SERIES SD-Dxxx

Cameras

High Speed Dome AHD / analog

D27HD-SD / SD-D27FD

INTRODUCTION

The cameras speed domes I'm cameras Fully remote controllable. They allow an operator to rotate the camera in all directions and zoom in pleasure on the scenes of most interest.

Can also perform movements automatic pre-programmed according to specific monitoring requirements.

What is PTZ

The cameras controlled remotely are also defined PTZ, which stands for PAN / TILT / ZOOM. PAN is the movement in horizontal, TILT movement in vertical and ZOOM control of the lens focal length.

Controlling the speed dome

The speed-dome cameras are controlled with special console of command or through the DSE digital video recorders. Digital video recorders also allow control of remote cameras via network or Internet, using both PC and smart phone or tablet. The command of the cameras is carried out on twisted pair with Pelco D Protocol today standard consolidated in the sector.

SPEED DOME

The product range includes several accessories for the assembly and control of motorized cameras

Fixing bars

SD-dst2
Wall Bracket

SD-DST3
Ceiling Bracket

SD-DST4
Mounting Collar pole brackets for SD-CST2

SD-DST5
Accessory for mounting at an angle to brackets SD-CST2

Control panel

SD-CON3D
Control panel for SD series cameras with 3D joystick for control movements

MAIN SPECIFICATIONS

analog Cameras

High-Speed-Dome

SD-D27FD

Camera Type	Speed dome motorized analog + AHD	Speed dome motorized analog + AHD
Color or black / white	colors	colors
video standards	PAL / AHD	PAL / AHD
Type CCD sensor	Sony Exmor TM	Sony Exmor TM
CCD Size	1/3 "	1/3 "
Number of pixels in the CCD	1305 (L) x1049 (H) 1.3 Megapixel	1920 (L) x1080 (H) 2 Megapixel
Analog CVBS Resolution	1000 TV lines	1000 TV lines
AHD Resolution	HD720P 1280x720	HD1080P 1920x1080
Video Signal Process	Digital - DSP	Digital - DSP
Video Signal Synchronization	internal	internal
Minimum required illumination for shooting	0.01 Lux Day / Night 0 Lux with IR	0.01 Lux Day / Night 0 Lux with IR
gamma correction	0.45	0.45
Signal / noise ratio (S / N ratio)	Over 50 dB	Over 50 dB
Automatic Gain Control (AGC)	Yes	Yes
Auto white balance (AWB)	Yes	Yes
Automatic electronic shutter	1/50 ... 1 / 50,000 s.	1/50 ... 1 / 50,000 s.
Compensation against the light (BLC)	It excludable	It excludable
Fog function (defog)	Yes	Yes
3DNR 3D noise reduction	Yes	Yes
Day / Night function (color day / night bn)	Yes	Yes
Compatibility with IR	Yes	Yes
ICR IR filter removal	Yes	Yes
Windscreen wiper	-	-
image Adjustments	Contrast, Brightness, Color	Contrast, Brightness, Color
Mirror Image (MIRROR)	Yes	Yes
Function Digital Slow Shutter (DSS)	No	No
optical Zoom	27x	27x
digital zoom	-	-
Focal Lens (mm.)	Min. 4.7 (wide angle) Max. 90.00 (tele)	Min. 4.7 (wide angle) Max. 90.00 (tele)
Autofocus	Yes	Yes
Infrared lighting compatible	850 nm	850 nm
Integrated IR illuminator	120 m.	120 m.
Intelligent-IR illuminator with adjustable power according Zoom	Yes	Yes
Auto Tracking	No	No
video Output	Composite video BNC fem. 1V pp 75 Ohms CVBS or AHD	Composite video BNC fem. 1V pp 75 Ohms CVBS or AHD

audio Output	Not present	Not present
the camera power supply	DC 12V	DC 12V
Power consumption	Max. 38W	Max. 38W
Power supply 230VAC / 12VDC included	No (recommended min. 3A)	No (recommended min. 3A)
Support bracket included	No Please order dst2-SD / 3	No Please order dst2-SD / 3
Bracket suporto compatible	SD-dst2 / 3 (wall / ceiling)	SD-dst2 / 3 (wall / ceiling)
BUS for communication command	RS485	RS485
Speed RS485 protocol (baud rate)	1200-2400 - 4800 - 9600 selectable	1200-2400 - 4800 - 9600 selectable
Protocol RS485 BUS	Pelco P, Pelco D	Pelco P, Pelco D
Maximum number of cameras connected to RS485	256	256
Maximum control console RS485	32	32
Connections to the camera	Twisted RS485A / RS485B + Video OUT BNC connector female + power cables	Twisted RS485A / RS485B + Video OUT BNC connector female + power cables
Recommended cable for the realization of the RS485 BUS	Twisted pair 0.5 mm Length. max 1200 m.	Twisted pair 0.5 mm Length. max 1200 m.
Installation	Indoor / Outdoor	Indoor / Outdoor
housing material	Aluminum	Aluminum
Protection Housing	IP66	IP66
Speed horizontal movement (PAN)	0.1 ° - 240 ° / sec.	0.1 ° - 240 ° / sec.
Speed vertical movement (TILT)	0.01 ° - 120 ° / sec.	0.01 ° - 120 ° / sec.
Excursion horizontal movement (PAN)	360 ° without limit switches	360 ° without limit switches
Excursion vertical movement (TILT)	0-90 ° (180 ° with AUTOFLIP)	0-90 ° (180 ° with AUTOFLIP)
Presets (PRESET)	Max.256	Max.256
Rotation speed between presets	PAN 400 ° / sec. TILT 120 ° / sec.	PAN 400 ° / sec. TILT 120 ° / sec.
panoramic movement between two limit switches (SCAN)	max.8	max.8
Automatic movement among more PRESET (or CRUISE TOUR)	max.8	max.8
Registration paths (PATTERNS)	max.8	max.8
housing material	Aluminum and polycarbonate shell	Aluminum and aluminum cap polycarbonate
Operating temperature	- 35 ° ... + 60 ° C	- 35 ° ... + 60 ° C
External dimensions (mm.)	Diam 210 x 320 (H)	Diam 210 x 320 (H)

INSTALLATION OF CAMERA

The cameras SD-D series are packed carefully to prevent damage during transport. First, you must check the received material. The speed dome camera that you have purchased is protected by packing items that must be carefully removed before using.

