





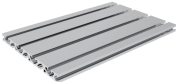




GENMITSU CNC ROUTER 3018-MX3

USER MANUAL





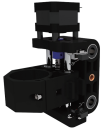
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




Part 1: Package List

NO.	TYPE	NAME	SIZE/PARAMETERS	PICTURES	QTY.	NO.
1	Mechanical Part	Aluminum Profile	20*40*290mm		2	MX3-1
2			20*20*360mm		2	MX3-2
3		Aluminum Workbench	180*300mm		1	MX3-3
4		Guide Rail (X Axis)	Ø10*360mm		2	MX3-4
5		Guide Rail (Y Axis)	Ø10*290mm		2	MX3-5
6		Lead Screw (X Axis)	365mm Lead: 4mm		1	MX3-6
7		Lead Screw (Y Axis)	297mm Lead: 4mm		1	MX3-7








Part 1: Package List

NO.	TYPE	NAME	SIZE/PARAMETERS	PICTURES	QTY.	NO.
8	Mechanical Part	Phenolic resin plate-R (X Axis)	90*220mm		1	MX3-8
9		Phenolic resin plate-L (X Axis)	90*220mm		1	MX3-9
10		Phenolic resin plate-F (Y Axis)	46*360mm		1	MX3-10
11		Phenolic resin plate-B (Y Axis)	46*360mm		1	MX3-11
12		X-Z Axis Assembly			1	MX3-12




Part 1: Package List

NO.	TYPE	NAME	SIZE/PARAMETERS	PICTURES	QTY.	NO.
13	Mechanical Part	42 Stepper motor	NEMA17 34mm		2	MX3-13
14		Spindle	775-ER11		1	MX3-14
15		ER11 Collet	ER11-3.175		1	MX3-15
16		Coupling	5mm-8mm		2	MX3-16
17		T-Copper Nut			2	MX3-17
18		Spring	12*30 mm		2	MX3-18
19		Bearing mount (Y Axis)			4	MX3-19
20		Nut mount (Y Axis)			1	MX3-20
21		Acrylic protection board			2	MX3-21








Part 1: Package List

NO.	TYPE	NAME	SIZE/PARAMETERS	PICTURES	QTY.	NO.
22	Electrical Part	Control Board MC3D3	NEMA17 34mm		1	MX3-22
23		Insulated Board			1	MX3-23
24		USB cable	A-B		1	MX3-24
25		24V power supply	24V 5A		1	MX3-25
26		Power cable (US)	1.2M		1	MX3-26
27		Power cable (EU)	1.2M		1	MX3-27
28		Limit Switch			4	MX3-28






Part 1: Package List

NO.	TYPE	NAME	SIZE/PARAMETERS	PICTURES	QTY.	NO.
29	Mechanical Part	Limit Switch Connecting wire	X LIM+ 15cm		1	MX3-29
30			X LIM- 53cm		1	MX3-30
31			Y LIM+ 30cm		1	MX3-31
32			Y LIM- 60cm		1	MX3-32
33			Z LIM+ 34cm		1	MX3-33
34			Z LIM- 40cm		1	MX3-34
35		Stepper motor Connecting wire	X Axis 17cm		1	MX3-35
36			Y Axis 52cm		1	MX3-36
37			Z Axis 28cm		1	MX3-37
38		Spindle motor wire	Red/black 35cm		1	MX3-38







Part 1: Package List

NO.	TYPE	NAME	SIZE/PARAMETERS	PICTURES	QTY.	NO.
39	Tools/ accessories	Work fixture			1	MX3-39
40		Probe Tool			1	MX3-40
41		Engraving Knife	NJ3.2002		10	MX3-41
42		Allen wrench	2.0mm, 2.5mm, 3.0mm, 4.0mm, 5.0mm		5	MX3-42
43		Open end wrench	17*108mm 13*87mm		2	MX3-43
44		Screwdriver			1	MX3-44
45		Cable tie	3X80mm		30	MX3-45

Part 1: Package List

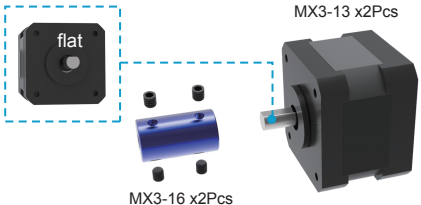
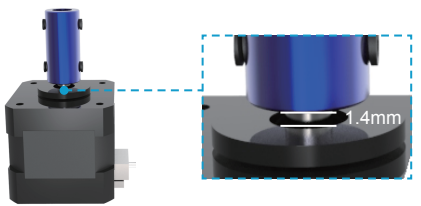
NO.	TYPE	NAME	SIZE/PARAMETERS	PICTURES	QTY.	NO.
45	Tools/ accessories	Wire holder			10	MX3-46
46		Sealing strip (Y Axis)	270mm		1	MX3-47
47		Sealing strip (X Axis)	340mm		1	MX3-48
48		Nylon braided tube	200mm		1	MX3-49
49		CD			1	MX3-50
50		Manual book			1	MX3-51

Part 1: Package List

NO.	TYPE	NAME	SIZE/PARAMETERS	PICTURES	QTY.	NO.
51	Screw/Nut	M3 bolt	M3*14mm		8	MX3-52
52		M5 bolt	M5*10mm		8	MX3-53
53			M5*14mm		4	MX3-54
54			M5*16mm		12	MX3-55
55			M5*20mm		20	MX3-56
56			M6 bolt		M6*16mm	10
57		M3 screw	M3*20mm		2	MX3-58
58			M3*6mm		16	MX3-59
59		Nut 20*M5	20M5		24	MX3-60
60		Nut 30*M6	30M6		10	MX3-61
61		ABS spacer	11mm*M5*5mm		4	MX3-62
62		ABS spacer	7mm*M3.2*10mm		2	MX3-63

