

# 7i96 Reference Build Pinout for plasma machines

## TB1 - Step and direction

Pin - TB1	Signal	Connection	Remarks
1	GND	No connection	Joint 0 - X axis  Do not connect anything to stepper drive enable
2	STEP0-		
3	STEP0+		
4	DIR0-		
5	DIR0+		
6	+5VP	No connection	
7	GND	No connection	Joint 1 - Y axis  Do not connect anything to stepper drive enable
8	STEP1-		
9	STEP1+		
10	DIR1-		
11	DIR1+		
12	+5VP	No connection	
13	GND	No connection	Joint 2 - Z axis  Do not connect anything to stepper drive enable
14	STEP2-		
15	STEP2+		
16	DIR2-		
17	DIR2+		
18	+5VP	No connection	
19	GND	No connection	Joint 3 - A axis rotary  Do not connect anything to stepper drive enable
20	STEP3-		
21	STEP0+		
22	DIR3-		
23	DIR3+		
24	+5VP	No connection	

## TB2 - Step and direction/Encoder/RS422

Pin - TB2	Signal	Connection	Remarks
1	GND	No connection	PWM Signal
2	STEP4-		
3	STEP4+		
4	DIR4-		
5	DIR4+		
6	+5VP		
7	ENCA+	Spindle Encoder	
8	ENCA-	Spindle Encoder	
9	GND	Spindle Encoder	
10	ENCB+	Spindle Encoder	
11	ENCB-	Spindle Encoder	
12	+5VP	Spindle Encoder	
13	IDX+	Spindle Encoder	
14	IDX-	Spindle Encoder	
15	GND	Spindle Encoder	
16	RS422/RS485 RX+	Smart Serial Interface - normally not used	
17	RS422/RS485 RX-		
18	RS422/RS485 TX+		
19	RS422/RS485 TX-		
20	+5VP		
21	5V IN		
22	5V IN		
23	GND		
24	GND		

## TB3 -Isolated IO

Pin - TB3	Signal	Connection	Remarks
1	INPUT0	External Estop	
2	INPUT1	Home Joint 0 (X)	
3	INPUT2	Home Joint 1 (Y)	
4	INPUT3	Home Joint 2 (Z)	
5	INPUT4	Min Limit Joint 0 (X)	
6	INPUT5	Min Limit Joint 1 (Y)	
7	INPUT6	Min Limit Joint 2 (Z)	
8	INPUT7	Max Limit Joint 0 (X)	
9	INPUT8	Max Limit Joint 1 (Y)	
10	INPUT9	Max Limit Joint 2 (Z)	
11	INPUT10		
12	INPUT COMMON	Field Power Ground	Set to Sourcing inputs +24V enables inputs
13	OUT0-	Spindle.0.on	Spindle on
14	OUT0+		
15	OUT1-	Flood Coolant	
16	OUT1+		
17	OUT2-	Mist Coolant	
18	OUT2+		
19	OUT3-		
20	OUT3+		
21	OUT4-		
22	OUT4+		
23	OUT5-		
24	OUT5+		