					•						
YOUR	BALL SCREW MILLS										
GLASSES	FUNCTION SETTINGS		18" MILL P/N 6858	18" MILL P/N 6858	14" MILL P/N 6820	14" MILL P/N 6820	12" MILL P/N 6854	12" MILL P/N 6854	10" MILL P/N 5000	10" MILL P/N 5100	
			18" Base, 18" Table, & 15" Column	18" Base, 18" Table, & 15" Column	14" Base, 13" Table, & 11" Column	14" Base, 13" Table, & 11" Column	12" Base, 13" Table, & 11" Column	12" Base, 13" Table, & 11" Column	10" Base, 13" Table, & 11" Column	10" Base, 13" Table, & 11" Column	
IS BETTER	HOMING	SETTINGS	INCH VALUES	METRIC VALUES							
O SIGHT	Homing	SEQ 1	Z	Z	Z	Z	Z	Z	Z	Z	
RUCTIONS		SEQ 2	Y	Y	Y	Y	Y	Y	Y	Y	
PERAIING	543 FX FX FX FX	SEQ 3	X	X	X	X	X	X	X	X	
	Denton invert	SEQ 4	A	A	A	A	A	A	A	A	
	X X Z Z Z A Homing Food dat 50 and year Indi Off Delawar (0.070 Judy	Direction Invert	X, Y, & Z=NO A-Axis=YES								
	Forme Position 0.000 x 0.000 y 0.000 y 0.000 A	Homing Feedrate	20IN/MIN	508MM/MIN	20IN/MIN	508MM/MIN	20IN/MIN	508MM/MIN	20IN/MIN	508MM/MIN	1
	🔽 Request Hone on startup	Pull Off Distance	0.039"	0.991MM	0.039"	0.991MM	0.039"	0.991MM	0.039"	0.991MM	i i
	Financi Hone offer C Ore press	Home Position	X0,Y0,Z0,A0	1							
		Request Home on Startup	YES/CHECK								



Sherline/MASSO Controller Default Settings Instructions

MASSO Default Settings

We have updated our Function Settings on the F1 Setup page.

The new settings will increase the speed of some of the functions such as Homing. It will reduce the amount of "ramp up – ramp down" on-axis moves. It will increase the accuracy and precision of the threading cycle, and in some cases it will correct the direction that your lathe-axis will jog.

We have a list of default settings for all of our standard machines on our Sherline/MASSO Help page (<u>https://www.sherline.com/sherline-masso-help/</u>).

1. When you go to the MASSO Help page, scroll down to "*MASSO Controller-Default Function Settings for Sherline Machines*" (see Figure 1). Then click on the type of machine that you have.



FIGURE 1—Detail of the Sherline/MASSO Help page.

2. The machines in each category are listed by part number and-axis length. Look up the machine settings for your machine.

BALL SCREW MILLS									
FUNCTION SETTINGS		18" MILL P/N 6858	18" MILL P/N 6858	14" MILL P/N 6820	14" MILL P/N 6820	12" MILL P/N 6854	12" MILL P/N 6854	10" MILL P/N 5000	10" MILL P/N 5100
		18" Base, 18" Table, & 15" Column	18" Base, 18" Table, & 15" Column	14" Base, 13" Table, & 11" Column	14" Base, 13" Table, & 11" Column	12" Base, 13" Table, & 11" Column	12" Base, 13" Table, & 11" Column	10" Base, 13" Table, & 11" Column	10" Base, 13" Table, & 11" Column
HOMING	SETTINGS	INCH VALUES	METRIC VALUES						
having	SEQ 1	I	Z	Z	Z	Z	Z	Z	Z
NOT TO THE TAX	SEQ 2	Y	Y	Y	Y	Y	Y	Y	Y
363 TO DE DE DA	SEQ 3	I	X	x	X	X	X	X	X
Denter inset	SEQ 4	A	A	A	A	A	A	A	A
To Tr To Date resected an Date of the Section of th	Direction Invert	X, Y, & Z=NO A-Axis=YES	X, Y, & Z=N0 A-Axis=YES	X, Y, & Z=NO A-Aais=YES	X, Y, & Z=NO A-Axis=YES	X, Y, & Z=NO A-Axis=YES	X, Y, & Z=NO A-Axis=YES	X, Y, & Z=NO A-Aais=YES	X, Y, & Z=NO A-Axis=YES
100 100 100 100 1000 1000	Horning Feedrate	20IN/MIN	508MM/MIN	20IN/MIN	508MM/MIN	20IN/MIN	508MM/MIN	20IN/MIN	508MM/MIN
Property and a second second	Pull Off Distance	0.039'	0.991 MM	0.039*	0.991MM	0.039*	0.991MM	0.039"	0.991MM
Frank the dis Chapter	Home Position	X0,Y0,Z0,A0	X0,Y0,Z0,A0	X0,Y0,Z0,A0	X0,Y0,Z0,A0	X0,Y0,Z0,A0	X0, Y0, Z0, A0	X0,Y0,Z0,A0	X0,Y0,Z0,A0
	Request Home on Startup	YES/CHECK							
	Request Home after E-Stop	NO/BLANK							

FIGURE 2—The blue outline is highlighting the 18" Ball Screw mill as an example.

