
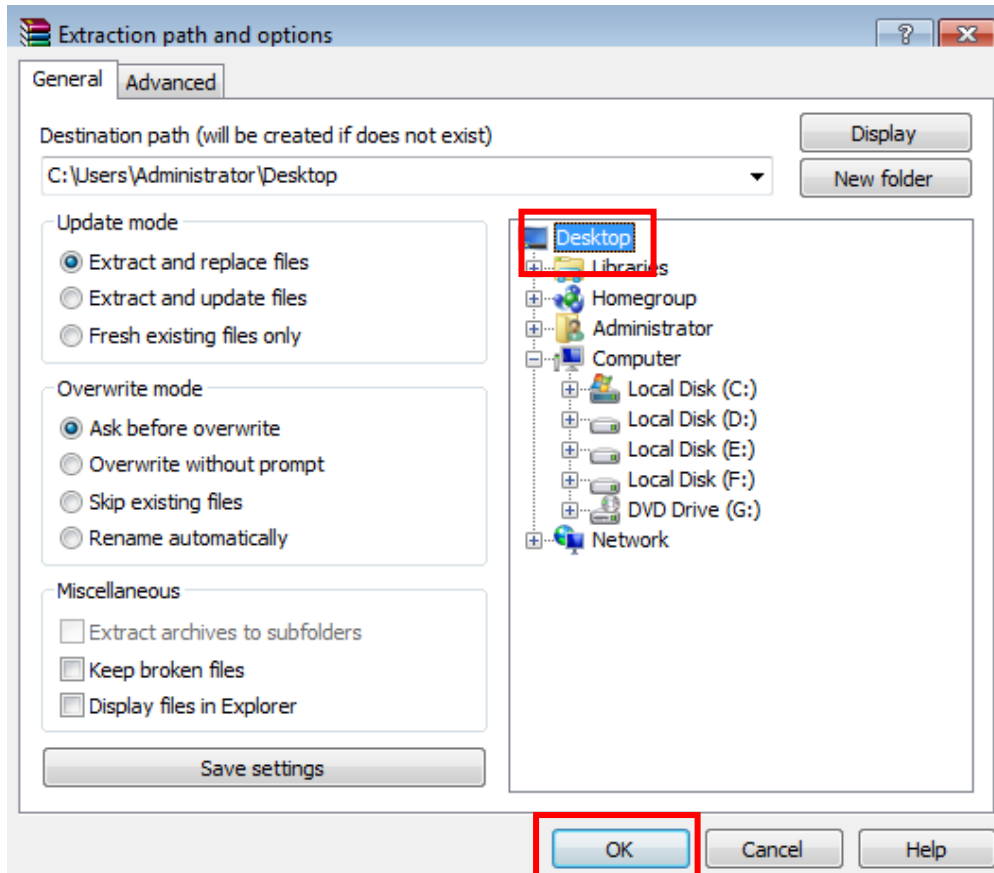

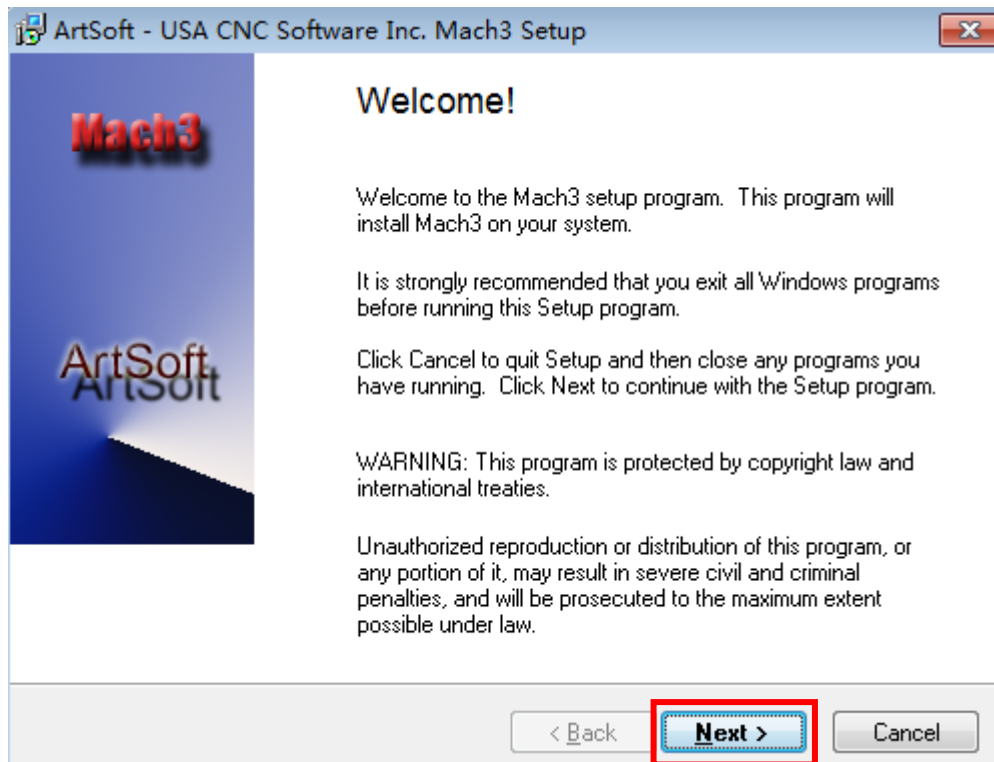


CONTROLLER SOFTWARE USB MACH3 INSTALLATION

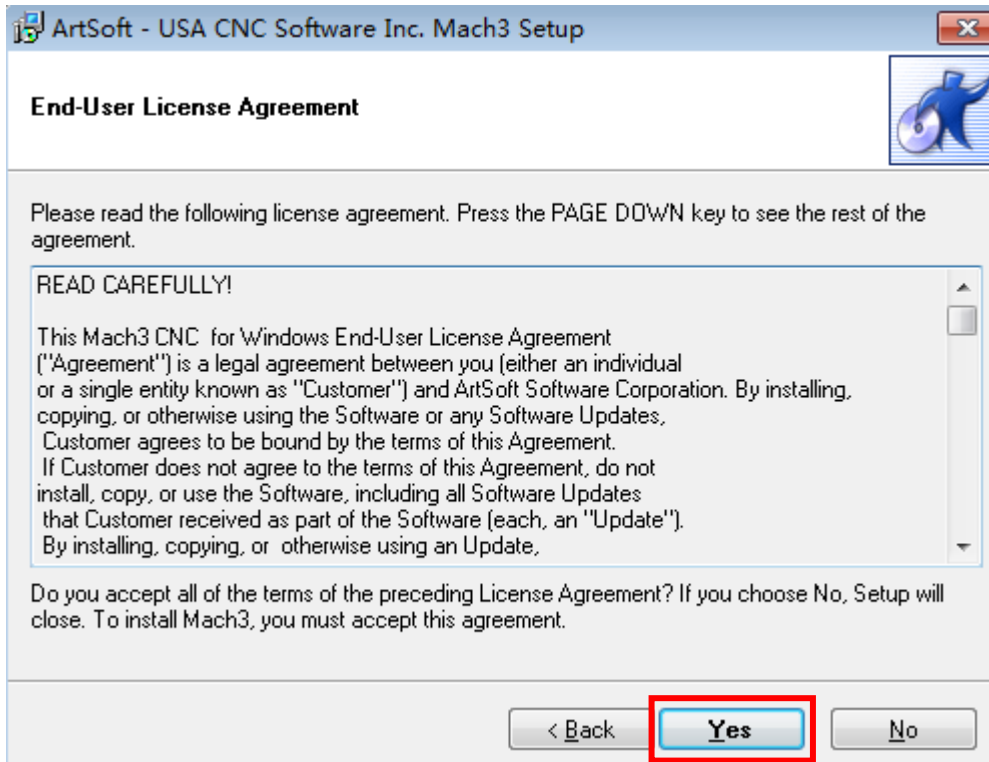
 **USB MANUAL**, extract files to computer desktop, click "Ok" as shown in picture:



