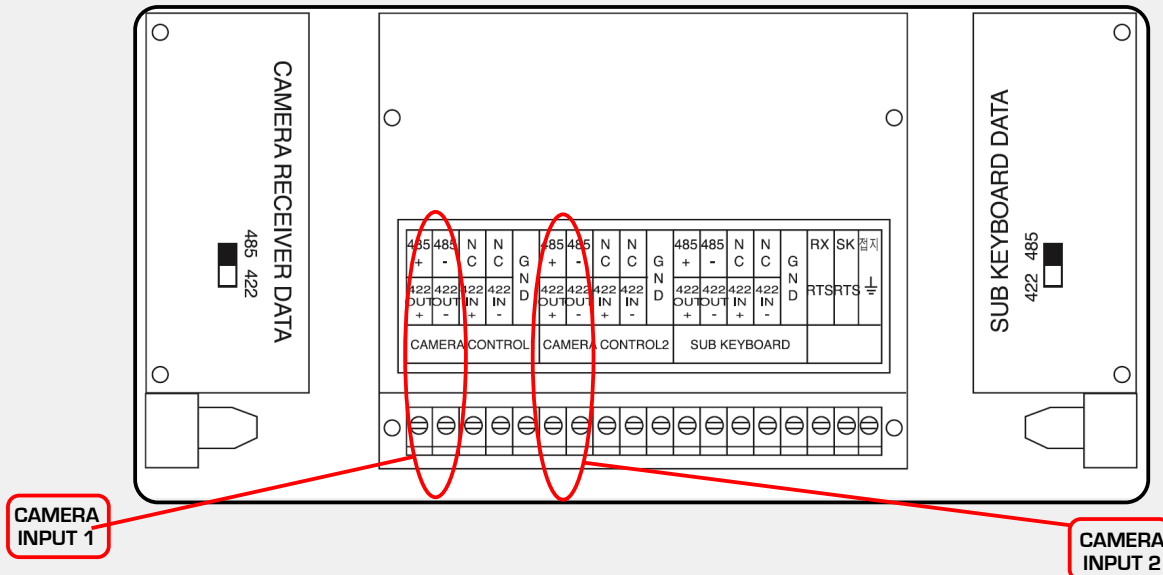


DYN-SD/EXT/A AND DYN-SD/KBD EASY SETUP GUIDE

STEP 1 of 2: CONNECTING DYN-SD/EXT/A DOME TO DYN-SD/KBD KEYBOARD

Communication between our DYN-SD/EXT/A dome and DYN-SD/KBD keyboard is done so using a single pair of CAT5 twisted pair cable which can be ran over a maximum distance of 1.2km between keyboard and dome. Both units use RS485 or RS422 communication system which is switchable at both the keyboard and the dome but must be matched the same at both ends for communication to be achieved. Our keyboard comes supplied with its own junction box where all dome and sub keyboard wiring termination is carried out' 2 camera inputs are available and clearly labelled on junction box each one with its own plus(+) and minus(-) input.

Please see below illustration of DYN-SD/KBD junction box.



The keyboard is capable of controlling a maximum of 255 devices (domes) which can be connected to either of the 2 camera inputs or split between both for ease of wiring.

When connecting multiple dome cameras to controller there are two connection methods and both are compatible and can be used with our keyboard.

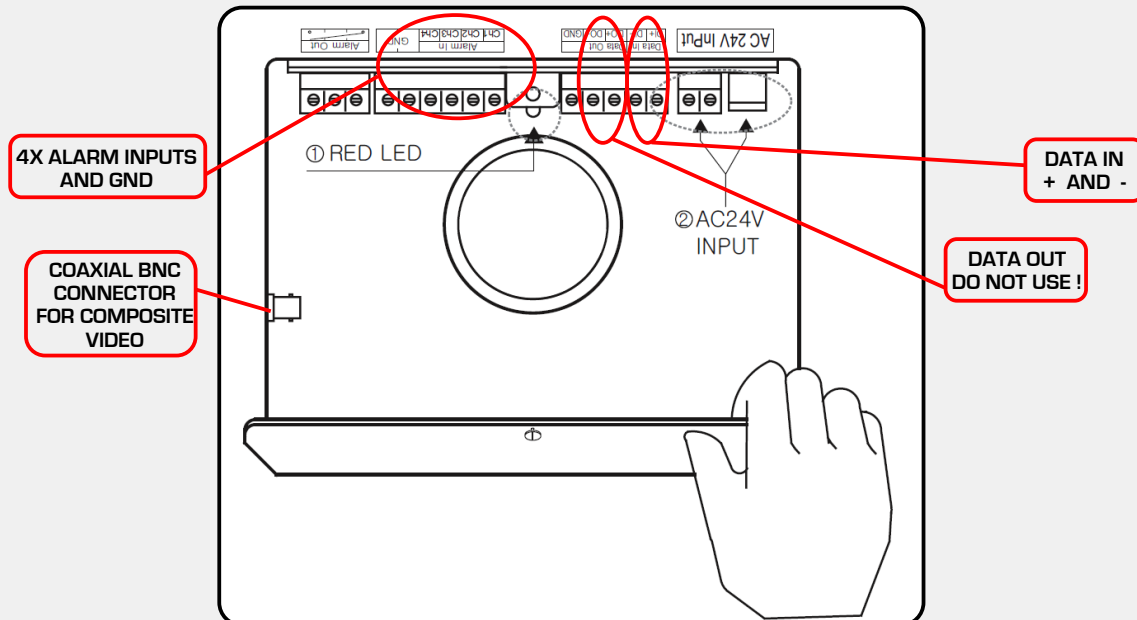
The first method is known as star connecting which is when an individual communication cable is ran from each dome back to controller' The second is known as daisy chain which is when you run one communication cable from the controller to the first dome then loop out of that dome to the next one and so on. It is fine to use both of those methods with our dome and controller either on there own or together to achieve communication.

