperature inside the speed dome(°C)
Cam title: User definable camera title
Zone: Current zone name
Pan deg.: Pan angle, 0-359°
Tilt deg.: Tilt angle, 0-90°
Zoom Factor: Zoom factor

Display of the information can be activate or deactivate through the OSD menu. please refer to the system setting for details.



PTZ operation

For the surveillance operation, the dome can be controlled from a keyboard device, Multiplexer or DVR through RS-485 Interface. Make sure that the cable is connected and the settings (baud rate, Address ID and protocol) of both keyboard and the dome are configured correctly. For more description about the PTZ operation, please refer to the user's manual of the keyboard.

OSD

OSD Menu

The PTZ cameras are equipped with new OSD-Menu function. All operation functions and camera related settings can be changed or modified here. In order to use the OSD function, a telemetric controller device, such as Keyboard, DVR or other devices with similar function is necessarily required. please make sure that the device used is physically connected to the dome properly, and all connection parameters are set correctly.

How to start the OSD menu

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

With 2-Axis keyboard **call 9 5 Enter** or **2 X call 9 Enter**
 With 3-Axis keyboard **Shot 9 5 Enter** or **2 X Shot 9 Enter**

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

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

1. the dome is running tour
2. performing PTZ operation
3. dome is receiving command other than OSD-request from the keyboard.

please stop the operation and try again.

Main menu and navigation

Main Menu

- ▶ SYSTEM SETTING →
- CAMERA SETTING →
- FUNCTION SETTING →
- WINDOW BLANKING →
- ALARM →
- EXIT

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

UP, DOWN: - Moving between current menu items
 - Changing the value in subitems
 RIGHT: - Enter the selected menu item
 - Confirm the value change and return to item selection
 LEFT: Exit from sub menu

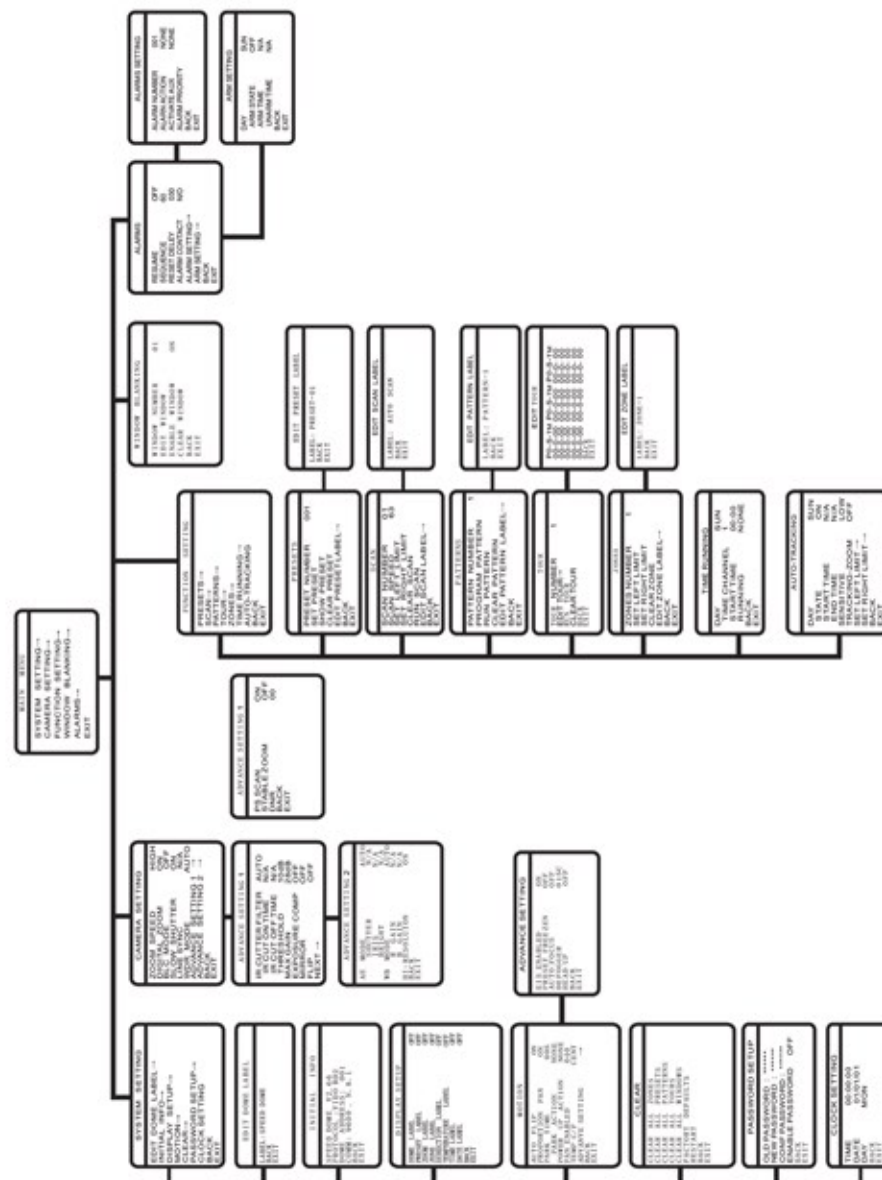
For more information, please refer to the illustration on the next page for the OSD menu structure.

