***Please note that this object auto tracking mini PTZ will not zoom when auto tracking. It will stay on the zoom setting that the end user has set for that preset when motion is found.
Thank You for Choosing our PTZ Camera!

When you open the box:

☑ Check that the packing and the contents are not visibly damaged. Contact the retailer immediately if any parts are either missing or damaged.

☑ Make sure if the contents are all included as per the packing list.

☑ Do not attempt to use the device with missing or damaged parts. Send the product back in its original packing if it is damaged.

⚠️ The information contained in the document is subject to change without notice.
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1. SAFETY NOTES --- IMPORTANT!!

The following important notes must be followed carefully to run the PTZ camera and respective accessories in total safety. The camera and relative accessories are called *video system* in this section.

Use the instructions correctly and fully
Read all safety rules and instructions carefully before starting to run the video system.

Follow the instructions in the instruction manual. Pay attention to all warnings on the camera and in the instruction manual. Keep the safety notes and instructions for use for future reference.

Attachments & Accessories
Do not use attachments other than those recommended in the instruction manual because this could cause risks to the products. Only use the recommended accessories for the camera for installation and operation.

Protect the video system
To protect the camera, avoid installing and using it in direct sunlight or any source of bright light. Bright light, like that from a spotlight, can cause dimming and blurs. A vertical line may appear on the screen. This does not indicate a problem.

Keep it away from rain and dust. Do not touch the zoom lens with your fingers. If needed, use a soft cloth and methylated spirit to remove traces of dust. Apply a specific cap to protect the zoom lens when the camera is not in use.

Install the camera away from video interference. The pictures could present interference if the leads are arranged near a TV set or other device. Either move the leads or re-install the device to solve the problem.

Do not use any part of the video system near water, i.e. bathtubs, wash basins, sinks, tubs, on damp surfaces, near swimming pools, etc. Do not insert objects of any kind through the camera openings to avoid touch live parts: fire and electrocution risk. Do not pour any kind of liquid on the device.

A switch for performing maintenance operations on the camera must be included. Connect the camera only to the electrical power supply shown on the ratings plate. Contact your retailer if in doubt.

Lay the power wires keeping them from being trodden on or squeezed by objects placed on top of them. Pay particular attention to leads near plugs, screws and the product outlet.

Disconnect the power lead and the wiring to protect the camera during electrical storms or when it is left unattended and not used for a
long time. This will prevent damage to the video system in the event of lightening or electrical line overload.

Do not overload the electrical power and the extensions to prevent the risk of fire or electrocution.

Do not place the camera near or over radiators or sources of heat. Check that the area is suitably ventilated before installing the camera inside partially closed areas (such as recesses, bookshelves and shelves).

Do not position the camera on unsteady trolleys, stands, brackets or tables. The camera could fall and severely injure adults and children in addition to seriously damaging the product.

**Maintenance & Repairs**
Always contact a qualified service technician to repair the camera (or any other part of the video system). Unauthorized opening or removing the lids may cause fire and electrocution risk and other dangers.

Disconnect all electrical parts from the mains before cleaning.

Uses spare parts specified by the manufacturer or spare parts with equivalent characteristics when replacements required. Unauthorized replacements can cause fires, electrical shocks and other dangers.

After any servicing intervention or repair to the video system, ask the technician to run a safety check to ensure that everything is working safely.

**Damage requiring professional assistance**
Disconnect the video system from the power mains and call qualified service personnel in the following cases:

- If the power lead or plug is damaged.
- If liquid or foreign objects accidentally penetrate inside the device.
- If the device was exposed to rain or water.
- If the device was dropped, subjected to heavy shocks or if the camera packaging was damaged.
- If the device performance changes considerably.

2. **ABOUT THE PRODUCT**

The **Auto Tracking/ High Speed Mini PTZ II** is based on our unique motion tracking technology with high resolution, high speed, low price and selectable communication protocols. It is widely used in surveillance system as unattended CCTV device.
2.1. FEATURES

- Auto tracking of moving object (auto PTZ) based on our motion tracking technology;
- Max 12X digital zoom, 144x optical, 0.1Lux night mode:0.0002 of module specifications;
- High resolution: 550 TV lines
- Pan: 360º at maximum speed of 250º/sec;
- Tilt: 0º to 90º at maximum speed of 250º/sec;
- Auto panning function with 256 preset positions;
- Built-in OSD Menu, to change dome parameter, save or call preset, and achieve auto scan, pattern etc;
- Password protection to prevent unauthorized changes to the dome setting;
- Windows blanking and tracking boundary for privacy purpose;
- The feature of defining specific activity when the dome parks;
- Integrated design with high reliability;
- RS-485 data communication;
- Auto-flip to follow object and surveillance of any subject that is constant and continuous;
- The speed can be adjusted automatically according to zooming times;
- Auto focus lens and auto white balance, BLC function;
- Multi protocol compatible (Pelco- D / P);
- Alarm input, Alarm output, Alarm action
- 24 Volt VDC

2.2. FUNCTIONS

Object Tracking
In auto tracking mode, the camera can track a moving object in the target area with auto pan, tilt and zoom which realizes smart unattended surveillance. ***Please note that this object auto tracking mini PTZ will not zoom when auto tracking. It will stay on the zoom setting that the end user has set for that preset when motion is found.

Tracking Cruise
The tracking function can be activated during cruise. At a preset of the cruise list, the camera can track moving objects automatically.
Soft Address
The camera address can be programmed with built-in OSD menu, and the user does not need to dismount the camera from field or do any screw work.

Wide Dynamic Range (WDR)
A camera is intended to provide clear images even under back light circumstances where intensity of illumination can vary excessively, when there are both vary bright and vary dark areas simultaneously in the field of view. WDR enables the capture and display of both bright areas and dark areas in the same frame, in a way that there are details in both areas, i.e. bright areas are not saturated, and dark areas are not too dark.

Day/Night Function
The IR cut filter of camera module inside the camera can be removed by sending special command, so that the camera can change from color to mono.

Wide Dynamic Range (WDR) and Day/Night function are based on the relative modules.

Proportional Pan
Proportional pan automatically reduces or increases the pan and tilt speeds in proportion to the zooming times. At telephoto zoom settings, the pan and tilt speeds will be slower for a given amount of joystick deflection then at wide zoom settings. This keeps the image from moving too fast on the monitor when there is a large amount of zoom.

Auto Flip
When the camera tilts downward and goes just beyond the vertical angle, the camera rotates 180°. When the camera rotates (flips), the camera starts moving upward as you continue to hold joystick in the down position. Once you let go of the joystick after the dome rotates, joystick control returns to normal operation. The auto-flip feature is useful for following a person who passes directly beneath the camera.

Save/Call Preset
Preset function is that dome saves current horizontal angle and title angle of pan/tilt, zoom and position parameters into memory. When necessary dome calls these parameters and adjusts Pan/Tilt and camera to that position. User can save and call presets easily and promptly by using keyboard controller or infrared controller. The camera supports up to 256 presets.

Lens Control
1)  Zoom control
User can adjust zoom in or out by controller to get desired image.

2)  Focus control
System defaults Auto Focus mode, that is, the lens and camera will automatically adjust the focus to get the best image.

Focus can also be controlled manually from the controller if required. Press Focus Near or Focus Far key to manually focus. Focus can be manual via keyboard or matrix, please refer to control keyboard or matrix operation manual for detailed operation. When adjusting position is set with auto focus status, it goes back to auto focus.

The camera will NOT auto focus in the following status.

☑ Target is not in the center of image.
☑ Targets are in near and far at the same time.
☑ Target is of strong light object. Such as spotlight etc.
☑ Target is behind the glass with water drop or dust.
☑ Target moves too fast.
☑ Large area target such as wall.
☑ Target is too dark or vague.

3) IRIS control
System defaults Auto IRIS. Camera can adjust immediately according to the alteration of background illumination so that a lightness steady image can be achieved.

You may adjust IRIS by controller to get required image brightness, and call back Auto IRIS by controlling the joystick.

Auto White Balance
Camera can automatically adjust white balance (WB) according to the alteration of background lightness to give a true color image.

Back Light Compensation (BLC)
If a bright backlight presents, the subjects in the picture may appear dark or as a silhouette. Backlight compensation enhances objects in the center of the picture. The camera uses the center of the picture to adjust the IRIS. If there is a bright light source outside this area, it will wash out to white. The camera will adjust the IRIS so that the object in the sensitive area is properly exposed.

Auto Cruise
The preset position is programmed to be recalled in sequence. This feature is called auto cruise. Up to 30 presets can be saved in each cruise tour.

Patterns
A pattern is a saved, repeating, series of pan, tilt, zoom and preset functions that can be recalled with a command from a controller or automatically by a programmed function (alarm action or park action or power-up action).

**Auto, Random and Frame Scan**

**Auto Scan:** Make the camera scan 360° ranging from the current position.

**Random Scan:** Make the camera random scan 360° ranging from the current position.

**Frame Scan:** This feature freezes the scene on the monitor when going to a preset. This allows for smooth transition from one preset scene to another.

**Zones Setting**

A zone is a pan area, defined by a left and right limit, on the 360° pan plane. The camera has eight zones, each with a 6-character label.

**Alarms Input**

The camera has four alarm inputs, which can be programmed as high, medium or low priority. When an alarm is received, an input signal to the camera triggers the user-defined action (go to preset, run pattern, etc.) programmed for the alarm.

**Auxiliary Output**

An auxiliary output is a programmable signal from the camera back box that can trigger another device to operate. An auxiliary output is programmable to trigger from an alarm or from a controller.

**Password Protection**

The camera features password protection to prevent unauthorized changes to the camera settings. You can open the System Information and Display Setup Screens, but cannot access any of the camera Settings menus.

**Windows Blanking**

A set window can be saved so that it is the only blanked tilt area of the scene. All other parts of the tilt area of the scene will be visible.

*Windows blanking is only available for Sony Modules at present.*
1. SPECIFICATIONS