Part 2: Mechanical installation

Step 1: Stepper motor Assembly Installation

	NO.	NAME	CODE	QTY.	BEFORE
Prepare materials	1	42 Stepper Motor	MX3-13	2	
	2	Coupling	MX3-16	2	
Tools	1	Allen wrench (2mm)			AFTER
Operation Steps	1	Load the hole of $\varnothing 5\text{mm}$ part of the coupling, fix into the Axis of motor, must lock the screws on the flat of the Axis and then tighten it.			
Check	1	When the motor is running, check the coupling smoothly.			
Remind	1	Keep a distance of 1.4mm between the coupling and the surface of the motor.			

Part 2: Mechanical installation

Step 2: Install Phenolic resin plate-R (X Axis)

Step 2: Install Phenolic resin plate-R (X Axis)					
	NO.	NAME	CODE	QTY.	BEFORE
Prepare materials	1	Phenolic resin plate-R (X Axis)	MX3-8	1	
	2	Stepper motor Assembly (from Step1)		1	
	3	Bolt M3*14mm	MX3-52	4	
	4	Limit switch	MX3-28	1	
	5	ABS spacer	MX3-63	2	
	6	Wire holder	MX3-46	2	
	7	M3 ScrewM3*20mm	MX3-58	2	
	8	M3 ScrewM3*6mm	MX3-59	2	
Tools	1	Allen wrench (2.5mm)			AFTER
	2	Screwdriver			
Operation Steps	1	It is recommended to install the motor first and then fix the limit switch for easy operation.			
Check	1	Make sure the right direction of the stepper motor and limit switch.			
Remind					

Part 2: Mechanical installation

Step 3: Install Phenolic resin plate-L (X Axis)

Step 3: Install Phenolic resin plate-L (X Axis)					
	NO.	NAME	CODE	QTY.	BEFORE
Prepare materials	1	Phenolic resin plate-L (X Axis)	MX3-9	1	<p>MX3-28 MX3-59 x2Pcs MX3-9</p>
	2	Limit switch	MX3-28	1	
	3	M3 ScrewM3*6mm	MX3-59	2	
Tools	1	Screwdriver			AFTER
Operation Steps					
Check	1	Make sure the right direction of the limit switch.			
Remind					

Part 2: Mechanical installation

Step 4: Install Phenolic resin plate-B/F (Y Axis)

	NO.	NAME	CODE	QTY.	BEFORE
Prepare materials	1	Phenolic resin plate-B (Y Axis)	MX3-11	1	<p>MX3-11</p> <p>MX3-28 x2Pcs</p> <p>MX3-10</p> <p>MX3-59 x8Pcs</p> <p>MX3-46 x 4Pcs</p>
	2	Phenolic resin plate-F (Y Axis)	MX3-10	1	
	3	M3 Screw M3*6mm	MX3-59	8	
	4	Limit switch	MX3-28	2	
	5	Wire holder	MX3-46	4	
Tools	1	Screwdriver			AFTER
Operation Steps					
Check	1	Make sure the right direction of the limit switch.			
Remind					

Part 2: Mechanical installation

Step 5: Base Installation

	NO.	NAME	CODE	QTY.	BEFORE
Prepare materials	1	Aluminum Profile 20*40	MX3-1	2	
	2	Phenolic resin plate-F (from Step4)		1	
	3	Phenolic resin plate-B (from Step4)		1	
	4	M5 Bolt M5*20mm	MX3-56	8	
Tools	1	Allen wrench (4mm)			AFTER
Operation Steps	1	Use allen wrench to tight the Bolts for 80%, remain 20% space for adjust later.			
Check					
Remind					

Part 2: Mechanical installation

Step 6: Install (Y Axis) Bearing mount (Y Axis)

Step 6: Install (Y Axis) Bearing mount (Y Axis)					
	NO.	NAME	CODE	QTY.	BEFORE
Prepare materials	1	Guide Rail (Y Axis)	MX3-5	2	
	2	Bearing mount (Y Axis)	MX3-19	4	
	3	Base (from Step5)		1	
	4	M5 Bolt M5*20mm	MX3-56	4	
Tools	1	Allen wrench (4mm)			AFTER
Operation Steps	1	When load the Bearing mounts to the Guide Rail, make sure the holes side in right position (refer to the picture)			
	2	Use allen wrench to tighten the Bolts for 80%, remain 20% space for adjust later.			
Check					
Remind					

Part 2: Mechanical installation

Step 7: Install Lead Screw Assembly (Y Axis)

Step 7: Install Lead Screw Assembly (Y Axis)					
	NO.	NAME	CODE	QTY.	BEFORE
Prepare materials	1	Lead Screw297mm (Y Axis)	MX3-7	1	
	2	T-Copper Nut	MX3-17	1	
	3	Spring	MX3-18	1	
	4	Nut mount (Y Axis)	MX3-20	1	
Tools					AFTER
Operation Steps	1	Make the T-Copper rotate to the Lead Screw, pay attention to the distance between the nut and Lead Screw for 13mm.			
	2	Load the Spring insert to the Nut, then insert them in to the Nut mount, finally rotate the Lead Screw in the middle position.			