Symbols and indicator

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

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OSD - MAP



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

6.OSD - System Setting

SYSTEM SETTING

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

System Setting

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

EDIT DOME LABEL

⚙️ LABEL : ENTRANCE
BACK
EXIT

Dome Label:

1. use UP or DOWN to change the character.
2. use RIGHT to move to next char.
3. use RIGHT to move to last char and save.
4. use Left to first char and cancel.

INITIAL INFO

SPEED DOME V1.00
PROTOCOL: FACTORY
DOME ADDRESS: 001
COMM: 4800, N, 8, 1
BACK
EXIT

Initial information:

Shows the information about current setting.

DISPLAY SETUP

⚙️ DOME LABEL OFF
PRESET LABEL OFF
ZOOM LABEL ON
ZONE LABEL OFF
DIRECTION LABEL ON
TEMPERATURE LABEL OFF
BACK
EXIT

Display setup

Activate the display for the on-screen info in operation mode.

Dome label: the name of 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 speed dome

6.OSD - Motion, Clear

MOTION

⚙️ AUTO FLIP ON
PROPORTION PAN ON
PARK TIME 005
PARK ACTION SCAN
POWER UP ACTION AUTO
FAN ENABLED 040
TEMP C/F CENT
ADVANCE SETTING →
BACK
EXIT

Motion control

AUTO FLIP: Auto. Image flip in tilt range from 90° to 180°

PROPORTIONAL PAN: depends 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 range is from 1 to 240 minutes. This function can be deactivated 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: defines the action which will be started 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: Activate Fan when the dome reaches the temperature.

TEMP C/F: Switch the temperature unit between Celsius and Fahrenheit.

ADVANCE SETTING

EIS ENABLED N/A
PRESET FREEZEN OFF
AUTO FOCUS OFF
DEFOGGER 015C
HEAD UP OFF
BACK
EXIT

Advance Setting

EIS ENABLED: Enable „Electric Image Stabilization“. This function is variable on certain camera modules.

PRESET FREEZEN: Freeze the image immediately.

AUTO FOCUS: Switch ON/OFF the Auto Focus

DEFOGGER: Activate Heater/Fan on the cold temperature.

HEAD UP: Switch ON/OFF the proportional PT moving. Can combine with Camera Flip function.

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 settings' memory or reset the camera to factory default. The following functions are supported:

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

Warning: The clear action can not 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.

OSD - Camera Setting

PASSWORD SETUP

OLD PASSWORD : *****
NEW PASSWORD : *****
CONF PASSWORD : *****
ENABLE PASSWORD OFF
BACK
EXIT

CLOCK SETTING

TIME 00:00:00
DATE 01/01/01
DAY MON
BACK
EXIT

CAMERA SETTING

⚙️ ZOOM SPEED HIGH
DIGITAL ZOOM ON
BLC MODE OFF
SLOW SHUTTER ON
LINE SYNC N/A
WDR MODE N/A
ADVANCE SETTING 1 →
ADVANCE SETTING 2 →
BACK
EXIT

Password setup

You can change password to access the OSD menu.
Default Password is 000000.