<table>
<thead>
<tr>
<th>MODEL</th>
<th>VP-ATDNC12X</th>
<th>VP-ATDNC12X</th>
</tr>
</thead>
<tbody>
<tr>
<td>Signal System</td>
<td>NTSC</td>
<td>PAL</td>
</tr>
<tr>
<td>Effective Pixels</td>
<td>768[H] x 494[V]</td>
<td>752[H] x 582[V]</td>
</tr>
<tr>
<td>Image Sensor</td>
<td>1/4 inch High Sensitivity CCD</td>
<td></td>
</tr>
<tr>
<td>Video Output</td>
<td>1.0Vp-p Composite Signal(75 ohms)</td>
<td></td>
</tr>
<tr>
<td>Sync. System</td>
<td>Internal Sync / L/L [0~359]</td>
<td></td>
</tr>
<tr>
<td>Luminance S/N Ratio</td>
<td>52db Min.[AGC OFF]</td>
<td></td>
</tr>
<tr>
<td>Horizontal Resolution</td>
<td>550 TV Lines[B/W 600 TV Lines]</td>
<td></td>
</tr>
<tr>
<td>Lens</td>
<td>12x D&amp;N Zoom Video AF [ F1.65(W)~F1.99(T) f = 3.68mm ~ 43.53mm ]</td>
<td></td>
</tr>
<tr>
<td>Digital-ZOOM</td>
<td>x1 ~ x12</td>
<td></td>
</tr>
<tr>
<td>Sensitivity / Min. Illumination</td>
<td>Day : 0.05 Lux / Night : 0.0002 Lux (Sens-Up x128)</td>
<td></td>
</tr>
<tr>
<td>Brightness</td>
<td>0 ~ 100</td>
<td></td>
</tr>
<tr>
<td>IRIS</td>
<td>AUTO / MANUAL [0 ~ 100]</td>
<td></td>
</tr>
<tr>
<td>Shutter</td>
<td>AUTO / A.FLK / MANUAL[1/160<del>1/90000 , x2</del>x312] / OFF</td>
<td></td>
</tr>
<tr>
<td>DSS</td>
<td>OFF / AUTO[2~128]</td>
<td></td>
</tr>
<tr>
<td>3D-DNR LEVEL</td>
<td>OFF / ON [0~63]</td>
<td></td>
</tr>
<tr>
<td>Global Motion</td>
<td>OFF / ON</td>
<td></td>
</tr>
<tr>
<td>Mode</td>
<td>AWB / ATW / PUSH / MANUAL</td>
<td></td>
</tr>
<tr>
<td>Color Temp.</td>
<td>INDOOR / OUTDOOR</td>
<td></td>
</tr>
<tr>
<td>Anti Color Rolling</td>
<td>OFF / ON</td>
<td></td>
</tr>
<tr>
<td>AGC</td>
<td>OFF / HIGH / MIDDLE / LOW / MANUAL [0dB~32dB]</td>
<td></td>
</tr>
<tr>
<td>WDR</td>
<td>W-FRONT / W-CENTER / W-REAR / W-USER [Long &amp; Short]</td>
<td></td>
</tr>
<tr>
<td>BLC</td>
<td>HIGH / MIDDLE / LOW</td>
<td></td>
</tr>
<tr>
<td>ECLIPSE</td>
<td>OFF / ON [16 Zones]</td>
<td></td>
</tr>
<tr>
<td>STABILIZER</td>
<td>OFF / ON</td>
<td></td>
</tr>
<tr>
<td>Day &amp; Night</td>
<td>AUTO [IR Cut Filter] / DAY / NIGHT / EXT</td>
<td></td>
</tr>
<tr>
<td>Motion Detection</td>
<td>OFF / ON [4 Zones]</td>
<td></td>
</tr>
<tr>
<td>Privacy</td>
<td>OFF / ON [8 Zones]</td>
<td></td>
</tr>
<tr>
<td>D-EFFECT</td>
<td>OFF / V-FLIP / MIRROR / ROTATE</td>
<td></td>
</tr>
<tr>
<td>Image Freeze</td>
<td>OFF / ON</td>
<td></td>
</tr>
<tr>
<td>Color</td>
<td>OFF / ON</td>
<td></td>
</tr>
<tr>
<td>Sharpness</td>
<td>0 ~ 100</td>
<td></td>
</tr>
<tr>
<td>Gamma</td>
<td>CRT / LCD / USER [0.45~1.00]</td>
<td></td>
</tr>
<tr>
<td>Protocol</td>
<td>CNB-ASCII / CNB-HEX / PELCO-D / PELCO-P</td>
<td></td>
</tr>
<tr>
<td>Camera ID</td>
<td>0 ~ 255</td>
<td></td>
</tr>
<tr>
<td>Baudrate</td>
<td>4800 / 9600 / 19200 / 38400 / 57600</td>
<td></td>
</tr>
<tr>
<td>OSD Language</td>
<td>Only ENG</td>
<td></td>
</tr>
<tr>
<td>Supply Voltage</td>
<td>12VDC ±20% [ 9.6VDC ~ 14.4VDC ]</td>
<td></td>
</tr>
<tr>
<td>Power Consumption</td>
<td>Normal : 2.04W [ 170mA ] / Max : 4.2W [ 350mA ] Zoom/Focus Operation</td>
<td></td>
</tr>
<tr>
<td>Operating Temperature / Humidity</td>
<td>-10°C to 50°C [ 14°F to 122°F ] / 20% ~ 60% RH</td>
<td></td>
</tr>
<tr>
<td>Storage Temperature / Humidity</td>
<td>-20°C to 60°C [ -4°F to 140°F ] / 20% ~ 90% RH</td>
<td></td>
</tr>
</tbody>
</table>
Table 1: Samsung Modules

Parameters vary if cameras other than Samsung are equipped with.

The specifications are subject to change without notice.

3. INSTALLATION

This section contains detailed instructions for installing the camera. These instructions assume that the installer has a good knowledge of installation techniques and is capable of adopting safe installation methods.

3.1. DIP SWITCH SETTING

Before installing the camera drive, check the DIP switch; configure the receiver address, communication protocol, and baud rate setting. Pic. 1 shows switch position and default settings. For normal user, setting switches to default position is suggested.

![Pic. 1 Switch Position]

The camera can be controlled via various communication protocols by setting SW2 switch (3 and 4 bit) and operate at 1200bps, 2400bps, 4800bps and 9600bps baud rate by setting SW2 switch (1and 2 bit). Refer to Table 2: SWITCH SETTING for address, communication protocol and baud rate settings, do not set the switches to reserved position.

![Pic. 2 DIP Switches]

Please refer to the below table to set baud rate, communication protocol type and camera address.

<table>
<thead>
<tr>
<th>POS</th>
<th>Addr</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Addr</td>
<td>0</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
</tr>
</tbody>
</table>
3.2. INSTALLATION

Step 1. **Install lower dome.**

Line up the mounting screw holes, and install the three mounting screws. Push the lower dome inside the back box.

Step 2. **Install the bracket for wall-mounted dome**

Dig four holes on the wall as Pic. 3. Take out the cables from the backward of the bracket. Install the bracket on the wall.

---

Table 2: SWITCH SETTING

<table>
<thead>
<tr>
<th>1</th>
<th>ON</th>
<th>OFF</th>
<th>OFF</th>
<th>OFF</th>
<th>OFF</th>
<th>OFF</th>
<th>OFF</th>
<th>OFF</th>
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<tbody>
<tr>
<td>2</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
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<td>3</td>
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<td>4</td>
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<tr>
<td>5</td>
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<td>OFF</td>
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<tr>
<td>6</td>
<td>OFF</td>
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<td>ON</td>
<td>OFF</td>
<td>OFF</td>
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<tr>
<td>7</td>
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<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
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<tr>
<td>8</td>
<td>OFF</td>
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<td>OFF</td>
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<th>BAUD RATE</th>
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<td></td>
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</tr>
<tr>
<td></td>
<td>4800</td>
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<td>ON</td>
</tr>
<tr>
<td></td>
<td>9600</td>
<td>ON</td>
<td>ON</td>
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</tbody>
</table>

<table>
<thead>
<tr>
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<th>PROTOCOL</th>
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<th>4</th>
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<tr>
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<td></td>
</tr>
<tr>
<td>reserved</td>
<td>ON</td>
<td>OFF</td>
<td></td>
</tr>
<tr>
<td>reserved</td>
<td>OFF</td>
<td>ON</td>
<td></td>
</tr>
<tr>
<td>reserved</td>
<td>ON</td>
<td>ON</td>
<td></td>
</tr>
</tbody>
</table>
When installing outdoors, make sure installation is properly sealed to keep moisture out.

Pic. 4
4. OPERATION GUIDE

4.1. OPERATION AT POWER UP

The camera employs the default settings the first time it is switched on. Changes to the settings will be permanently stored and will be made available the next time the camera is switched on. You can return to the default settings by means of the appropriate menu option at any time.

The camera will work as follows when it is switched on.

The camera will run a calibration procedure and a message showing the following information will appear on the video output OSD (On Screen Display): software version, address, protocol, baud rate and zoom module brand.

Check that the data are suitable for operation. Otherwise, refer to the section in this document that shows how to install the camera correctly.

<table>
<thead>
<tr>
<th>MINI DOME II</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOFT VERSION: 5.3</td>
</tr>
<tr>
<td>ADDRESS: 1</td>
</tr>
<tr>
<td>PROTOCOL: PELCO-D P</td>
</tr>
<tr>
<td>BAUD RATE: 2400</td>
</tr>
<tr>
<td>TEMPERATURE: 25°C</td>
</tr>
</tbody>
</table>

SAMSUNG SERIES CAMERA

At the end of the calibration step, the camera will switch to stand-by as programmed (PTZ > POWER UP > ACTION). The camera will continue working this way until any command is received from the keypad. The camera during this phase can be pointed to a fixed point or pan across the field. Refer to the details described in the POWER UP menu section.
4.2. HOW TO USE OUR CONTROL KEYBOARD

The camera is ready to receive commands from our control keyboard (see figure below) after connecting.

4.2.1. CONTROL KEYPAD COMMAND SYNTAX

Controls can use the joystick, single keys or key combinations.

The key command syntax is shown below.

**Key command syntax**

The syntax used in this manual for controls using keys consists of various elements (words and three digit numbers). Each command is always in braces and each element is separated by commas. Each word or decimal digit used in the syntax is identified by a corresponding key on our control panel. Words can be enclosed in round brackets, square brackets or no brackets. Three digit decimals are never enclosed in brackets.

The following words only can be used: **PRESET, CALL, ESC, OPEN, CLOSE, NEAR, FAR, ZOOM OUT, ZOOM IN, CAM, MON, SCAN, ENTER**. The decimal digits are: 0, 1, 2, 3, 4, 5, 6, 7, 8, and 9.

Some application examples of controls are shown in detail below.

**Using the joystick**

A command can also be given simply by moving the joystick because this generates actions on the camera or OSD (On Screen Display) menu.
Using a single key
Pressing a single key can cause camera action. For example, the following command will zoom out of the frame. Underling indicates the key is in use.

ZOOM OUT

Key combinations
Pressing a key combination in rapid sequence extents the command set. For example, the following command (select camera address 1) is performed by pressing the following keys:

1 + CAM

4.2.2. CONTROL KEYPAD COMMAND TYPES

There are four command types:

- Select camera,
- Move camera (tilt and pan, zoom, adjust focus and IRIS opening, go to preset positions),
- Adjust camera operation mode using menus,
- Various quick controls operable from the control panel.

The method for accessing these controls will be shown in details in the following paragraphs.

4.3. SELECT A CAMERA

The camera to be controlled must be selected first. For example, the following command selects camera 1:

1 + CAM

After this operation, the message CAM 1 will appear on the control panel display.

4.4. CAMERA MOTIONS

After selecting a camera, it can be moved either directly using the control panel as described below:

- Panning (horizontal) and tilting (vertical).
Zooming, focusing and IRIS opening.

Preset positions programming and recalling.

These functions can be directly accessed using a single key or joystick or a simple key combination.

4.4.1. PAN AND TILT FUNCTIONS

The camera may be moved using our keyboard controller. Move the joystick vertically to tilt the camera and horizontally to pan it.

The maximum pan span is from 0° to 360° with continuous rotation. The maximum tilt span is from 0° (camera in vertical position) and 90°.

The panning and tilting speed can be modulated by operating the joystick appropriately.

Note that the maximum speed that can be obtained by operating the joystick is not always equal to that programmed in the working settings. This in fact depends on the value of the PTZ > MOTION > PROPORTIONAL PAN setting. If the option is ON, the maximum rotation speed which can be obtained using the joystick is proportional to the magnification used to obtain the best frame.

Panning (horizontal)
Tip the joystick rightwards to turn the camera horizontally clockwise and tip it leftwards to turn it anticlockwise.

If no advanced options are set (e.g. range limits set enabled), the camera can be turned continuously without interruptions.

The pan span may be limited between two angles in PTZ > MOTION > MANUAL LIMIT.

Tilting (vertical)
Tip the joystick upwards to turn the camera vertically upwards and tip it downwards to turn the camera downwards. The camera rotation is limited upwards by the horizontal plane or downwards by the vertical axis.

Performance will change considerably near the vertical axis according to whether the AUTO FLIP is on or not (default setting is on).

With AUTO FLIP off, the camera will stop in perfectly vertical position and will stop turning when the joystick is tipped downwards.

With AUTO FLIP on, the camera will proceed over the vertical axis when the joystick is tipped downwards. This is because, when the vertical axis is reached, the camera flips automatically by 180 degrees and resumes the initial trajectory.

The AUTO FLIP function can be used to follow a subject arriving in a certain direction passes under the camera and continues in a straight
line. To do this, hold the joystick tipped downwards following the movement of the subject. Observe that in this case the joystick performance after the camera passes over the vertical axis opposite to the normal axis because tipping the joystick downwards will turn the camera upwards.

Normal operation of the joystick will be resumed as soon as the downward tip is interrupted (also only for an instant). At this point, to follow the subject in the same direction, you will need to tip the joystick upwards, as you would normally.

4.4.2. ZOOM FUNCTIONS

The camera frame may be adjusted by using the ZOOM IN and ZOOM OUT commands. Use ZOOM IN to zoom into the detail; use ZOOM OUT to zoom out.