Cable connections

From a Speed Dome SD-D series camera protrudes a cable fitted with the following connections:

- **1** 12VDC power supply with 5.5 mm plug.
- **video Output** BNC female
- **2 Cables** BUS **RS485** ORANGE (A +) / YELLOW (B-)

To structure a system of Speed Dome cameras must prepare three types of wiring:

- **Supply.** IS' can feed there camera locally with a adapter 220VAC / 12VDC by at least 3A (not supplied) or prepare a 12VDC network with cables with a suitable section so as to avoid excessive voltage drop.

- **Video connection.** It is carried out as for any traditional analog CCTV camera. The video signal produced by this camera can be set to composite video CVBS or AHD depending on the DVR that is to be connected, but there are no differences in the type of wiring of these two technologies. You typically use RG59 coaxial cable for distances up to 2-300 meters. E 'can also carry the video signal on twisted pairs twisted using special converters (RE-BNCRJ1) up to 200 m .. I for twisted cable converters are also available in active version to reach distances over 200 m.

- **Telemetry.** It is of the serial connection that leads the movement commands to the camera. The SD series cameras use an RS485 serial line (RS485 BUS) which is formed with a pair of twisted wires. E 'essential that the two cables are wound between them and non-parallel. In principle the RS485 serial line can extend up to 1200 meters in length and along it are connected in cascade devices. The section of the cables closely depends on the length of the connection: for medium distances is sufficient a section of 0.5 mm, while if it is necessary to reach considerable distances (max. 1200 m.) Should be used upper sections of 1 mm or even 2.5 mm. In carrying out the wiring is recommended, but not necessary to use shielded cable. The CAT5 network cable, containing 4 twisted pairs is great for the realization of a RS485 BUS. The cameras and the console must be connected in cascade ie entering and exiting from the clamps 2 and RS485A RS485B. It 'important not to confuse the two cables (AB) during the connection of the equipment.

The order in which the devices are connected to BUS has not relevance. Every equipment will be identified by its own unique address, adjustable via DIP switches, which will properly address the instructions. E 'can be connected to the same BUS up to 256 cameras.

The console does not require any addressing, while for the cameras is necessary to set a different address for each camera, as described below.

Controls

The movements of these cameras are controlled via the common protocol PELCO P / D, which has become the industry standard. E 'can send commands with the appropriate console for dome cameras or through the DVR equipped with RS485 port.

Address, Protocol and Baud Rate

After connecting the camera you need to set the communication parameters in such a way that it is able to communicate with the control members. All elements of the RS485 BUS, both cameras that control devices must use the same protocol (PELCO D standard) and the same transmission speed (baud 2400,4800,9600)

Each camera must have an address different from the other in order to be identified along the BUS.

Of these 3 parameters: Protocol, Baud rate, Address, the first two are self-recognition, while the address is set using DIP switches within the camera.

Set protocol and Baud Rate

In these cameras you do not need to set either the protocol or its speed. There

camera is able to to recognize automatically the protocol (Pelco P or D) and the speed sent from the control unit and to adapt automatically.

Set the address

The address of the camera is imposed by the microswitches present to board room. This type of assignment is defines HARDWARE ADDRESS.
It 'also possible, as we will see a software assignment via the OSD menu of the camera overlooking hardware assignment but it is good to reserve a qualified expert when you need to operate a lot of speed dome cameras in the same installation.

The microswitches to set the hardware address are housed in a compartment protected by a watertight cover so as to be always accessible also installed camera.

To set the address it uses the first 8 microswitch SW1 to the left block (1 to 8) according to **the following table. The camera is set with address 1 Factory.** E 'can set any address between 1 and 255 as long as different for each camera.