Clock setting

Some function like Auto-Tracking require the timer for activation.

Time: HH:MM:SS
DATE: YY/MM/DD
DAY: MON-SUN

CAMERA SETTING

In camera setting menu, you can setup camera module related settings. please note that depends on module's capability, some function may not be available. please contact your local sales representative for detailed information.

ZOOM SPEED: defines the speed when performing zoom function.

DIGITAL ZOOM: Activate or deactivate the digital zoom function of the camera module.

BLC MODE: Select the Back Light Compensation mode, 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-environment.

WDR: Activates the Wide Dynamic Range function, which improves the image contrast when an object has very strong light on background. Only available with camera modules with WDR.

ADVANCE SETTING 1

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

MAX GAIN: improve the image quality in the Night modus

EXPOSURE COMP: This mode fixes the shutter speed of a short exposure. Configure the shutter speed of a long exposure by setting the ratio with regards to a short exposure with the exposure ratio parameter. Blocked-up shadow correction is not performed in this mode.

Mirror: This function reverses the camera horizontally.

Flip: This function turns the camera upside down.

OSD - Preset, Scan

ADVANCE SETTING 1

⚙️ PS SCAN ON
STABLE ZOOM ON
DNR 00
BACK
EXIT

ADVANCE SETTING 2

⚙️ AE MODE AUTO
SHUTTER N/A
IRIS N/A
BRIGHT N/A
WB MODE AUTO
R GAIN N/A
B GAIN N/A
HI-RESOLUTION OFF
BACK
EXIT

FUNCTION SETTING

PRESETS →
SCAN →
PATTERNS →
TOUR →
ZONES →
TIME RUNNING →
AUTO-TRACKING →
BACK
EXIT

PRESETS

PRESET NUMBER 001
SET PRESET
SHOW PRESET
CLEAR PRESET
AUTO-TRACKING ON
EDIT PRESET LABEL
BACK
EXIT

ADVANCE SETTING 1

These function are only available with the E-Series camera modules

PS SCAN: Activate Progressive Scan, can be combine on the WDR mode.

STABLE ZOOM: This function is performing correction using the Image Stabilizer function in accordance with the zoom ratio, and smoothly zooming up to approximately ×40 using a combination of the optical zoom and digital zoom.

DNR: Set the 2D/3D Digital Noise Reduction.

ADVANCE SETTING 2

Under the advanced setting, you can make improvements to image quality due to 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, a image improvement based on DSP processing. you can also adjust the Red-Gain or Blue-Gain to change the color tone.

ALC, PLC: Average and Peak Level Control, additional setting to WB function. only avialbe with dedicated camera modules.

FUNCTION SETTING

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

PRESETS:

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 max. optical zoom range in order to provide the best image.

SHOW PRESET: Moves to current preset point

6.OSD - Patterns, Tours

EDIT PRESET LABEL

LABEL : ROOM 1

BACK
EXIT

SCAN

SCAN NUMBER 01
SCAN SPEED 63
SET LEFT LIMIT
SET RIGHT LIMIT
CLEAR SCAN
RUN SCAN
EDIT SCAN LABEL
BACK
EXIT

PATTERNS

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

CLEAR PRESET: Clear the current preset

AUTO-TRACKING: Start Auto Tracking, if the preset is called.

EDIT PRESET LABEL: For the current preset, you can define a name which will be shown on the operation screen once the preset is called. please choose the preset number at first. The available characters are: 0-9, A-Z, <, >, ., and space.

SCAN

The SCAN function moves the PTZ between 2-predefined points in constant speed. The following parameters can be set:

SCAN NUMBER: The Speed Dome supports up to 4 scan.

SCAN SPEED: cruising speed between the points.

SET LEFT LIMIT: defines the left point.

SET RIGHT LIMIT: defines the right point

CLEAR SCAN: Delete the scan setting

RUN SCAN: starting the scan function

EDIT SCAN LABEL: set the name for the scan

Pattern

Pattern records the user's operation steps on performing PTZ control and stores as a track. The Speed Dome can record up to 4 tracks with max. 180 sec. each.

