

SD-CON3D USER MANUAL



Description

The SD-CON3D control console allows to control PTZ motorized speed-dome cameras via RS485 serial line and supports the standard PELCO P / D communication protocol as well as numerous other proprietary protocols. This is the control system used by almost all motorized cameras in AHD, CVI, TVI, CVBS and even SDI technology.

This console is not used for IP cameras

Installation

The console communicates with the cameras through the RS485 BUS, so the first thing to do is connect the console to the BUS.

A BUS is nothing more than a twisted pair (twisted) that cascades all the elements of the system (cameras, consoles, DVRs, etc.).

The fact that the BUS cable is twisted is essential for its operation. It is possible to use a special cable for serial bus, or a twisted pair of a network cable.

The overall length of an RS485 bus can reach up to 1200 meters. The greater the length, the greater the section of the bus cables must be. For short distances a section of 0.5 mm is sufficient, while for maximum distances even 1 or 2.5 mm.

One bus can connect up to 255 cameras. Each of these must be set with a different ID (from 1 to 255) via its internal switches.

Connections

On the back of the console there is a terminal block with the following connections:

- (T +) RS485 A
- (T-) RS485 B
- (R +) RS485 slave A
- (R-) RS485 slave b

The RS485 control port of the camera must be connected to terminals T + and T-

Be careful to connect the + cable of the camera with the + of the keyboard without reversing them. Some cameras use the letter A and B instead of + and - as symbols

In this case, connect terminal A to Ta and B to Tb.

Further cameras are connected in cascade following by referring to the camera manual.

In addition to the RS485 port, the console requires 12VDC power to be supplied by connecting the included 12VDC power supply to the rear plug.

Unlike cameras for which an address must be programmed, consoles do not require addressing.

There are two LEDs that indicate the power supply (PW) and the passage of communication data (T / R).



The R + R- terminals are available to connect another control unit such as a second console or a DVR.

Set the communication parameters

Before the console can be used, the communication parameters must be programmed so that they are consistent with those set on the cameras. In order for the console to control the camera it is essential that the devices share 2 fundamental communication parameters: the same communication protocol and the same communication speed (Baud Rate). The SD-CON3D console can manage 2 of the most universal protocols: PELCO P and PELCO D and transmission speeds from 1200 to 19200 baud. It also supports some other proprietary protocols from other manufacturers: Samsung, Yaan, SAE.

All DSE cameras support the PelcoD protocol which is factory set.

After starting, the console screen shows the following indication

PELCO-D 24000 001

It means that the camera is set up to send command with PelcoD protocol, speed 2400 bauds towards the camera with address 1



To change the communication protocol

- 1 - PRESS THE MENU BUTTON
- 2 - Choose the protocol with the right / left arrows or with the joystick
- 3 - Press ENTER to confirm
- 4 - Press ESC to exit

To change the communication speed

- 1 - PRESS THE MENU BUTTON
- 2 - Move to BAUDRATE with the UP / DOWN arrows or with the joystick
- 3 - Choose the speed with the right / left arrows or with the joystick
- 3 - Press ENTER to confirm
- 4 - Press ESC to exit

After making the changes, check that they appear in the first line of the LCD indicating the current parameters set.

Select the camera to control

A console is able to control up to 255 different cameras, each with its own internal address from 1 to 255 that distinguishes it on the bus.

To set the address of the camera to be controlled

- 1 - PRESS THE ADDR BUTTON
- 2 - Enter the camera ID (1-256)
- 3 - Confirm with ENTER

After making the changes, check that they appear in the first line of the LCD indicating the current parameters set.

Keyboard shortcuts

The console also features some quick commands to quickly change the main settings. To use them type in sequence:

SETUP + N + ENTER

No.	Function
700	Mute keyboard sounds
701	Turn on keyboard sounds
812	Set speed 1200 bps
824	Set speed 2400 bps
848	Set 4800 bps speed
896	Set 9600 bps speed
819	Set speed 19200 bps

Using the joystick

The Joystick of this console is of the 3D type. You can move it in various directions to control the movements of the camera. You can also turn the knob left and right to control the zoom.

The force with which you operate the joystick determines the speed of movement of the camera which is shown to you with the indication on the LCD from <to <<<<<

In the configuration menu you can use the joystick instead of the arrows.

The push button panel

- **0-9**- The 0-9 buttons are used to enter numerical values. In the operations inside the menu they are also useful for moving according to the arrows indicated.
- **Clear**- It is used to exit the menu or to delete a PRESET previously set in the camera by typing CLEAR + NN + ENTER
- **Enter** - Confirmation
- **Zoom +/-** - These buttons allow you to control the zoom of the camera making the shot more focused (Tele) or more wide-angle (Wide).
- **Focus +/-** -These buttons allow you to manually adjust the focus of the camera. This command may have no effect if the camera settings do not provide for manual focus adjustment.
- **Iris +/-** - These buttons allow you to manually close (Close) or open (Open) the iris (IRIS) of the camera. This command may have no effect if the camera settings do not include manual iris adjustment.
- **Aux ON / OFF** - Activates auxiliary functions in the camera if provided
- **Setup** - Allows you to set a preset (pre-positioning) in the camera by pressing SETUP + NN + ENTER. Consult the camera manual to find out which presets can be freely set and which activate special functions.
- **Preset**- This button allows you to recall the presets (prepositions) of the camera by pressing PRESET + NN + ENTER. For example, to recall preset 1, type: PRESET + 1 + ENTER.
- **Menu**- Allows you to open the camera menu where you can configure the protocol and enable / disable the LCD backlight and the buzzer. In the menu you can select the schedules by moving up and down and the values by moving to the right and left. Confirm any changed settings with ENTER.
- **ADDR** - Select the ID of the camera to control by typing ADDR + NN + ENTER

Special commands

This keyboard allows you to send the standard protocol commands to cameras which are motion, lens and preset recall commands. Other advanced camera functions, such as tour, cruise or patterns, can be activated by recalling special presets. See the camera manual for a list of system presets.