When terminating cable at junction box and within dome head of DYN-SD/EXT/A ensure that polarity remains the same at both ends ie plus(+) at camera input of junction box must be connected to plus(+) of data in within dome head and minus (-) at camera input of junction box must be connected to minus(-) of data in within dome head! If polarity is reversed communication will not be achieved. The maximum allowable transmission distance for communication using CAT5 twisted pair is 1.2km and it is important not to exceed this distance or you could lose communication. When using daisy chain method of connecting domes the furthest dome should be within the 1.2km limit and should also be terminated to achieve communication' termination is achieved by setting dip switch on camera module and is explained later in this guide. As explained earlier the daisy chain method of connecting domes is when you loop out of first or nearest dome to controller to the next dome and so on' when doing this it is important that you connect loop cable to same connections in dome head that you came in on which in this case are DATA IN + and - terminals. It is important that you DO NOT use data out terminal which are also present in the dome head to loop to next dome as this will not work and communication to subsequent domes will be lost.

DYN-SD/EXT/A AND DYN-SD/KBD EASY SETUP GUIDE

STEP 1 of 2: CONNECTING DYN-SD/EXT/A DOME TO DYN-SD/KBD KEYBOARD

Please see below illustration of connections within DYN-SD/EXT/A dome Head.



KEY POINTS TO REMEMBER WHEN CONNECTING DOME TO CONTROLLER FOR COMMUNICATION.

- 1) When wiring between dome and controller use a single pair of CAT5 cable.
- 2) Do not reverse polarity of cable ensure ie plus (+) and minus (-) connections
- 3) Do not exceed maximum allowable transmission run of 1.2Km
- 4) Do not exceed maximum allowable connected domes at controller of 255!
- 5) Both star and daisy chain connection methods can be used
- 6) When connecting using daisy chain method only use data in terminals for looping in and back out of connected domes. DO NOT USE DATA OUT TERMINALS.

STEP 2 of 2: SETTING PROTOCOL'BAUDRATE AND CAMERA ID

Now that you have successfully connected the dome to the controller you now need to set the protocol'baudrate and camera id of both units which is also necessary if communication is to be achieved.If your only going to be using our DYN-SD/EXT/A dome with our DYN-SD/KBD controller then this procedure is be very simple as both units come set as default to manufacturers protocol D-MAX at a baud rate of 9600 meaning they are preconfigured to work with each other out of the box and only the camera id of each dome needs to be set.

However in the event that you do need to change the protocol and baudrate Of the dome and controller this is how it is done:

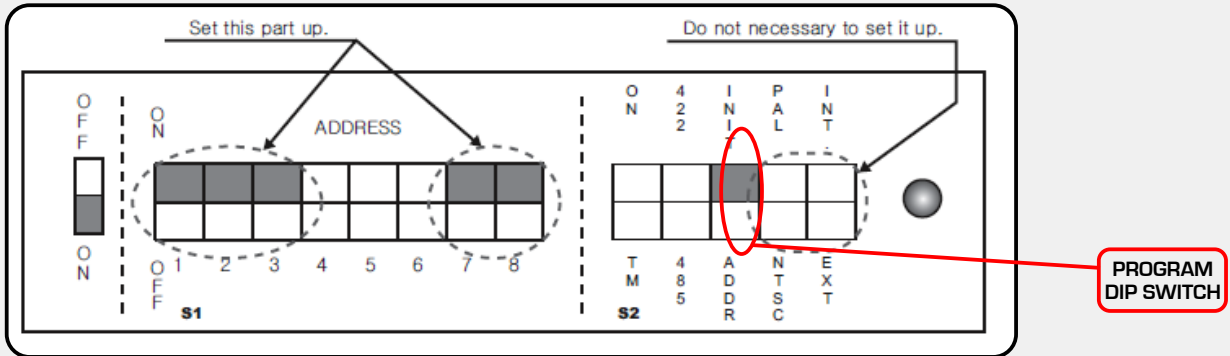
SETTING PROTOCOL'BAUDRATE AND ID OF DYN-SD/EXT/A

Setting the protocol and baudrate of DYN-SD/EXT/A dome is very simple and is done so by using collection of dip switches located on the base of camera module.