PATTERN NUMBER: Selects the pattern number, from 1 to 4

PROGRAM PATTERN: Starts recording the pattern when selected. you can perform PTZ movement for recording and shall not exceed 180 sec. Press IRIS-OPEN to save the track.

RUN PATTERN: Starts the current pattern

CLEAR PATTERN: Delete current pattern.

EDIT PATTERN LABEL : Sets the name for current pattern.

6.OSD - Zones and Privacy Mask

EDIT TOUR

TOUR DWELL 001
00-00-00-00-00-00-00-00-00
00-00-00-00-00-00-00-00-00
00-00-00-00-00-00-00-00-00
00-00-00-00-00-00-00-00-00
RUN TOUR
BACK
EXIT

ZONES

ZONES NUMBER 1
SET LEFT LIMIT
SET RIGHT LIMIT
CLEAR ZONE
EDIT ZONE LABEL
BACK
EXIT

TIME RUNNING

DAY SUN
TIME CHANNEL 1
START TIME 00:00
END TIME 00:00
RUNNING NONE
BACK
EXIT

AUTO TRACKING

DAY SUN
STATE ON
START TIME 00:00
END TIME 00:00
SENSITIVE LOW
TRACKING-ZOOM OFF
SET LEFT LIMIT →
SET RIGHT LIMIT →
BACK
EXIT

Tour

Tour is an auto-run through selected preset points with definable pause time. A tour can store up to 32 preset points.

TOUR DWELL: pause time for every stop on the preset points. selectable between 000-255(s).

TOUR PRESETS: press IRIS-OPEN Key on the keyboard device to enter the preset point selection. Move the joystick with up and down to select the preset points by number and save the setting with IRIS-OPEN key. with IRIS-CLOSE key you can move to the previous selection. If a select point has the value 0, all the following preset points will be ignored.

RUN TOUR: Starts the tour and exit the OSD menu.

ZONE

You can define the zones in the whole PT range up to up to 8 zones with individual label. When the display setting "Zone Label" is activated, the label will be displayed on the operation screen. The definition of the zones should not be overlapped.

ZONES NUMBER: Current zone selection

SET LEFT LIMIT: Left limit of the current zone

SET RIGHT LIMIT: Right limit of the current zone

CLEAR ZONE: Delete the current zone

EDIT ZONE LABEL : change the label of current zone.

TIME RUNNING

You can set up the timer to start a function like preset, tour or pattern. Each day can be set 4 action.

AUTO TRACKING

Auto-Tracking can search people or object with high speed and low light performance.

DAY: set current day

STATE: activate AUTO-TRACKING on this day

START TIME: set the time for activation

END TIME: set the time for stop the tracking

SENSITIVE: set the sensitivity for the detection

TRACKING ZOOM: activate auto-zoom

SET LIMIT: set the max. angle for the tracking.

6.OSD - Alarm Setting

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 not to be displayed once the camera is pointed on, such as elevatory area or the operation desk of an ATM machine. It might be required for video surveillance application depends on the local law regulation. The PTZ camera supports up to 24 private masks. (depends on installed camera module, please contact your local sales representative for more information)

Hitachi camera modules: 8 masking area.

Sony Camera modules: up to 24 masking area (except the 45 series provides only 8)

LG,CNB Camera modules: no masking function.

ALARMS

Resume OFF
SEQUENCE 001
RESET DELEY 030
ALARM CONTACT N/O
ALARM SETTING →
ARM SETTING →
BACK
EXIT

WINDOW NUMBER: Mask number

EDIT WINDOW: Edit position of the mask by joystick of the keyboard. presse IRIS-OPEN to save.

ENABLE WINDOW: shows the mask on screen OFF

CLEAR WINDOW: Delete the mask

Alarms

RESUME: Continue the function on the camera , if it was setting before the alarms.

RESET DELAY: How long the camera stay in Alarm position.

ALARM CONTACT: Setting between N/C (normal Close) or N/O (normal Open).

ALARM NUMBER: curent Alarm number.

ALARM ACTION: Setting for PRESET, SCAN, TOUR, PAT 1-4, or NONE, if the camere in Alarm position.