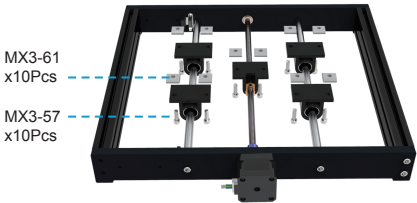
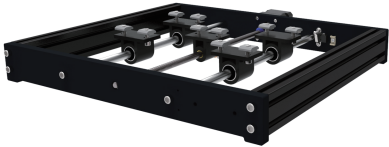
Part 2: Mechanical installation

Step 8: Runing part (Y Axis) Installation

Step 8: Runing part (Y Axis) Installation					
	NO.	NAME	CODE	QTY.	BEFORE
Prepare materials	1	Stepper motor Assembly (from Step1)		1	
	2	M3 Bolt M3*14mm	MX3-52	4	
	3	Base (from Step6)		1	
	4	Lead Screw assembly (from Step7)		1	
Tools	1	Allen wrench (2mm, 2mm)			AFTER
Operation Steps	1	Put the Lead Screw assembly into The Base, insert the end of the Lead screw to the hole of Phenolic resin plate-B, put another end of the screw insert into the bearing by force, which loacted in the middle of the Phenolic resin plate-F.			
	2	At the same time,make the stepper motor assembly install on the Phenolic resin plate-B,insert the lead screw to the coupling of motor assembly. tighten the M3 Bolts of motor,don't forget the small M3 bolt in the coupling.			
Check	1	When you finish the steps here, you should to check the Horizontal and vertical, if you have not any professional tools, you can stand the base, observe the Bearing mount fall dow} smooth, if not that you have to check the vertical of the Guide Rail.			
Remind	1	Finish the assembly of the base, you can tighten all the bolts (remember to leave 20% space before)			

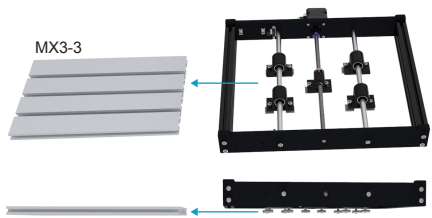
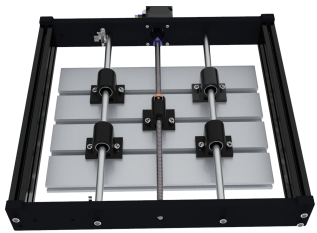
Part 2: Mechanical installation

Step 9: Aluminum Nuts Installation

Step 9: Aluminum Nuts Installation					
	NO.	NAME	CODE	QTY.	BEFORE
Prepare materials	1	Nut 30*M6	MX3-61	10	 <p>MX3-61 x10Pcs</p> <p>MX3-57 x10Pcs</p>
	2	M6 Bolt M6*16mm	MX3-57	10	
Tools					AFTER
Operation Steps	1	Install the Nut into bolts by hand.			
Check					
Remind	1	Don't need to tighten the Nut, we need the space to insert the workbench in next step.			

Part 2: Mechanical installation

Step 10: Aluminum Workbench Installation

	NO.	NAME	CODE	QTY.	BEFORE
Prepare materials	1	Aluminum Workbench	MX3-3	1	
	2	Base (from Step 9)		1	
Tools	1	Allen wrench (1 mm)			AFTER
Operation Steps	1	Turn over the Base in the side of the Aluminum workbench, move the base and make sure the nuts insert into the three channels of the workbench.			
	2	When the workbench in the middle of the base, use the Allen wrench tighten the Bolts.			
Check					
Remind					

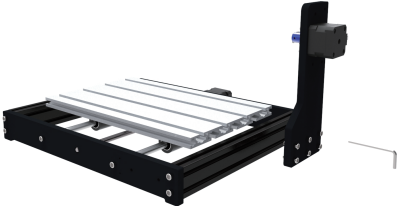

Part 2: Mechanical installation

Step 11: Prepare Phenolic resin plate-R/L

Step 11: Prepare Phenolic resin plate-R/L					
	NO.	NAME	CODE	QTY.	BEFORE
Prepare materials	1	(X Axis) Phenolic resin plate-R (from Step2)		1	
	2	(X Axis) Phenolic resin plate-L (from Step3)		1	
	3	Nut 20*M5	MX3-60	12	
	4	M5 Bolt M5*16mm	MX3-55	12	
Tools					AFTER
Operation Steps					
Check					
Remind	1	Don't need to tighten the Nut, we need the space to the next step.			

Part 2: Mechanical installation

Step 12: Install Phenolic resin plate-R/L

	NO.	NAME	CODE	QTY.	BEFORE
Prepare materials	1	Phenolic resin plate-R (from Step 11)		1	
	2	Phenolic resin plate-L (from Step 11)		1	
	3	Base (from Step 11)		1	
Tools	1	Allen wrench (1 mm)			AFTER
Operation Steps	1	Fix the Phenolic resin plates on the base, Use the Allen wrench tighten the Bolts 80% in advance, remain 20% for adjust later.			
Check					
Remind					

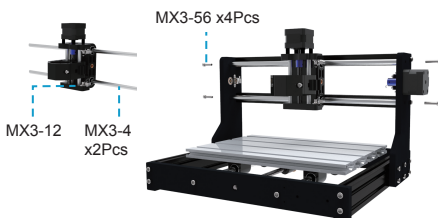
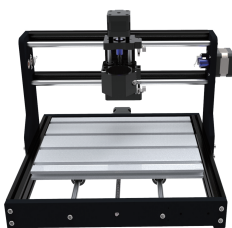
Part 2: Mechanical installation