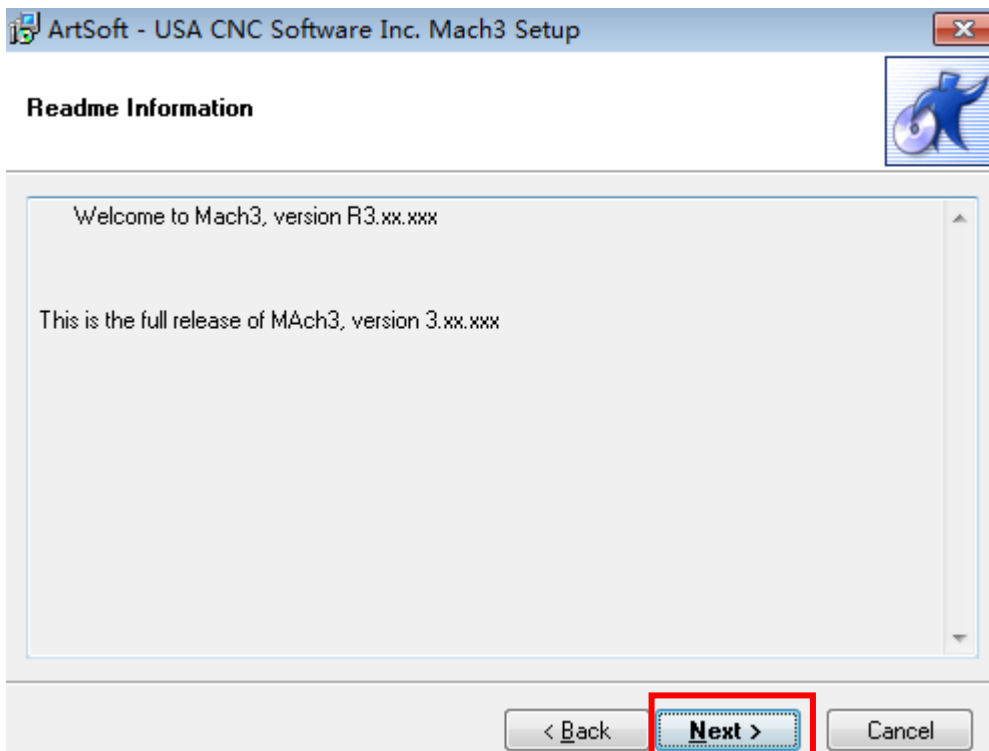
 **Mach3VersionR3.041**, double click on it, then Mach3 Setup as shown in picture:



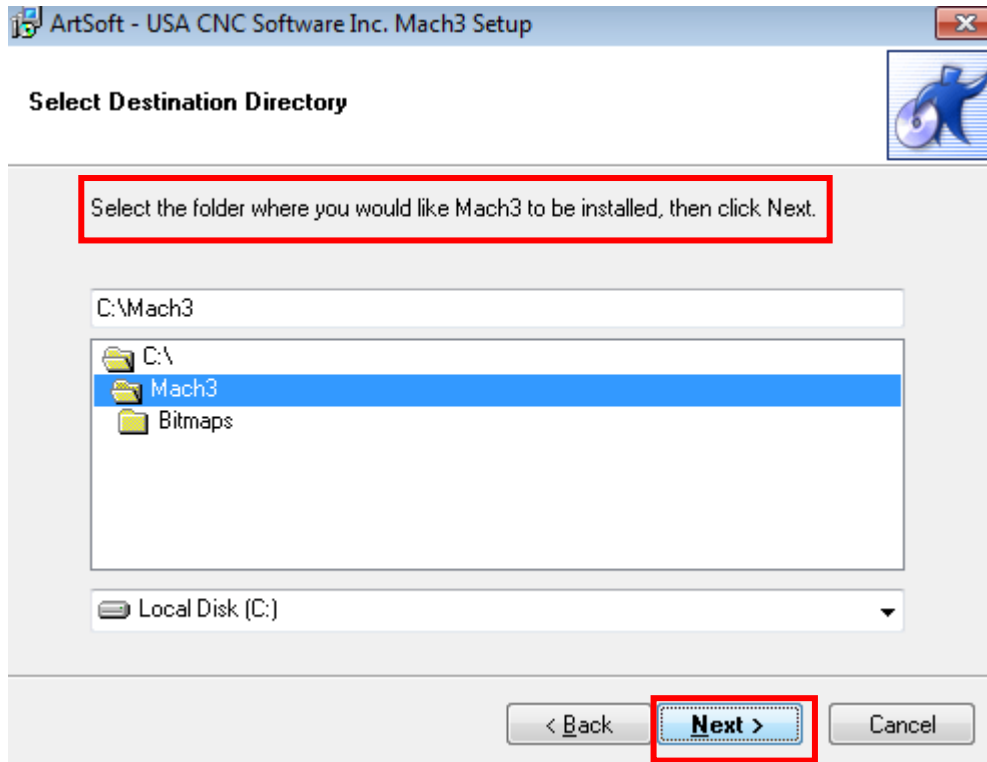
Click Next.



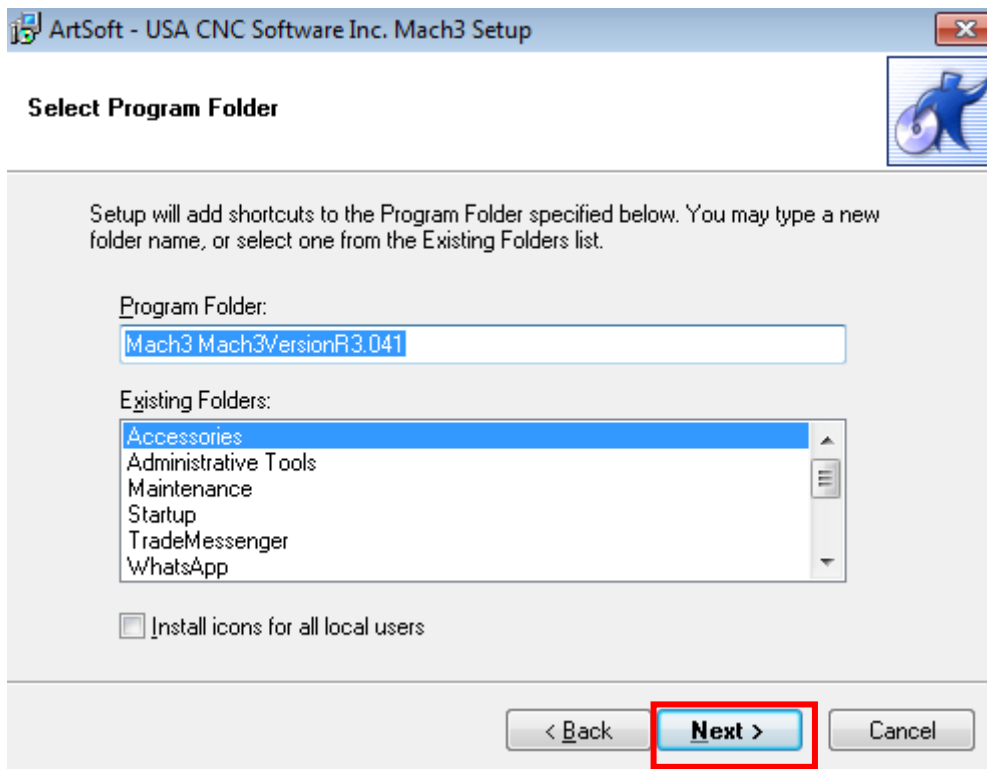
Click Yes.



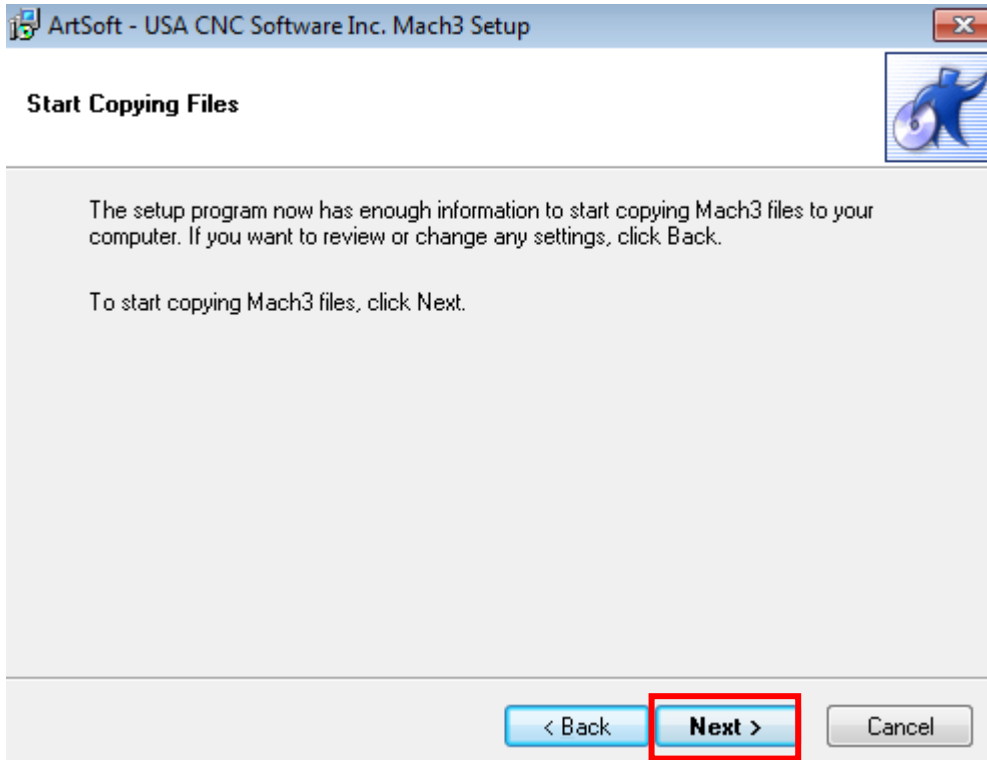
Click Next.



