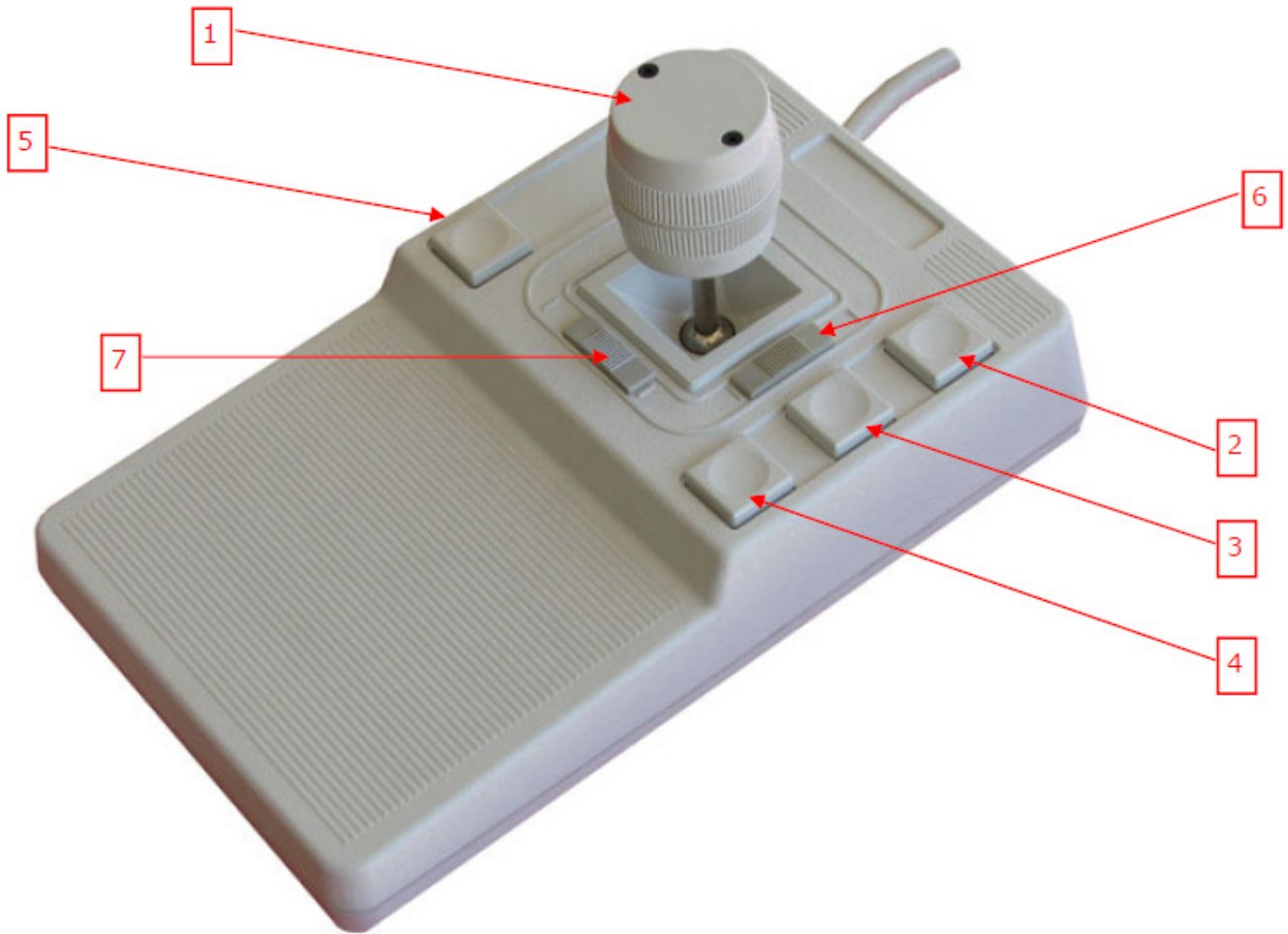


Joystick Motion Controller



Optimal Engineering Systems, Inc.
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- 1- Move the joystick to left and right to move the X-axis motor.
Move the joystick to up and down to move the Y-axis motor.
Turn the knob CW and CCW move the Z-axis motor.
- 2- Press this button to select the high speed mode.
- 3- Press this button to select the medium speed mode.
- 4- Press this button to select the low speed mode.
- 5- Spare
- 6- Push the slide downward to engage the joystick.
- 7- Push the slide to the right to engage the joystick.
- 8- Connect an LED via a 330 Ohm resistor to GND. The LED will blink and stay on upon power-up.
- 9- While button 2, button 3 or button 4 is pressed, the LED keeps blinking.