ADDRESS	SW.1	sw.2	sw.3	sw.4	sw.5	sw.6	sw.7	Sw.8
1	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF
2	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF
3	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF
4	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF
5	ON	OFF	ON	OFF	OFF	OFF	OFF	OFF
6	OFF	ON	ON	OFF	OFF	OFF	OFF	OFF
7	ON	ON	ON	OFF	OFF	OFF	OFF	OFF
8	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF
9	ON	OFF	OFF	ON	OFF	OFF	OFF	OFF
10	OFF	ON	OFF	ON	OFF	OFF	OFF	OFF
11	ON	ON	OFF	ON	OFF	OFF	OFF	OFF
12	OFF	OFF	ON	ON	OFF	OFF	OFF	OFF
13	ON	OFF	ON	ON	OFF	OFF	OFF	OFF
14	OFF	ON	ON	ON	OFF	OFF	OFF	OFF
15	ON	ON	ON	ON	OFF	OFF	OFF	OFF
16	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF
17	ON	OFF	OFF	OFF	ON	OFF	OFF	OFF
18	OFF	ON	OFF	OFF	ON	OFF	OFF	OFF
19	ON	ON	OFF	OFF	ON	OFF	OFF	OFF
20	OFF	OFF	ON	OFF	ON	OFF	OFF	OFF
21	ON	OFF	ON	OFF	ON	OFF	OFF	OFF
22	OFF	ON	ON	OFF	ON	OFF	OFF	OFF
23	ON	ON	ON	OFF	ON	OFF	OFF	OFF
24	OFF	OFF	OFF	ON	ON	OFF	OFF	OFF
25	ON	OFF	OFF	ON	ON	OFF	OFF	OFF
26	OFF	ON	OFF	ON	ON	OFF	OFF	OFF
27	ON	ON	OFF	ON	ON	OFF	OFF	OFF
28	OFF	OFF	ON	ON	ON	OFF	OFF	OFF
29	ON	OFF	ON	ON	ON	OFF	OFF	OFF
30	OFF	ON	ON	ON	ON	OFF	OFF	OFF
31	ON	ON	ON	ON	ON	OFF	OFF	OFF
32	OFF	OFF	OFF	OFF	OFF	ON	OFF	OFF
33	ON	OFF	OFF	OFF	OFF	ON	OFF	OFF
34	OFF	ON	OFF	OFF	OFF	ON	OFF	OFF
35	ON	ON	OFF	OFF	OFF	ON	OFF	OFF
36	OFF	OFF	ON	OFF	OFF	ON	OFF	OFF
37	ON	OFF	ON	OFF	OFF	ON	OFF	OFF
38	OFF	ON	ON	OFF	OFF	ON	OFF	OFF
39	ON	ON	ON	OFF	OFF	ON	OFF	OFF
40	OFF	OFF	OFF	ON	OFF	ON	OFF	OFF
41	ON	OFF	OFF	ON	OFF	ON	OFF	OFF
42	OFF	ON	OFF	ON	OFF	ON	OFF	OFF
43	ON	ON	OFF	ON	OFF	ON	OFF	OFF
44	OFF	OFF	ON	ON	OFF	ON	OFF	OFF

45	ON	OFF	ON	ON	OFF	ON	OFF	OFF
46	OFF	ON	ON	ON	OFF	ON	OFF	OFF
47	ON	ON	ON	ON	OFF	ON	OFF	OFF
48	OFF	OFF	OFF	OFF	ON	ON	OFF	OFF
49	ON	OFF	OFF	OFF	ON	ON	OFF	OFF
50	OFF	ON	OFF	OFF	ON	ON	OFF	OFF
51	ON	ON	OFF	OFF	ON	ON	OFF	OFF
52	OFF	OFF	ON	OFF	ON	ON	OFF	OFF
53	ON	OFF	ON	OFF	ON	ON	OFF	OFF
54	OFF	ON	ON	OFF	ON	ON	OFF	OFF
55	ON	ON	ON	OFF	ON	ON	OFF	OFF
56	OFF	OFF	OFF	ON	ON	ON	OFF	OFF
57	ON	OFF	OFF	ON	ON	ON	OFF	OFF
58	OFF	ON	OFF	ON	ON	ON	OFF	OFF
59	ON	ON	OFF	ON	ON	ON	OFF	OFF
60	OFF	OFF	ON	ON	ON	ON	OFF	OFF
...	... ..	... ..	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...
246	OFF	ON	ON	OFF	ON	ON	ON	ON
247	ON	ON	ON	OFF	ON	ON	ON	ON
248	OFF	OFF	OFF	ON	ON	ON	ON	ON
249	ON	OFF	OFF	ON	ON	ON	ON	ON
250	OFF	ON	OFF	ON	ON	ON	ON	ON
251	ON	ON	OFF	ON	ON	ON	ON	ON
252	OFF	OFF	ON	ON	ON	ON	ON	ON
253	ON	OFF	ON	ON	ON	ON	ON	ON
254	OFF	ON	ON	ON	ON	ON	ON	ON
255	ON	ON	ON	ON	ON	ON	ON	ON

Analog Video or AHD

This camera can operate either as a traditional analog cameras as AHD 720P cameras.

The AHD technology is the latest development in analog CCTV. Launched in May 2014 by Nextchip, world leader in the production of DSP for CCTV, the AHD technology allows analog cameras

reaching resolutions **HD720P (1280x720) and HD1080P (1920x1080)** previously obtainable only with IP technology or HD-SDI. These AHD cameras, video recorders combined with the latest generation of AHD, providing megapixel resolution, without

latency, maintaining the whole ease of installation of an analog system.
It is twice the resolution compared to traditional analog video.

In order to use the AHD technology you need a VCR that supports this technology. If you need to connect these cameras to a DVR in the previous generation 960H or D1 resolution is switchable video output AHD in CVBS composite video, achieving the same performance of our best analog cameras to 1000 TV lines.

AHD / CVBS Switching

The camera is supplied factory mode in which presumably will be used. If you buy the camera together with our DVR you will receive it in AHD mode. If the purchased individually for use with different devices you will receive it in CVBS mode. **It's possible switch the video output to CVBS in AHD and vice versa in the OSD menu of the camera.**

Proceed as follows:

1 - Call the Preset 103 to open the camera menu

With the ZOOM +/- button move to the third page of the programming menu and select OUTPUT

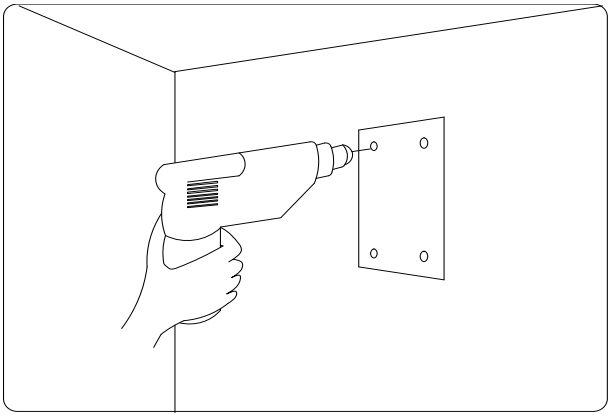
With FOCUS +/- button to choose the type of video signal: CVBS (analog) or AHD (video AHD) Then navigate to the page 4

Navigate to the item and confirm with SAVE FIRE +

mechanical assembly

The speed dome cameras SD-C can be installed for exterior wall and ceiling with the aid of SD-dst2 / 3 brackets that must be ordered separately.