Step 13: Aluminum Profile (X Axis) Installation

	NO.	NAME	CODE	QTY.	BEFORE
Prepare materials	1	Aluminum Profile 20*20	MX3-2	2	
	2	M5 Bolt M5*20mm	MX3-56	4	
	3	Base(from Step 12)		1	
Tools	1	Allen wrench (1 mm)			AFTER
Operation Steps	1	Fix the Aluminum Profile on the Phenolic resin plate, Use the Allen wrench tighten the Bolts 80% in advance, remain 20% for adjust later.			
Check					
Remind					

Part 2: Mechanical installation

Step 14: Install X-Z Axis Assembly & Guide Rail

Step 14: Install X-Z Axis Assembly & Guide Rail					
	NO.	NAME	CODE	QTY.	BEFORE
Prepare materials	1	X-Z Axis Assembly	MX3-12	1	
	2	M5 Bolt M5*20mm	MX3-56	4	
	3	Guide Rail (X Axis) 360mm	MX3-4	2	
Tools	1	Allen wrench (1 mm)			AFTER
Operation Steps	1	Use the Allen wrench tighten the Bolts 80% in advance, remain 20% space for adjust later.			
Check					
Remind					

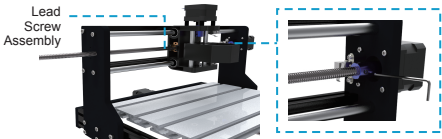
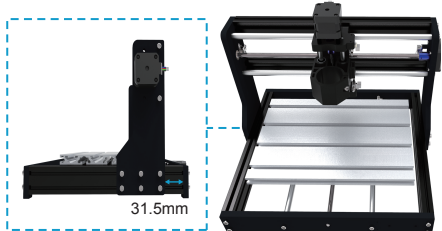
Part 2: Mechanical installation

Step 15: Prepare Lead Screw Assembly (X Axis)

Step 15: Prepare Lead Screw Assembly (X Axis)					BEFORE
Prepare materials	NO.	NAME	CODE	QTY.	
	1	Lead Screw (X Axis) 365mm	MX3-6	1	
	2	T-Copper Nut	MX3-17	1	
	3	Spring	MX3-18	1	
Tools	1	.			AFTER
Operation Steps	1	First, insert the Lead Screw into the Phenolic resin plate-L, then make the T-Copper rotate to the Lead Screw, pay attention to the distance between the nut and Lead Screw for 33mm.			
	2	Load the Spring insert the Nut.			
Check					
Remind					

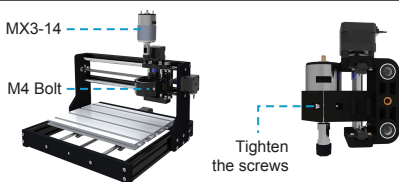

Part 2: Mechanical installation

Step 16: Install Lead Screw Assembly (X Axis)

Step 16: Install Lead Screw Assembly (X Axis)					
	NO.	NAME	CODE	QTY.	BEFORE
Prepare materials	1	Lead Screw Assembly (from Step15)		1	
Tools	1	Allen wrench (2mm)			AFTER
Operation Steps	1	Insert the Lead Screw assembly to the X-Z Axis Assembly, then rotate the Lead Screw into the nut inside of the X-Z Axis assembly.			
	2	Keep to rotate the Lead Screw, until insert to the blue coupling, tighten the small screws in the coupling.			
	3	Make sure the distance between the Phenolic resin plate-R and Phenolic resin plate-B for 31.5mm.			
Check					
Remind					

Part 2: Mechanical installation

Step 17: Install Spindle

	NO.	NAME	CODE	QTY.	BEFORE
Prepare materials	1	Spindle	MX3-14	1	
Tools	1	Allen wrench (3mm)			AFTER
Operation Steps	1	Loosen the M4 bolt in the X-Z Axis assembly, Vertical place the spindle to the ring of the X-Z Axis assembly.			
	2	When the gray cover of the spindle complete fall into the ring, tighten the M4 Bolt. Be careful not to use excessive force to avoid plastic damage.			
Check	1	Check all the parts carefully, find where need to adjust, then you can tighten all the bolts (remember we remain 20% space before)			
Remind					

Part 2: Mechanical installation

Step 18: Install Control board Assembly

Step 18: Install Control board Assembly					BEFORE
Prepare materials	1	Control board MC3D3	MX3-22	1	<p>MX3-22 MX3-60 x 4Pcs MX3-62 x 4Pcs</p> <p>MX3-23 MX3-54 x 4Pcs</p>
	2	Insulated Board	MX3-23	1	
	3	M5 Bolt M5*14mm	MX3-54	4	
	4	Nut20*M5	MX3-60	4	
	5	ABS spacer	MX3-62	4	
Tools	1	Allen wrench (4mm)			AFTER
Operation Steps	1	Fix the distance between the Control board and Phenolic resin plate-R for 30mm.			<p>30mm</p>
Check					
Remind					

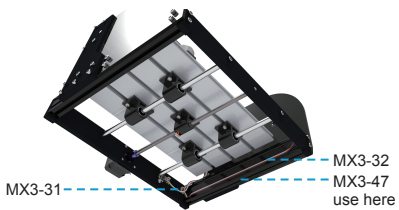
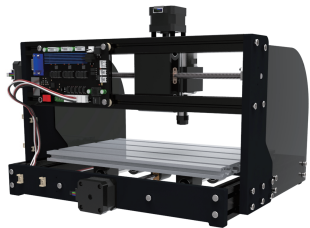
Part 2: Mechanical installation