Zoom can be set as per the zoom specifications of relative modules, combined between optical zoom and digital zoom. Refer to the specific section for programming the function.

4.4.3. FOCUS FUNCTIONS

The camera focus may be adjusted manually using the NEAR and FAR controls.

As the auto focus function is always on, a manual setting made using NEAR and FAR will be kept only until a pan, tilt or zoom command is used. In this case, auto focus will adjust focus automatically again.

Refer to the specific section for additional details on focusing and on the various options.

The auto focus function cannot work correctly in the following cases:

- The object to be focused on it not in the middle of the image.
- There are far and near object in the frame.
- Bright light is shining on the subject.
- The subject is behind a glass pane covered in drops or dust.
- The subject is moving very quickly.
- The subject is not well lit.
- The subject is too big.
4.4.4. IRIS OPENING FUNCTIONS

The IRIS opening may be controlled manually using the OPEN and CLOSE commands.

The manual setting made using OPEN and CLOSE will be kept only until a pan, tilt or zoom command is used if the automatic IRIS opening option is enabled (the default setting is on). In this case, the opening will be controlling automatically again.

Refer to the specific section for additional details on IRIS opening adjustment.

4.4.5. PRESET POSITIONS PROGRAMMING AND RECALLING

The camera can store up to 256 panning, tilting and zooming configurations (called preset positions) which can be recalled at any time.

The manual focusing and IRIS opening settings cannot be stored.

When storing presets, it is important to remember that some are reserved and cannot be either stored or used for positioning the camera.

- Presets from 80 to 99 are reserved for management controls
- Presets from 100 to 103, 170 to 173 are reserved for Tracking and Pattern controls

The following examples show how to program the free Presets and recall them.

**Example: programming preset number 32**

1) Position the camera in a certain pan, tilt and zoom configuration.
2) Enter the command **32 + HOLD DOWN SHIFT KEY + CALL**.

From this moment onwards, simply enter the command **32 + CALL** to move the camera to the preset position.

The saved value will be written over if the setting is reprogrammed.

The Presets are saved in a permanent memory area of the camera where they are maintained also when power is disconnected. However, restoring default settings will delete all preset values.

Press **83 + HOLD DOWN THE SHIFT KEY + CALL** to delete all the saved preset values.
The Presets store the coordinates according to an angular reference system. Therefore, the reference system zero point may become misaligned with the camera mechanics after prolonged use of the tilting and panning functions. Minor inaccuracies in preset positions may occur. In this case, calibrate the angular coordinate system using the REBOOT SYSTEM command. This calibration is automatically run when the camera is switched on.

4.5. FUNCTION PROGRAM MENU

Use the following control panel command to access the function programming menu.

95 + CALL

At this point, if no password is required for access, the following first level menu will appear on the screen:

```
MAIN MENU
-------------------------------------
- -
1. <SYSTEM>
2. <CAMERA>
3. <PTZ>
4. <ALARM>
5. <TRACK>
6. <EVENT>
7. <SET DEFAULT>
8. SYSTEM REBOOT
9. BACK
10. EXIT
```

Screen 1: Main Menu

If a password is required, the following prompt will appear. The password is a numeric combination (max. 4 digits).
Select the password digits by moving the joystick in the horizontal direction. Symbol “▲” indicates the digit to be entered.

Press OPEN to enter the selected digit. The entered numbers will be replaced by an “x” symbol on the screen for privacy.

Select ENTER and press OPEN to access the first level menu after entering all the digits correctly.

📖 THE DEFAULT PASSWORD IS “Blank”.
📖 It is advisable to change the default password to prevent intrusions.
📖 Do not lose or forget the programmed password.

Simply move the joystick vertically to scroll the menu and point the cursor to the menu item to be selected: at this point, select OPEN to access the selected second level.

Simply press BACK and use OPEN or just press CLOSE to go back to the previous level menu.

<table>
<thead>
<tr>
<th>Option</th>
<th>Value</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>SYSTEM</td>
<td>System setting menu</td>
<td>(See Section 4.5.1)</td>
</tr>
<tr>
<td>CAMERA</td>
<td>Lens parameters setting menu</td>
<td>(See Section Error! Reference source not found.)</td>
</tr>
<tr>
<td>PTZ</td>
<td>PTZ Setting Menu</td>
<td>(See Section 4.5.3)</td>
</tr>
<tr>
<td>ALARM</td>
<td>Alarm setting menu</td>
<td>(See Section 4.5.4)</td>
</tr>
<tr>
<td>TRACK</td>
<td>Tracking setup menu</td>
<td>(See Section 4.5.5)</td>
</tr>
<tr>
<td>EVENT</td>
<td>Event function setting menu</td>
<td>(See Section 4.5.6)</td>
</tr>
<tr>
<td>SET DEFAULT</td>
<td>This function restarts the device by clearing</td>
<td>the settings performed by the user. The camera is</td>
</tr>
<tr>
<td></td>
<td>the settings performed by the user. The camera</td>
<td>repositioned.</td>
</tr>
</tbody>
</table>
SYSTEM REBOOT

This function restarts the device without clearly the settings performed by the user. The camera is repositioned.

Table 3

4.5.1. SYSTEM MENU

In the main menu, select SYSTEM to set the parameters such as protocol, baud rate, camera address, dome label, display setup, password, bootup screen and position memory.

```
SYSTEM
- - - - - - - - - - - - - - - - - - - - -
1. <SOFT DIP SWITCH>
2. <DOME LABEL>
3. <DISPLAY SETUP>
4. <PASSWORD>
5. <BOOTUP SCREEN>
6. POSITION MEMORY: OFF
7. BACK
8. EXIT
```

Screen 3: System

<table>
<thead>
<tr>
<th>Option</th>
<th>Value</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOFT DIP SWITCH</td>
<td></td>
<td>Program protocol, address, baud rate via OSD menu.</td>
</tr>
<tr>
<td>DOME LABEL</td>
<td></td>
<td>Dome label setting submenu</td>
</tr>
<tr>
<td>DISPLAY SETUP</td>
<td></td>
<td>Display submenu: program the info to be displayed on screen.</td>
</tr>
<tr>
<td>PASSWORD</td>
<td></td>
<td>Password submenu</td>
</tr>
<tr>
<td>BOOTUP SCREEN</td>
<td></td>
<td>Boot up screen submenu</td>
</tr>
<tr>
<td>POSITION MEMORY</td>
<td>ON/OFF</td>
<td>Remember the camera position of last power off.</td>
</tr>
</tbody>
</table>

Table 4
4.5.1.1. SOFT DIP SWITCH

The SOFT DIP SWITCH submenu is used to set protocol, address and baud rate operated by OSD menu.

```
SOFT DIP SWITCH
-------------------------------------
--
1. SOFT ADDR: 1
2. SOFT ADDR ENABLE: OFF
3. SOFT PTCL: PELCO-D/P
4. SOFT BAUD RATE: 2400
5. SOFT B. RATE/PTCL: OFF
6. BACK
7. EXIT
```

Screen 4: Protocol Menu

<table>
<thead>
<tr>
<th>Option</th>
<th>Value</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOFT ADDR</td>
<td>0~255</td>
<td>Set the soft address</td>
</tr>
<tr>
<td>SOFT ADDR ENABLE</td>
<td>ON, OFF</td>
<td>Enable the soft address or not.</td>
</tr>
<tr>
<td>SOFT PTCL</td>
<td>DAHUA, PELCO-D/P</td>
<td>Set the protocol via OSD menu instead of hard DIP switch</td>
</tr>
<tr>
<td>SOFT BAUD RATE</td>
<td>1200, 2400, 4800, 9600</td>
<td>Set the soft baud rate</td>
</tr>
<tr>
<td>SOFT B. RATE/PTCL</td>
<td>ON, OFF</td>
<td>Enable the soft baud rate and protocol or not.</td>
</tr>
</tbody>
</table>

Table 5

4.5.1.2. DOME LABEL
EDIT DOME LABEL submenu

The operations needed to associate a label to a camera are:

1) Use the joystick to point the cursor to the "EDIT DOME LABEL" option.
2) Press OPEN. The following menu will appear on the display:

   DOME
   DOME LABEL
   0123456789 YZ YZ
   ABCDEFGHIJKLMNOPQRSTUVWXYZ
   abcdefghijklmnopqrstuvwxyz
   OK CN SP BP

3) Point the cursor to the first character to be used and press OPEN. Point the cursor to “BP” (BACKSPACE) to delete it.
4) After writing the text, point the cursor to OK and press OPEN to save and go back to the main screen.
5) OK means CONFIRMATION, CN means CANCEL, SP means character SPACE, BP means character BACKSPACE.
4.5.1.3. DISPLAY SETUP

The DISPLAY SETUP submenu is used to enable the labels to be displayed for the various camera functions.

### DISPLAY SETUP

<table>
<thead>
<tr>
<th>Option</th>
<th>Value</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLOCK</td>
<td></td>
<td>Set the date and time</td>
</tr>
<tr>
<td>ORIENTATION</td>
<td></td>
<td>The orientation setting submenu</td>
</tr>
<tr>
<td>DOME LABEL</td>
<td>ON/OFF</td>
<td>Show or hide the label</td>
</tr>
<tr>
<td>ZOOM</td>
<td>ON/OFF</td>
<td>Show or hide zoom labels</td>
</tr>
<tr>
<td>AZIMUTH/ELEVATION</td>
<td>ON/OFF</td>
<td>Show or hide camera pan/tilt labels. The coordinates refer to the monitor center.</td>
</tr>
<tr>
<td>PRESET LABEL</td>
<td>ON/OFF</td>
<td>Show or hide preset labels</td>
</tr>
<tr>
<td>ZONE LABEL</td>
<td>ON/OFF</td>
<td>Show or hide zone label</td>
</tr>
<tr>
<td>EVENT LABEL</td>
<td>ON/OFF</td>
<td>Show or hide event label</td>
</tr>
<tr>
<td>LABEL POSITION</td>
<td></td>
<td>Label positioning submenu</td>
</tr>
</tbody>
</table>

Screen 7: Display Setup
**Clock Submenu**

The CLOCK submenu is used to set the date and the time.

<table>
<thead>
<tr>
<th>Option</th>
<th>Value</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLOCK DISPLAY</td>
<td>ON/OFF</td>
<td>Show or hide the date and time</td>
</tr>
<tr>
<td>DATE</td>
<td></td>
<td>Set the date. The format is YYYY/MM/DD.</td>
</tr>
<tr>
<td>TIME</td>
<td></td>
<td>Set the time. The format is 24 hour (HH:MM:SS).</td>
</tr>
</tbody>
</table>

**Orientation Submenu**

The ORIENTATION submenu is used to set the direction. The camera can tell which direction the camera is facing.
Screen 9: Orientation

<table>
<thead>
<tr>
<th>Option</th>
<th>Value</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>DISPLAY</td>
<td>ON/OFF</td>
<td>Show or hide the orientation</td>
</tr>
<tr>
<td>PRIME DIRECTION</td>
<td>N/S/E/W/NW/N E/SW/SE</td>
<td>Set the prime direction</td>
</tr>
</tbody>
</table>

Table 9

Label Position Submenu
The labels may be positioned where required on the screen.

To establish a position:
1) Point the cursor to the label to be moved by moving the joystick vertically.
2) Press OPEN.
3) Symbol “■” will appear.
4) Position the entire label in the chosen position using the joystick.
5) Press OPEN.
6) Repeat this operation for each label.
7) Point the cursor “►” to SAVE and press OPEN.

4.5.1.4. PASSWORD
Screen 11: Password

<table>
<thead>
<tr>
<th>Option</th>
<th>Value</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENABLE PASSWORD</td>
<td>ON/OFF</td>
<td>This enables or disables the password.</td>
</tr>
<tr>
<td>EDIT PASSWORD</td>
<td></td>
<td>This is the password entry procedure.</td>
</tr>
</tbody>
</table>

The password is a numeric combination (max. 10 digits).