3. Then go to the F1 Setup screen. Enter your password, and then go to the Function Settings at the top left corner of the page.

Function S	iettings	Inputs	Function	Invert	Statu
Hemir	πg	EStop	EStop	Ne	High
Spine	ile	Encoder	Signal - A	Ne	Lov
General S	ettings	Encoder	Signal - B	Ne	
Lubrica	ition	Encoder	Index: 0, Pos: 1	Yes	
Tool Cha	ander	MPG	Dial Signal - A	Ne	
	vie	MPG	Dial Signal - B	Ne	
A-4.		MPG	Select X	Ne	
	XIS	MPG	Select Y	No	
	xis	MPG	Select Z	No	
	xis	MPG	Select A	Ne	
	l Zero	MPG	Select B	No	
	ration Settings	MPG	Resolution 1	No	
		MPG	Resolution 2	No	
		MPG	Resolution 3	No	
MASSO		Analog	Input 1		0.01
MASSO	SHERLINE	Analog	Input 2		0.00
MASSO Serial No: 5A-3010	Sherline Products USA	Analog	Input 3		0.01
		Analog	Input 4		0.00
		Input 1	X - Home Sensor Input	Yes	
		Input 2	Y - Home Sensor Input	Yes	
	1-800-541-0735	Input 3	Z - Home Sensor Input		
		Input 4			
		Input 5			
					High
		Input 7			High
		L			
F1 - SETUP	F2 - PROGRAM & MDI		JOG F	4 - TOOL	S & SETS
				Critic Off	0.010

4. Double click on each setting option and compare these settings to the default settings.

Most of the setting changes are going to be on the "Homing" page and the individual axis pages.



FIGURE 4—The Homing settings screen.

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MPG	Dial Signal	- A	No			Output 3
MPG	Dial Signal	- В	No			Output 4
X - Axis						Output 5
Axis resolution:	0.000063 inch 8	k max pulse r	ate: 8,4	kHz		Output 6
Motor: Distance	per revolution:	0.05000	In	ch Wizan		Output 7
Drive: Pulses pe	r revolution:	800	-			Output 8
Maximum Feedr	ate:	31,49654	In	ch Imin		Output 9
Asselsesting		2 75501		criymur)		Output 10
Acceleration:		2.73591	۱n ج	ch/sec^2		Output 11
Travel Minimum:		-5.400	In	ch		Output 12
Travel Maximum	6	0.000	In	ch		Output 13
Backlash		0.00000	In	ch		Output 14
		Invert D	irection			Output 15
						Output 16
						Relay 1
						Relay 2
	Saus	Car	- 0			Relay 3
	5446	Cali				Relay 4
Input 5			No			Relay 5
Input 6			No	High		Relay 6
	MPG MPG Axis resolution: Axis resolution: Maximum Feedr Acceleration: Travel Maximum Backlash Input 5 Input 6	MPG Dial Signal MPG Dial Signal X - Axis Axis resolution: 0.000063 inch 8 Motor: Distance per revolution: Dial Signal Drive: Pulses per revolution: Dial Signal Maximum Feedrate: Acceleration: Travel Minimum: Travel Maximum: Backlash Save Input 5 Input 6	MPG Dial Signal - A MPG Dial Signal - B Axis resolution: 0.00068 inch & max pulse r Motor: Dial Signal - B Maximum Feedrate: 31.49654 Acceleration: 2.75591 Travel Minimum: 5.400 Backlash 0.0000 Invert D Save Cant Input 5 Input 6	MPG Dial Signal - A No MPG Dial Signal - B No X - Axis Axis resolution: 0.000063 inch & max pulse rate: 3.4 Motor: Distance per revolution: 0.05000 In Drive: Pulses per revolution: 800 In Maximum Feedrate: 31.49654 In Acceleration: 2.75591 In Travel Maximum: 0.0000 In Backlash 0.0000 In Invert Direction Save Cancel Input 5 No	MPG Dial Signal - A No Low MPG Dial Signal - B No Low X - Axis Axis resolution: 0.000683 inch & max pulse rate: 8.4 kHz Motor: Distance per revolution: 0.05000 Inch Drive: Pulses per revolution: 800 Inch/Vinin Acceleration: 2.75591 Inch/sec*2 Travel Minimum: 5.400 Inch Backlash 0.0000 Inch Save Cancel Input 5 No Low Input 6 No High	MPG Dial Signal - A No Low MPG Dial Signal - B No Low X - Axis Axis resolution: 0.000063 inch & max pulse rate: 8.4 kHz Motor: Distance per revolution: 0.05000 Inch Drive: Pulses per revolution: 30.0 Inch Maximum Feedrate: 31.49654 Inch/min Acceleration: 2.75591 Inch/sec^2 Travel Maximum: 0.0000 Inch Backlash 0.0000 Inch Save Cancel Invert Direction Travel Munt 5 No Low Invert Direction Save Cancel