DYN-SD/EXT/A AND DYN-SD/KBD EASY SETUP GUIDE

STEP 2 of 2: SETTING PROTOCOL, BAUDRATE AND CAMERA ID

Please see below illustration of dip switches located at base of camera module.



To change protocol and baudrate of dome first of all power the dome down using the on/off switch and ensure all dip switches labelled 1 to 8 are in the OFF position. Next locate the program dip switch which is highlighted in above illustration and set to INIT position. Now you must position dip switches 1, 2, 3 & 7, 8 in accordance with which protocol and baudrate you wish to use please see chart overleaf for various protocol and baudrate configurations. Once you have positioned dip switches correctly you now need to switch the dome on using on/off switch. The dome will now power up in program mode and your chosen protocol and baudrate settings will appear on screen. After checking that the settings on screen match the ones you have chosen you can now power the dome down and reset the dip switches 1 to 8 to OFF position and set Program dip switch back to ADDR position. All that remains now is to set ID address of chosen dome which is explained later in this guide.

Please see below chart showing various protocol and baudrate dip switch configurations, P-P = PELCO P, P-D = PELCO D.

PROTOCOL	The switch to select Protocol. (S1)			The switch to select Baud Rate (S2)		S2 SW 'INIT→ADDR'
	SW1	SW2	SW3	SW7	SW8	
D-MAX (9600 bps)	OFF	OFF	OFF	OFF	OFF	INIT
P-P (9600 bps)	ON	OFF	OFF	OFF	OFF	INIT
P-P (4800 bps)	ON	OFF	OFF	OFF	ON	INIT
P-P (2400 bps)	ON	OFF	OFF	ON	OFF	INIT
P-D (9600 bps)	OFF	ON	OFF	OFF	OFF	INIT
P-D (4800 bps)	OFF	ON	OFF	OFF	ON	INIT
P-D (2400 bps)	OFF	ON	OFF	ON	OFF	INIT
S-T (9600 bps)	OFF	OFF	ON	OFF	OFF	INIT

Change No3 of S2 to INIT if user wants to change Protocol.

DYN-SD/EXT/A AND DYN-SD/KBD EASY SETUP GUIDE

STEP 2 of 2: SETTING PROTOCOL, BAUDRATE AND CAMERA ID

SETTING ID ADDRESS OF DYN-SD/EXT/A

Please see below chart showing ID address dip switch configurations from 1 to 55 although a maximum of 255 ID,s can be set if needed.