ACTIVATE AUX: Setting Alarm Output, when Alarm is activate. Select between AUX1, AUX2 (not connected) or BOTH.

ALARM PRIORITY: define the priority of the alarm input.

ARM SETTING: define the operation timer of the alarm

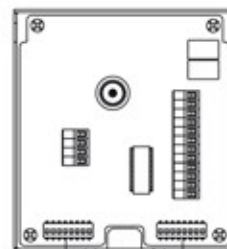
ALARM SETTING

ALARM NUMBER 001
ALARM ACTION TOUR
ACTIVATE AUX AUX1
ALARM PRIORITY LOW
BACK
EXIT

ARM SETTING

DAY SUN
ARM STATE OFF
ARM TIME N/A
UNARM TIME N/A
BACK
EXIT

7. Dome Address & Protocol



Sw1 Sw2

Protocol setting

In order to establish a connection for telemetric control with keyboard device. you need to setup the dome address and protocol.

The PTZ cameras are capable with multiple communication protocol. The setting can be changed through the DIP-Switches on the rear side of the connector boards as Illustrated.

please use the following table for details setup. current pattern.

SW 1:
represent the domes address in binary form.
please refer to the list on next page for reference.

SW 2:
Used for protocol settting and baud rate.
DIP 1 to 6 : Protocol setting
DIP 7 and 8: Baud rate setting

Baud rate	DIP 7	DIP8
2400 bps	0	0
4800 bps	1	0
9600 bps	0	1
19200 bps	1	1

Protocol / DIP	1	2	3	4	5	6
B02	0	0	1	1	0	0
DIAMOND	1	0	0	1	0	0
HUNDA	1	0	1	1	0	0
KALATEL	0	1	0	1	0	0
LILIN	1	1	0	1	0	0
MOLYNX	0	0	1	0	0	0
PANASONIC	1	1	1	0	0	0
PELCO (D/P)	1	0	0	0	0	0
PHILIPS	0	0	0	0	0	1
SAE	0	1	0	0	0	0
SAMSUNG	0	0	0	1	0	0
SANTACHI	0	1	1	0	0	0
UNIVISION	0	1	0	0	0	1
VCL	1	1	0	0	0	0
VICON	1	0	1	0	0	0
AD	1	0	0	0	0	1

7. Address ID, 1 to 67

ID	Switchnumber (Sw1)		ID	Switchnumber (Sw1)
	Bit 1 2 3 4 5 6 7 8			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	1 0 0 0 0 0 0 0		35	1 1 0 0 0 1 0 0
2	0 1 0 0 0 0 0 0		36	0 0 1 0 0 1 0 0
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	1 0 1 0 0 0 0 0		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	1 0 0 1 0 0 0 0		43	1 1 0 1 0 1 0 0
10	0 1 0 1 0 0 0 0		44	0 0 1 1 0 1 0 0
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	1 0 1 1 0 0 0 0		47	1 1 1 1 0 1 0 0
14	0 1 1 1 0 0 0 0		48	0 0 0 0 1 1 0 0
15	1 1 1 1 0 0 0 0		49	1 0 0 0 1 1 0 0
16	0 0 0 0 1 0 0 0		50	0 1 0 0 1 1 0 0
17	1 0 0 0 1 0 0 0		51	1 1 0 0 1 1 0 0
18	0 1 0 0 1 0 0 0		52	0 0 1 0 1 1 0 0
19	1 1 0 0 1 0 0 0		53	1 0 1 0 1 1 0 0
20	0 0 1 0 1 0 0 0		54	0 1 1 0 1 1 0 0
21	1 0 1 0 1 0 0 0		55	1 1 1 0 1 1 0 0
22	0 1 1 0 1 0 0 0		56	0 0 0 1 1 1 0 0
23	1 1 1 0 1 0 0 0		57	1 0 0 1 1 1 0 0
24	0 0 0 1 1 0 0 0		58	0 1 0 1 1 1 0 0
25	1 0 0 1 1 0 0 0		59	1 1 0 1 1 1 0 0
26	0 1 0 1 1 0 0 0		60	0 0 1 1 1 1 0 0
27	1 1 0 1 1 0 0 0		61	1 0 1 1 1 1 0 0
28	0 0 1 1 1 0 0 0		62	0 1 1 1 1 1 0 0
29	1 0 1 1 1 0 0 0		63	1 1 1 1 1 1 0 0
30	0 1 1 1 1 0 0 0		64	0 0 0 0 0 0 1 0
31	1 1 1 1 1 0 0 0		65	1 0 0 0 0 0 1 0
32	0 0 0 0 0 1 0 0		66	0 1 0 0 0 0 1 0
33	1 0 0 0 0 1 0 0		67	1 1 0 0 0 0 1 0