- **THE DEFAULT PASSWORD IS “1111”**.
- **It is advisable to change the default password to prevent intrusions.**
- **Do not lose or forget the programmed password.**

Screen 12: Edit Password

1) Select the password digits by moving the joystick horizontally. Symbol “▲” indicates the digit to be entered.
2) Press **OPEN** to enter the selected digit.
3) The entered numbers will be replaced by a “*” symbol on the screen for privacy.
4) Enter all the digits correctly and select **ENTER** to confirm.
5) During the password change procedure you will be asked to enter the old password. Enter the new password and enter it again for
confirmation.

4.5.1.5. **BOOTUP SCREEN**

In the **SYSTEM** menu, select **BOOTUP SCREEN** to display information concerning software version, address, protocol, baud rate and zoom module brand. The information in this menu cannot be edited.

```
MINI DOME II

SOFTWARE VERSION: 5.3
ADDRESS: 1
PROTOCOL: PELCO-D/P
BAUD RATE: 2400
TEMPERATURE: 25C

SAMSUNG SERIES CAMERA
```

Screen 13: Boot up Screen
2. Menu and Functions

Use the button on the back panel of the camera to bring up the menu screen for controlling functions and operations of the camera.

Same to the Rear side of X27

Module

1. Key Operations

- Menu :: Low Middle [LIGHT] → [MENU On], [MENU Set]
- Accessing Sub Menu :: Center Side [I], [O] → [Up], [Down]
- Select a Value :: Low Side [B], [NW] → [Left], [Right]

Use Five buttons above to browse the menu options.

2. Entering Menu Screen

- When camera is turned on, press and hold the middle [MENU On] button for 2 seconds.
- [MENU] button is used for [MENU On] and [MENU Set]

3. Main Menu

- Main Menu Screen like the following will appear when Menu button is pressed for two seconds

![Main Menu Screen]

< Figure 1. Main Menu>

3. Browsing through Menu Options
The cursor will be initially at [FOCUS].

- [ ] gets displayed in front of the selected menu options.
- Use [UP] and [DOWN] button to move the cursor.
- When the cursor is at the desired position, press the [menu Set] button to go into the selected sub menu screen.

4. Exiting the Menu

- Bring the cursor to [SAVE & EXIT] and press the Menu button. Then the Menu Screen will disappear.

5. Focus Menu

- In the Main Menu, go into the [FOCUS ] sub menu screen by bringing the cursor to [FOCUS ] and pressing [menu Set] button.

![Focus Menu](image)

5-1. Focus Mode

- Changes the Focus Mode.
- Bring the cursor to [FOCUS MODE ], and change the option using [LEFT] or [RIGHT] button.

  - The following options are available.

    AUTO: The camera will focus automatically. <Recommended>

    MANUAL: The focus will be focused by the user manually.

    PUSH: The Focus gets automatically set by pressing the Menu button shortly.

5-2. Focus Distance

- Changes the focal distance of an object.
- Bring the cursor to [FOCUS DIST ], and change the value using [LEFT] or [RIGHT] button.

  - The following options are available.

    10cm | 50cm | 1m | 1.5m | 2m | 3m | 5m
5-3. Zoom Start

- Changes the minimum zoom magnification rate.
- Bring the cursor to [ZOOM START], and change the value using [LEFT] or [RIGHT] button.
  - The following options are available: (x1~x12)
    - Any ratio between X1 and x35 can be selected.

5-4. Zoom End

- Changes the maximum zoom magnification rate.
- Bring the cursor to [ZOOM END], and change the value using [LEFT] or [RIGHT] button.
  - The following options are available: (X2 ~ X144)
    - Please note that x1 cannot be selected for Maximum zoom.

5-5. Zoom Tracking Mode

- Changes the Zoom Tracking.
- Bring the cursor to [ZOOM TRK MODE], and change the value using [LEFT] or [RIGHT] button.
  - The following options are available:
    - AUTO: The focus gets adjusted automatically when zoom Lens is moved.
    - OFF: The focus stays at its setting when zoom Lens is moved.
    - MANUAL: The focus gets adjusted to the position specified by the user when zoom Lens is moved.

5-6. Zoom Speed

- Changes the Speed of the Zoom lens movement.
- Bring the cursor to [ZOOM SPEED], and change the option using [LEFT] or [RIGHT] button.
  - The following options are available:
    - NORMAL
    - QUICK
    - SLOW

5-5. Lens Initial

- Initializes to the default Focus and Zoom values.
- Bring the cursor to [LENS INITIAL], and change the option using [LEFT] or [RIGHT] button.
  - The following options are available:
    - AUTOS
    - OFF
    - ONE PUSH
  - Select [ONE PUSH] and press [menu Set] button to manually initialize the lens.
• Select [AUTO] and press [menu Set] to set an automatic Lens initialization period. 1day ~ 7day

5-6. INITIAL SET (Same for all sub menus)

• All values in Focus Menu will be set to default.

• Bring the cursor to [INITIAL SET], and press the [menu Set] button to execute reset.

   All configurations in FOCUS MODE- LENS INITIAL option will be set to default value

5-7. PREVIOUS (Same for all sub menus)

• Brings the screen to previous screen.

• Move the cursor to [PREVIOUS], and press the [menu Set] button to go to the upper menu screen.

   • Selecting this at FOCUS Menu will bring the root [Main Menu] Screen.

6. Exposure Menu

• In the Main Menu, go into the [Exposure] sub menu screen by bringing the cursor to the [Exposure] and pressing [menu Set] button.

   < Figure 3. Exposure Menu>

6-1. Brightness

• Changes the Brightness level.

• Move the cursor to [BRIGHTNESS], and change the value using [LEFT] or [RIGHT] button.

   ½ It can be set in between 0 and 100, where 50 is the normal brightness.

6-2. Iris

• Changes the Iris mode.

• Move the cursor to [Iris], and change the option using [LEFT] or [RIGHT] button.

   ½ AUTOS
Manual controls is disabled when using WDR in Backlight option.

It can be set between 0 and 100, where 60 is considered to be normal.

6-3. Shutter

- Changes the electrical shutter operation.
- Move the cursor to [SHUTTER], and change the option using [LEFT] or [RIGHT] button.
- When the setting is changed to [MANUAL], press [menu Set] button to go into the manual shutter speed change menu screen.

- AUTO : The camera automatically changes the shutter Speed.
- A-FLK : The shutter speed sets to 1/100(NTSC) or 1/120(PAL).
- MANUAL : The shutter speed gets set by the user manually.

- The value can be selected between X512 and X2(LOW), 1/60 and 1/90000(HIGH) seconds.

Manual control is disabled when using WDR in the BackLight option

6-4. AGC

- Changes the maximum value for the Automatic Gain Control.
- Move the cursor to [AGC], and change the value using [LEFT] or [RIGHT] button.

- LOW 12 dB
- MIDDLE 24 dB
- HIGH 32 dB
- MANUAL 0~32 dB

Manual control is disabled when 3D-DNR or D/N mode is set to [ON]

6-5. Sense-Up

- Changes the number of images to be accumulated at low light
- Move the cursor to [SENS-UP], and change the value using [LEFT] or [RIGHT] button.

- OFF
- AUTO X2 ~ X128

6-6. INITIAL SET (Same for all sub menus)

6-7. PREVIOUS (Same for all sub menus)

7. White Balance Menu

- In the Main Menu, go into the [WHITE BALANCE] menu screen by bringing the cursor to the [WHITE BALANCE]
  and pressing [menu Set] button.
32/77

Figure 4. White Balance Menu

7-1. W/B Mode
- Selects the White Balance Mode
- Move the cursor to [W/B MODE], and change the value using [LEFT] or [RIGHT] button.
  - AWB: 2,200 ~ 7,000 K
  - ATW: 2,000 ~ 18,000 K
  - PUSH: Execute the ATW operation when [MENU SET] button is pressed
  - IN DOOR: Sets the standard color temperature to an indoor level. (3200 K)
  - OUTDOOR: Sets the standard color temperature to an outdoor level. (5100 K)
  - MANUAL: The user sets the W/B value for RED and BLUE color (refer to 7-5)

7-2. Anti – Color Rolling
- Eliminates Color-rolling effect when using High – shutter speed.
- Move the cursor to [ANTI ROLLING], and change the option using [LEFT] or [RIGHT] button.
  - ON: Turns the feature on.
  - OFF: Turns the feature off.

7-3. INITIAL SET (Same for all Sub Menus)

7-4. PREVIOUS (Same for all Sub Menus)
7-5

a. W/B RED (Adjusting the Red gain level)
   - Changes the Red Gain Level.
   - Move the cursor to [W/B RED], and change the value using [LEFT] or [RIGHT] button.
   - Can be changed between -100 and 100, where 0 is the normal value.

b. W/B BLUE (Adjusting the Blue gain Level)
   - Changes the Blue Gain Level.
   - Move the cursor to [W/B Blue], and change the value using [LEFT] or [RIGHT] button.
   - Can be changed between -100 and 100, where 0 is the normal value.

c. INITIAL SET (Same for all sub menus)

d. PREVIOUS (Same for all sub menus)

8. Day/ Night Menu

   - In the Main Menu, go into the [DAY / NIGHT] sub menu screen by bringing the cursor to the [DAY / NIGHT] and pressing [menu Set] button.

8-1. Day/ Night mode change

   - Configures the operation of IR-CUT filter according to Day /Night light level.
   - Move the cursor to [D/N MODE], and change the option using [LEFT] or [RIGHT] button.
   - AUTO: Camera will automatically determine the light level
   - DAY: Always in Day mode. (IR-CUT filter engaged all the time)
% NIGHT: Always in Night mode. (IR-CUT filter disengaged all the time)

% EXT: Mode changes according to an external signal.

% CDS: Mode changes according to the CDS SENSOR.

8-2. Day/Night Level

• Changes the light level for Day/Night switching

  • Move the cursor to [D/N Level], and change the value using [LEFT] or [RIGHT] button.

  % Can be changed in between 0 and 10, where 5 is the normal value. (Switching light level is 0<5<10)

8-3. Day/Night delay

• Sets the delay time for Day/Night switching

  • Move the cursor to [D/N Delay], and change the value using [LEFT] or [RIGHT] button.

  % Can be set in between 5 - 60 seconds.

8-4. INITIAL SET (Same for all sub menus)

8-5. PREVIOUS (Same for all sub menus)

9. Backlight Menu

• In the Main Menu, go into the [BACKLIGHT] sub menu screen by bringing the cursor to the [BACKLIGHT] and pressing [menu Set] button.
9-1. Backlight mode

- Changes Backlight Mode.

  - Move the cursor to [BACKLIGHT], and change the option using [LEFT] or [RIGHT] button.

    ¾ OFF: No Back Light Compensation
    ¾ WDR: Wide Dynamic Range
    ¾ BLC: Back Light Compensation
    ¾ ECL: Eclipse

  - Press [menu Set] button when desired mode option gets displayed to go into the sub menu screen for further configuration.

10. WDR Menu

- In the [BACKLIGHT] option, press the [Menu Set] Button when WDR is displayed to go into the [WDR] sub menu screen.

  < Figure 8. WDR Menu >

10-1. WDR

- Selects which WDR Mode to use.

  - Move the cursor to [WDR LEVEL], and press [LEFT] or [RIGHT] button to change the option.

    ¾ W-FRONT: Compensation for Dim Light Area front 00 %, Back 00 %
    ¾ W-CENTER: Compensation for Normal Light Area front 00 %, Back 00 %
    ¾ W-REAR: Compensation for Strong Light Area front 00 %, Back 00 %
    ¾ W-USER: The user configures the desired value

  - Press the [menu Set] button when W-USER is displayed to go into the W-USER menu screen.
¾ LONG: selects in between 0 and 60.
¾ SHORT: selects in between 0 and 60.

10-2. PREVIOUS (Same for all sub menus)

11. Backlight Menu

- In the [BACKLIGHT] option, press the [Menu Set] Button when [BLC] is displayed to go into the [BLC] sub menu screen

![Backlight menu](image)

11-1. Backlight

- Selects which BLC Mode to use.
  - Move the cursor to [BLC LEVEL], and press [LEFT] or [RIGHT] button to change the option
    - MIDDLE: Normal Back light compensation
    - HIGH: Strong Back light compensation.
    - LOW: Dim Back light compensation.