RX NO (DEC)	DIP SWITCH (HEX)							RX NO (DEC)	DIP SWITCH (HEX)						
	1	2	3	4	5	6	7		1	2	3	4	5	6	7
1	ON	OFF	OFF	OFF	OFF	OFF	OFF	33	ON	OFF	OFF	OFF	OFF	ON	OFF
2	OFF	ON	OFF	OFF	OFF	OFF	OFF	34	OFF	ON	OFF	OFF	OFF	ON	OFF
3	ON	ON	OFF	OFF	OFF	OFF	OFF	35	ON	ON	OFF	OFF	OFF	ON	OFF
4	OFF	OFF	ON	OFF	OFF	OFF	OFF	36	OFF	OFF	ON	OFF	OFF	ON	OFF
5	ON	OFF	ON	OFF	OFF	OFF	OFF	37	ON	OFF	ON	OFF	OFF	ON	OFF
6	OFF	ON	ON	OFF	OFF	OFF	OFF	38	OFF	ON	ON	OFF	OFF	ON	OFF
7	ON	ON	ON	OFF	OFF	OFF	OFF	39	ON	ON	ON	OFF	OFF	ON	OFF
8	OFF	OFF	OFF	ON	OFF	OFF	OFF	40	OFF	OFF	OFF	ON	OFF	ON	OFF
9	ON	OFF	OFF	ON	OFF	OFF	OFF	41	ON	OFF	OFF	ON	OFF	ON	OFF
10	OFF	ON	OFF	ON	OFF	OFF	OFF	42	OFF	ON	OFF	ON	OFF	ON	OFF
11	ON	ON	OFF	ON	OFF	OFF	OFF	43	ON	ON	OFF	ON	OFF	ON	OFF
12	OFF	OFF	ON	ON	OFF	OFF	OFF	44	OFF	OFF	ON	ON	OFF	ON	OFF
13	ON	OFF	ON	ON	OFF	OFF	OFF	45	ON	OFF	ON	ON	OFF	ON	OFF
14	OFF	ON	ON	ON	OFF	OFF	OFF	46	OFF	ON	ON	ON	OFF	ON	OFF
15	ON	ON	ON	ON	OFF	OFF	OFF	47	ON	ON	ON	ON	OFF	ON	OFF
16	OFF	OFF	OFF	OFF	ON	OFF	OFF	48	OFF	OFF	OFF	OFF	ON	ON	OFF
17	ON	OFF	OFF	OFF	ON	OFF	OFF	49	ON	OFF	OFF	OFF	ON	ON	OFF
18	OFF	ON	OFF	OFF	ON	OFF	OFF	50	OFF	ON	OFF	OFF	ON	ON	OFF
19	ON	ON	OFF	OFF	ON	OFF	OFF	51	ON	ON	OFF	OFF	ON	ON	OFF
20	OFF	OFF	ON	OFF	ON	OFF	OFF	52	OFF	OFF	ON	OFF	ON	ON	OFF
21	ON	OFF	ON	OFF	ON	OFF	OFF	53	ON	OFF	ON	OFF	ON	ON	OFF
22	OFF	ON	ON	OFF	ON	OFF	OFF	54	OFF	ON	ON	OFF	ON	ON	OFF
23	ON	ON	ON	OFF	ON	OFF	OFF	55	ON	ON	ON	OFF	ON	ON	OFF
24	OFF	OFF	OFF	ON	ON	OFF	OFF	56	OFF	OFF	OFF	ON	ON	ON	OFF
25	ON	OFF	OFF	ON	ON	OFF	OFF	57	ON	OFF	OFF	ON	ON	ON	OFF
26	OFF	ON	OFF	ON	ON	OFF	OFF	58	OFF	ON	OFF	ON	ON	ON	OFF
27	ON	ON	OFF	ON	ON	OFF	OFF	59	ON	ON	OFF	ON	ON	ON	OFF
28	OFF	OFF	ON	ON	ON	OFF	OFF	60	OFF	OFF	ON	ON	ON	ON	OFF
29	ON	OFF	ON	ON	ON	OFF	OFF	61	ON	OFF	ON	ON	ON	ON	OFF
30	OFF	ON	ON	ON	ON	OFF	OFF	62	OFF	ON	ON	ON	ON	ON	OFF
31	ON	ON	ON	ON	ON	OFF	OFF	63	ON	ON	ON	ON	ON	ON	OFF
32	OFF	OFF	OFF	OFF	OFF	ON	OFF	64	OFF	OFF	OFF	OFF	OFF	OFF	ON

DYN-SD/EXT/A AND DYN-SD/KBD EASY SETUP GUIDE

STEP 2 of 2: SETTING PROTOCOL 'BAUDRATE AND CAMERA ID

There are up to 255 different ID settings and each are programmed using dip switches 1 to 8 on dome camera module just like we used when setting protocol and baudrate only this time the dip switches are permanently set in position.

using chart on previous page simply position the dip switches in accordance to your chosen ID and that's it !you can now power dome up ready for use .

Remember that each connected dome must have its own unique ID address you cannot use the same address twice' it is usually best to start with address 1 and work up numerically for each additional dome.

SETTING PROTOCOL ' BAUDRATE AND ID OF DYN-SD/KBD CONTROLLER

In the event that you need to change the protocol and baudrate of our DYN-SD/KBD controller from the manufacturers default settings of D-MAX , 9600 then please follow below instructions.

First you will need to unlock all the controllers capable protocols by pressing the button combination below in the order given :

2 > 2 > 0 > MENU > OFF

Now hold the SET button down located in the top right hand corner of the controller then disconnect and reconnect the RJ45 plug from the back of the keyboard remembering to keep the SET button held down. After approx 3 seconds you will hear a beep and a menu will appear on the lcd screen of the controller! At this point press button 3 to select option labelled RECEIVER SELECT which after doing this should make all available protocols and baudrates visible on the lcd screen as shown below.

1 D-MAX

2 SAMSUNG

3 PD24 (PELCO D 2400)

4 PP48 (PELCO P 4800)

5 PP96 (PELCO P 9600)

6 PD96 (PELCO D 9600)

Now all you need to do is press the number button on the keypad that relates to the protocol and baudrate you wish to change DYN-SD/KBD to and once this is done the keyboard will reset with all new settings in place ready for use.

To change camera ID on DYN-SD/KBD simply press the id number button on the keypad that relates to the camera id you wish to control followed by the CAM button and the new id will be displayed on the keyboard lcd screen.