7.Address ID, 68 to 135

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	0 0 1 0 0 0 1 0		102	0 1 1 0 0 1 1 0
69	1 0 1 0 0 0 1 0		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	1 0 1 1 0 1 1 0
76	0 0 1 1 0 0 1 0		110	0 1 1 1 0 1 1 0
77	1 0 1 1 0 0 1 0		111	1 1 1 1 0 1 1 0
78	0 1 1 1 0 0 1 0		112	0 0 0 0 1 1 1 0
79	1 1 1 1 0 0 1 0		113	1 0 0 0 1 1 1 0
80	0 0 0 0 1 0 1 0		114	0 1 0 0 1 1 1 0
81	1 0 0 0 1 0 1 0		115	1 1 0 0 1 1 1 0
82	0 1 0 0 1 0 1 0		116	0 0 1 0 1 1 1 0
83	1 1 0 0 1 0 1 0		117	1 0 1 0 1 1 1 0
84	0 0 1 0 1 0 1 0		118	0 1 1 0 1 1 1 0
85	1 0 1 0 1 0 1 0		119	1 1 1 0 1 1 1 0
86	0 1 1 0 1 0 1 0		120	0 0 0 1 1 1 1 0
87	1 1 1 0 1 0 1 0		121	1 0 0 1 1 1 1 0
88	0 0 0 1 1 0 1 0		122	0 1 0 1 1 1 1 0
89	1 0 0 1 1 0 1 0		123	1 1 0 1 1 1 1 0
90	0 1 0 1 1 0 1 0		124	0 0 1 1 1 1 1 0
91	1 1 0 1 1 0 1 0		125	1 0 1 1 1 1 1 0
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	0 0 0 0 0 0 0 1
95	1 1 1 1 1 0 1 0		129	1 0 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	0 0 1 0 0 0 0 1
99	1 1 0 0 0 1 1 0		133	1 0 1 0 0 0 0 1
100	0 0 1 0 0 1 1 0		134	0 1 1 0 0 0 0 1
101	1 0 1 0 0 1 1 0		135	1 1 1 0 0 0 0 1