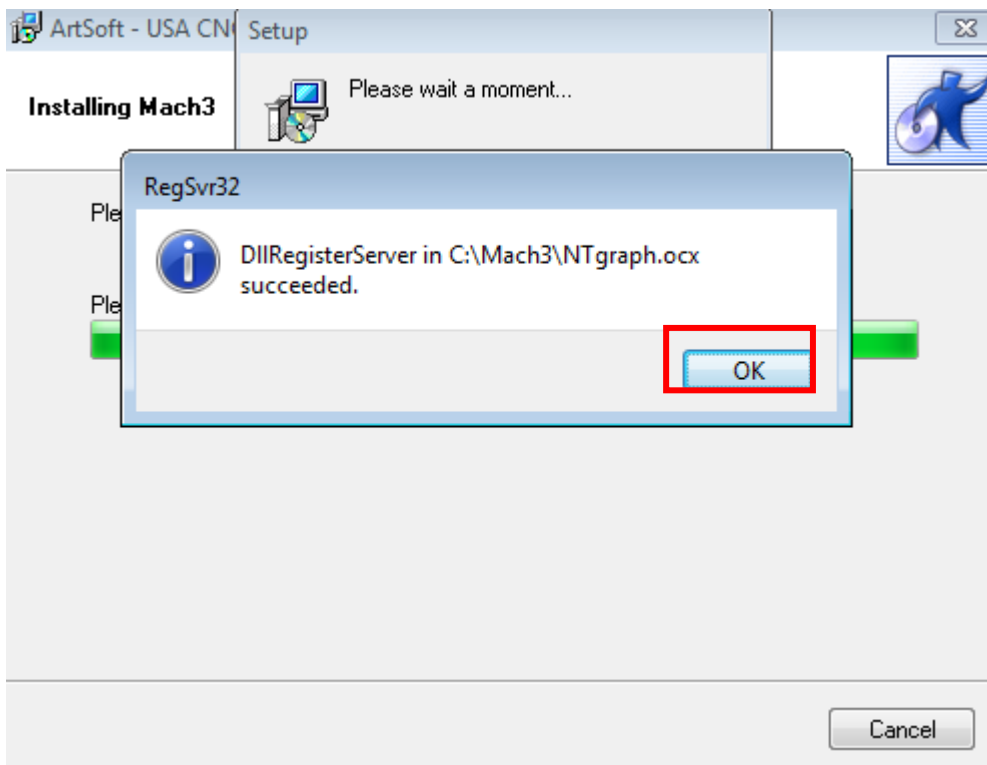
Click Next.



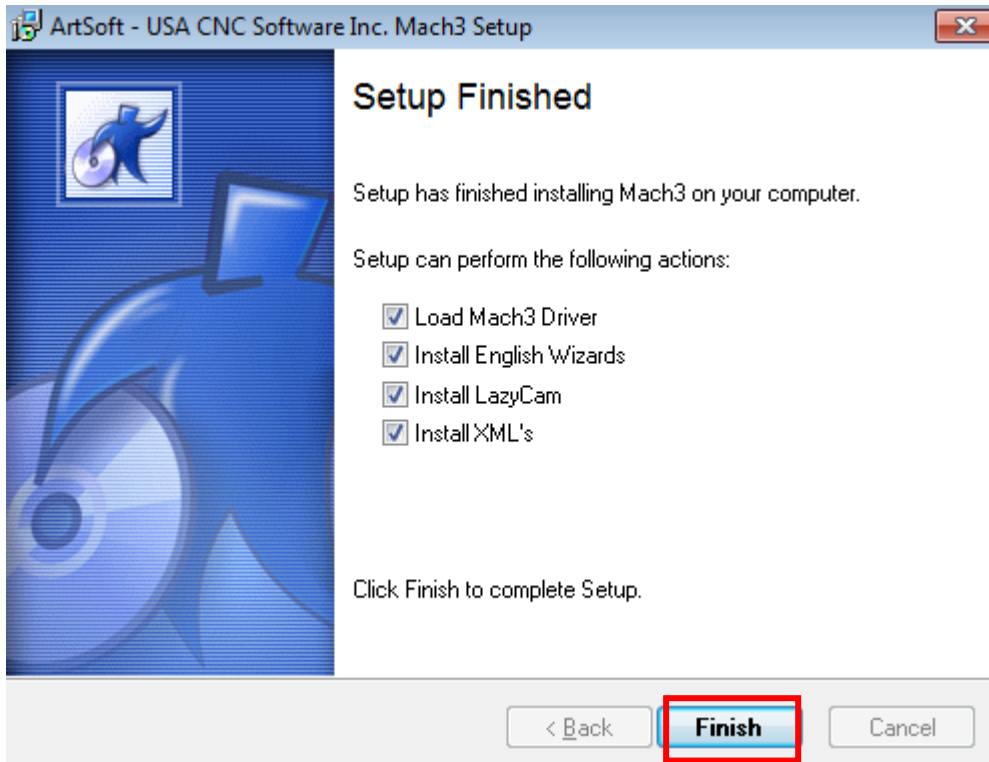
Click Next.



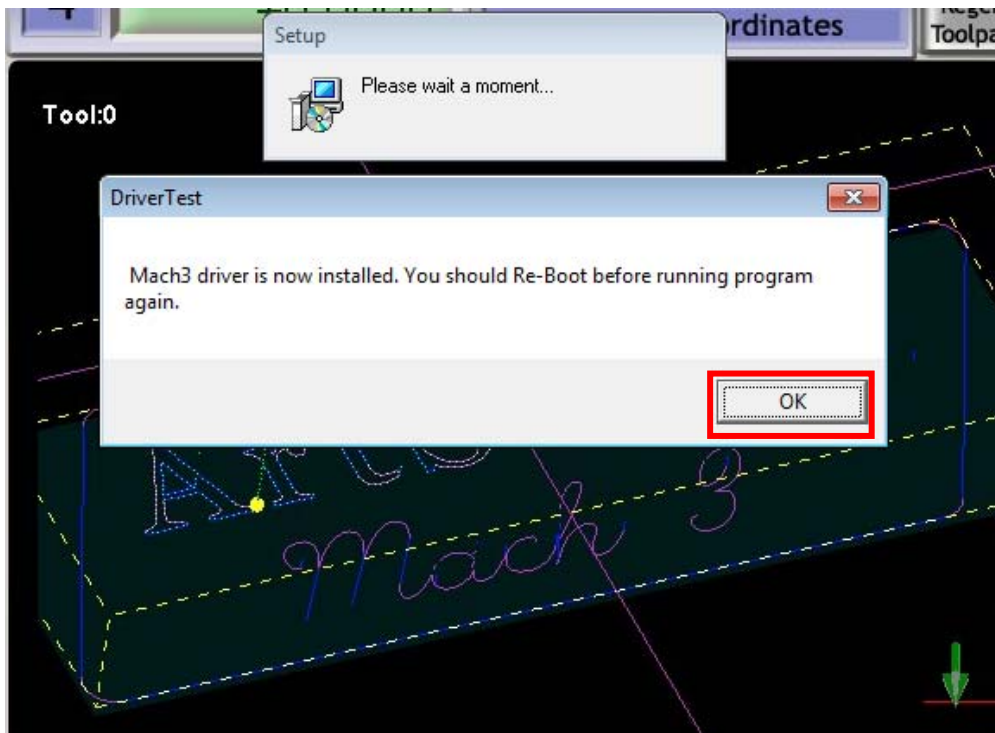
Click Next.