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Single-axis Joystick Motion Controller, JMC-1-01

Single-axis Pre-wired Joystick with 3 Speed Selection Keys, Step and Direction Signal Outputs per Axis

25-pin DB-25, Male Connector

Cable Length = 5.5 ft (168 cm)

PIN	NAME	DESCRIPTION
1		Not Connected
2		Not Connected
3		Not Connected
4		Not Connected
5		Not Connected
6		Not Connected
7	DIR-X	X-axis Direction Signal Output, 0 to +5 VDC
8	STEP-X	X-axis Step Signal Output, 0 to +5 VDC
9		Not Connected
10		Not Connected
11		Not Connected
12		Not Connected
13		Not Connected
14		Not Connected
15		Not Connected
16		Not Connected
17	GND	System Ground
18		Not Connected
19	+5 VDC	+5 VDC Input
20		Not Connected
21		Not Connected
22		Not Connected
23		Not Connected
24	LED	Status LED Output, 0 to +5 VDC
25		Not Connected



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Single-axis Joystick Motion Controller, JMC-1-02

Single-axis Pre-wired Joystick with 3 Speed Selection Keys, Quadrature Signal Outputs per Axis

25-pin DB-25, Male Connector

Cable Length = 5.5 ft (168 cm)

PIN	NAME	DESCRIPTION
1		Not Connected
2		Not Connected
3		Not Connected
4		Not Connected
5		Not Connected
6		Not Connected
7	CHA-X	X-axis Channel-A of Quadrature Signal Output, 0 to +5 VDC
8	CHB-X	X-axis Channel-B of Quadrature Signal Output, 0 to +5 VDC
9		Not Connected
10		Not Connected
11		Not Connected
12		Not Connected
13		Not Connected
14		Not Connected
15		Not Connected
16		Not Connected
17	GND	System Ground
18		Not Connected
19	+5 VDC	+5 VDC Input
20		Not Connected
21		Not Connected
22		Not Connected
23		Not Connected
24	LED	Status LED Output, 0 to +5 VDC
25		Not Connected



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Single-axis Joystick Motion Controller, JMC-1-03

Single-axis Pre-wired Joystick with 3 Speed Selection Keys, PWM and Direction Signal Outputs per Axis

25-pin DB-25, Male Connector

Cable Length = 5.5 ft (168 cm)

PIN	NAME	DESCRIPTION
1		Not Connected
2		Not Connected
3		Not Connected
4		Not Connected
5		Not Connected
6		Not Connected
7	DIR-X	X-axis Direction Signal Output, 0 to +5 VDC
8	PWM-X	X-axis PWM Signal Output, 0 to +5 VDC
9		Not Connected
10		Not Connected
11		Not Connected
12		Not Connected
13		Not Connected
14		Not Connected
15		Not Connected
16		Not Connected
17	GND	System Ground
18		Not Connected
19	+5 VDC	+5 VDC Input
20		Not Connected
21		Not Connected
22		Not Connected
23		Not Connected
24	LED	Status LED Output, 0 to +5 VDC
25		Not Connected



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Two-axis Joystick Motion Controller, JMC-2-01

Two-axis Pre-wired Joystick with 3 Speed Selection Keys, Step and Direction Signal Outputs per Axis

25-pin DB-25, Male Connector

Cable Length = 5.5 ft (168 cm)

PIN	NAME	DESCRIPTION
1		Not Connected
2		Not Connected
3		Not Connected
4		Not Connected
5		Not Connected
6		Not Connected
7	DIR-X	X-axis Direction Signal Output, 0 to +5 VDC
8	STEP-X	X-axis Step Signal Output, 0 to +5 VDC
9		Not Connected
10	DIR-Y	Y-axis Direction Signal Output, 0 to +5 VDC
11	STEP-Y	Y-axis Step Signal Output, 0 to +5 VDC
12		Not Connected
13		Not Connected
14		Not Connected
15		Not Connected
16		Not Connected
17	GND	System Ground
18		Not Connected
19	+5 VDC	+5 VDC Input
20		Not Connected
21		Not Connected
22		Not Connected
23		Not Connected
24	LED	Status LED Output, 0 to +5 VDC
25		Not Connected



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Two-axis Joystick Motion Controller, JMC-2-02

Two-axis Pre-wired Joystick with 3 Speed Selection Keys, Quadrature Signal Outputs per Axis

25-pin DB-25, Male Connector

Cable Length = 5.5 ft (168 cm)