In the pictures that follow the example of installing the wall bracket



- Fasten the wall bracket by plugs, taking care to leave the cable outlet at the center between the fixing holes.

- The connecting cables pass through the bracket

- Connect the camera and fasten it to the bracket with the supplied screws.

overvoltage protection

The overvoltages of atmospheric origin are the main cause of failure of the speed dome cameras in the exterior.

This camera is provided with protections against overvoltages able to protect it from atmospheric discharges minor up to 3000V. However in outdoor installations necessary to pay attention to the following general rules:

- Keep wiring at least 50 m away from high / medium voltage
- If you can make runs and cables under the protection of a cornice
- In routes outside the building, to use underground steel pipes with a good point grounding
- Avoid overhead cables
- If the zone and subject to strong temporal or is located in close proximity to electrical power stations or booths in

medium or high voltage use appropriate additional protections and possibly of a lightning conductor system.

BASIC OPERATIONS

Once properly installed the camera and arranged at least one control organ (keyboard or DVR) is possible to test the first operational commands. Below we listed the main controls through which it is possible to control the speed dome cameras.

On and Self Test

Powering the camera will start a sequence of automatic operations. The camera performs a series of movements and verifies the operation of the horizontal movement of the vertical movement and the camera body.

A monitor appear overlay the
Protocol, the communication speed and the address set in the camera via the microswitches. At the end of the automatic test the camera is ready to receive the incoming commands from the console.

Pan Tilt Control Manual

The first command to verify the correct
communication between the camera and the console is the displacement RIGHT / LEFT (PAN) and UP / DOWN (TILT) by acting on the console joystick.

If the camera does not react to the console commands it means that something is not in the choir communication. Check in order:

1 - That the two twisted wires leading to the RS485 or wire is not reversed (A with A and B to B). 2 - That the console or DVR are set with Pelco D protocol

3 - That on the console or DVR is selected the camera address to be controlled.

To facilitate these checks, the start screen of the camera summarizes all
his settings of
communication (protocol, speed and address)

manual ZOOM Command

The cameras are equipped with a 27x optical zoom. To control the zoom is possible to act on the keyboard ZOOM +/- buttons (or TELE / WIDE depending on the console). If you're using a so-called 3D console you can also control the zoom by rotating the head of the joystick.

If necessary, it is possible to change the focus by pressing the buttons FOCUS +/- (or NEAR / FAR depending on the console), but it is generally more practical to allow that the camera uses the autofocus function. The controls of the opening IRIS +/- Aperture are not normally allowed by the cameras factory settings.

Setting PRESET

The cameras are in degree to store predefined positions that can be called up quickly without having to manually move the joystick.

Each camera is able to store 80 PRESET each distinguished by its own value of XY coordinates, ZOOM and FOCUS.

The total number of manageable preset by the camera is actually 255, but only 1-80 presets are available to the user for predefined positions. To set a preset do the following:

- Select the camera to be controlled
- Acting on the joystick to position the camera in your favorite tune and adjust zoom and eventual fire
- Dial on the keyboard to set the preset number (1 to 80)

- Press on the keyboard the setting button generally referred to as PRESET The camera stores the preset. Each control center uses different wordings and sequences. To consult

accompanying documents
to the control mechanism for precise control mode.

Recalling Preset

Once you have stored presets for interest
You can easily recall from the keyboard acting as follows:

- Check that you have selected the camera
- Dial the number PRESET
- to press the button recall PRESET, generally CALL or PREVIEW depending on the console.

The camera automatically moves up to the stored position.

automatic movements

The cameras can perform automatic movements as scans
panoramic or sequences of
presets. Setting these movements you make in the programming menu that is described below. The initiation of these movements is carried out with the organ of control commands or by using the system presets.

System PRESET

Not all of the 255 camera presets are available for user customization; some are used by the camera for specific functionality and are denominated SYSTEM PRESET.

The system Preset allow access to the configuration of the camera and to impart quickly the main controls, such as the start of SCAN, and PATTERN CRUISE. Even the control console and provide DVR button to start automatic movements, but often, because of imperfect standardization of Pelco protocol may not be effective. The use of the system presets is instead always working on each type of control units.

The cameras in this range allows many operations with the use of the OSD menu system presets making even superfluous describe later.

It should be noted that the same system presets can have different functions depending on whether you sent the preset recall command (GO TO, CALL) or preset setting (SET). Refer to the following table.

PRESET	FUNCTION CONTROL		DESCRIPTION
GENERAL COMMANDS			
95	CALL	Opens General OSD	Recalling preset 95 opens the general OSD programming menu (see below)
103	CALL	Opens OSD menu of the camera module	Recalling the preset 103 opens the programming menu of the OSD only camera module (see below)
104	CALL	Closes OSD menu of the camera module	Closes an open menu with the preset 103
81	CALL	automatic IR	Sets the operation of the IR illuminators on with automatic day / night passage according to ambient brightness.
82	CALL	IR always on	Sets the operation of the IR illuminators on the night mode with recovery always B / N
83	CALL	IR always off	Sets the operation of the IR illuminators on the day shooting mode with more color
105	CALL	On / off speed control based on zoom	These cameras are able to change the speed of movement according to the zoom. This is convenient because it slows down the movement of the camera when it is set to a high zoom ratio which generally requires a more accurate positioning. Recalling the preset 105 enables and disables this function.
107	CALL	Reports in the default position	This preset allows you to return the camera to its factory location
137	CALL	On / off AUTOFLIP	This preset is used to enable and disable the autoflip function which intervenes when the camera is moved to tilt position beyond 90 °. If the autoflip the camera is enabled once the position reached 90 ° completes a rotation of 180 ° in order to continue the automatic vertical movement in the opposite direction. If the autoflip is disabled, the camera is not able to overcome the vertical angle of 90 °
139	CALL	It varies the threshold that regulates the power of the LEDs according to the zoom	This preset affects the behavior of the IR LEDs. To avoid glare due to excessive lighting, the camera turns on only 2 LEDs in wide-angle shots with zoom x1. As it zooms in to turn on 4:06 LED. If the switching thresholds do not adapt to your recovery and most desired illumination can call one or more times the preset 139. In so doing changing, in subsequent steps, the power-on mode of IR LED groups.