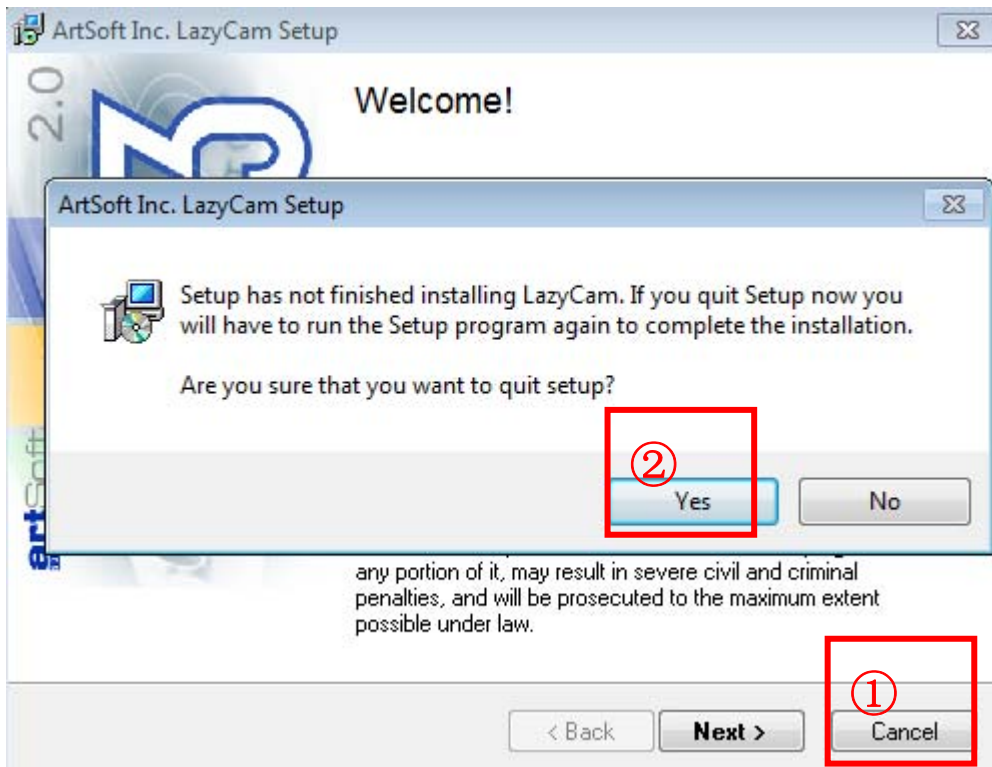
Click Ok.



Click Finish.




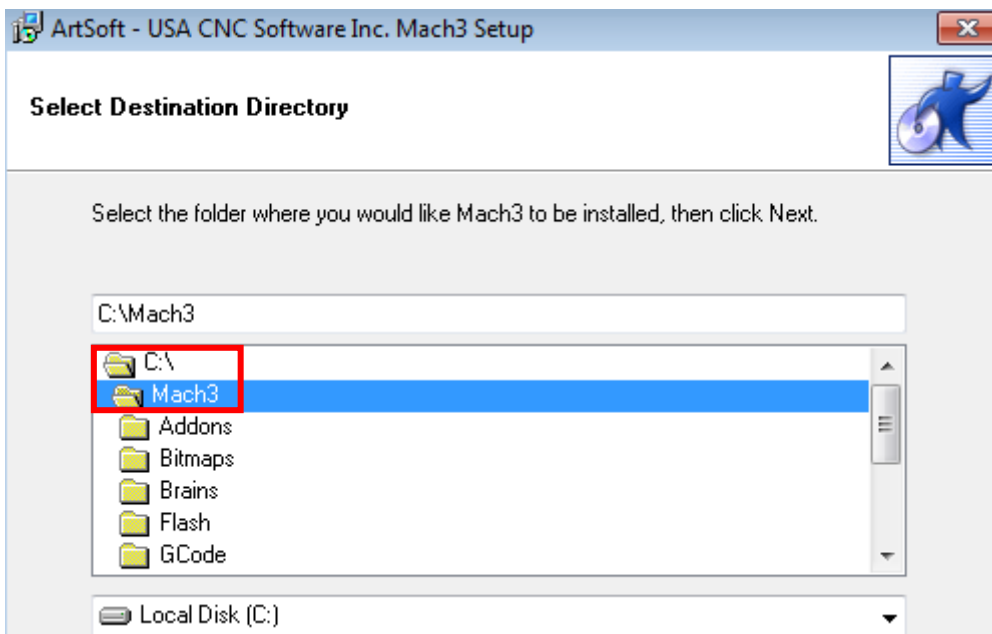
Click Ok.

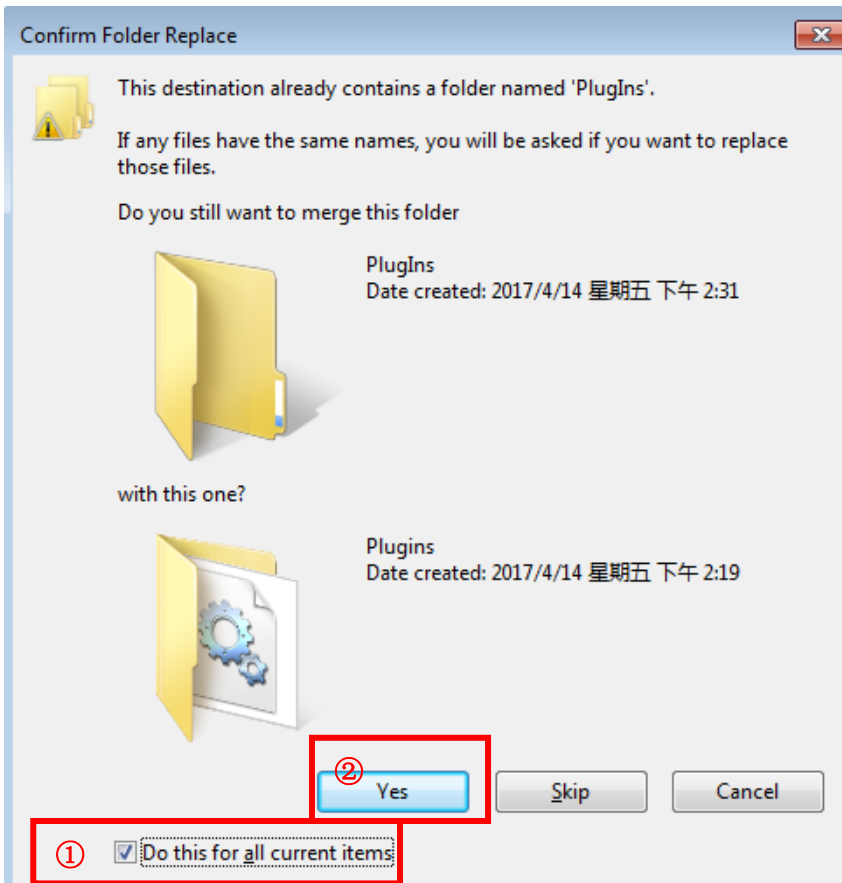


Click Cancel, then Yes.

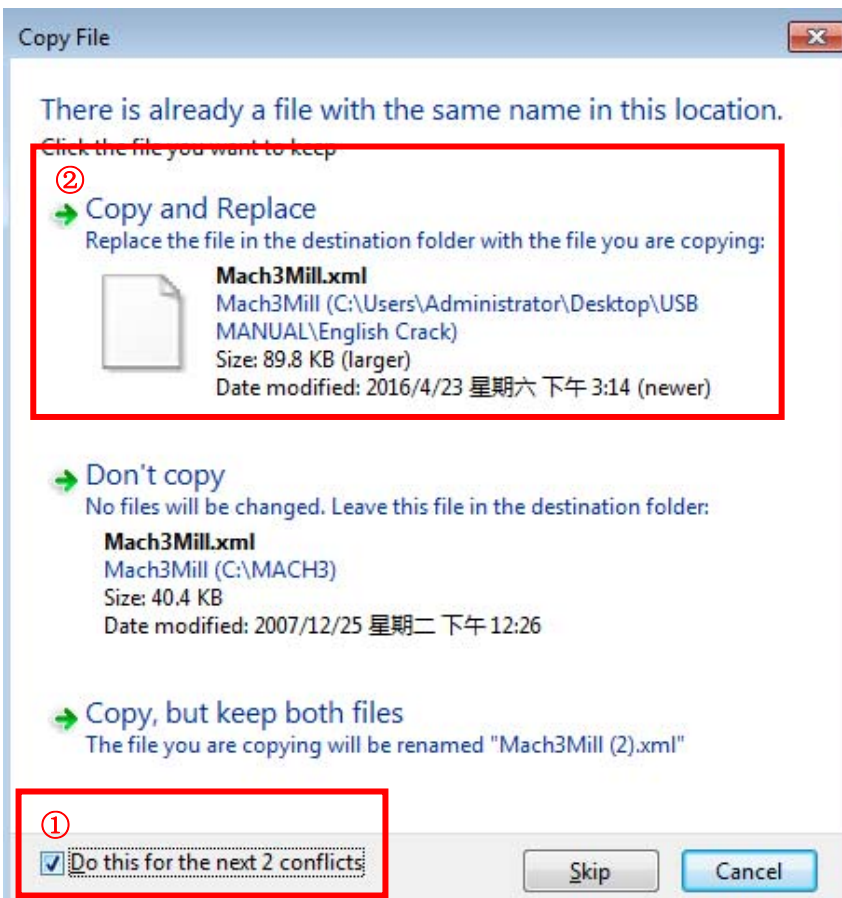
NOTICE: MUST BE RESTART COMPUTER AFTER FINISHED INSTALLATION.

