User Manual of
5Axis Breakout Board
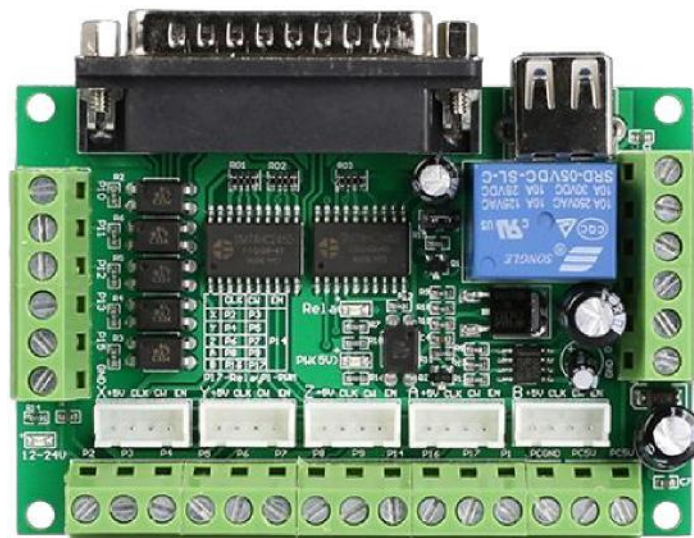
5 Axis Breakout Board Interface Adapter

Contents

5 Axis Breakout Board Interface Adapter

1 Introduction and Features

1.1 Introduction

The latest upgraded 5 axis breakout board is specially designed for the CNC single axis 2-phase stepper driver controller, such as M542, M542H, MA860H, 2M542, 2M982, DM542(A), DM860(A) etc. single axis stepper driver controller series. With this 5 axis breakout board, any 1-5 single axis stepper driver controllers can be directly controlled by the PC via the MACH3, EMC2, KCAM4, etc.

1.2 Features

- Maximum support 5-axis stepper motor driver controllers
- Compatible with MACH3, Linux CNC (EMC2) etc. parallel-control CNC software.
- USB power supply and peripherals powered phase are separated to protect computer security.
- All the signals are opto-isolated which can protect your computer security.
- 5-input interface to define the Limit, Emergence-Stop, Cutter alignment, etc.
- Wide input voltage range: 12-24V, and with anti-reverse function.
- One relay output control interface, accessed by the spindle motor or the air pump, water pump, etc.
- Output 0-10V analog voltage for inverter to control the spindle speed.