106	CALL	Restoring DEFAULT	Restore the values of the factory settings and erases all customizations as presets, etc. Tour Use this preset if you are not satisfied with the settings made or if these lead to unwanted behavior of the camera. After retrieving the preset wait even for one minute for the completion of the reset procedure during which the camera will not respond to external commands.
119	CALL	Reset	This preset allows to remotely reboot the camera without having to interrupt the power supply

SETTING ACTION HOME (HOME)

131	CALL	Set the main action of the camera	Call preset 131 and immediately initiate an automatic action (TOUR, SCAN, PATTERN). From this moment this action will become the primary action of the camera, and it will return to run automatically after a certain operator's idle time (factory 5 minutes).
130	CALL	Delete the primary action of the camera	Call preset 130 to delete the previous setting.
132	CALL	Increase of 1 min. downtime	If you set the main automatic action with 131 presets you can increase the idle time (default 5 minutes). Each booster 132 increases the preset time of 1 minute (10 minutes maximum, minimum 1 minute).
133	CALL	It reduces of 1 min. downtime	In contrast to the previous preset 132 it reduces a minute idle time

TOUR MANAGEMENT (CRUISE)

98181	CALL	Start TOUR 1	As CRUISE TOUR or refers to the display in sequence of several preset with a certain residence time on each one. The speed of movement during the tour is set in the OSD menu of the camera or with the 135/136 system presets (see below). The residence time of each camera is set with the system preset 123/124 (see below) The camera can handle up to 8 different cruise. Recalling the system presets 98 or 181 starts the CRUISE 1 among the presets 1-5. Any unplanned preset between 1 and 5 are ignored.
97182	CALL	Start TOUR 2	As above but between the preset 5-15
96183	CALL	Start TOUR 3	As above but among the presets 16-30
184	CALL	Start TOUR 4	As above but among the presets 31-50
185	CALL	Start TOUR 5	As above but between the preset 1-30
186	CALL	Start TOUR 6	As above but between the preset 1-40
187	CALL	Start TOUR 7	As above but between the preset 1-60
188	CALL	Start TOUR 8	As above but between the preset 1-80
123	CALL	Increase of 5 sec the dwell time during the TOUR	During a TOUR between different presets the camera is stationed for a certain time on every preset before moving on to the next. By default this time is set to 10 seconds. Recalling the preset 123 the parking time increases by 5 seconds.
124	CALL	Decreases of 5 sec the dwell time	Inversely to the previous preset 123, decreases by 5 seconds, the residence time during the cruise

		during TOUR	
135	CALL	Increase of 1 point, the speed of rotation during the TOUR	During a TOUR the camera moves between preset at a speed that can be adjusted from 1 (lowest speed) to 255 (maximum speed). The factory is set to the maximum speed: 255. Recalling the preset 135 is increased by one point this speed.
136	CALL	It decreases by 1 point the speed of rotation during the TOUR	Inversely to the previous preset 135, it decreases by 1 point the speed of rotation during the CRUISE.

MANAGEMENT SCAN

91/141 CALL		Start SCAN 1	As linear SCAN defines the horizontal continuous movement between two limit switches with the same level of TILT. The camera can handle up to 8 different scan with limit switches. The limit switches of the scan are set in the OSD configuration or by using from 81 to 96 presets system (see below). If you do not set the limit switches scan conitnua performs a 360 ° rotation Recalling the preset 91 or 141 starts the SCAN 1
92142	CALL	Start SCAN 2	As above but start the scan 2
93143	CALL	Start SCAN 3	As above but start the scan 3
144	CALL	Start SCAN 4	As above but start the scan 4
145	CALL	Start SCAN 5	As above but start the scan 5
146	CALL	Start SCAN 6	As above but start the scan 6
147	CALL	Start SCAN 7	As above but start the scan 7
148	CALL	Start SCAN 8	As above but start the scan 8
99/120 CALL		Start SCAN 360	Start a horizontal scanning without limit switches with continuous rotation at 360 ° from the position of the camera at that time.
81	SET	Sets the left limit of the SCAN 1	Position the camera at the point where you want to place the left edge of the scan 1 and the preset SET 81 to store it. Be careful not to use the preset recall command 81 (other function) but to setting.
82	SET	Sets the right limit of SCAN 1	Position the camera at the point where you want to set the right limit of the scan 1 and recall the preset 82 to store it. Be careful not to use the preset recall command 82 (other function) but to setting.
83	SET	Sets the left limit of the SCAN 2	As above for the scan 2
84	SET	Sets the right limit of SCAN 2	As above for the scan 2
85	SET	Sets the left limit of the SCAN 3	As above for the scan 3
86	SET	Sets the right limit of SCAN 3	As above for the scan 3
87	SET	Sets the left limit of the SCAN 4	As above for the scan 4
88	SET	Sets the right limit of SCAN 4	As above for the scan 4