 English Crack , double click on it, **all files are copy, then paste** to the folder where you would like Mach3 to be installed, as shown in picture:

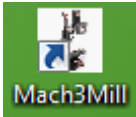




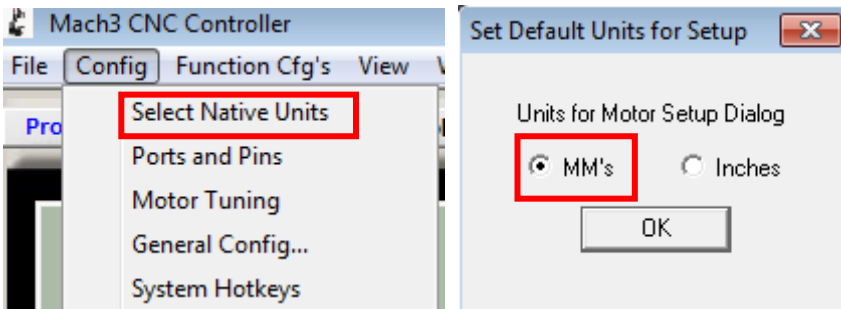
Choose to “Do this for all current items”, then Yes.



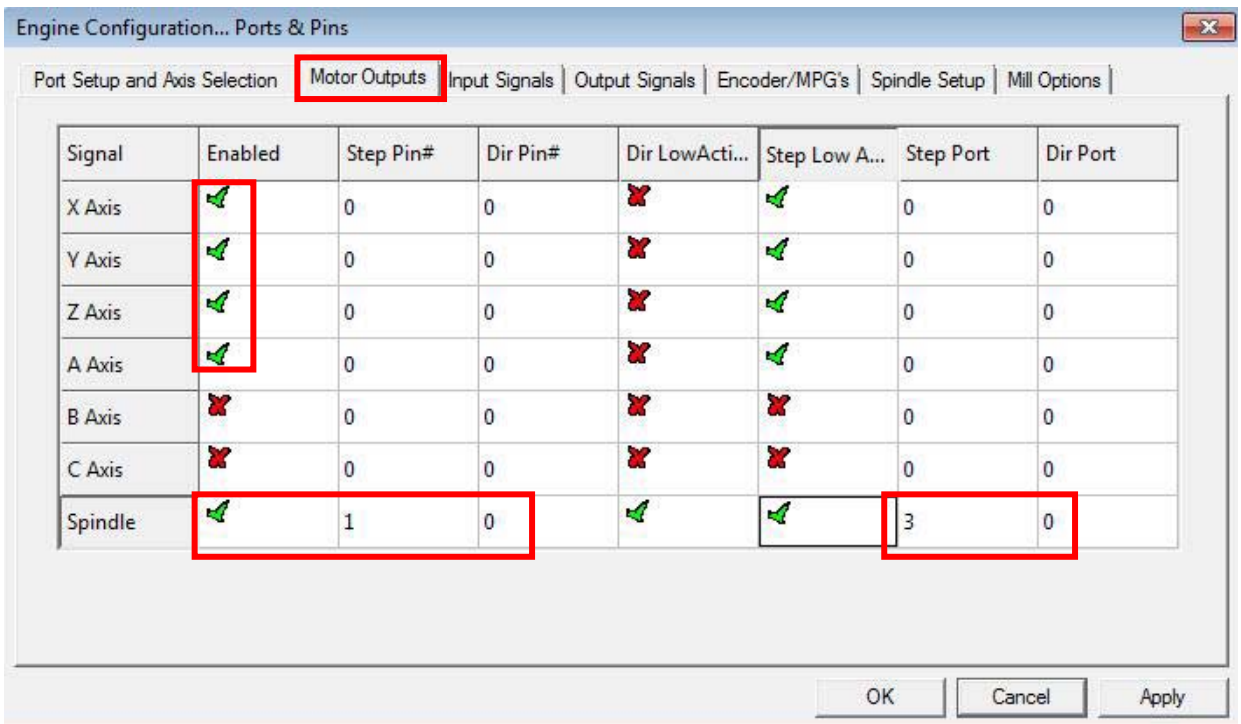
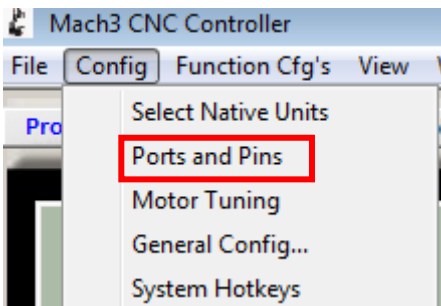
Choose to “Do this for the next 2 conflicts”, then click to Copy and Replace.



, double click on it, Select Native Units, MM's OR Inches, as shown in picture:



Select **Ports and Pins**, **Motor Outputs**, **Input Signals** setting, as shown in picture:



Engine Configuration... Ports & Pins

Port Setup and Axis Selection | Motor Outputs | **Input Signals** | Output Signals | Encoder/MPG's | Spindle Setup | Mill Options

| Signal | Enabled | Port # | Pin Number | Active Low | Emulated | HotKey |
|--------|-------------------------------------|--------|------------|-------------------------------------|-------------------------------------|--------|
| X ++ | <input checked="" type="checkbox"/> | 3 | 2 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 0 |
| X -- | <input checked="" type="checkbox"/> | 3 | 2 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 0 |
| X Home | <input checked="" type="checkbox"/> | 3 | 2 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 0 |
| Y ++ | <input checked="" type="checkbox"/> | 3 | 2 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 0 |
| Y -- | <input checked="" type="checkbox"/> | 3 | 2 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 0 |
| Y Home | <input checked="" type="checkbox"/> | 3 | 2 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 0 |
| Z ++ | <input checked="" type="checkbox"/> | 3 | 2 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 0 |
| Z -- | <input checked="" type="checkbox"/> | 3 | 2 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 0 |
| Z Home | <input checked="" type="checkbox"/> | 3 | 2 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 0 |
| A Home | <input checked="" type="checkbox"/> | 3 | 2 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 0 |
| B ++ | <input checked="" type="checkbox"/> | 1 | 0 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 0 |

Pins 10-13 and 15 are inputs. Only these 5 pin numbers may be used on this screen

Automated Setup of Inputs

OK Cancel **Apply**

Engine Configuration... Ports & Pins

Port Setup and Axis Selection | Motor Outputs | Input Signals | **Output Signals** | Encoder/MPG's | Spindle Setup | Mill Options

| Signal | Enabled | Port # | Pin Number | Active Low |
|-----------|-------------------------------------|--------|------------|-------------------------------------|
| Enable3 | <input checked="" type="checkbox"/> | 1 | 0 | <input checked="" type="checkbox"/> |
| Enable4 | <input checked="" type="checkbox"/> | 1 | 0 | <input checked="" type="checkbox"/> |
| Enable5 | <input checked="" type="checkbox"/> | 1 | 0 | <input checked="" type="checkbox"/> |
| Enable6 | <input checked="" type="checkbox"/> | 1 | 0 | <input checked="" type="checkbox"/> |
| Output #1 | <input checked="" type="checkbox"/> | 3 | 1 | <input checked="" type="checkbox"/> |
| Output #2 | <input checked="" type="checkbox"/> | 3 | 2 | <input checked="" type="checkbox"/> |
| Output #3 | <input checked="" type="checkbox"/> | 3 | 3 | <input checked="" type="checkbox"/> |
| Output #4 | <input checked="" type="checkbox"/> | 3 | 4 | <input checked="" type="checkbox"/> |
| Output #5 | <input checked="" type="checkbox"/> | 1 | 0 | <input checked="" type="checkbox"/> |
| Output #6 | <input checked="" type="checkbox"/> | 1 | 0 | <input checked="" type="checkbox"/> |

Pins 2 - 9 , 1, 14, 16, and 17 are output pins. No other pin numbers should be used.