11-2. PREVIOUS (Same for all sub menus)

12. ECL Menu

- In the [BACKLIGHT] option, press the [Menu Set] Button when ECL is displayed to go into the [ECL] menu screen

![ECL menu](image)
12-1. ECL Area
   • Configures Eclipse Area.
   • Move the cursor to [AREA SETTING], and press [menu Set] button to go into the sub menu.
      ¾ The total area consists of 16 cells (4 by 4)
      ¾ Use [LEFT] or [RIGHT] buttons to move to the desired area.
      ¾ Use [UP] or [DOWN] buttons to turn each Eclipse area ON or OFF
      ¾ Press [menu Set] button to go back to the upper menu screen
      • Select [ALL AREA SET] option using [LEFT] or [RIGHT] button.
         ¾ Selects all 16 areas

12-2. Mask Color
   • Selects the Eclipse Mask Color.
   • Move the cursor to [MASK COLOR], and use [LEFT] or [RIGHT] button to change the color.
      ¾ BLACK, GRAY, and Dark GRAY can be selected.

12-3. ECL activate level
   • Sets the light level for Eclipse activation
   • Move the cursor to [ECL LEVEL], and press [LEFT] or [RIGHT] button to change the value.
      ¾ Can be selected in between 0 and 100, where 50 is the normal level.

12-4. INITIAL SET (Same for all sub menus)

12-5. PREVIOUS (Same for all sub menus)

13. 3D DNR Menu
   • In the main menu, move the cursor to [3D-DNR], and press the [LEFT] or [RIGHT] button to show different options. Press [menu Set] button when [On] is displayed to go into the 3D DNR Menu Screen.
13-1. 3D DNR mode

- Turns 3D digital Noise Reduction option on or off.
  - Move the cursor to [3D-DNR], and press [LEFT] or [RIGHT] button to change the option.

  - **OFF**: 3D DNR disabled.
  - **ON**: 3D DNR enabled.

13-2. 3D-DNR level

- Configures Noise Reduction level.
  - Move the cursor to [3D - DNR], and press [LEFT] or [RIGHT] button to change the value.

  - Can be selected in between 0 and 63, where 32 is the normal value.

13-3. Global Motion

- Eliminates 'the ghost effect' when using 3D-DNR feature.
  - Move the cursor to [GLOBAL MOTION], and press[LEFT] or [RIGHT] button to change the option.

  - **ON**: Enables Global Motion Compensation.
OFF : Disables Global Motion Compensation.

13-4. INITIAL SET (Same for all sub menus)

13-5. PREVIOUS (Same for all sub menus)

14. Image Adjust Menu

* In the Main Menu, select [IMAGE ADJUST] using [menu Set] button to go into [IMAGE ADJUST] menu screen.

14-1. D-Effect

* Selects which Digital Effect Option to use.

  * Move the cursor to [D- EFFECT], and press [LEFT] or [RIGHT] button to change the option.
    
    % OFF : No digital Effect.
    
    % V-FLIP : Flips the image vertically.
    
    % MIRROR : Flips the image horizontally.
    
    % ROTATE : Flips the image both horizontally and vertically

14-2. Image Freeze

* Freezes the image.

  * Move the cursor to [IMAGE FREEZE], and press [LEFT] or [RIGHT] button to change the option.
    
    % OFF : Displays the Real time image
    
    % ON : Freezes the image Display.

14-3. Color / Black and White
• Selects the image output to be color or B/W.
  • Move the cursor to [COLOR], and press [LEFT] or [RIGHT] button to change the selection.
    • ON: Color Image Output
    • OFF: B/W Image Output

14-4. Sharpness
  • Changes the Image’s Sharpness level.
  • Move the cursor to [SHARPNESS], and press [LEFT] or [RIGHT] button to change the value.
    • Can be changed in between 0 and 100, where 60 is the normal value.
    • OFF: Displays Black and White.

14-5. Gamma
  • Adjusts the Image’s Gamma Level.
  • Move the cursor to [GAMMA], and press [LEFT] or [RIGHT] button to change the option.
  • Select [USER] option by pressing [menu Set] button to go into the [USER] menu screen.
    • CRT: pre-configured gamma level for a CRT monitor (0.45)
    • LCD: pre-configured gamma level for an LCD monitor (1.00)
    • USER: The user can select the level. Select in between 0.45-1.

14-6. INITIAL SET (same for all sub menus)

14-7. PREVIOUS (same for all sub menus)

15. Special Menu
  • In the main menu, move the cursor to [SPECIAL] and press [menu Set] button to go into [SPECIAL] menu Screen.
15-5. Stabilizer
  • Stabilizes the image on slight fluctuations.
  • Move the cursor to [STABILIZER] and press [LEFT] or [RIGHT] button to turn on or off.

15-6. L/L Sync
  • Sets the source for the line lock.
  • Move the cursor to [L/L SYNC] and press [LEFT] or [RIGHT] button to change the value.

  \( \frac{1}{2} \) INT, L/L(0~359)

15-7. Factory Initial
  • Initializes the camera to factory default mode.
  • Move the cursor to [FACTORY INITIAL] and press [Menu Set] button for reset.

15-8. Reboot
  • Move the cursor to [REBOOT] and press [Menu Set] button to reboot the camera.

15-1. Comm. Adjust

![Comm Adjust Menu](image.png)
### 15-1-1. Protocol
- Selects communication protocol to use.
  - Move the cursor to [PROTOCOL] and press [LEFT] or [RIGHT] button to change the option.
  - Five protocols are selectable - CNB-ASCII, CNB-HEX, PELCO-D, PELCO-P

### 15-1-2. Camera ID
- Configures the Camera's ID.
  - Move the cursor to [CAMERA ID] and press [LEFT] or [RIGHT] button to change the ID.
  - Can be selected in between 0 and 255 where 0 is the initial value.

### 15-1-3. Save/Reboot
- The change in the configuration setting will apply after it was saved/rebooted.

### 15-1-4. PREVIOUS (same for all sub menus)
- Exit without saving

---

### 15-2. Motion Detection Menu
- In the Special Menu Screen, Select [MOTION DET] by pressing [menu Set] button to go into the [MOTION DET] menu screen.
15-2. Detection Zone
• Up to 4 zones can be configured.
  • Move the cursor to [ZONE NUMBER] and press [LEFT] or [RIGHT] button to select the desired zone.
  • Configuration for each zone needs to be done separately when you select a different zone.

15-2. Zone State
• Turns on or off the selected movement detection zone.
  • Move the cursor to [ZONE STATE] and press [LEFT] or [RIGHT] button to change the selection.
  • Can be configured to be ON or OFF.

15-2. Size of the Detection Zone
• Configures the size of the selected detection zone
  • Move the cursor to [WIDTH] or [HEIGHT] and press [LEFT] or [RIGHT] button to change the value.
    • WIDTH: Changes the width of the detection zone.
    • HEIGHT: Changes the height of the detection zone.

15-2. Location of the Detection Zone
• Configures the location of the selected detection zone
  • Move the cursor to [MOVE X] or [MOVE Y] and press [LEFT] or [RIGHT] button to change the value.
    • Move X: Moves the detection zone horizontally.
    • Move Y: Moves the detection zone vertically.

15-2. Motion Zoom
• Can zoom in the image when a motion is detected on the selected detection zone.
  • Move the cursor to [MOTION ZOOM] and press [LEFT] or [RIGHT] button to change the setting.
  • Change the option to [ON] and press [menu Set] button to go into the sub menu screen.
    • [TARGET ZOOM]: sets the zoom magnification upon motion detection.
    • The maximum zoom is limited to the optical zoom
    • [D - WELL]: dwell time to stay on that zoom magnification
15-2-6. Sensitivity

- Sensitivity to detect motion on the selected detection zone.

  - Move the cursor to [SENSITIVITY] and press [LEFT] or [RIGHT] button to change the setting.

  - Can be selected in between 0 and 100, where 50 is the normal value.

15-2-7. MD Alarm Out

- Sets the Alarm Output upon when motion is detected.

  - Move the cursor to [MD ALARM OUT] and press [LEFT] or [RIGHT] button to change the setting.

  - ON : [MD] gets displayed on the screen, and the Alarm Output gets activated.

  - OFF : Motion Detection does not get alerted.

15-2-8. INITIAL SET (Same for all Sub menus)

15-2-9. PREVIOUS (Same for all Sub menus)

15-4. Privacy Mask Menu

- In the Special Menu screen, select [PRIVACY MASK] and press [menu Set] button to go in to the [PRIVACY MASK] menu screen.

  < Figure 16. Privacy Mask Menu>

15-4-1. Masking Zone

- Up to 8 zones can be configured.

  - Move the cursor to [MASK NUMBER] and press [LEFT] or [RIGHT] button to change the value.

  - Configuration for each zone needs to be done separately when you select a different zone.
15-4-2. Mask State

- Turns on or off the selected masking zone.
  - Move the cursor to [MASK STATE] and press [LEFT] or [RIGHT] button to change the State.
    - Select in between ON and OFF

15-4-3. Mask Color

- Selects the color for the masking.
  - Move the cursor to [MASK COLOR] and press [LEFT] or [RIGHT] button to change the State.
    >Can be selected in between GRAY, YELLOW, GREEN, RED, BLUE, BLACK, and WHITE.

15-4-4. Size of the Masking Zone

- Configures the size of the selected Masking zone.
  - Move the cursor to [WIDTH] or [HEIGHT] and press [LEFT] or [RIGHT] button to change the value.
    - WIDTH: Changes the width of the Masking zone.
    - HEIGHT: Changes the height of the Masking zone.

15-4-5. Location of the Masking Zone

- Configures the location of the selected Masking zone.
  - Move the cursor to [MOVE X] or [MOVE Y] and press [LEFT] or [RIGHT] button to change the value.
    - Move X: Moves the Masking zone horizontally.
    - Move Y: Moves the Masking zone vertically.

15-4-6. Reset Mask

- The configured size and location on the selected masking zones can be set back to the initial state.
  - Move the cursor to [RESET MASK] and press [menu Set] button for reset.

15-4-7. INITIAL SET (same for all sub menus)

15-4-8. PREVIOUS (same for all sub menus)

16. OSD Setup Menu

- In the main menu screen, move the cursor to [OSD SETUP] and press [menu Set] button to go into the [OSD SETUP] screen.
16-1. Zone Label

- Configures the name of the zone and turns On or Off its display.
- Move the cursor to [ZONE LABEL] and press [LEFT] or [RIGHT] button to change the state.
  
  Press [menu Set] button when selecting [On] to go into the sub menu screen.

16-2. Location of Camera ID

- Use this to label certain Cam ID (configured at Comm. Adjust menu) to a specific name or change the location of the label display.
- Move the cursor to [CAMERA ID] and press [LEFT] or [RIGHT] button to change the state.
  
  Select [On] and press [menu Set] button to go into the sub menu screen.
16-1. Zone Label

- Sets the name of the zone and display location in the screen
  - Letter selection section on the top, and preview section at the bottom. Blinking cursor indicates which section you are at.
  - You can browse through the letter selection section on the top and the menu section in the middle using [LEFT], [RIGHT], [UP], or [DOWN] button.
  - Press [menu Set] button to select the highlighted letter, and it will get displayed on the preview section at the bottom
  - [CLR]: erases all letters written
  - [POS]: Sets the position of the name display.
  - [END]: Save/ Exit to the upper menu screen.

16-2. Camera ID label

- Sets the position of the Camera ID.
  - Go into the sub menu screen and change the position using [LEFT] or [RIGHT] button.

16-3. Zoom magnification Display

- Sets the zoom magnification display on or off and also configures the display position
  - Move the cursor to [ZOOM IMAG] and press [LEFT] or [RIGHT] button to change the option.

16-4. Motion Zoom Display

- Sets the display of Motion Zoom. When turned on, it displays [MD] upon detecting motions.
  - Move the cursor to [MOTION DET] and press [LEFT] or [RIGHT] button to change the option.