89	SET	Sets the left limit of the SCAN 5	As above for the scan 5
90	SET	Sets the right limit of SCAN 5	As above for the scan 5
91	SET	Sets the left limit of the SCAN 6	As above for the scan 6
ninety two	SET	Sets the right limit of SCAN 6	As above for the scan 6
93	SET	Sets the left limit of the SCAN 7	As above for the scan 7
94	SET	Sets the right limit of SCAN 7	As above for the scan 7
95	SET	Sets the left limit of the SCAN 8	As above for the scan 8
96	SET	Sets the right limit of SCAN 8	As above for the scan 8
128	CALL	Increase of 1 point, the speed of rotation during the SCAN	During a linear SCAN the camera moves horizontally at a speed that can be adjusted from 1 (lowest speed) to 20 (maximum speed). The factory is set the speed: 5. Recalling the preset 128 is increased by one point this speed.
129	CALL	It decreases by 1 point the speed of rotation during the SCAN	Inversely to the previous preset 128, it decreases by 1 point the speed of rotation during the SCAN.

PATTERN MANAGEMENT

108151	CALL	Start PATTERN 1	A PATTERN is a sequence of movements and zoom prestored called up at any time. The recording of the sequence is carried out with the system presets 113..118, 121..122 and 159..174 as explained later .. The camera can store up to 8 different patttern. Recalling the preset 108 or 151 starts the PATTERN 1
109152	CALL	Start PATTERN 2	As above but starts the PATTERN 2
110153	CALL	Start PATTERN 3	As above but starts the PATTERN 3
111154	CALL	Start PATTERN 4	As above but starts the PATTERN 4
155	CALL	Start PATTERN 5	As above but starts the PATTERN 5
156	CALL	Start PATTERN 6	As above but starts the PATTERN 6
157	CALL	Start PATTERN 7	As above but starts the PATTERN 7
158	CALL	Start PATTERN 8	As above but starts the PATTERN 8
113159	CALL	Start recording the PATTERN 1	To store the sequence of operations of the PATTERN 1 move to the start point and recall the preset 113 or 159. From this moment the camera will store all the operations that will be performed. Then start to take the camera with all the movements of Pan Tilt Zoom and you want to store. At the end recall the preset 114 or 160 next to save the pattern 1
114 160	CALL	End recording the PATTERN 1	Recall preset 114 or 160 to stop recording the PATTERN 1 and save it automatically.
115	CALL	Start Recording. PATTERN 2	As above for PATTERN 2

161 116			
162	CALL	End Rec. PATTERN 2	As above for PATTERN 2
117163	CALL	Start Recording. PATTERN 3	As above for PATTERN 3
118 164	CALL	End Rec. PATTERN 3	As above for PATTERN 3
121165	CALL	Start Recording. PATTERN 4	As above for PATTERN 4
122 166	CALL	End Rec. PATTERN 4	As above for PATTERN 4
167	CALL	Start Recording. PATTERN 5	As above for PATTERN 5
168	CALL	End Rec. PATTERN 5	As above for PATTERN 5
169	CALL	Start Recording. PATTERN 6	As above for PATTERN 6
170	CALL	End Rec. PATTERN 6	As above for PATTERN 6
171	CALL	Start Recording. PATTERN 7	As above for PATTERN 7
172	CALL	End Rec. PATTERN 7	As above for PATTERN 7
173	CALL	Start Recording. PATTERN 8	As above for PATTERN 8
174	CALL	End Rec. PATTERN 8	As above for PATTERN 8

SETUP MENU OSD

In the camera setup menu, you can set all the operating parameters of the camera and its movement.
The access to the menu is not required for normal operation of the dome as the main control functions and setting can be operated via the system presets as just described. In the OSD are however additional controls.

Access to the Main OSD

To access the OSD setup menu just call from the console:

PRESET 95 system.
Typically, you must first select all the address of camera that Yes want program, then type 95 and then press CALL or PREVIEW or GO TO (refer to the manual of the console on how to recall a preset)

To move within the general OSD menu using the joystick or navigation arrows.

To select a menu item or exit using the IRIS + button (ENTER) and IRIS - (EXIT) The OSD menu consists of 4 items: SYSTEM SETTINGS CAMERA SETTINGS OPERATION SETTINGS, SYSTEM INFO.

Access to the OSD menu of the camera module only

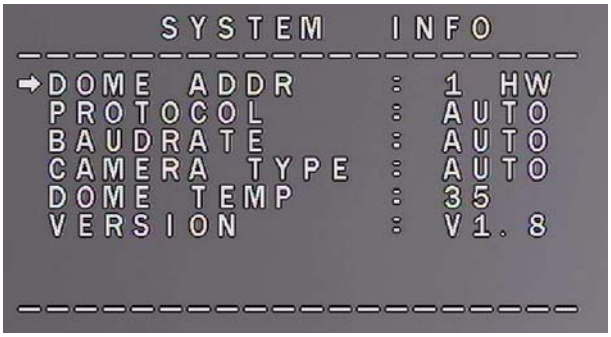
In the OSD menu, the CAMERA section is a submenu reserved for settings of one module SONY camera where action is taken to change the parameters inherent in the image. E 'can directly access this area by calling:

System PRESET 103
To close the camera module call up the menu
System PRESET 104

To move around the OSD menu of the camera module just do not use the joystick or arrows shift. You move between the items with ZOOM + / ZOOM - and you change the values of individual entries with FOCUS + / FOCUS -

System info

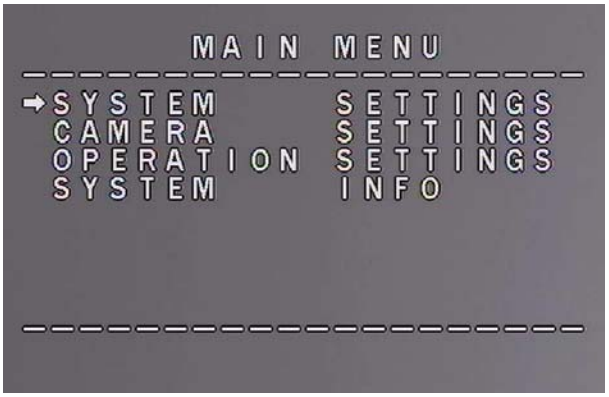
This menu item provides information on the camera. This is an information-only panel where you can not set anything.