Engine Configuration... Ports & Pins

Port Setup and Axis Selection | Motor Outputs | Input Signals | Output Signals | Encoder/MPG's | Spindle Setup | Mill Options

| Signal | Enabled | A -Port # | A -Pin # | B -Port # | B -Pin # | Counts/U... | Velocity |
|----------|-------------------------------------|-----------|----------|-----------|----------|-------------|------------|
| Encoder1 | <input checked="" type="checkbox"/> | 0 | 0 | 0 | 0 | 1.000000 | 100.000000 |
| Encoder2 | <input checked="" type="checkbox"/> | 0 | 0 | 0 | 0 | 1.000000 | 100.000000 |
| Encoder3 | <input checked="" type="checkbox"/> | 0 | 0 | 0 | 0 | 1.000000 | 100.000000 |
| Encoder4 | <input checked="" type="checkbox"/> | 0 | 0 | 0 | 0 | 1.000000 | 100.000000 |
| MPG #1 | <input checked="" type="checkbox"/> | 0 | 0 | 0 | 0 | 1.000000 | 100.000000 |
| MPG #2 | <input checked="" type="checkbox"/> | 0 | 0 | 0 | 0 | 1.000000 | 100.000000 |
| MPG #3 | <input checked="" type="checkbox"/> | 0 | 0 | 0 | 0 | 1.000000 | 100.000000 |

Engine Configuration... Ports & Pins

Port Setup and Axis Selection | Motor Outputs | Input Signals | Output Signals | Encoder/MPG's | Spindle Setup | Mill Options

Relay Control

Disable Spindle Relays

Clockwise (M3) Output #

CCW (M4) Output #

Output Signal #'s 1-6

Motor Control

Use Spindle Motor Output

PWM Control

Step/Dir Motor

PWMBase Freq.

Minimum PWM %

Special Functions

Use Spindle Feedback in Sync Modes

Closed Loop Spindle Control

P I D

Spindle Speed Averaging

Flood Mist Control

Disable Flood/Mist relays

Mist M7 Output # Delay

Flood M8 Output # Delay

Output Signal #'s 1-6

General Parameters

CW Delay Spin UP Seconds

CCW Delay Spin UP Seconds

CW Delay Spind DOWN Seconds

CCW Delay Spin DOWN Seconds

Immediate Relay off before delay

Special Options, Usually Off

HotWire Heat for Jog

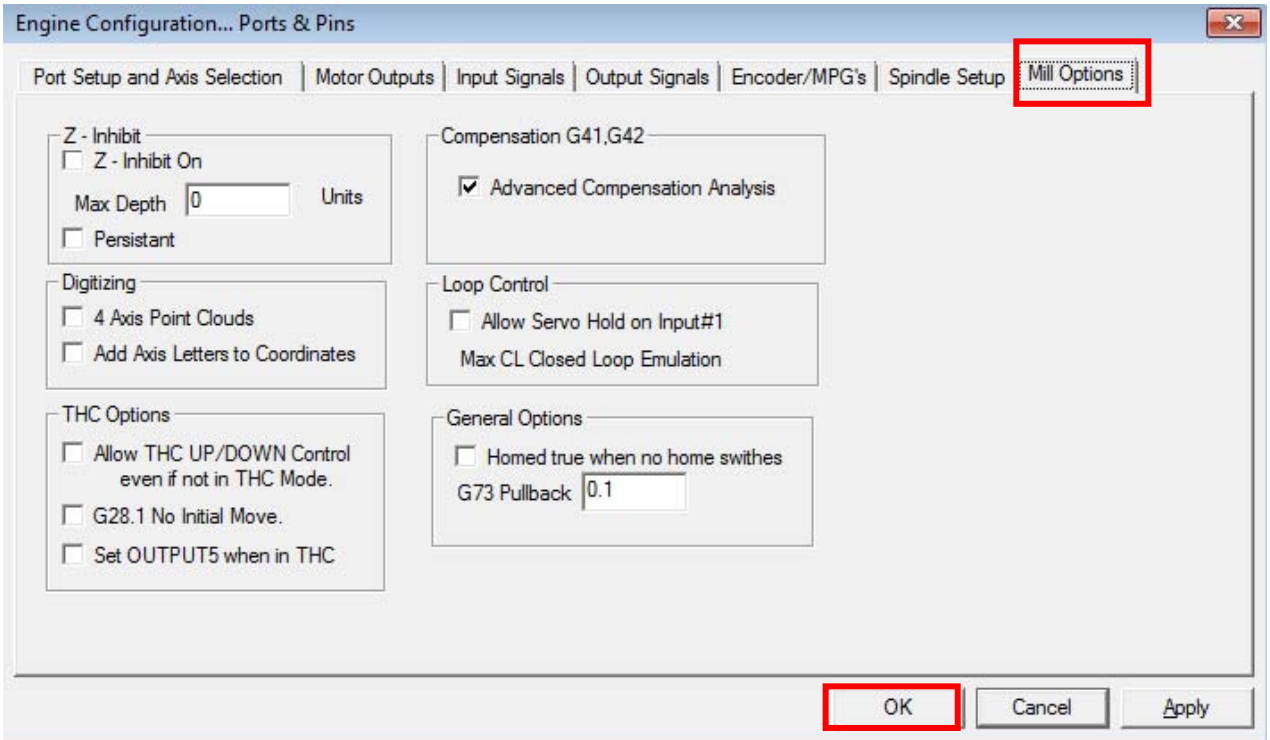
Laser Mode. freq I

Torch Volts Control

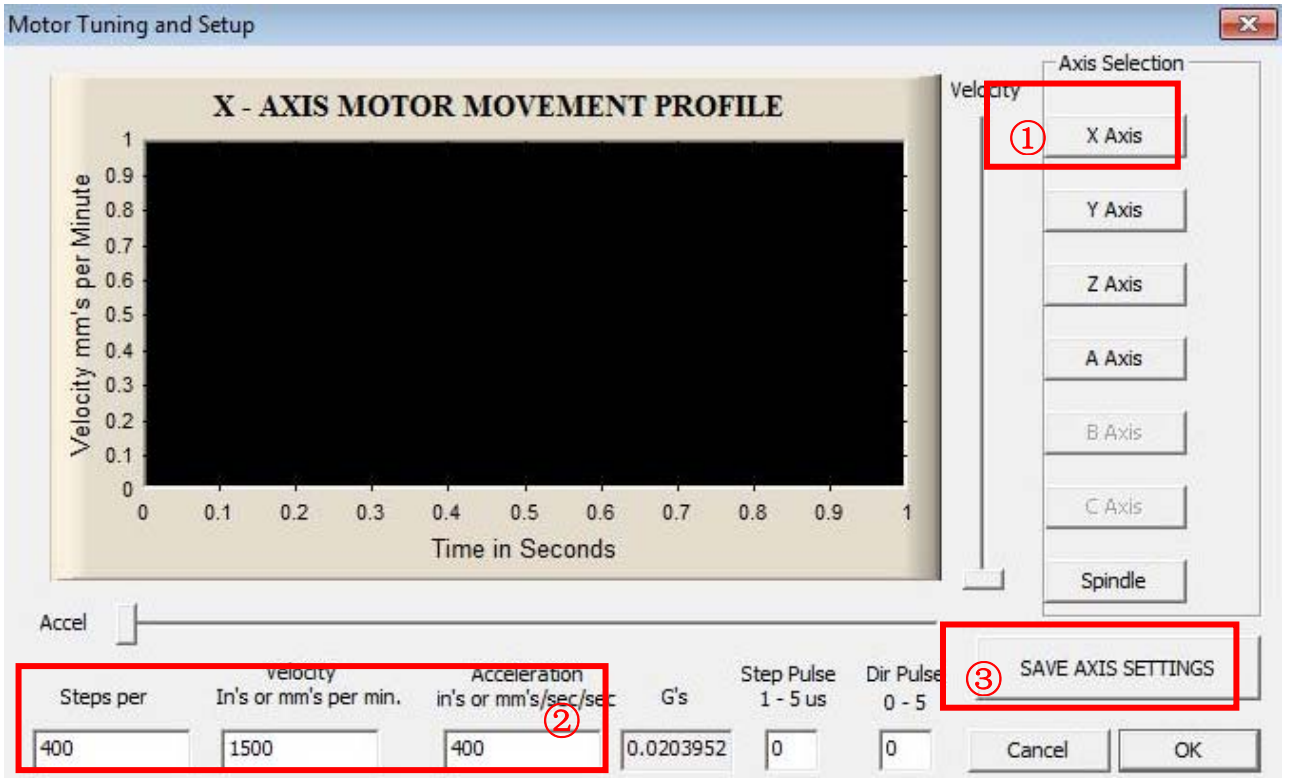
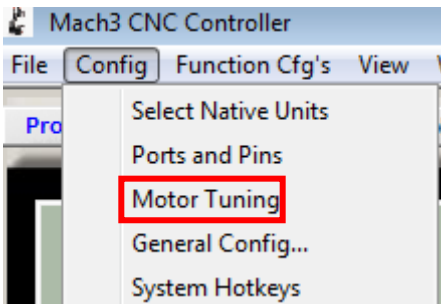
ModBus Spindle - Use Step/Dir as well