7. Address ID, 136 to 203

ID	Switchnumber (Sw1) Bit 1 2 3 4 5 6 7 8	ID	Switchnumber (Sw1) Bit 1 2 3 4 5 6 7 8
136	0 0 0 1 0 0 0 1	170	0 1 0 1 0 1 0 1
137	1 0 0 1 0 0 0 1	171	1 1 0 1 0 1 0 1
138	0 1 0 1 0 0 0 1	172	0 0 1 1 0 1 0 1
139	1 1 0 1 0 0 0 1	173	1 0 1 1 0 1 0 1
140	0 0 1 1 0 0 0 1	174	0 1 1 1 0 1 0 1
141	1 0 1 1 0 0 0 1	175	1 1 1 1 0 1 0 1
142	0 1 1 1 0 0 0 1	176	0 0 0 0 1 1 0 1
143	1 1 1 1 0 0 0 1	177	1 0 0 0 1 1 0 1
144	0 0 0 0 1 0 0 1	178	0 1 0 0 1 1 0 1
145	1 0 0 0 1 0 0 1	179	1 1 0 0 1 1 0 1
146	0 1 0 0 1 0 0 1	180	0 0 1 0 1 1 0 1
147	1 1 0 0 1 0 0 1	181	1 0 1 0 1 1 0 1
148	0 0 1 0 1 0 0 1	182	0 1 1 0 1 1 0 1
149	1 0 1 0 1 0 0 1	183	1 1 1 0 1 1 0 1
150	0 1 1 0 1 0 0 1	184	0 0 0 1 1 1 0 1
151	1 1 1 0 1 0 0 1	185	1 0 0 1 1 1 0 1
152	0 0 0 1 1 0 0 1	186	0 1 0 1 1 1 0 1
153	1 0 0 1 1 0 0 1	187	1 1 0 1 1 1 0 1
154	0 1 0 1 1 0 0 1	188	0 0 1 1 1 1 0 1
155	1 1 0 1 1 0 0 1	189	1 0 1 1 1 1 0 1
156	0 0 1 1 1 0 0 1	190	0 1 1 1 1 1 0 1
157	1 0 1 1 1 0 0 1	191	1 1 1 1 1 1 0 1
158	0 1 1 1 1 0 0 1	192	0 0 0 0 0 0 1 1
159	1 1 1 1 1 0 0 1	193	1 0 0 0 0 0 1 1
160	0 0 0 0 0 1 0 1	194	0 1 0 0 0 0 1 1
161	1 0 0 0 0 1 0 1	195	1 1 0 0 0 0 1 1
162	0 1 0 0 0 1 0 1	196	0 0 1 0 0 0 1 1
163	1 1 0 0 0 1 0 1	197	1 0 1 0 0 0 1 1
164	0 0 1 0 0 1 0 1	198	0 1 1 0 0 0 1 1
165	1 0 1 0 0 1 0 1	199	1 1 1 0 0 0 1 1
166	0 1 1 0 0 1 0 1	200	0 0 0 1 0 0 1 1
167	1 1 1 0 0 1 0 1	201	1 0 0 1 0 0 1 1
168	0 0 0 1 0 1 0 1	202	0 1 0 1 0 0 1 1
169	1 0 0 1 0 1 0 1	203	1 1 0 1 0 0 1 1

7. Address ID, 204 to 255

ID	Switchnumber (Sw1) (Bit) 1 2 3 4 5 6 7 8	ID	Switchnumber (Sw1) (Bit) 1 2 3 4 5 6 7 8
204	0 0 1 1 0 0 1 1	238	0 1 1 1 0 1 1 1
205	1 0 1 1 0 0 1 1	239	1 1 1 1 0 1 1 1
206	0 1 1 1 0 0 1 1	240	0 0 0 0 1 1 1 1
207	1 1 1 1 0 0 1 1	241	1 0 0 0 1 1 1 1
208	0 0 0 0 1 0 1 1	242	0 1 0 0 1 1 1 1
209	1 0 0 0 1 0 1 1	243	1 1 0 0 1 1 1 1
210	0 1 0 0 1 0 1 1	244	0 0 1 0 1 1 1 1
211	1 1 0 0 1 0 1 1	245	1 0 1 0 1 1 1 1
212	0 0 1 0 1 0 1 1	246	0 1 1 0 1 1 1 1
213	1 0 1 0 1 0 1 1	247	1 1 1 0 1 1 1 1
214	0 1 1 0 1 0 1 1	248	0 0 0 1 1 1 1 1
215	1 1 1 0 1 0 1 1	249	1 0 0 1 1 1 1 1
216	0 0 0 1 1 0 1 1	250	0 1 0 1 1 1 1 1
217	1 0 0 1 1 0 1 1	251	1 1 0 1 1 1 1 1
218	0 1 0 1 1 0 1 1	252	0 0 1 1 1 1 1 1
219	1 1 0 1 1 0 1 1	253	1 0 1 1 1 1 1 1
220	0 0 1 1 1 0 1 1	254	0 1 1 1 1 1 1 1
221	1 0 1 1 1 0 1 1	255	1 1 1 1 1 1 1 1
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	1 0 0 0 0 1 1 1		
226	0 1 0 0 0 1 1 1		
227	1 1 0 0 0 1 1 1		
228	0 0 1 0 0 1 1 1		
229	1 0 1 0 0 1 1 1		
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		
233	1 0 0 1 0 1 1 1		
234	0 1 0 1 0 1 1 1		
235	1 1 0 1 0 1 1 1		
236	0 0 1 1 0 1 1 1		
237	1 0 1 1 0 1 1 1		