Step 20: Wiring Connecting wires (X Axis Limit Switch)

					X轴限位
Prepare materials	1	Limit Switch Connecting wire X LIM + 15cm	MX3-29	1	
	2	Limit Switch Connecting wire X LIM - 53cm	MX3-30	1	
	3	Sealing strip 340mm (X Axis)	MX3-48	1	
Tools					X轴限位
Operation Steps	1	Put Limit switch connecting wire insert the Control board and Limit switch, the switch near by the motor is the LIM+.			
	2	Use the Sealing strip to cover the wires inside the Aluminum Profile.			
Check	1	Pay attention the mark on the Control board, make sure The correct sequence and direction of the connectors.			
Remind					

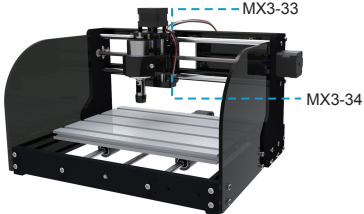
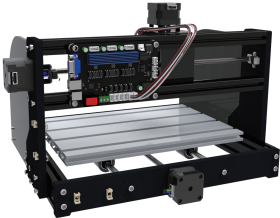
Part 2: Mechanical installation

Step 21: Wiring Connecting wires (Y Axis Limit Switch)

Step 21: Wiring Connecting wires (Y Axis Limit Switch)					
	NO.	NAME	CODE	QTY.	X轴Y轴
Prepare materials	1	Limit Switch Connecting wire Y LIM + 30cm	MX3-31	1	 <p>MX3-31</p> <p>MX3-32</p> <p>MX3-47 use here</p>
	2	Limit Switch Connecting wire Y LIM - 60cm	MX3-32	1	
	3	Sealing strip 270mm (Y Axis)	MX3-47	1	
Tools					X轴Y轴
Operation Steps	1	Put Limit switch connecting wire insert the Control board and Limit switch, the switch near by the motor is the LIM+.			
	2	Use the Sealing strip to cover the wires MX3-32 inside the Aluminum Profile.			
Check	1	Pay attention the mark on the Control board, make sure the correct sequence and direction of the connectors.			
Remind					

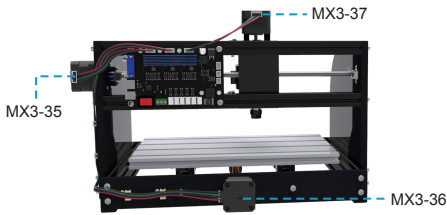
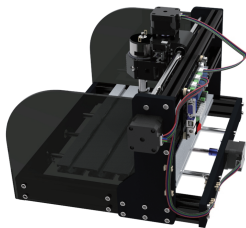
Part 2: Mechanical installation

Step 22: Wiring Connecting wires (Z Axis Limit Switch)

	NO.	NAME	CODE	QTY.	ΧΩΥ ΑΉ
Prepare materials	1	Limit Switch Connecting wire Z LIM + 34cm	MX3-33	1	
	2	Limit Switch Connecting wire Z LIM - 40cm	MX3-34	1	
Tools					ΧΩΥ ΑΓ
Operation Steps	1	Put Limit switch connecting wire insert the Control board and Limit switch, the switch near by the motor is the LIM+.			
Check	1	Pay attention the mark on the Control board, make sure the correct sequence and direction of the connectors.			
Remind					

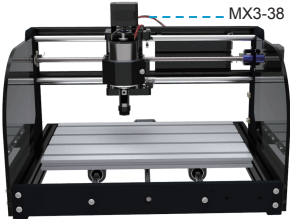

Part 2: Mechanical installation

Step 23: Wiring Connecting wires (Stepper motors)

	NO.	NAME	CODE	QTY.	ΧΩΥ ΑΓ
Prepare materials	1	(X Axis) Stepper motor connecting wire 17cm	MX3-35	1	
	2	(Y Axis) Stepper motor connecting wire 52cm	MX3-36	1	
	3	(Z Axis) Stepper motor connecting wire 28cm	MX3-37	1	
Tools					ΧΩΥ ΑΓ
Operation Steps	1	Use the Stepper motor connecting wire connect the control board and motors.			
Check	1	Pay attention the mark on the Control board, make sure the correct sequence and direction of the connectors.			
Remind					

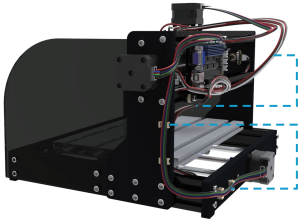
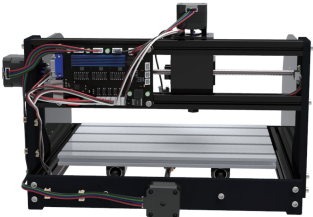
Part 2: Mechanical installation

Step 24: Wiring Spindle motor wires

	NO.	NAME	CODE	QTY.	X00Y ÁF
Prepare materials	1	Spindle motor wires 35cm	MX3-38	1	
Tools					X00Y ÁG
Operation Steps	1	Use the spindle motor wire insert the Control board, NOTE: Red wire to M +, Black wire to M -			
Check	1	Pay attention the mark on the Control board, make sure the correct sequence and direction of the connectors.			
Remind					