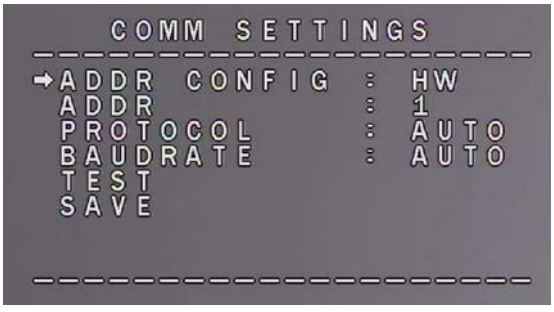
- DOME ADDR - Address camera on the RS485 BUS. The address can be followed by the letters HW whether it is the hardware address set with DIP switches on board room, or SW if it is a software address (see below).
- PROTOCOL - Indicate the protocol communication used on the RS-485 bus. Typically it indicates the AUTO mode factory because the camera is able to automatically identify the protocol command (PELCOP / D).
- BADRATE - Speed protocol communication on the RS485 BUS. Typically indicates the AUTO mode factory because the camera is able to identify the speed used automatically by the control unit.
- ROOM TYPE - type camera module mounted in the dome. Typically it indicates the AUTO mode factory because the camera is able to automatically identify the form template in its interior.
- DOME TEMP - Temperature inside the container measured in real time
- VERSION - Firmware version.
- right of each group of LEDs

System settings

This section contains all the settings related to the display of the camera image screen with the ability to define the information to be superimposed



- LANGUAGE - TV STANDARD - SCREEN POSITION not editable
- COMMUNICATIONS - Opens the communication parameters control panel



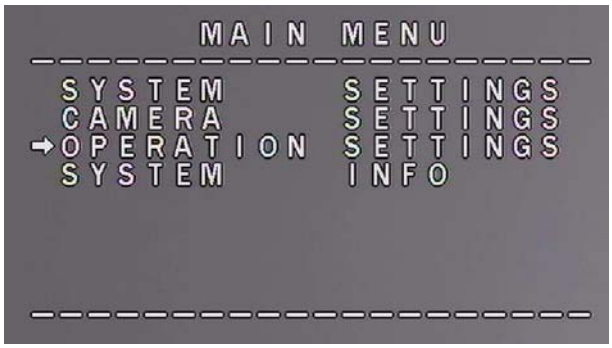
In this panel the modifiable data are the first
2. If ADDR SETUP is set to HW (hardware) address of the camera will be set

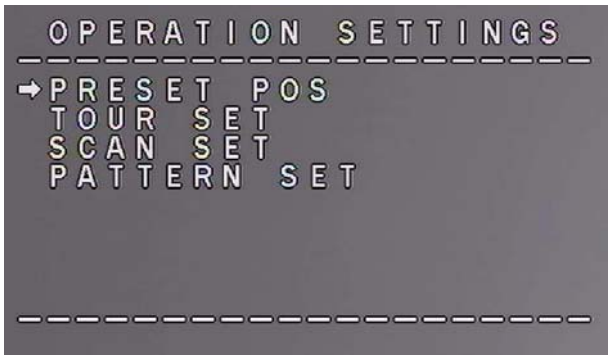
with the microswitches on board room that will appear in the second line and will not be editable. If you change ADDR CONFIG SW (software), you can enter the ADDR line any address that will be used by the speed dome to replace the hardware. This change should only be used by external personnel since once this address modified and saved with the SAVE command, the camera will no longer respond to the previous.

- FACTORY RESET - Restores factory settings

Operation

This section contains all the programming for the automatic movement of the camera.





To avoid misunderstandings in the reading of this part of the manual appropriate first to clarify that for these cameras, there are 4 types of automatic movements:

- **PRESET** - The presets are preset camera positions characterized by a precise value of X / Y coordinates, zoom and focus. Yes

may recall Easily keyboard

if necessary.

- **SCAN** - Yes It means the continuous movement RIGHT-LEFT between two end positions.
- **TOUR** - Also commonly called CRUISE. It means the automatic movement of the camera between presets with a residence time on each of them programmable.

- **PATTERN** - Similar to the TOUR. The camera, however, does not follow in sequence the various presets, but a sequence of user customized prerecorded movements.

Presets

This section allows you to set the camera presets via the programming menu, although this is also possible via the controls

from keyboard such as already described previously.

The camera can handle 255 presets but only presets 1 to 80 are available to the user for their own presets.

- PRESET NUMBER - Select the preset number to be set from 1 to 80.
- P / T POS - Select this to set the preset position. Press IRIS + (ENTER) to select this item. Once you entered into the programming necessary to position the camera with the desired coordinates and zoom and then press IRIS - to exit.

- CLEAR - Clear the preset setting
- SAVE - Save the preset position

Tour (or Cruise)

This section allows to set the TOUR, namely the automatic movement of the camera between presets. This camera supports 8 different TOUR.

- NUMBER - Select the number of the TOUR to program (1 to 8).
- SPEED - Program the speed of movement between the various presets (1 to 255)
- SAVE - Save the configuration.