Enabled Reg 64 - 127

Max ADC Count



Select **Motor Tuning, X Axis, Y Axis, Z Axis, and Spindle** set up as shown in picture:



Motor Tuning and Setup

Y - AXIS MOTOR MOVEMENT PROFILE

Axis Selection:

- X Axis
- Y Axis** (1)
- Z Axis
- A Axis
- B Axis
- C Axis
- Spindle

Accel:

| Steps per | Velocity In's or mm's per min. | Acceleration in's or mm's/sec/sec | G's | Step Pulse 1 - 5 us | Dir Pulse 0 - 5 |
|-----------|-----------------------------------|--------------------------------------|-----------|------------------------|--------------------|
| 400 | 1500 | 400 (2) | 0.0203952 | 0 | 0 |

SAVE AXIS SETTINGS (3)

Cancel OK

Motor Tuning and Setup

Z - AXIS MOTOR MOVEMENT PROFILE

Axis Selection:

- X Axis
- Y Axis
- Z Axis** (1)
- A Axis
- B Axis
- C Axis
- Spindle

Accel:

| Steps per | Velocity In's or mm's per min. | Acceleration in's or mm's/sec/sec | G's | Step Pulse 1 - 5 us | Dir Pulse 0 - 5 |
|-----------|-----------------------------------|--------------------------------------|-----------|------------------------|--------------------|
| 400 | 1500 | 400 (2) | 0.0203952 | 0 | 0 |

SAVE AXIS SETTINGS (3)

Cancel OK

Motor Tuning and Setup

A - AXIS MOTOR MOVEMENT PROFILE

Velocity

Axis Selection

X Axis

Y Axis

Z Axis

1 A Axis

B Axis

C Axis

Spindle

Accel

| Steps per | Velocity In's or mm's per min. | Acceleration in's or mm's/sec/sec | G's | Step Pulse 1 - 5 us | Dir Pulse 0 - 5 |
|-----------|-----------------------------------|--------------------------------------|-----------|------------------------|--------------------|
| 10 | 1500 | 2 400 | 0.0203952 | 0 | 0 |

3 SAVE AXIS SETTINGS

Cancel OK

Motor Tuning and Setup

SPINDLE MOTOR MOVEMENT PROFILE

Velocity

Axis Selection

X Axis

Y Axis

Z Axis

A Axis

B Axis

C Axis

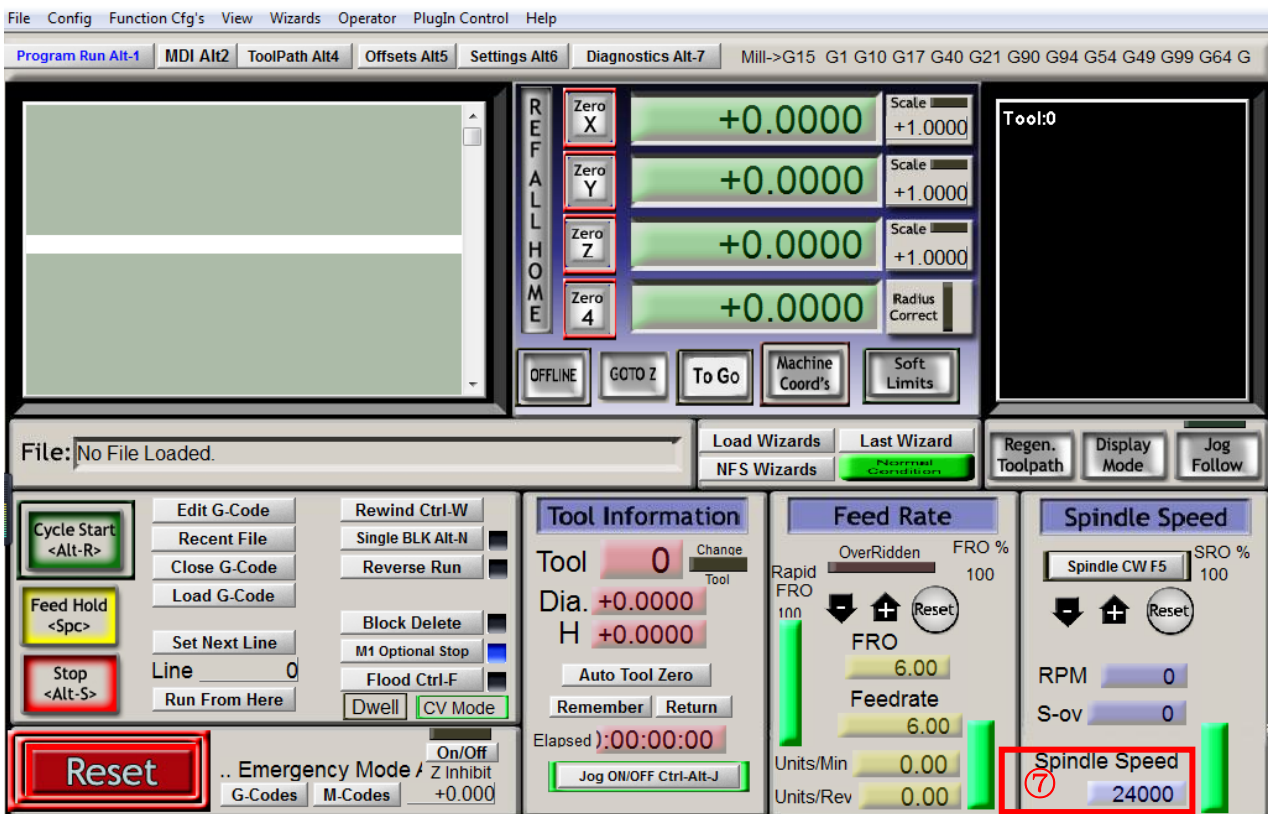
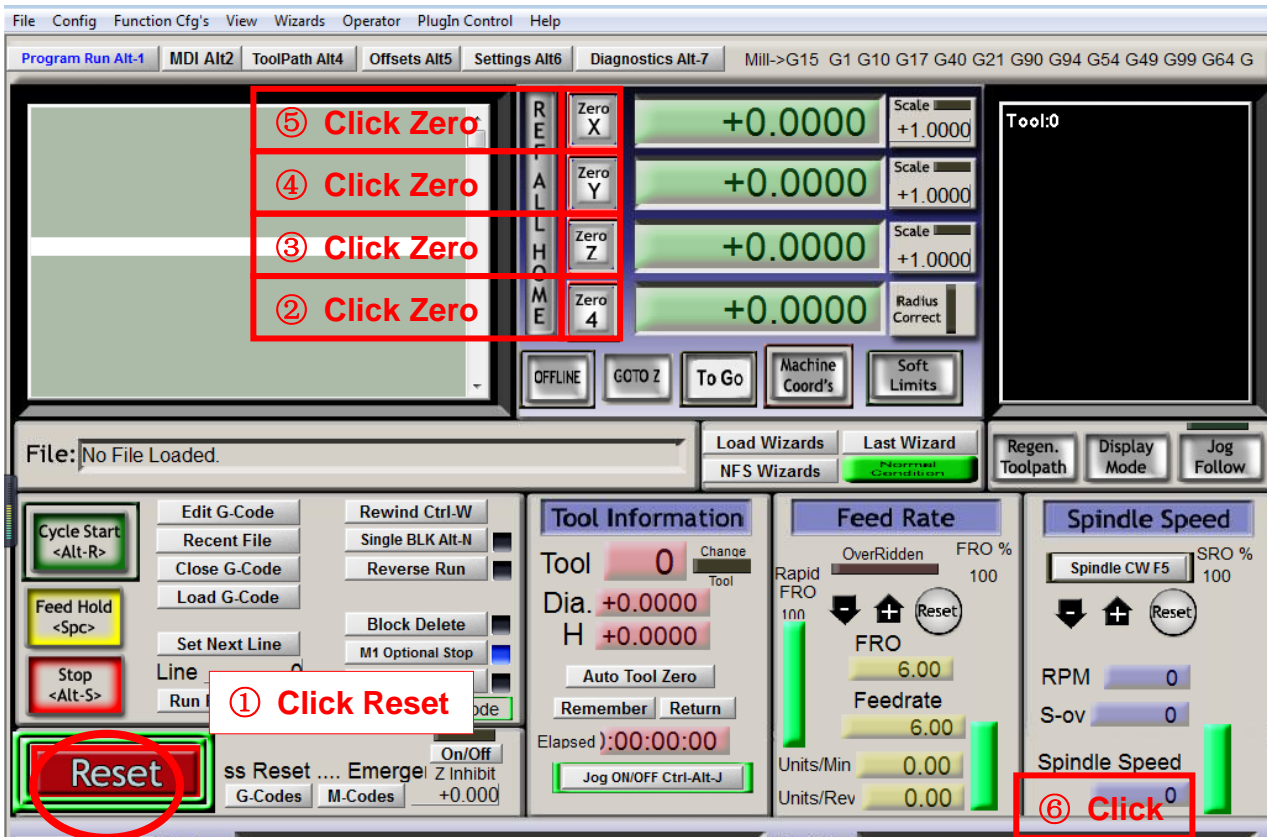
1 Spindle