FIGURE 5—The X-axis settings screen.

- 5. Double click on each of these pages to open them up. Then edit the new default settings onto each page. Then click on Save.
- 6. After you have changed all of the settings, double click on "Save & Load Calibration Settings," then click on "Load from File." This will save all of your settings onto your USB drive.

Very Important Notes:

- 1. You will need to touch off all of your tools and reset them because your machine home position may change with the increased acceleration settings.
- 2. You will need to check you part home position and any "Work Offsets" G54 – G59.
- 3. On the lathe, your X-axis should home out correctly. Then it should jog in the correct direction and your tool should be described on the tool page correctly as front side or back side tools (see Figures 6 and 7).



FIGURE 6—X-axis table directions.



FIGURE 7—Tools 1 and 2 are on the back side of the part and Tool 3 is on the front side of the part.

Edit Tool No: 2	p	0.000	
)	0.000	
Tool Name 55 BORE)	0.000	0
Z Offset -12.52321 Inch Z VO	ì	0.015	0
Test Piece (Dia) 0.00 Inch Touch)	0.000	0
		0.000	0
Tool on back side)	0.000	
)	0.000	0
)	0.000	0
)	0.000	0
Z Wear 0.00000 Toch	1	0.000	Π

FIGURE 8—The blue triangle indicates tool #2 is on the back side.

	-		
Edit Tool No: 3	p	0.000	1
)	0.000	0
Tool Name THRD)	0.000	0
Z Offset -12.16711 Inch Ztor	ì	0.015	0
Test Piece (Dia) 0.00 Inch Touch)	0.000	0
		0.000	0
Tool on front side)	0.000	0
)	0.000	0
)	0.000	0
)	0.000	0
Z Wear -0.01000 Toch	ī	0 000	0

FIGURE 9—The blue triangle indicates tool #3 is on the front side.

4. If you have upgraded your machine to a longer base, table, or column, you will need to look at the-axis information for a comparable machine with those-axis length dimensions.

Example Set-up

You have a 5400 mill and you upgraded your table to an 18" table.

- 1. Is your machine a Leadscrew machine, or a Ball screw machine?
- 2. If it is a Leadscrew machine, are the leadscrews Inch or Metric?

For this example, we are going to say that your machine is a leadscrew machine and the leadscrews are metric.

 For all of your settings, except for the X-axis settings, you would use the settings under 12" Mill, P/N 5410, 12" Base, 13" Table, & 11" Column (see Figure 10).