8. Specification

Model	EL-TRACK36000 with WDR
Signal Format	PAL / NTSC
Scanning	Progressive
Image Sensor	1/4 inch Ex-View CCD
H. Resolution	470 TVL, 440K Pixels (PAL)/ 540 TVL (High Resolution)
Viewing Angle	57.8° (Wide end) 1.7° (Tele end)
Zoom	36x Opt. / 12x Digital
Min. Illumination	Day: 1.4lx (1/50, 0.1lx (1/3)) Night: 0.01lx (1/3)
Focus	Auto / Manual
White Balance	Auto / Manual (ATW, Indoor, Outdoor, One Push WB, Manual WB) Wide Dynamic Function (SB18WD/ SB26WD/ SB36WD models)
Shutter Speed	1/3 to 1/10,000 Sec.
Iris Control	Auto / Manual / Auto Slow Shutter
Gain Control	Auto / Manual (-3 to 28 dB, 2 dB steps, 16steps)
Video Output	VBS: 1.0Vp-p (Sync Negative), Y / C Output
S/N Ratio	More than 50 dB
PTZ Characteristics	360° PAN (0.4° ~ 320° per sec) / 90° Tilt (0.4° ~ 150° per sec) with Auto Flip/ Vario-Speed control* / Proportional & constant PT speed
On-Screen Display	Date/ Time/ Zoom Rate/ Temperature/ Zones/ Camera name
OSD Menu	Setup/ Automation programming/ Password protection
Object Tracking	Manual activation / Preset triggering / Scheduled activation Tracking zone selection
Communication	RS-485, 16 Multiple protocol supported, coax
Preset Positions	128 Presets
Auto Pan	Yes, between 2 presets
Tour / Sequence	4 progr. Tours with max 32 presets/ 4 Pattern up to 180s
Alarm inputs	7 inputs / 2 output
Operating Environment	Outdoor: -40°C to 60°C / IP66 weather protection Indoor: -10°C to 50°C / humidity up to 95%
Power	24V AC / 24W(indoor) 48W(outdoor)

9. Motion Tracking

Note: This option is only available if your Speed dome supported this function.

1. Enter the OSD menu with CALL 95
2. Go to the option Function Setting → Auto Tracking

AUTO TRACKING	
DAY	SUN
STATE	ON
START TIME	00:00
END TIME	00:00
SENSITIVE	LOW
TRACKING-ZOOM	OFF
SET LEFT LIMIT	→
SET RIGHT LIMIT	→
BACK	
EXIT	

AUTO TRACKING

Auto-Tracking can search people or object with high speed and low light performance.

DAY: set current day
STATE: activate AUTO-TRACKING on this day
START TIME: set the time for activation
END TIME: set the time for stop the tracking
SENSITIVE: set the sensitivity for the detection
TRACKING ZOOM: activate auto-zoom
SET LIMIT: set the max. angle for the tracking.

Setting 1: Auto Tracking all the time

1. Step: Set on all „Day“ (Mon-Sun) with „ON“ on the „State“ setting.

Setting 2: Auto Tracking on the certain time

1. Step: Set the desired „Day“ (Mon-Sun) with „ON“ on the „State“ setting.
2. Step: Set the „Start Time“ and „End Time“

Setting 3: Auto Tracking on the certain Area

1. Step: Set the desired „Day“ (Mon-Sun) with „ON“ on the „State“ setting. Set the „Time“, if it necessity.
2. Step: Set the „Left Limit“ and „Right Limit“
(The AT function will be stop, if the range of the limit is reach)

Optional function can be use:

- ▶ **Tracking Zoom** Auto Zoom if the moving object is too small.
- ▶ **Start/Stop Auto Tracking by Preset:** Go to „Function Setting“ → „Preset“ and set „Auto Tracking“
ON..... Start Auto Tracking function
OFF..... Stop Auto Tracking function
NONE .. No function
- ▶ **Park Time**..... Start a function if the AT isn't moving (lost object)
Go to „System setting“ → „Motion“ and set the „Park Time“
time (1-240min) and action(like Preset as a Start position)
to do, when the AT is on Idle.