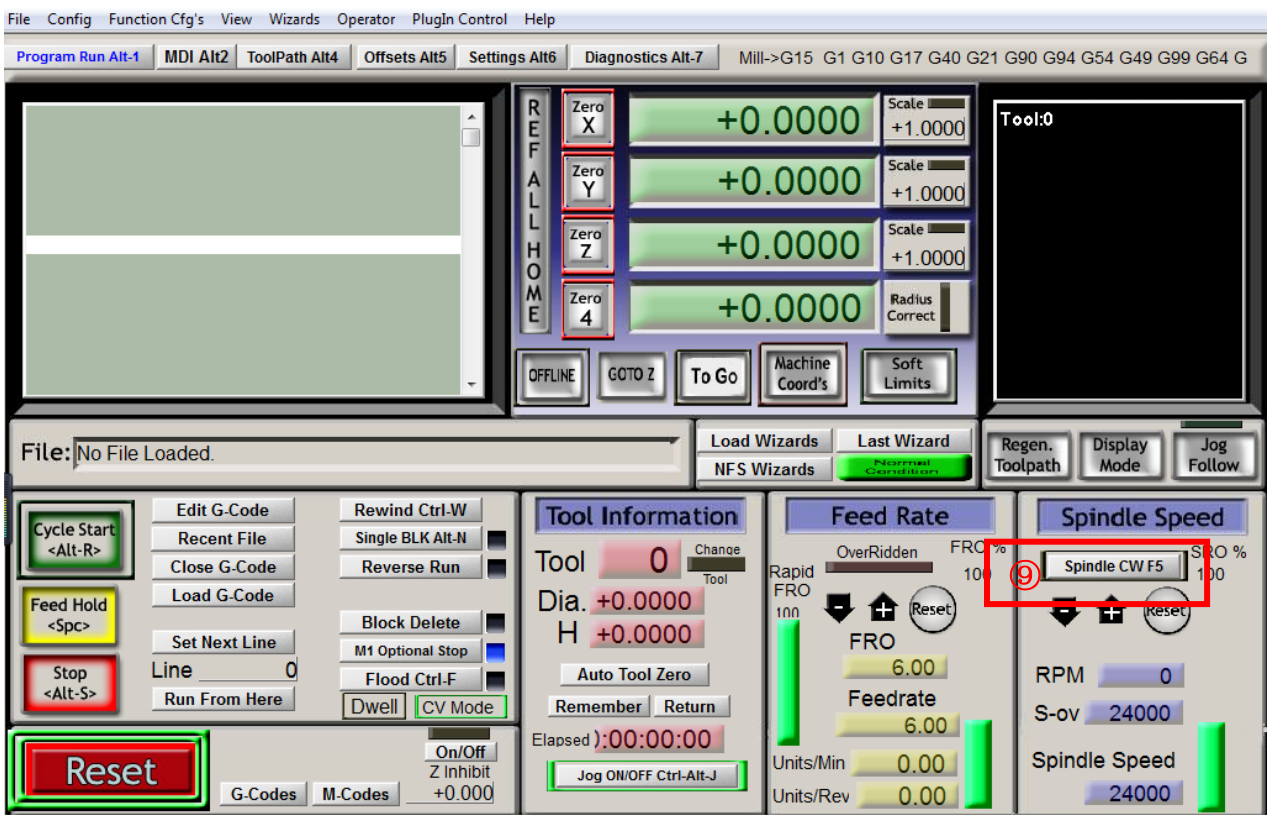
Accel

| Steps per | Velocity In's or mm's per min. | Acceleration in's or mm's/sec/sec | G's | Step Pulse 1 - 5 us | Dir Pulse 0 - 5 |
|-----------|-----------------------------------|--------------------------------------|-----------|------------------------|--------------------|
| 30 | 24000 | 2 5000 | 0.0004079 | 0 | 0 |

3 SAVE AXIS SETTINGS

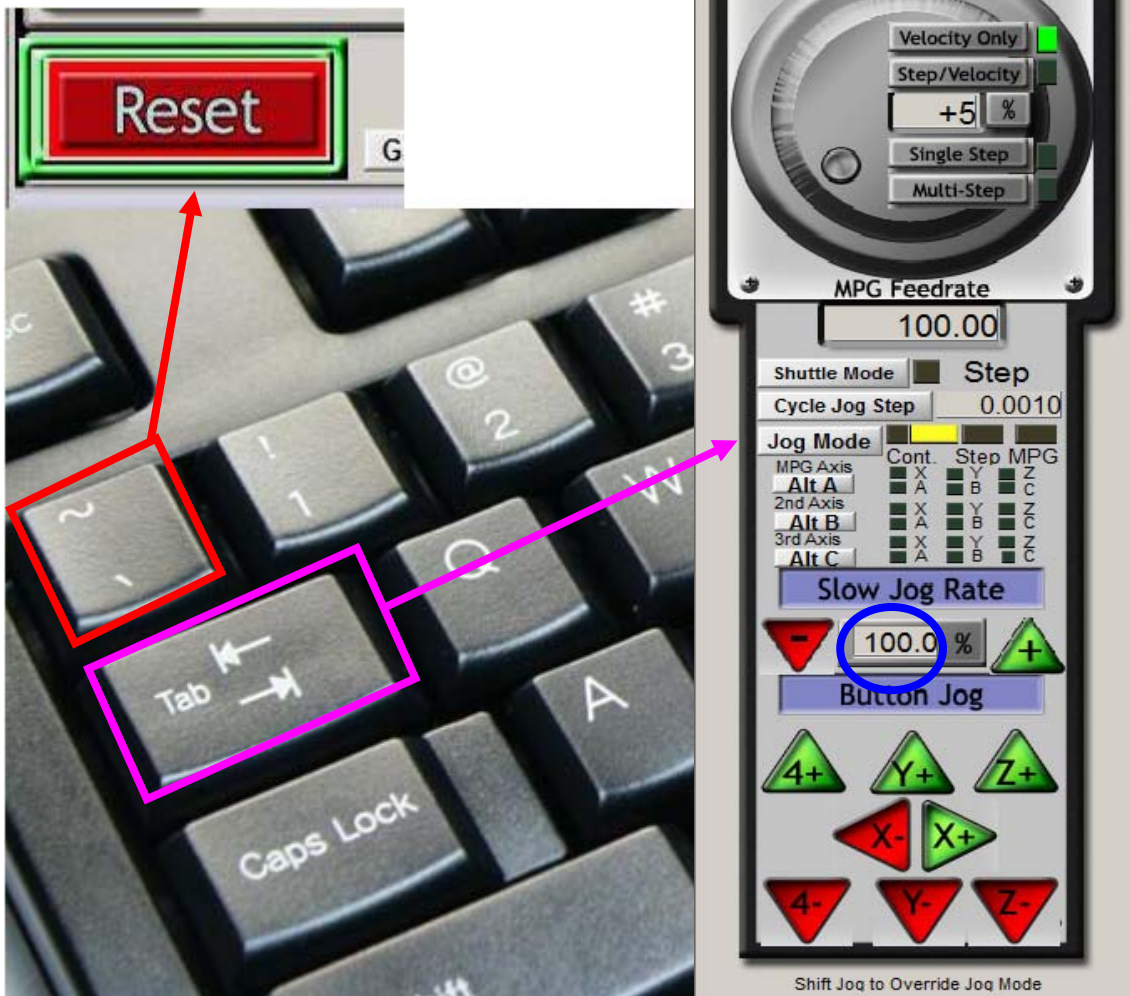
Cancel **4** OK





Spindle CWF5 Click, spindle will be rotation, Click again, rotation will be stop, then exit.





MPG MODE: Stepper Motor Speed Setting for X, Y, Z Axis, when working tool setting.

WARNIN: There are a lot of dangerous, if it is not properly to operate, and it is not a toy. Learners to meet the most mistakes, who they have not fully to known how does the machine work and run G code, then lead to machine spindle hit to the rack. Therefore, limit switch, emergency stop switch must be installed in advance.

In case of an emergency, except to click reset emergency stop, turn off the motor power, if you do not install those protective switches. **REMOVE USB LINE** is the most convenient to stop, then machine will automatically shut down.