



Installation & Operation Manual

DVW-KBD-D Universal Keyboard

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INSTALLATION

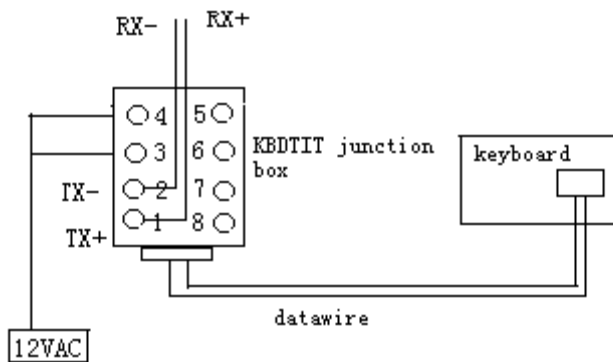
The keyboard is wired directly to a maximum of 16 receivers. You can communicate using Pelco P Protocol or Pelco D Protocol.

In Direct P and Direct D modes you can now change the zoom speed of a PTZ by entering a number from 1 to 4 followed by a zoom command. This causes the zoom speed command to be sent.

Connecting the Keyboard

1. Make sure all receivers are configured to communicate using either Pelco P or Pelco D protocol and that each receiver has a unique address. Refer to your receiver manual for switch settings.
2. Decide on a suitable location for the keyboard and wall block. The keyboard must be within 25 feet (7.6 meters) of the wall block. The wall block must be within 6 feet (1.8 m) of the nearest suitable electrical outlet. Do not mount the wall block at this time.
3. Receiver wiring should be in place before installing the keyboard. You can control up to 16 receivers from the keyboard. Communication to the keyboards is RS-422. Maximum cable distance for RS-422 communication over 24-gauge wire is 4,000 feet (1,219m). The recommends using shielded twisted pairs cable that meets or exceeds the basic requirements for EIA RS-422 applications.
4. Remove the wall block cover and make receiver cable connections.

5. At the wall block wire the transformer to pins 3 and 4. Polarity is unimportant.
6. Replace the cover on the wall block. A double-sided sticky pad is provided to mount the wall block. Secure the wall block to a suitable surface.
7. Set the keyboard DIP switches according to the instructions in the *Switch Settings* section.
8. Plug in the keyboard data cable.
9. Plug the DVW-KBD-D transformer into a suitable outlet. The LED display shows number 1, which is the default camera number.
10. Go to the *Programming and Operation* section and program and test for proper operation



SWITCH SETTINGS

To set the switches on the keyboard (refer to Figure 12):

1. Remove the two screws and the DIP switch cover plate from the rear of the keyboard.
2. Set the switches:
Address (Switches 1-4) Position the switches according to Table A. Each keyboard in the system must have a different address, including

the local keyboard. To make programming easier, address keyboards in ascending order

Table A. Keyboard Addresses

Keyboard	Switch settings			
	1	2	3	4
1	OFF	OFF	OFF	OFF
2	ON	OFF	OFF	OFF
3	OFF	ON	OFF	OFF
4	ON	ON	OFF	OFF
5	OFF	ON	ON	OFF
6	ON	OFF	ON	OFF
7	OFF	ON	ON	OFF
8	ON	ON	ON	OFF
9	OFF	OFF	OFF	OFF
10	ON	OFF	OFF	ON
11	OFF	ON	OFF	ON
12	ON	OFF	OFF	ON
13	OFF	OFF	ON	ON
14	ON	OFF	ON	ON
15	OFF	ON	ON	ON
16	ON	ON	ON	ON

Mode (Switches 5, 7, 8) Position the switches according to Table B. Switch 6 enables/disables turbo pan. It can be switched while the keyboard is on.

Table B. Keyboard Modes

	Direct P	Direct D
Switch 5	ON	ON
Switch 6	ON or OFF	ON or OFF
Switch 7	OFF	ON
Switch 8	OFF	OFF