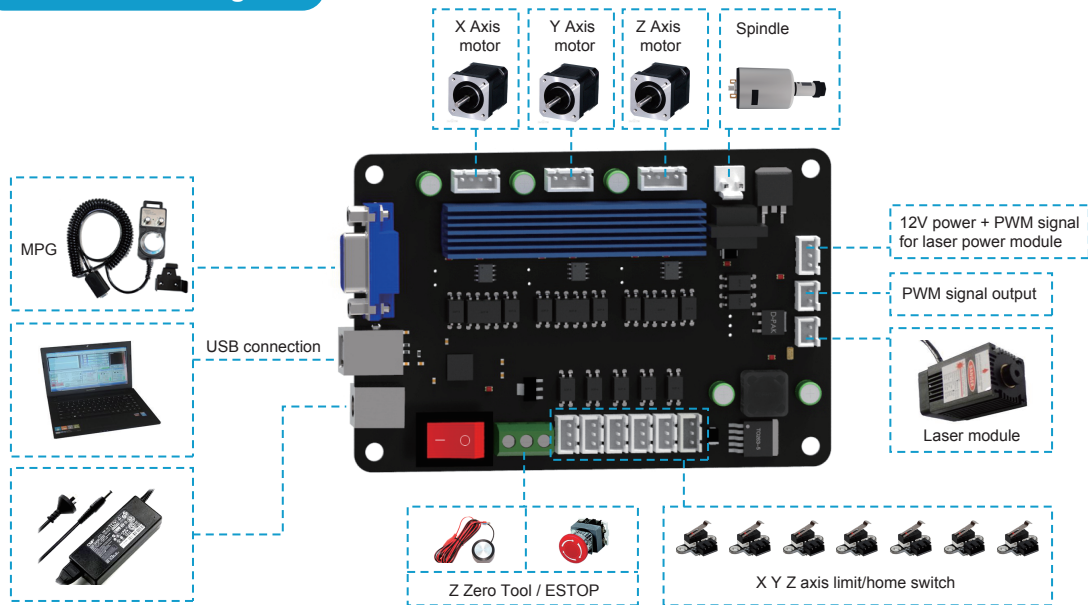
Part 2: Mechanical installation

Step 25: Sorting wires

	NO.	NAME	CODE	QTY.	ΧΩΥ ΑΕ
Prepare materials	1	Cable tie (Black)	MX3-45	1	 <p>MX3-49 use here</p> <p>MX3-45 use here</p>
	2	Nylon braided tube	MX3-49	1	
Tools					VIEW 2
Operation Steps	1	Use cable tie to fix all the wires which across the wire holder.			
	2	Use the Nylon braided tube to bundle the multi-wires.			
Check					
Remind					

Part 3: Control Card Introduction

a. Connection diagram



Part 3: Control Card Introduction

b. 3018 MX3 control card features

1. Applicable to mach3mill CNC software, support Windows XP, Windows 7 32 / 64bit, Windows8, Windows10 operating system;
2. USB interface communication, support 3-axis engraving, support laser cutting;
3. Support automatic tool setting function;
4. External emergency stop switch, limit switch (home switch);
5. Onboard motor driver, maximum 32 micro steps, the motor runs smoothly;
6. The maximum output pulse frequency is 100KHz;
7. All control signals are isolated by optocoupler and have strong anti-interference ability;
8. Support external MPG for manual control.

Part 3: Control Card Introduction

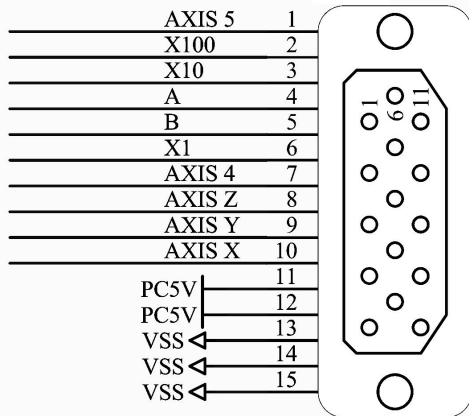
c. PCB mark Description

Mark	Description	Mark	Description
MPG	MPG interface	YLIM-	Y limit switch -
USB	USB interface	ZLIM+	Z limit switch +
24VDC	24V power interface	ZLIM-	Z limit switch -
ON	Power ON	LAS	Laser module interface
OFF	Power OFF	PWM	PWM signal output interface
COM	Input signal common	12V	12V power output interface
ESTOP	Emergency stop switch interface	GND	V-(0V)
PORBE	Z Zero Tool interface	Spindle	Spindle motor interface
XLIM+	X limit switch +	X	X Axis motor interface
XLIM-	X limit switch -	Y	Y Axis motor interface
YLIM+	Y limit switch +	Z	Z Axis motor interface

Part 3: Control Card Introduction

d. MPG Interface pin definition

Support for external connect electronic hand wheel, use HDR15 interface to connect electronic hand wheel, Interface pin definition as shown below, You can weld the hand wheel connector according to the definition, or you can contact us to buy the hand wheel that has been welded.:



Note: The hand wheel does not directly control the motor operation, but controls the motor through software. When the electronic hand wheel is rotated, the software coordinates will change.