16-5. FUNCTION Display.
Sets the display of various functions such as BLC, D-EFFECT, DAY&NIGHT, and W/B mode on the screen.

16-6. Language

- This version can only display English.
- In case another language is added, move the cursor to [MOTION DET] and press [LEFT] or [RIGHT] button to change the setting.

16-7. INITIAL SET (same for all sub menus)

16-8. PREVIOUS (same for all sub menus)

4.5.3. PTZ MENU

In the main menu, select <PTZ> and the corresponding submenus to access the menu.

<table>
<thead>
<tr>
<th>Option</th>
<th>Value</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>MOTION</td>
<td>Camera motion parameter programming submenu</td>
<td></td>
</tr>
<tr>
<td>PRESETS</td>
<td>Preset parameter submenu</td>
<td></td>
</tr>
<tr>
<td>SCAN</td>
<td>Pattern and zone parameter submenu</td>
<td></td>
</tr>
<tr>
<td>POWER UP</td>
<td>Power up parameter submenu</td>
<td></td>
</tr>
<tr>
<td>CRUISE</td>
<td>Cruise parameter programming submenu</td>
<td></td>
</tr>
</tbody>
</table>
### CLEAR SET

<table>
<thead>
<tr>
<th>PRESET NUMBER</th>
<th>Clear settings submenu</th>
</tr>
</thead>
<tbody>
<tr>
<td>256/64/40</td>
<td>Maximum number of Presets. Always enter 256</td>
</tr>
</tbody>
</table>

**Table 11**

### 4.5.3.1. MOTION

The first level of this menu contains the following options grouped as shown in the following table.

#### MOTION

<table>
<thead>
<tr>
<th>Option</th>
<th>Value</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUTO FLIP</td>
<td>ON/OFF</td>
<td>When this option is on, the movements of a subject moving underneath the camera can be followed by moving the joystick vertically only. This is possible because after reaching vertical position, the camera will automatically pan by 180 degrees to be repositioned and resume the tilt stroke.</td>
</tr>
</tbody>
</table>

Screen 15: Motion
<table>
<thead>
<tr>
<th><strong>PROPORTIONAL PAN</strong></th>
<th><strong>ON/OFF</strong></th>
<th>If this mode is on, the pan and tilt speed applied by the keypad is proportion to the set zoom so that the movement speed decreases when the zoom increases.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PARK TIME</strong></td>
<td><strong>15 S ~ 12 H</strong></td>
<td>With this function, the camera will resume the function defined in &quot;PARK ACTION&quot; by specifying a value (in 1s, 1m, 1h steps) following a stop or interruption of the performed function and after the programmed time.</td>
</tr>
<tr>
<td><strong>PARK ACTION</strong></td>
<td><strong>NONE</strong></td>
<td>No action is performed at the end of the park time.</td>
</tr>
<tr>
<td></td>
<td><strong>AUTO SCAN</strong></td>
<td>The camera performs an auto scan at the end of the park time: the camera performs a 360 horizontal scan operation.</td>
</tr>
<tr>
<td></td>
<td><strong>RANDOM SCAN</strong></td>
<td>The camera performs a random scan at the end of the park time: the camera performs a random 360 degree scan pausing for approximately 2&quot; every 142°.</td>
</tr>
<tr>
<td></td>
<td><strong>FRAME SCAN</strong></td>
<td>The camera performs a frame scan at the end of the park time: the horizontal scan is performed in the SET SCAN limits.</td>
</tr>
<tr>
<td></td>
<td><strong>PRESET 1/PRESET 8</strong></td>
<td>The camera goes to preset 1 or preset 8 at the end of the park time.</td>
</tr>
<tr>
<td></td>
<td><strong>PATTERN 1 ~ 4</strong></td>
<td>The camera performs one of the 4 patterns at the end of the park time (command sequence continuously performed).</td>
</tr>
<tr>
<td></td>
<td><strong>CRUISE</strong></td>
<td>The camera performs a cruise (preset sequence) at the end of the park time: the camera runs a cycle</td>
</tr>
</tbody>
</table>
The camera simply resumes the operation it was performing before being interrupted at the end of the park time.

The camera performs a tracking operation at the end of the park time. This is only available on tracking ptzs.

This submenu set the pan/tilt speed of the scan.

Zone parameter programming submenu

If the option is ON, horizontal automatically scanning is performed within the right and left scanning limits open.

To set the left and right scanning limit, position the camera at the required pan angle and press **OPEN** to set.

The two angles must be at least 10 degrees apart.

A preset position may be called up outside these scanning limits.

**SPEED SETTING** submenu

1) Use the joystick to point the cursor to **SPEED SETTING** option.

2) Press **OPEN**. The following menu will appear on the display:
### SPEED SETTING

<table>
<thead>
<tr>
<th>Option</th>
<th>Value</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAN SPEED</td>
<td>50 ~ 250</td>
<td>This will specify the rotation speed for automatic horizontal scans.</td>
</tr>
<tr>
<td>TILT SPEED</td>
<td>50 ~ 250</td>
<td>This will specify the rotation speed for automatic vertical scans.</td>
</tr>
</tbody>
</table>

Table 13

### MANUAL LIMIT Submenu

1) Use the joystick to point the cursor to "MANUAL LIMIT" option.

2) Press **OPEN**. The following menu will appear on the display:

#### MANUAL LIMIT

<table>
<thead>
<tr>
<th>Option</th>
<th>Value</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;SET MANUAL STOPS&gt;</td>
<td></td>
<td>To set the left and right scanning limit, position the camera at the required pan angle and press <strong>OPEN</strong> to set. The two angles must be at least 10 degrees apart.</td>
</tr>
</tbody>
</table>
A preset position may be called up outside these scanning limits.

<table>
<thead>
<tr>
<th>LIMIT STOPS</th>
<th>ON/OFF</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ON</strong></td>
<td><strong>OFF</strong></td>
</tr>
</tbody>
</table>

If the option is ON, horizontal automatically scanning is performed within the right and left scanning limits open.

**Table 14**

**SET MANUAL STOPS SUBMENU**

1) Use the joystick to point the cursor to the “SET MANUAL STOPS” option.

2) Press **OPEN**. The following menu will appear on the display:

   **SCREEN 18: SET LEFT LIMIT**

   SET MANUAL STOPS
   LEFT LIMIT POSITION
   IRIS OPEN TO CONTINUE
   IRIS CLOSE TO CANCEL

3) Use the joystick to position left limit and press **OPEN** to save.

   **SCREEN 19: SET RIGHT LIMIT**

   SET MANUAL STOPS
   RIGHT LIMIT POSITION
   IRIS OPEN TO CONTINUE
   IRIS CLOSE TO CANCEL

4) Use the joystick to position right limit and press **OPEN** to save.

**Zones Submenu**
A zone is a space defined on the display by the user. It may be associated to a label. Up to 8 zones may be defined.

<table>
<thead>
<tr>
<th>Option</th>
<th>Value</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZONE NUMBER</td>
<td>1 ~ 8</td>
<td>This option is used to select a zone.</td>
</tr>
<tr>
<td>EDIT ZONE LABEL</td>
<td></td>
<td>This submenu is used to associate a label to a zone.</td>
</tr>
<tr>
<td>EDIT ZONE</td>
<td></td>
<td>This submenu is used to create a zone.</td>
</tr>
<tr>
<td>ZONE ENABLED</td>
<td>ON/OFF</td>
<td>This is used to enable/disable each zone selected</td>
</tr>
<tr>
<td>CLEAR ZONE</td>
<td></td>
<td>This submenu is used to delete the zone selected</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>ZONE NOT DEFINED</strong></th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Option</th>
<th>Value</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZONE NUMBER</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>EDIT ZONE LABEL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EDIT ZONE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ZONE ENABLED</td>
<td>OFF</td>
<td></td>
</tr>
<tr>
<td>CLEAR ZONE</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**EDIT ZONE LABEL submenu**

This includes the operations needed to enter labels to be associated to zones.

1) Use the joystick to point the cursor to the **EDIT ZONE LABEL** option.
2) Press **OPEN**. The following menu will appear on the display:
3) Point the cursor to the first character to be used and press OPEN. Point the cursor to “BP” to delete it.
4) After writing the text, point the cursor to OK and press OPEN to save and go back to the main screen.

EDIT ZONE submenu
This includes all the operations needed to program a zone.
1) Press “►” on “EDIT ZONE”.
2) Press OPEN to confirm.
3) Use the joystick to point to the required position to define the left limit of the zone to be created.
4) Press OPEN to confirm.
5) Use the joystick to point to the required position to define the right limit of the zone to be created.
6) Press OPEN to confirm.
7) Press CLOSE to cancel the operation.

4.5.3.2. PRESETS

PRESETS

- -
1. PRESET NUMBER: 1
   ** PRESET NOT DEFINED **
2. <EDIT PRESET LABEL>
3. <EDIT PRESET POSITION>
4. <CLEAR PRESET>
5. BACK
6. EXIT
The camera will start a scanning cycle when a presetting or pattern is recalled. This scanning cycle may be interrupted simply by moving the joystick.

EDIT PRESET LABEL submenu

This includes the operations needed for associating a label to a presetting.

1) Use the joystick to point the cursor to "EDIT PRESET LABEL" option.

2) Press OPEN. The following menu will appear on the display:

<table>
<thead>
<tr>
<th>PRESET NUMBER</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRESET LABEL</td>
<td>1-......</td>
</tr>
<tr>
<td>0123456789</td>
<td>YZ yz</td>
</tr>
<tr>
<td>ABCDEFGHIJKLMNPQRSTUVWXYZ</td>
<td></td>
</tr>
<tr>
<td>abcdefghijklmnopqrstuvwxyz</td>
<td></td>
</tr>
<tr>
<td>OK CN SP BP</td>
<td></td>
</tr>
</tbody>
</table>

3) Point the cursor to the first character to the use and press OPEN. Point the cursor to "BACKSPACE" to delete it.

4) After writing the text, point the cursor to OK and press OPEN to save and go back to the main screen.

EDIT PRESET SCAENE submenu
This includes the operations needed for associating a scene to a presetting.

1) Use the joystick to point the cursor to "EDIT PRESET SCENE" option.

2) Press **OPEN**. The following menu will appear on the display:

```
EDIT PRESET POSITION

USE THE JOYSTICK OR KEYBOARD TO POSITION THE CAMERA
IRIS OPEN TO CONTINUE
IRIS CLOSE TO CANCEL
```

Screen 24: Preset scene Sub-Menu

3) Use the joystick or keyboard to position the camera and get satisfactory image

4) Press **OPEN** to save and go back to the main screen.

5) Press **CLOSE** button does not save the scene, but return to the preset setting menu

### 4.5.3.3. SCAN

```
SCAN
------------------------
--
1. <ZONE SCAN>
2. <PATTERN SCAN>
3. BACK
4. EXIT
```

Screen 25: Scan Sub-Menu

<table>
<thead>
<tr>
<th>Option</th>
<th>Value</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZONE SCAN</td>
<td></td>
<td>Zone parameter submenu</td>
</tr>
<tr>
<td>PATTERN SCAN</td>
<td></td>
<td>Pattern parameter submenu</td>
</tr>
</tbody>
</table>

Table 17

**Zone Scan Submenu**
Screen 26: Zone Scan Sub-Menu

<table>
<thead>
<tr>
<th>Option</th>
<th>Value</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCAN SPEED</td>
<td>1 ~ 32</td>
<td>This option is used to set scan speed.</td>
</tr>
<tr>
<td>SET ZONE SCAN</td>
<td></td>
<td>This submenu is used to set scan stops.</td>
</tr>
</tbody>
</table>

**Table 18**

**SET ZONE SCAN submenu**
This includes all the operations needed to set scan stops.

1) Use the joystick to point the cursor to the **SET ZONE SCAN** option.

2) Press **OPEN**. The following menu will appear on the display:

```
SET ZONE SCAN
------------------
  1. <SET SCAN STOPS>
  2. <CLEAR SCAN STOPS>
  3. EXIT
```

**SCREEN 27: SET ZONE SCAN**

**SET SCAN STOPS SUBMENU**

1) Use the joystick to point the cursor to the **SET SCAN STOPS** option.

