Parallel Port Machine Controller

FEATURES

- **P** Up to 6-axis control via a single parallel port
- **P** Precision stepper or servo motor control timing
- P Operator control 5% to 100% feed rate override
- **P** E-Stop input
- **P** Limit switch input
- **P** Step/Direction or biphase output for each axis
- **P** Guaranteed I/O setup / hold times and pulse widths
- **P** Assembled in USA.

SUMMARY

The Parallel Port Machine Controller (PMC) acts as an intermediate buffer between a computer's parallel port and the motor driver module of a CNC machine tool.

The PMC expands the number of available output lines to accommodate up to six (6) axes of independent motion. Each axis can be configured for either Step / Direction or biphase (quadrature) outputs. A wiring breadboard area allows simple custom connection of the output signals for control of auxiliary devices such as coolant feed or spindle drivers.

The PMC generates precision timing for the motor step pulses, independent of the interface timing of the host computer. This allows non-real-time computer systems (read: Microsoft® Windows) to safely and accurately control CNC machinery.

An internal FIFO buffer stores commands from the computer for up to 96 step pulses. All pulses are issued to the CNC machine with a precision unmatched by direct interfacing to the host computer. In case of buffer under-run the PMC gracefully slows the machine to a stop without losing steps or relative indexing.

An analog potentiometer may be connected to the PMC to provide a direct feed rate override control. The operator can manually adjust the overall system feed rate from 5% to 100% of the programmed rate.

Individual connectors are provided for external E-stop and limit switch inputs.

CONNECTORS

Power In Parallel In Motor Control Out E-Stop In Limit Switch In Aux Interface Feed Override Pot

2.1 mm barrel DB25F DB25F 2.1 mm barrel 2.1 mm barrel 10-pin header SIP pads on board (3)

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SPECIFICATIONS

Power Supply Temperature Humidity

9 Volt (AC or DC) 100 mA -40^{N}C to $+80^{\text{N}}\text{C}$ 95%, non-condensing

INDICATORS

Power On LED (red)

COMMAND SUMMARY

D7	D6	D5	D4	D3	D2	D1	D0	Command
0	0	S5	S4	S 3	S2	S 1	S0	Step
0	1	D5	D4	D3	D2	D1	D0	Direction
	0	m 7		T 2		77.1	TO	
1	0	15	14	13	12	TI	10	Time Delay
1	0	T11	T10	T9	T8	T7	T6	
1	1	0	0	0	0	0	0	Setup
1	1	Q5	Q4	Q3	Q2	Q1	Q0	Axis Quadrature
1	1	P5	P4	Р3	P2	P1	P0	Step Polarity
1	1	p5	p4	p3	p2	p1	p0	Dir Polarity
		1						
1	1	1	0	0	0	0	0	Skip on Limit
1	1	1	0	0	0	0	1	Resume on Limit
1	1	1	0	0	0	1	0	Manual Resume
		-						
1	1	1	1	1	1	1	1	Clear FIFO

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PRELIMINARY SPECIFICATIONS - SUBJECT TO CHANGE

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