PROGRAMMING AND OPERATION

Table C. Keyboard Functions

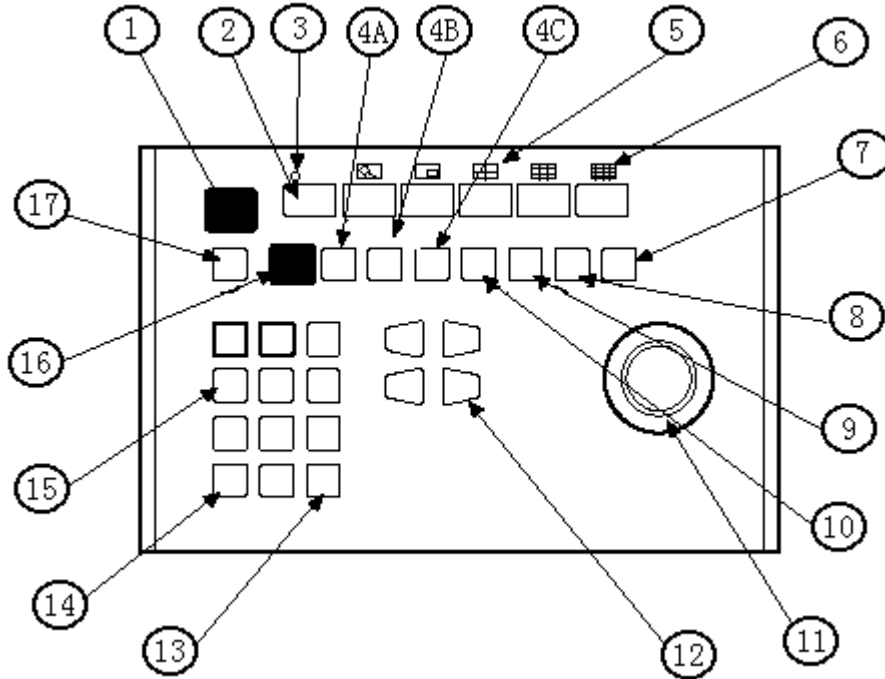
Function	Procedure
Select Camera	Enter camera number (1-16) and press CAM to select.
Pan/Tilt/Zoom	Move the joystick until the camera reaches the desired position. To increase the speed of movement, move the joystick further from center. Twist the joystick clock wise to zoom in, counterclockwise to zoom out.
Lens Control	Focus, iris - Press and hold the appropriate lens control key until the desired effect is seen.
Presets	Enter preset number (1-66) and press PRESET to put camera in preset position. To program, position camera, enter desired preset number (1-66), and hold down PRESET for two seconds.

Table C Keyboard Functions (continued)

Function	Procedure
Patterns	Programming and operation varies with the receiver type. To program DVW-D, select a camera (1-16), select a long pattern by holding down PATTERN for two seconds, or select short pattern 1 or 2 by entering 1 or 2 and holding down PATTERN for two seconds. The monitor will indicate the programming function is active. Move the camera position _ as desired for the pattern and press ACK to close the programming function. To run a long pattern, press PATTERN. To run a short pattern, enter 1 or 2 and press PATTERN. Move the joystick or call a preset to stop. Do not program a pattern with turbo pan on (switch 6).

KEYBOARD FUNCTIONS

Table D. DVW-KBD-D Button Functions



Reference Number	Description
1	LED display
2	Shift key
3	Shift key LED
4	Sequence keys: Previous, Next, Hold
5	Function keys F1/Latch, F2/Off, F3/Mom control auxiliaries. With Shift on they control multiplexer display.
6	The AUX ON and AUX OFF keys control receiver auxiliaries. With Shift on they control multiplexer display.
7	Program key
8	Preset key

9	Pattern key
10	Joystick
11	Focus and iris keys (iris keys can be used to scroll through menus on the CM6800 only)
12	Camera selection key
13	Keypad (numbers 1 through 0)
14	Acknowledge key

Operation of the scanning functions depends on the kind of receiver or pan/tilt mechanism you have and the operating mode of your keyboard, There are four types of scanning functions: auto (moves camera back and forth between stops), random (moves camera in a random pattern), frame (moves camera back and forth in 10 degree steps), and preset (sequences camera through all programmed presets, pausing between each). Operate scans according to Table E.

SCANNING FUNCTIONS

Table E Operating scan Functions with Various Receivers

AUTO SCAN	RANDOM SCAN	FRAME SCAN	STOP SCAN
99 preset	97 preset	98 preset	96 preset

Programming Limit Stops

Spectra and Esprit can be programmed for scan and manual limit stops.

Program left limit before programming right limit. Locate camera at desired limit. Enter the set code from Table G. Hold the PRESET key for two seconds. In CM6700 and CM6800 modes, a label appears on the monitor. Use F1 and F2 to edit the label, then select SET and press ACK or tap the joystick to the right and release.

To cancel all limit stops, enter 95. Hold the preset key for two seconds. Move joystick up or down to move the pointer to Other. Press IRIS OPEN. Move the pointer to Limit Stops. Press IRIS OPEN. Move joystick right/left to change limit stops to off. Press IRIS OPEN. Move the pointer to EXIT. Press IRIS OPEN.

Move pointer to exit. Press IRIS OPEN.

Table F. Limit Set Codes

	Scam Limit	Manual Limit
Left Limit	92	90
Right Limit	93	91

SPECIFICATIONS GENERAL

Keyboard Keypad: Electromechanical

Joystick: 3-axis, vector-solving, with twisting, return-to-center head

Digital Display: Red LED, 7-segment, 2 cells

Shift Mode Indicator: Green LED Ambient Operating

Temperature: 20 to 120 F (-7 to 49 C)

Humidity: 10–90% non-condensing

Dimensions: 9.50(W) x 7.125(D) x 2.25(H) inches (24.13 x 18.1 x 5.72cm)

Weight: 2.5 lb (1.12 kg)

Ratings: Meets NEMA Type 1 standards

Meets IP 30 standards

ELECTRICAL

Input Voltage: 12 VAC or 12 VDC

Power Consumption: 5 watts

Connector Type: RJ-45, 8-pin, modular (female)

Keyboard Communication Direct D Mode

Interface: RS-485

Protocol: Pelco D

Baud: 2400 Communication

Parameters: 8 data bits, 1 stop bit, no parity

(Design and product specifications subject to change without notice)