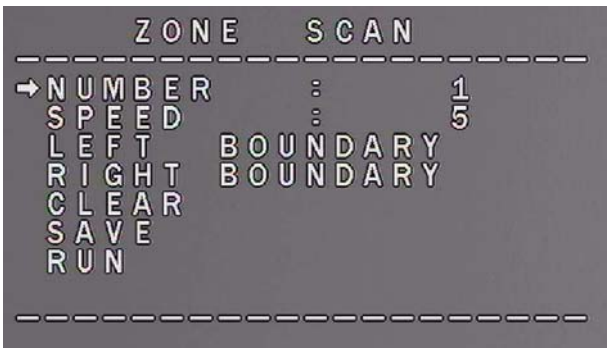
Note that, unlike other speed dome on the market, This range does not It requires manually program the sequence that you want to perform in the tour. The 8 TOUR are in fact already preset as follows:

TOUR 1	Among the presets 1-5
TOUR 2	Among the presets 5-15
TOUR 3	Among the presets 16-30
TOUR 4	Among the presets 31-50
TOUR 5	Among the presets 1-30
TOUR 6	Among the presets 1-40
TOUR 7	Among the presets 1-60
TOUR 8	Among the presets 1-80

If one of the presets provided by the tour some are not set, they are ignored.

Scan

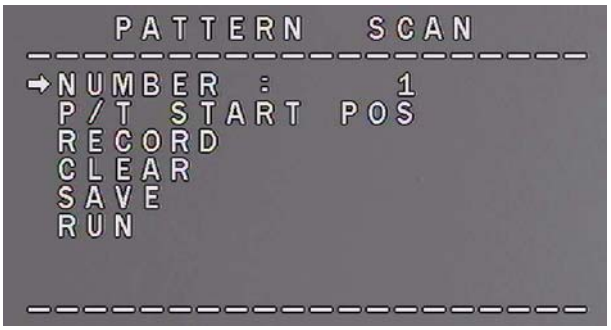
The scan is the continuous horizontal movement (PAN) from right to left between two end positions. This camera allows you to store up to 8 different linear scan that can be invoked as necessary by the control unit.



- NUMBER - Select the number of the linear scan (1 to 8)
- SPEED - E 'can set the rotation speed (1 to 20)
- LEFT BOUNDARY - Defines the left limit of the scan. Once you placed the sursore on this item press IRIS + to enter the programming, position the camera with the desired coordinates and then press IRIS - to exit.
- RIGHT LIMIT - Sets the right limit of the scan. As described above.
- CLEAR - Delete the scheduled scan
- SAVE - Save the scan set
- RUN - Starts the programmed scan.

Pattern

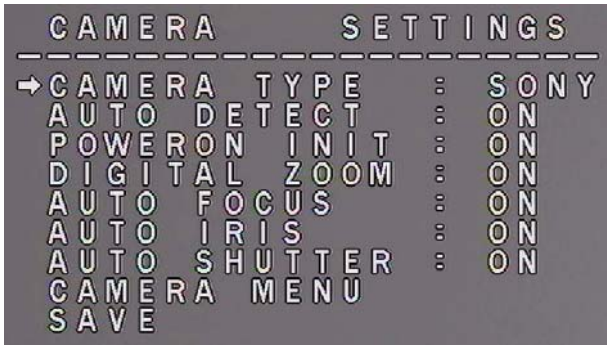
This camera is able to record a sequence of operations performed by the user, such as displacements, zoom etc. for them rerun automatically. These stored sequences are defined PATTERN. The camera allows you to record 8 pattern.



- NUMBER - The number of the pattern to be programmed (1 to 8)
- P / T START - Sets the starting point of patterm.
- RECORD - Press IRIS + and the camera will start to store all the operations conducted user with the control member. At the end of the path press IRIS- to stop recording.
- CLEAR - Clear the stored pattern
- SAVE - Save the pattern
- RUN - Start the pattern

Room

This section contains some settings of the camera module which has its own independent configuration from the mechanical movement of the dome.



- ROOM TYPE - Display the camera module installed.
- AUTO DETECT - Enables the automatic detection of the camera module.
- POWER ON INIT - Activate the initial self test
- DIGITAL ZOOM - Not available
- AUTO FOCUS - Enable auto focus
- AUTOIRIS - Not available
- AUTO SHUTTER - Enables automatic iris control
- CAMERA MENU - Opens the internal menu of the camera module (see next chapter).

CAMERA MENU

This section contains all general settings of the camera module. You can access this menu from the CAMERA SETTING menu, or by calling the 103 presets.

- LANG - Only English
- ADDRESS - Display the camera address
- BAUD - Shows the speed of the Protocol
- OSD DISP - Not available
- ADDRESS DISP - Not available
- D & N - Sets the operation day night AUTO, COLOR, B / W, CDS (sensor)
- D & N LV - passage Threshold Day-Night
- N & D LV - Threshold crossing Night-Day
- MIRROR - tilting feature image for mounting the non-conventional camera.
- AGC - Level of the automatic gain control
- BRIGHT - Dimming
- CONTRAST - Adjust contrast
- SHARPNESS - Adjust Definition
- SAT - Saturation adjustment
- ATR - Not available
- 2DNR - 2D Noise Reduction

- 3DNR - 3D Noise Reduction
- BLC - Back Light Compensation
- WB - White Balance
- DE-FOG - digital compensation function of the fog

- OUTPUT - Video output setting of AHD or CVBS camera

- FORMAT - choice of available options
- ZOOM - Indicates the available zoom
- FOCUS - Only autofocus
- Z-SAVE - Set the zoom value to display overlay

- F-RANGE - Adjusts the depth of field of the focus of the autofocus function

- ZDISP-POS - Rule the position of the superimpose zoom value (RD = Bottom right, LD = Bottom left, LU = top left, RU = Upper Right

- RESET - Restores the factory settings
- SAVE EXIT