

TB214 (Rev2) - Setup Parameters for Centroid 5-Axis AC Tilt-Table Systems

Purpose:

This document covers the correct default configuration settings for 5-Axis Tilt-Table systems.

Control Configuration (F1 -> F3 -> F1):

DRO Display Units	Inches
Machine Units	Inches
Max Spindle	***
Min Spindle	***
Machine Home at Powerup	Home Switch
PLC Type	Normal
Console Type	Uniconsole-2
Jog Panel Required	Yes
Screen Blank Delay	40
Remote Drive & Directory	E

*** Machine dependant

Parameters (F1 -> F3 -> F3):

Parameter	Description	Value	Parameter	Description	Value
2	G-code Interpretation Control	8	118	B-Axis X Coordinate	***
4	File Load Options	5	119	B-Axis Z Coordinate	***
13	Probing Recovery Distance	0.1	121	Grid Digitize Min Z Pullback	0.1
14	Fast Probe Rate	30	132	5th Axis Heating Coefficient	0.23
15	Slow Probe Rate	3	136	5th Axis Cooling Coefficient	12
24	4th Axis Heating Coefficient	0.23	151	Probe Repeatability Tolerance	0
28	4th Axis Cooling Coefficient	12	152	5th Axis Autotune Accel Time	36
38	Multi-axis Maximum Feedrate	0	155	DSP Probe Enable	1
54	Smoothing	5	156	5th Axis Autotune Distance	5
60	Digital Filter Size	0	166	5th Axis Properties	257
94	4th Axis Properties	1	179	XPLC Parameter LP9	3015
98	4th Axis Autotune Distance	15	189	Aux 2 Key Function	35
116	A-axis Y Coordinate	***	190	Aux 3 Key Function	25
117	A-axis Z Coordinate	***			

*** See tiltdata.out

PID (F1 -> F3 -> F4):

Axis	Kp	Ki	Kd	Limit	Kg	Kv1	Ka	Accel
1	2.0000	0.01250	10	32000	1	20	10	0.275
2	2.0000	0.01250	10	32000	1	20	10	0.275
3	2.0000	0.01250	10	32000	-1	20	10	0.275
4	2.0000	0.01250	5	32000	0	20	10	0.275
5	2.0000	0.01250	3	32000	0	20	10	0.275

Drive Setup (F1 -> F3 -> F4 -> F8)

Axis	Motor Poles	Drive Current	Drive Angle
1	8	16	5
2	8	16	5
3	8	16	5
4	8	8	5
5	8	8	5

Motor Setup (F1 -> F3 -> F2 -> F2):

Axis	Label	Motor revs/in	Encoder counts/rev	Lash Comp	Limit		Home		Dir Rev	Screw Comp
					-	+	-	+		
1	X	Laser	8192	0.0000	1	2	1	2	N	Y
2	Y	Laser	8192	0.0000	3	4	3	4	N	Y
3	Z	Laser	8192	0.0000	6	5	6	5	Y	Y
4	A	0.25000	8192	0.0000	0	0	30	0	Y	N
5	B	5.08094	8192	0.0000	10	0	10	0	N	N

*** Machine dependant

Jog Setup (F1 -> F3 -> F2 -> F1):

Axis	Slow Jog(in/min)	Fast Jog (in/min)	Max Rate (in/min)	Dead Start (in/min)	Delta Vmax (in/min)	Travel (-) (inches)	Travel (+) (inches)
1	25	250	Autotune	20.0000	20.0000	***	***
2	25	250	Autotune	20.0000	20.0000	***	***
3	25	250	Autotune	20.0000	20.0000	***	***
4	2000	8000	8000	20.0000	200.0000	0	0
5	25	250	350	20.0000	20.0000	Automatic	Automatic

*** Machine dependant

Tilt-Table Setup (F1 -> F3 -> F2 -> F6 -> F1):

Side	25 Deg. Tilt-Table	32 Deg. Tilt-Table Rev. 2	32 Deg. Tilt-Table Rev. 3	32 Deg. Tilt-Table Rev. 4
A	15.2764812300	18.2640531500	15.9450520900	16.225520900
B	23.0600580800	23.0613454200	23.0613668000	23.1760674400
C	21.3600093500	22.9622652400	22.1562945000	22.1558422400

DSP Probe (F1 -> F3 -> F7):

DSP to Mechanical: Minimum	0.001
DSP to Mechanical: Maximum	0.025
DSP Probing Rate	25
DSP Retry Limit	10
Force DSP Feedrate in M115/M116	YES
Accept Mechanical Points	NO

Document History

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[Rev1](#) Created on **2008-03-27** by **#240**