LEADSCREW MILLS							\frown	、 、	
FUNCTION SETTINGS		18" MILL-NEXGEN P/N 5800	18" MILL-NEXGEN P/N 5810	14" NILL P/N 2000	14" MILL P/N 2010	12" MILL P/N 5400	12" MILL P/N 5410	PIN 5000	10" MILL P/N 5100
		18" Base, 18" Table, & 15" Column	18" Base, 18" Table, & 15" Column	14" Base, 13" Table, & 11" Column	14" Base, 13" Table, & 11" Column	12" Base, 13" Table & 11" Column	12" Base, 13" Table, & 11" Column	0" Base, 13" Table, & 11" Column	10" Base, 13" Table, & 11" Column
HOMING	SETTINGS	INCH VALUES	METRIC VALUES	INCH VALUES	METRIC VALUES	INCH VALUES	METRIC VALUES	INCH VALUES	METRIC VALUES
hanne	SEQ 1	2	Z	Z	Z	Z	Z	Z	2
NAME AND A DESCRIPTION OF A DESCRIPTIONO	SEQ 2	Y	Y	Y	Y	Y	Y	Y	Y
NO DI DI DI DI	SEQ 3	X	X	x	X	x	X	X	X
Dealer Street	SEQ 4	A	A	A	A	A	A	A	A
TE TE DA remenutation (2000 Baldions Publicition (2000 Baldions)	Direction Invert	X, Y, & Z=NO A-Axis=YES	X, Y, & Z=NO A-Axis=YES	X, Y, & Z=NO A-Axis=YES	X, Y, & Z=NO A-Aais=YES	X, Y, & Z=NO A-Axis=YES			
Tana batan (1.00 - g(1.00 - g(0.00 - g(0.00 - g	Horning Feedrate	20IN/MIN	508MM/MIN	20IN/MIN	508MM/MIN	20IN/MIN	508MM/MIN	20IN/MIN	508MM/MIN
C Report Armonitation	Pull Off Distance	0.039*	0.991 MM	0.039*	0.991MM	0.039*	0.991MM	0.039"	0.991MM
Topos the dist Day no	Home Position	X0,Y0,Z0,A0	X0,Y0,Z0,A0	X0,Y0,Z0,A0	X0,Y0,Z0,A0	X0,Y0,Z0,A0	X0, Y0, Z0, A0	X0,Y0,Z0,A0	X0,Y0,Z0,A0
	Request Home on Startup	YES/CHECK	YES/CHECK	YES/CHECK	YES/CHECK	YES/CHECK	YES/CHECK	YES/CHECK	YES/CHECK
	Request Home after E-Stap	NO/BLANK	NO/BLANK	NO/BLANK	NO/BLANK	NO/BLANK	NO/BLANK	NO/BLANK	NO/BLANK

FIGURE 10—The blue outline shows the 5410 12" metric mill in the table.

For the X-axis settings you will use the settings for the "18" Mill – NexGen, P/N 5810, 18" Base, 18" Table, & 15" Column (see Figure 11).

				<pre> ````````````````````````````````````</pre>						
			18" Base, 18" Table & 15" Column	18" Base, 18" Table, & 15" Column	4" Base, 13" Table, & 11" Column	14" Base, 13" Table, & 11" Column	12" Base, 13" Table, & 11" Column	12" Base, 13" Table, & 11" Column	10" Base, 13" Table, & 11" Column	10" Base, 13" Table, & 11" Column
	X-AXIS	SETTINGS	INCH VALUES	METRIC VALUES	INCH VALUES	METRIC VALUES	INCH VALUES	METRIC VALUES	INCH VALUES	METRIC VALUES
	T. Ball An existence California's the parents of the Prior Openes of Sciences (Control of Sciences)	Motor: Distance per Revolution	0.05	1.00	0.05	1.00	0.05	1.00	0.05	1.00
	All Party Local Rock Views Lastrone 200 Kales Lastrone 200 Kales Kales Lastrone 200 Kales Kale	Drive: Pulses per Revolution	800	800	800	800	800	800	800	800
		Maximum Feedrate	32.00	32.00	32.00	32.00	32.00	32.00	32.00	32.00
		Acceleration	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
1		Travel Minimum	-12.80	-325.12	-7.80	-198.12	-7.80	-198.12	-7.80	-198.12
		Travel Maximum	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1		Backlash	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Invert: Check or Blank	NO/BLANK	NO/BLANK	NO/BLANK	NO/BLANK	NO/BLANK	NO/BLANK	NO/BLANK	NO/BLANK
	Y-ANS	SETTINGS	18" Base, 18" Table, & 15" Column	18" Base, 18" Table, & 15" Column	14" Base, 13" Table, & 11" Column	14" Base, 13" Table, & 11" Column	12" Base, 13" Table, & 11" Column	12" Base, 13" Table, & 11" Column	10" Base, 13" Table, & 11" Column	10" Base, 13" Table, & 11" Column
	T. ANY MARKAGES CONTRACTOR OF TAXABLE New Income or Widows (1999)	Motor: Distance per Revolution	0.05	1.00	0.05	1.00	0.05	1.00	0.05	1.00
	Neurofeder (1973) etce Soleder (1973) Saaffaan (1976) Saaffaan (1976) etc	Drive: Pulses per Revolution	800	800	800	800	800	800	800	800
	Terrar Linco and	Maximum Feedrate	32.00	32.00	32.00	32.00	32.00	32.00	32.00	32.00

FIGURE 11— The blue outline shows the 5810 18" metric mill in the table for the 18" table X-axis settings.

If you have any questions or problems, call 760-727-5857 and ask for Karl.

Thank you, Sherline Products Inc.