2) Press **OPEN**. The following menu will appear on the display:
3) Use the joystick to position left limit and press **OPEN** to save.

4) Use the joystick to position right limit and press **OPEN** to save.

**CLEAR ZONE STOPS Submenu**
This includes the operations for deleting the selected zone stops.

**Patterns Submenu**

A pattern is a sequence of movements and functions which may be stored and repeated manually or automatically.

<table>
<thead>
<tr>
<th>Option</th>
<th>Value</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>PATTERN NUMBER</td>
<td>1 ~ 4</td>
<td>This option is used to select a pattern.</td>
</tr>
</tbody>
</table>
PROGRAM PATTERN submenu

This includes all the operations needed to program a pattern.

1) Use the joystick to point the cursor to the "PATTERN NUMBER" option.
2) Select the required pattern and press OPEN.
3) Position the cursor under "PROGRAM PATTERN" option and press the OPEN button.

The number of actions available (including zoom operations) for programming the Pattern is shown in percentage form on the screen while they are each being programmed. 100 operations are available for each pattern.

CLEAR PATTERN submenu

This includes the operations for deleting the selected pattern.

4.5.3.4. POWER UP

<table>
<thead>
<tr>
<th>Option</th>
<th>Value</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACTION</td>
<td>NONE</td>
<td>No action is performed at the end of power up.</td>
</tr>
<tr>
<td></td>
<td>AUTO SCAN</td>
<td>The camera performs an auto scan at the end of power up: the camera performs a 360 horizontal scan operation.</td>
</tr>
</tbody>
</table>

Screen 31: Power UP Sub-Menu
The camera performs a random scan at the end of power up: the camera performs a random 360° scan pausing for approximately 2" every 142°.

The camera performs a frame scan at the end of power up: the horizontal scan is performed in the SET SCAN limits.

The camera goes to preset 1 or 8 at the end of power up.

The camera performs one of the 4 patterns at the end of power up.

The camera performs a cruise at the end of power up: the camera runs a cycle consisting of up to 30 preset positions.

The camera performs tracking action at the end of power up. This is only available for the tracking PTZ’s.

### Table 20

| **RANDOM SCAN** | The camera performs a random scan at the end of power up: the camera performs a random 360° scan pausing for approximately 2" every 142°. |
| **FRAME SCAN** | The camera performs a frame scan at the end of power up: the horizontal scan is performed in the SET SCAN limits. |
| **PRESET 1/ PRESET 8** | The camera goes to preset 1 or 8 at the end of power up. |
| **PATTERN 1 ~ 4** | The camera performs one of the 4 patterns at the end of power up. |
| **CRUISE** | The camera performs a cruise at the end of power up: the camera runs a cycle consisting of up to 30 preset positions. |
| **TRACKING** | The camera performs tracking action at the end of power up. This is only available for the tracking PTZ’s. |

### 4.5.3.5. CRUISE SETTING

#### CRUISE

----------------------------------------

1. **Dwell Time<SECS>**: 5
2. **Cruise Tracking**: OFF
3. **Preset List**: 1
   1 ON 0 OFF
   1234567890 <PRESET 1-10>
   0000000000
4. **BACK**
5. **EXIT**

Screen 32: Cruise
The **CRUISE** function is used to make the camera run a cycle consisting of up to 30 preset positions.

This menu item is used to enable each of the preset positions used in the cruise cycle.

For the cruise cycle to be effective, the preset positions must be actually stored.

<table>
<thead>
<tr>
<th>Option</th>
<th>Value</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>DWELL TIME &lt;SECS&gt;</td>
<td>5 ~ 250</td>
<td>Duration (in seconds) of the dwelling time on each presetting.</td>
</tr>
<tr>
<td>CRUISE TRACKING</td>
<td>ON/OFF</td>
<td>Set tracking or not when the dome is cruising.</td>
</tr>
<tr>
<td>PRESET LIST</td>
<td>1 ~ 3</td>
<td>Value 1 selects the first group of Presets from 1 to 10, value 2 selects the second group from 11 to 20, and value 3 selects the third group from 21 to 30. The following 10 digits (1/10) are used to switch the corresponding preset in the corresponding ten (1-10, 11-20, 21-30) either on or off (1=ON; 0=OFF).</td>
</tr>
</tbody>
</table>

Table 21

4.5.3.6. **CLEAR SET**

```plaintext
CLEAR SET

-----------------------
1. <CLEAR ZONES>
2. <CLEAR PRESETS>
3. <CLEAR PATTERNS>
4. <LOAD DEFAULTS>
5. BACK
6. EXIT

Screen 33: Clear Set Submenu
```

This menu is used to delete the settings of several elements at one time.

<table>
<thead>
<tr>
<th>Option</th>
<th>Value</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Option</td>
<td>Value</td>
<td>Explanation</td>
</tr>
<tr>
<td>-------------------</td>
<td>-------</td>
<td>---------------------------------</td>
</tr>
<tr>
<td>CLEAR ZONES</td>
<td></td>
<td>This option is used to delete all the zone settings.</td>
</tr>
<tr>
<td>CLEAR PRESETS</td>
<td></td>
<td>This is used to delete all the Presets.</td>
</tr>
<tr>
<td>CLEAR PATTERNS</td>
<td></td>
<td>This is used to delete all the pattern settings.</td>
</tr>
<tr>
<td>SET DEFAULT</td>
<td></td>
<td>This performs a total reset and loads the default settings. The operations may take a few seconds (approximately 20 seconds): the message &quot;WAIT&quot; will appear on the monitor.</td>
</tr>
</tbody>
</table>

### 4.5.4. ALARM

In the main menu, select <ALARM> and the corresponding submenus to access the other menus.

```
ALARM
-------------------
1. ALARM NUMBER: 1
2. SEQUENCE (SECS): 1
3. ALARM ACT: NONE
4. ALARM AUX: OFF
5. ALARM CONTACT: OFF
6. <CLEAR SET>
7. DWELL TIME:<SECS>:1: 0
8. BACK
9. EXIT
```

Screen 34: Alarm

The camera has 4 alarm inputs and 2 alarm outputs.
The actions defined by the user may be associated to an alarm.
The camera has 2 alarm outputs (AUX1 & AUX2) which may be programmed to activate the external devices in the case of alarm. The 2 outputs closed to ground.

<table>
<thead>
<tr>
<th>Option</th>
<th>Value</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALARM NUMBER</td>
<td>1 ~ 4</td>
<td>This option allows selecting one of the 4</td>
</tr>
<tr>
<td>ALARM ACT</td>
<td>Description</td>
<td></td>
</tr>
<tr>
<td>-----------------</td>
<td>--------------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>SEQUENCE (SECS)</td>
<td>Duration time (in seconds) of the action related to each alarm when several alarms occur at the same time.</td>
<td></td>
</tr>
<tr>
<td>NONE</td>
<td>No action occurs during the alarm.</td>
<td></td>
</tr>
<tr>
<td>PRESET</td>
<td>The camera goes to the corresponding presetting following the alarm (correspondence is fixed: Alarm 1 - Preset 1; Alarm 2 - Preset 2, etc.).</td>
<td></td>
</tr>
<tr>
<td>PATTERN</td>
<td>The alarm performs the corresponding pattern following the alarm (correspondence is fixed: Alarm 1 - Pattern 1; Alarm 2 - Pattern 2; etc.)</td>
<td></td>
</tr>
<tr>
<td>AUTO SCAN</td>
<td>The camera performs an auto scan after the alarm: the camera performs a 360° horizontal scan operation.</td>
<td></td>
</tr>
<tr>
<td>RANDOM SCAN</td>
<td>The camera performs a random scan after the alarm: the camera performs a random 360° scan pausing for approximately 2&quot; every 142°.</td>
<td></td>
</tr>
<tr>
<td>FRAME SCAN</td>
<td>The camera performs a frame scan after the alarm: the horizontal scan is performed in the SET SCAN limits.</td>
<td></td>
</tr>
<tr>
<td>CRUISE</td>
<td>The camera performs a cruise after the alarm: the camera runs a cycle of up to 30 preset positions.</td>
<td></td>
</tr>
<tr>
<td>TRACKING</td>
<td>The camera performs a tracking operation after the alarm, starting from the preset position associated with the alarm. This is only available for tracking ptz.</td>
<td></td>
</tr>
<tr>
<td>ACTIVATE AUX</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OFF</td>
<td>No action occurs after the alarm.</td>
<td></td>
</tr>
<tr>
<td>AUX1</td>
<td>AUX1 output is activated following the alarm: e.g. a siren.</td>
<td></td>
</tr>
<tr>
<td>AUX2</td>
<td>AUX2 output is activated following the alarm: e.g. a siren.</td>
<td></td>
</tr>
<tr>
<td>ALARM CONTACT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ON/OFF</td>
<td>Alarm output polarity: normally open (ON)</td>
<td></td>
</tr>
</tbody>
</table>
or normally closed (OFF).

The circuit will open to generate an alarm if it is "NC" and will close if it is "NO".

<table>
<thead>
<tr>
<th>ALARM SETTINGS</th>
<th>This submenu contains the alarm settings.</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLEAR SETTINGS</td>
<td>This submenu is used to delete the alarm programming.</td>
</tr>
<tr>
<td>DWELL TIME 1</td>
<td>0 ~ 30</td>
</tr>
<tr>
<td>DWELL TIME 2</td>
<td>0 ~ 30</td>
</tr>
</tbody>
</table>

Table 23

If an alarm is triggered during any automatic operation of the camera (Pattern, Auto Tracking, etc.), the operation in progress is stopped and the camera executes the action that has been set in the ALARM ACT menu:

- In the event of Preset action, the camera moves to the preset position. Then, if the option PARK ACTION is set to execute an action, the action will be executed after the PARK TIME period has expired.

- In the event of "PATTERN, CRUISE" actions, the action are executed by the camera permanently and can only be stopped by one of the following actions: any command sent by a controller or any alarm event.

4.5.5. TRACK
The auto tracking function is used to automatically track moving objects by detecting grayscale variations in the frame.

<table>
<thead>
<tr>
<th>Option</th>
<th>Value</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEFAULT SETTING</td>
<td></td>
<td>This function is used to load the auto tracking default settings.</td>
</tr>
<tr>
<td>SIZE SNS</td>
<td>LARGE/MEDIUM/SMALL</td>
<td>This option defines the total dimensions of the object to be tracked. The parameters are LARGE/MEDIUM/SMALL. An object larger than one fourth of the screen is LARGE. An object smaller than one eighth of the screen is SMALL.</td>
</tr>
<tr>
<td>GRAY SNS</td>
<td>HIGH/MEDIUM/LOW</td>
<td>This option determines the auto tracking sensitivity. The sensitivity measures the grey scale variations of a certain point in the frame in the unit of time.</td>
</tr>
<tr>
<td>LOST ACT</td>
<td>HOME N TRA</td>
<td>This option is used to establish the action to be performed if the camera loses the tracked object: the HOME N TRA option commands the camera to go back to preset number 1 and tracking is enabled from this position.</td>
</tr>
<tr>
<td>------------</td>
<td>------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>KEEP TRACK</td>
<td></td>
<td>The KEEP TRACK option keeps the camera in the position reached and the tracking function is kept on waiting for an object to be intercepted again.</td>
</tr>
<tr>
<td>STOP TRACK</td>
<td></td>
<td>The STOP TRACK option leaves the camera in the position reached and deactivates the tracking function.</td>
</tr>
<tr>
<td>ZOOM SETTING</td>
<td>OFF, 1 ~ 18</td>
<td>This option determines the maximum zoom value that the camera / may use for tracking the object.</td>
</tr>
<tr>
<td>WAIT TIME</td>
<td></td>
<td>This option determines the time which must elapse before performing an action after losing a motion in frame. The action (LOST ACT) may consist in:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- The camera goes back to preset number 1 and tracking is enabled from this position. (HOME N TRA).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- The camera is left in the position reached and the tracking function is kept on waiting for an object to be intercepted again (KEEP TRACK). The camera is left in the position reached and deactivates the tracking function (STOP TRACK).</td>
</tr>
<tr>
<td>TRACKING BOUNDARY</td>
<td>UP/DOWN/LEFT/RIGHT</td>
<td>This option is used to define the zone in which the camera performs the tracking.</td>
</tr>
<tr>
<td>AUX</td>
<td>OFF, 1, 2</td>
<td>This option is used to activate one of the 2 alarm outputs if the tracking function is on (OFF = no active alarm output).</td>
</tr>
</tbody>
</table>
| TRACKING   | AUTO, 1 ~ 63 | This option establishes the camera
SPEED

movement speed. If AUTO is selected, the camera is automatically “adapted” to the motion of the target. The MANUAL options allow selecting the expected speed of the object to be tracked (1 slow, 63 fast).