2 Specifications

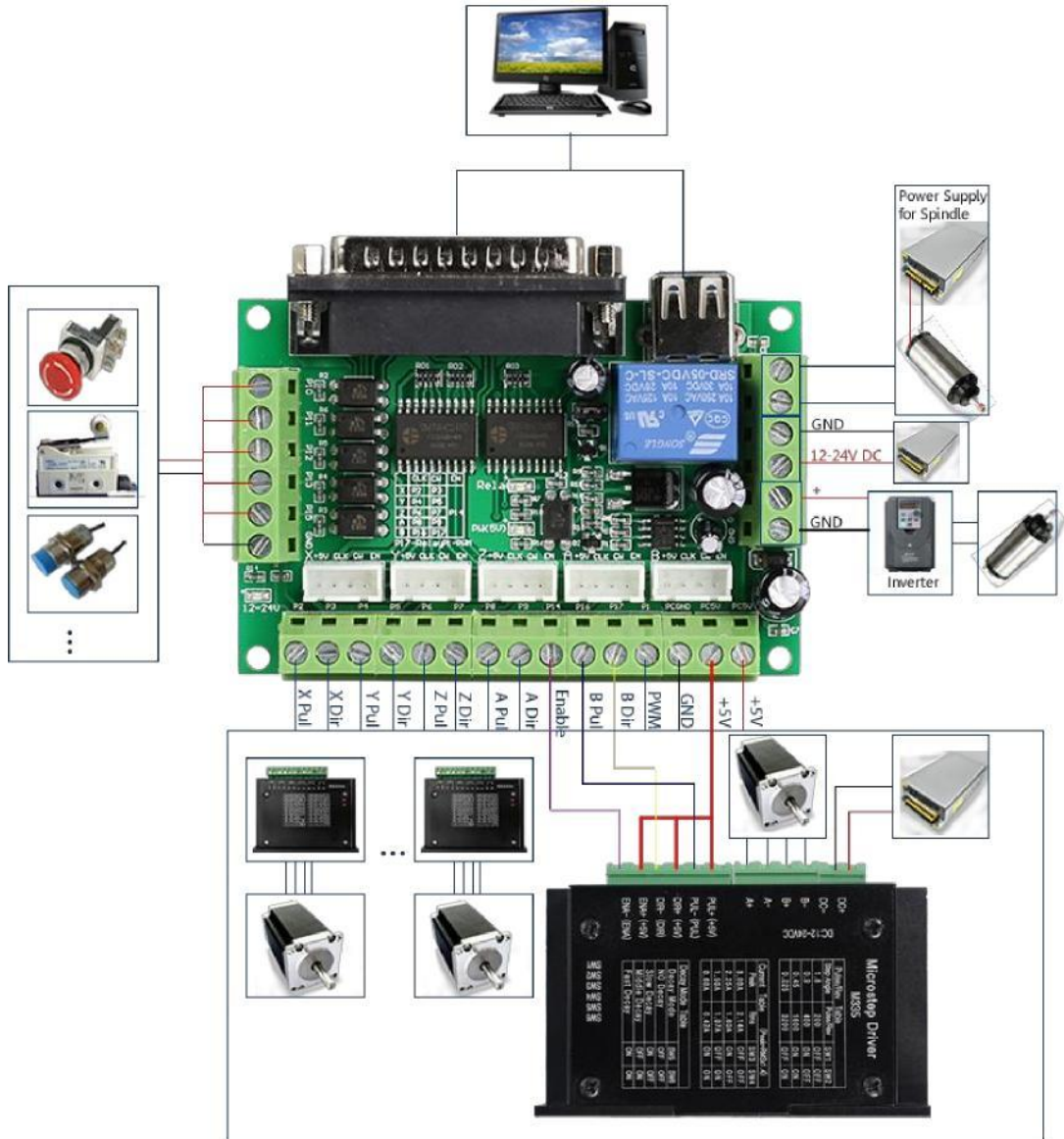| Electrical properties(ambient temperature Tj = 25 C)	
Input Power	USB port to directly get power from PC and 12-24V power supply(optional)
Compatible Stepper Motor Driver	Max 5 2-phase Microstep controllers
Driver type	Pulse and Direction signal control
Net/Total Weight	Approx 75g
Dimensions	90 * 70 * 20mm (L*W*H)
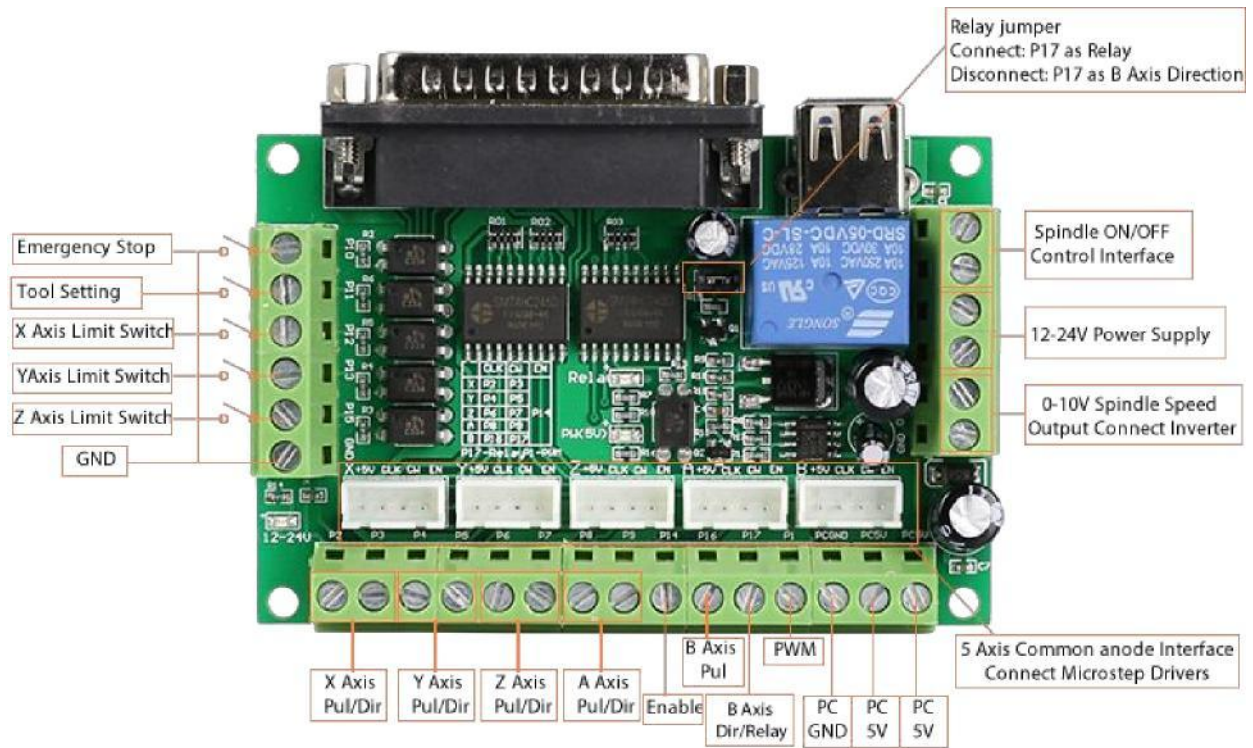
3 Interfaces