PIN	NAME	DESCRIPTION
1		Not Connected
2		Not Connected
3		Not Connected
4		Not Connected
5		Not Connected
6		Not Connected
7	CHA-X	X-axis Channel-A of Quadrature Signal Output
8	CHB-X	X-axis Channel-B of Quadrature Signal Output
9		Not Connected
10	CHA-Y	Y-axis Channel-A of Quadrature Signal Output
11	CHB-Y	Y-axis Channel-B of Quadrature Signal Output
12		Not Connected
13		Not Connected
14		Not Connected
15		Not Connected
16		Not Connected
17	GND	System Ground
18		Not Connected
19	+5 VDC	+5 VDC Input
20		Not Connected
21		Not Connected
22		Not Connected
23		Not Connected
24	LED	Status LED Output, 0 to +5 VDC
25		Not Connected



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Two-axis Joystick Motion Controller, JMC-2-03

Two-axis Pre-wired Joystick with 3 Speed Selection Keys, PWM and Direction Signal Outputs per Axis

25-pin DB-25, Male Connector

Cable Length = 5.5 ft (168 cm)

PIN	NAME	DESCRIPTION
1		Not Connected
2		Not Connected
3		Not Connected
4		Not Connected
5		Not Connected
6		Not Connected
7	DIR-X	X-axis Direction Signal Output
8	PWM-X	X-axis PWM Signal Output
9		Not Connected
10	DIR-Y	Y-axis Direction Signal Output
11	PWM-Y	Y-axis PWM Signal Output
12		Not Connected
13		Not Connected
14		Not Connected
15		Not Connected
16		Not Connected
17	GND	System Ground
18		Not Connected
19	+5 VDC	+5 VDC Input
20		Not Connected
21		Not Connected
22		Not Connected
23		Not Connected
24	LED	Status LED Output, 0 to +5 VDC
25		Not Connected



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Three-axis Joystick Motion Controller, JMC-3-01

Three-axis Pre-wired Joystick with 3 Speed Selection Keys, Step and Direction Signal Outputs per Axis

25-pin DB-25, Male Connector

Cable Length = 5.5 ft (168 cm)

PIN	NAME	DESCRIPTION
1		Not Connected
2		Not Connected
3		Not Connected
4		Not Connected
5		Not Connected
6		Not Connected
7	DIR-X	X-axis Direction Signal Output
8	STEP-X	X-axis Step Signal Output
9		Not Connected
10	DIR-Y	Y-axis Direction Signal Output
11	STEP-Y	Y-axis Step Signal Output
12		Not Connected
13		Not Connected
14		Not Connected
15		Not Connected
16		Not Connected
17	GND	System Ground
18		Not Connected
19	+5 VDC	+5 VDC Input
20		Not Connected
21		Not Connected
22	STEP-Z	Z-axis Step Signal Output
23	DIR-Z	Z-axis Direction Signal Output
24	LED	Status LED Output, 0 to +5 VDC
25		Not Connected



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Three-axis Joystick Motion Controller, JMC-3-02

Three-axis Pre-wired Joystick with 3 Speed Selection Keys, Quadrature Signal Outputs per Axis

25-pin DB-25, Male Connector

Cable Length = 5.5 ft (168 cm)

PIN	NAME	DESCRIPTION
1		Not Connected
2		Not Connected
3		Not Connected
4		Not Connected
5		Not Connected
6		Not Connected
7	CHA-X	X-axis Channel-A of Quadrature Signal Output
8	CHB-X	X-axis Channel-B of Quadrature Signal Output
9		Not Connected
10	CHA-Y	Y-axis Channel-A of Quadrature Signal Output
11	CHB-Y	Y-axis Channel-B of Quadrature Signal Output
12		Not Connected
13		Not Connected
14		Not Connected
15		Not Connected
16		Not Connected
17	GND	System Ground
18		Not Connected
19	+5 VDC	+5 VDC Input
20		Not Connected
21		Not Connected
22	CHA-Z	Z-axis Channel-A of Quadrature Signal Output
23	CHB-Z	Z-axis Channel-B of Quadrature Signal Output
24	LED	Status LED Output, 0 to +5 VDC
25		Not Connected



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25-pin DB-25, Male Connector

Cable Length = 5.5 ft (168 cm)

PIN	NAME	DESCRIPTION
1		Not Connected
2		Not Connected
3		Not Connected
4		Not Connected
5		Not Connected
6		Not Connected
7	DIR-X	X-axis Direction Signal Output
8	PWM-X	X-axis PWM Signal Output
9		Not Connected
10	DIR-Y	Y-axis Direction Signal Output
11	PWM-Y	Y-axis PWM Signal Output
12		Not Connected
13		Not Connected
14		Not Connected
15		Not Connected
16		Not Connected
17	GND	System Ground
18		Not Connected
19	+5 VDC	+5 VDC Input
20		Not Connected
21		Not Connected
22	PWM-Z	Z-axis PWM Signal Output
23	DIR-Z	Z-axis Direction Signal Output
24	LED	Status LED Output, 0 to +5 VDC
25		Not Connected



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