<table>
<thead>
<tr>
<th>TRACKING TIME</th>
<th>AUTO, 1~15 (MINUTES)</th>
</tr>
</thead>
</table>

This option allows setting the max. Tracking duration, in minutes, during which the camera automatically tracks moving objects.

Once the tracking time has expired, the camera executes the action set in the option "LOST ACT", independently of the movement in the scene.

If the value "AUTO" is set, there is no time limitation on the tracking action and, in case of no movement in the scene at all, the camera executes the option "WAIT TIME".

Table 24

TRACKING BOUNDARY submenu
Operations needed to establish an intervention zone for the tracking function.

Screen 36: Tracking Boundary Sub-Menu

<table>
<thead>
<tr>
<th>Option</th>
<th>Value</th>
<th>Explanation</th>
</tr>
</thead>
</table>
**Table 25**

<table>
<thead>
<tr>
<th>BOUNDARY LIMIT</th>
<th>ON/OFF</th>
<th>This switches tracking function intervention zone on and off.</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLEAR BOUNDARY</td>
<td></td>
<td>This deletes the intervention area.</td>
</tr>
<tr>
<td>LEFT LIMIT</td>
<td>ON/OFF</td>
<td>Left limit of the intervention zone.</td>
</tr>
<tr>
<td>RIGHT LIMIT</td>
<td>ON/OFF</td>
<td>Right limit of the intervention zone.</td>
</tr>
<tr>
<td>UP LIMIT</td>
<td>ON/OFF</td>
<td>Upper limit of the intervention zone.</td>
</tr>
<tr>
<td>DOWN LIMIT</td>
<td>ON/OFF</td>
<td>Lower limit of the intervention zone.</td>
</tr>
</tbody>
</table>

### Advice for Correct Auto Tracking Use

#### General warnings

- ☑ The tracking function should mainly be used in indoor environments. Outdoor use is highly problematic: the variety of objects (leaves, flags, litter, etc.) moved by the wind makes use unreliable. Also the Veilux VP-ATDNC12X will only zoom up to 2X max while auto tracking.

- ☑ Provide the best lighting possible in the detection zone: in poor lighting conditions, the inevitable presence of noise on the image makes grayscale variations extremely critical. In poor lighting conditions, the camera may easily lose the tracked object.

- ☑ If IR illuminators are used, remember that:
  - The camera must be programmed to operate in B/W only because the Slow Shutter will make tracking unreliable in color mode
  - The lighting entirely covers the frame where motion is tracked, possibly by restricting the range of action of the camera in tracking mode (using the TRACKING BOUNDARY option).

- ☑ Avoid background objects in the frame which could trick the motion detector, such as blinds, gates, doors with grid and objects with very marked, contrasting contours. A checker board background is certainly the worst condition for satisfactory operation.

- ☑ Do not use the privacy zone function in frames where auto tracking is used: the privacy zone can trick the auto tracking function.

- ☑ Do not use the auto tracking function if the object to be tracked and/or monitored moves too fast.

#### Recommended control parameters

**SIZE SENS**: select **SMALL** particularly in poor lighting conditions to improve performance.
GRAY SENS: most false alarms are caused by the tracking of unexpected objects. For this reason, it is preferable to select low sensitivity.

ZOOM SETTING: it is advisable to use the lowest possible zoom values. Excessive detail makes tracking difficult (the movement must be fastener and consequently or the risk of losing the object is much higher).

WAIT TIME: particularly, in the case of poor lighting conditions or frames with interference, it is preferable to set the lowest possible time to prevent the camera from constantly tracking unexpected objects (e.g. “video noise” in the frame).

TRACKING SPEED: the AUTO setting should always be preferred, unless the object to be tracked does not always move at low, constant speed.

TRACKING BOUNDARY: it is strongly advised to delimit the tracking zone, avoiding including unnecessary parts in the frame.

4.5.6. EVENT

In the main menu, select <EVENT> and the corresponding submenus to access the menus.
<table>
<thead>
<tr>
<th>Option</th>
<th>Value</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>EVENT NUMBER</td>
<td>1~4</td>
<td>This option is used to select a presetting for entering a descriptive label. This operation is allowed for up to 4 Presets. Press the OPEN button and use the joystick to set the number of the event to the stored. Press OPEN to confirm.</td>
</tr>
<tr>
<td>EDIT EVENT LABEL</td>
<td></td>
<td>This submenu is used to access writing mode for associating a label to an event. Specific operating point of reference to the edit of the preset title.</td>
</tr>
<tr>
<td>EDIT EVENT</td>
<td></td>
<td>Edit event submenu</td>
</tr>
<tr>
<td>CLEAR EVENT</td>
<td></td>
<td>This submenu is used to clear all the settings of the selected event. Press the OPEN button to clear the selected event, press CLOSE to cancel.</td>
</tr>
<tr>
<td>LIST EVENT</td>
<td></td>
<td>The event list submenu. Show all the number and state of the events established.</td>
</tr>
</tbody>
</table>
EDIT EVENT submenu

This includes the operations needed for programming an event.

1) Use the joystick to point the cursor to "EDIT EVENT" option.
2) Press OPEN. The following menu will appear on the display:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EDIT EVENT</strong></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>1. EVENT NUMBER:</td>
<td>1</td>
</tr>
<tr>
<td>2. EVENT LABEL:</td>
<td></td>
</tr>
<tr>
<td>3. EVENT ACTIVE:</td>
<td>OFF</td>
</tr>
<tr>
<td>4. START TIME:</td>
<td>00:00</td>
</tr>
<tr>
<td>5. STOP TIME:</td>
<td>00:00</td>
</tr>
<tr>
<td>6. ACTION:</td>
<td>AUTO SCAN</td>
</tr>
</tbody>
</table>

**GO TO NEXT PAGE**
### Option | Value | Explanation
--- | --- | ---
**EVENT LABEL** | Show the label of the event. 
**EVENT ACTIVE** | ON/OFF | Set of events and non-implementation of the implementation parameters on and off, set to open when the implementation of the stipulated time period selected events, set to off when the selected event does not perform. 
**START TIME** | Set the start time of the selected events. 
**STOP TIME** | Set the stop time of the selected events. 
**ACTION** | Select the type of the event.
- AUTO SCAN
- TRACKING
- CRUISE
- PATTERN 1~4
- PRESET 1 OR 8
- FRAME SCAN
- RANDOM
Select which day(s) of the week when the event occurs.

Select the month of the selected holiday.

Show the number of the event.

**EDIT HOLIDAY Submenu**

This includes the operations needed for programming a holiday.

1) Use the joystick to point the cursor to "EDIT HOLIDAY" option.

2) Press OPEN. The following menu will appear on the display:

<table>
<thead>
<tr>
<th>Option</th>
<th>Value</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>HOLIDAY NUMBER</td>
<td>1~14</td>
<td>Select number of the holiday.</td>
</tr>
<tr>
<td>MONTH</td>
<td>JAN~DEC</td>
<td>Select the month of the selected holiday.</td>
</tr>
<tr>
<td>DAY</td>
<td>1~31</td>
<td>Select the date of the selected holiday.</td>
</tr>
</tbody>
</table>

**4.5.7. SET DEFAULT**

This menu is to set the camera or all PTZ parameters to factory default.

```plaintext
SET DEFAULT
---------------------
- -
1. `<RESET CAMERA>`
2. `<RESET ALL>`
3. BACK
4. EXIT
```

**Screen 41: Set Default**

**4.6. SPECIAL CONTROL PANEL COMMANDS**

The camera can be programmed and operated using various quick control panel commands.

<table>
<thead>
<tr>
<th>Control panel command</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>95 + CALL</td>
<td>Accesses main menu</td>
</tr>
<tr>
<td>PRESET # + HOLD DOWN</td>
<td>Stores preset position (Preset) xxx.</td>
</tr>
<tr>
<td>SHIFT KEY + CALL</td>
<td></td>
</tr>
<tr>
<td>PRESET # + CALL</td>
<td>Recalls preset position (Preset) xxx.</td>
</tr>
<tr>
<td>80 + CALL</td>
<td>Starts the tracking function</td>
</tr>
<tr>
<td>81 + CALL</td>
<td>Stops the tracking function</td>
</tr>
<tr>
<td>82 + CALL</td>
<td>Starts the cruise function</td>
</tr>
<tr>
<td>83 + CALL</td>
<td>Delete all Presets</td>
</tr>
<tr>
<td>84 + CALL</td>
<td>Start pattern 1</td>
</tr>
<tr>
<td>85 + CALL</td>
<td>Start pattern 2</td>
</tr>
<tr>
<td>86 + CALL</td>
<td>Start pattern 3</td>
</tr>
<tr>
<td>87 + CALL</td>
<td>Start pattern 4</td>
</tr>
<tr>
<td>84 + HOLD DOWN SHIFT</td>
<td>Create a pattern 1</td>
</tr>
<tr>
<td>KEY + CALL</td>
<td></td>
</tr>
<tr>
<td>85 + HOLD DOWN SHIFT</td>
<td>Create a pattern 2</td>
</tr>
</tbody>
</table>
When storing Presets, it is important to remember that some are reserved and cannot be either stored or used for positioning the camera.

- Presets from 80 to 99 are reserved for management controls
- Presets from 100 to 103, 170 to 173 are reserved for Tracking and Pattern controls

<table>
<thead>
<tr>
<th>KEY + CALL</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>86 + HOLD DOWN SHIFT KEY + CALL</td>
<td>Create a pattern 3</td>
</tr>
<tr>
<td>87 + HOLD DOWN SHIFT KEY + CALL</td>
<td>Create a pattern 4</td>
</tr>
<tr>
<td>88 + CALL</td>
<td>Start park action function</td>
</tr>
<tr>
<td>89 + CALL</td>
<td>Stop park action function</td>
</tr>
<tr>
<td>97 + CALL</td>
<td>Start random scan function</td>
</tr>
<tr>
<td>98 + CALL</td>
<td>Start frame scan function</td>
</tr>
<tr>
<td>99 + CALL</td>
<td>Start auto scan function</td>
</tr>
</tbody>
</table>

Table 29
## TROUBLE SHOOTING

<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible Reason</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power on normally but no video signal</td>
<td>Wrong wire connections</td>
<td>Check and reconnect wires</td>
</tr>
<tr>
<td></td>
<td>Wrong or bad power source</td>
<td>Change power source</td>
</tr>
<tr>
<td></td>
<td>Fuse broken.</td>
<td>Change fuse</td>
</tr>
<tr>
<td></td>
<td>Power cable is disconnected</td>
<td>Reconnect power wiring</td>
</tr>
<tr>
<td>Pan/Tilt not initializing when power on</td>
<td>Address, protocol, and baud rate is not correctly set</td>
<td>Check and set the parameters again.</td>
</tr>
<tr>
<td></td>
<td>RS-485 cable is not correctly connected</td>
<td>Check and reconnect RS485 cable</td>
</tr>
<tr>
<td>Video is not stable</td>
<td>Video cable is wrong</td>
<td>Check and reconnect video</td>
</tr>
<tr>
<td></td>
<td>Power source is wrong</td>
<td>Change the power source</td>
</tr>
<tr>
<td>Control center is not stable</td>
<td>RS-485 wiring error</td>
<td>Check and reconnect the RS485</td>
</tr>
</tbody>
</table>