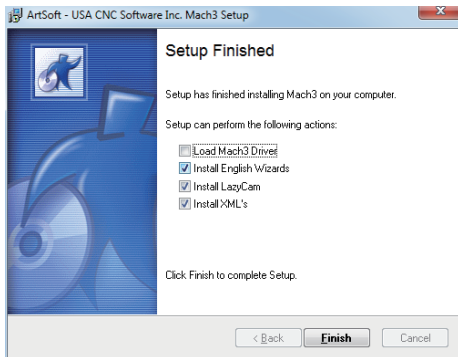
Part 4: Installation the Mach3

1. Open the CD, find mach3 software, run the installation file:

Name	Date modified	Type	Size
Mach3VersionR3.041	1/10/2014 1:23 PM	Application	25,733 KB

2. Follow the prompts to install, until the last step.

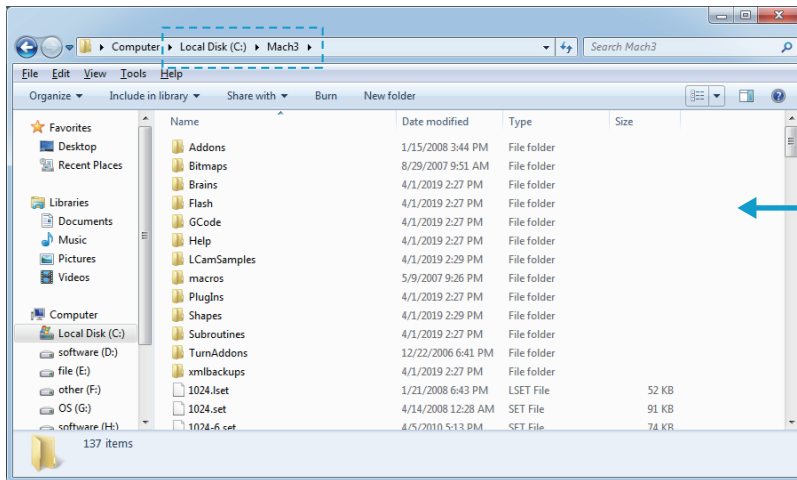
Note: For 64-bit computer, it is best not to select “LoadMach3 Driver” this one, because it will cause the system to prompt installation errors.



Part 4: Installation the Mach3

3. Mach3 configuration and plug-in import:

Copy the file "Mach3Mill.xml" 、 folder "PlugIns" from CD, replace those files in the mach3 installation directory, as shown in the following figure:



Copy these files and place them in the mach3 installation directory folder, replacing the original files.

Part 4: Installation the Mach3

4. About Mach3 license:

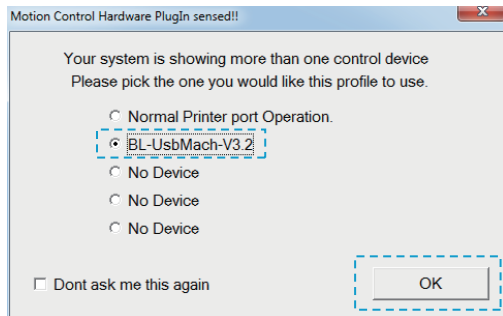
The mach3 software we provide is a trial version. It can only run up to 500 lines of G code, and does not affect the testing of machine functions. The license can be obtained through the mach3 official website:

<https://www.machsupport.com/>

5. Start the Mach3 software :

Click on the desktop icon “Mach3Mill”, a dialogue of “Motion Control Hardware PlugIn sensed!” will be show.

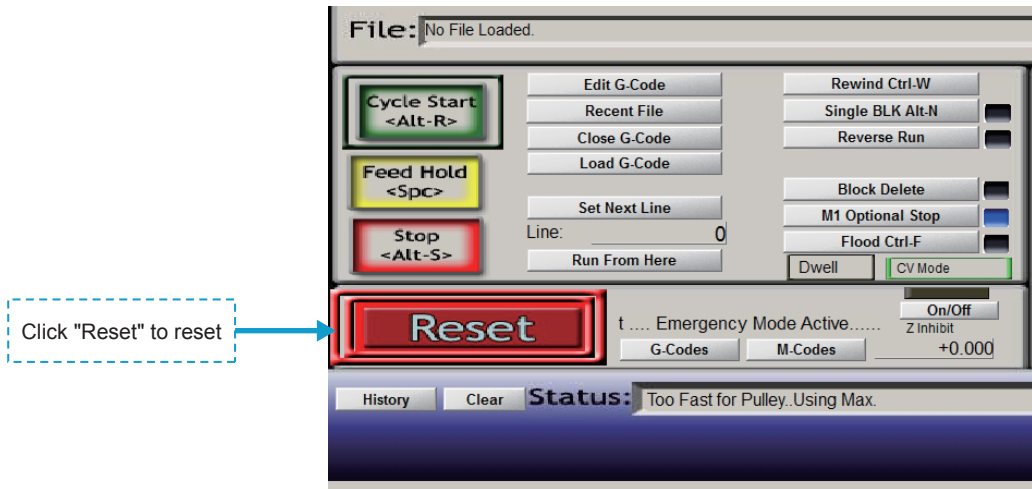
Please select the“BL-UsbMach-V3.2”, you can also select “Don't ask me this again”.



Part 4: Installation the Mach3

6. About the mach3 "Reset" button:

If "Reset" is flashing, the software will not work. If it cannot be reset, please check if the motion control is connected, Check software input settings.

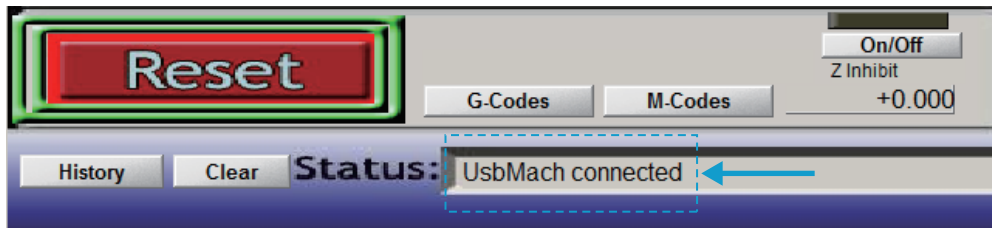


Part 5: Engraving process example

Step 1

Turn on the control card's power switch button, LED (24V.PWR) is on.

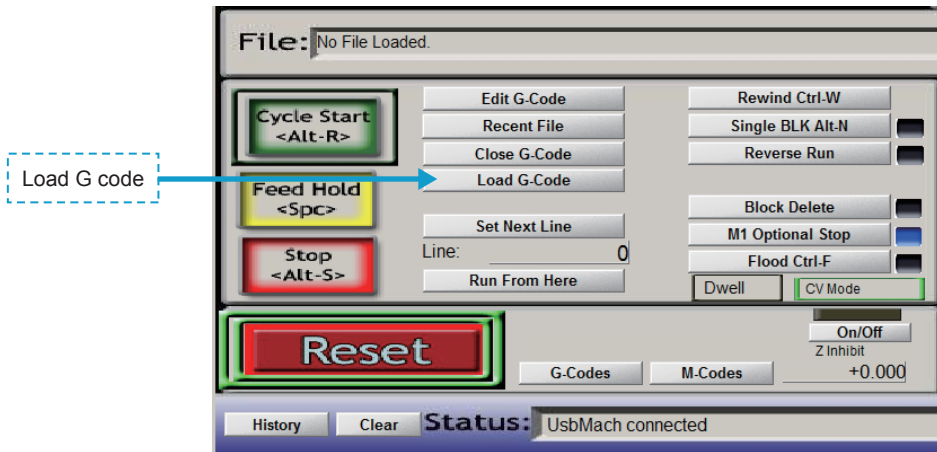
Reset the software and display "**Usbmach connected**". The control card is successfully connected, as shown below:



Part 5: Engraving process example

Step 2

Click "Load G-Code" to import the engraving code, for example, import the NC file in the CD: sainsmart.nc, as shown below:

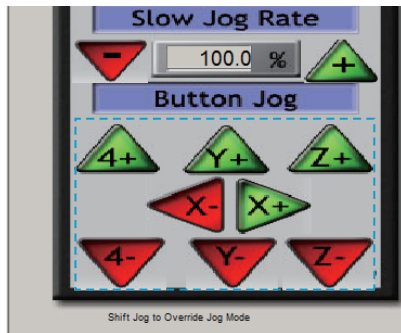


Part 5: Engraving process example

Step 3

Use the manual function to move the X Y Z axis to find the machining start point of the workpiece:

Press the “**Tab**” button on the keyboard to bring up the MPG interface. Click on X Y axis button to manually control the motor work, to find the machining start point of the workpiece, as shown below:



NOTE: The Z-axis can use the automatic tool zero function. For detailed operation, please refer to the automatic tool setting tutorial on the CD.

Part 5: Engraving process example

Step 4

Zero X Y Z coordinates:

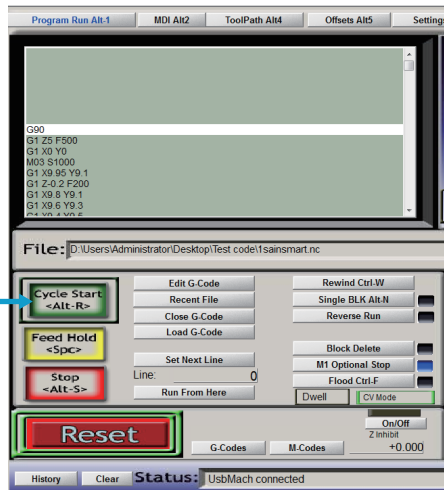
Click button, Zero X Y Z coordinates



Step 5

Run for engraving:

Run for engraving



Part 6: How to release the limit switch trigger

How to release the limit switch trigger?

After the limit trigger, the software can't do anything. At this time, the " Auto LimitoverRide " function can be used to restore the manual operation function, Manual operation away from the limit switch, release limit trigger as shown in the figure:

Click the button and the LED on the side of the button lights up to activate the "AutoLimitoverRide" function

click here

Special Functions

Speed Override Rate (Units/Min) 1000.00

Rapid Override

Single Step on Input Activation

Toggle

Auto Limit OverRide

Auto Limit OverRide

Manual Limit Override

Override Limits

Do not run Tool Change Macro

Ignore Tool Change

Probe Tip Diameter +0.0000

Enable THC Top

MPG Diagnostics

MPG 1 Velocity +0.00 Count -3.00

MPG 2 +0.00 +0.00

MPG 3 +0.00 +0.00

Encoder Position

X +0.0000 To DRO Load DRO Zero Alt X

Y +0.0000 To DRO Load DRO Zero Alt Y

Z +0.0000 To DRO Load DRO Zero Alt Z

Tangential Control

LR Angle +45

LR Z +1.00

Axis Inhibits

X A

Y a

Z c

Laser Trigger On

Toggle

Laser Grid Zero

Laser Grid

X +0.0000

Y +0.0000

CV Distance 180.0000

CV Feedrate +1.0000

Reset

G Codes M Codes Torch Voltage

History Clear UsbMach connected Mach3Mill

NOTE: For more detailed information on the use of the product, please refer to the contents of the CD.



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