4 Wiring Diagram for Reference

5 MACH3 Software Settings

1. Check whether the MACH3 driver is installed correctly.
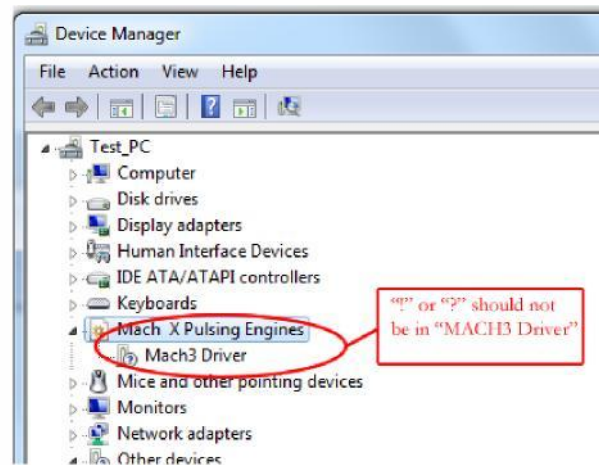
2. Setup Units: Choose ^{3}0 0 's^T in **Config->Set Default Units for Setup**
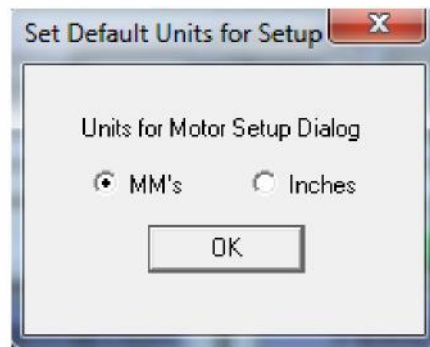
3. Click **"Config"->"Ports and Pins"** on Main Interface.
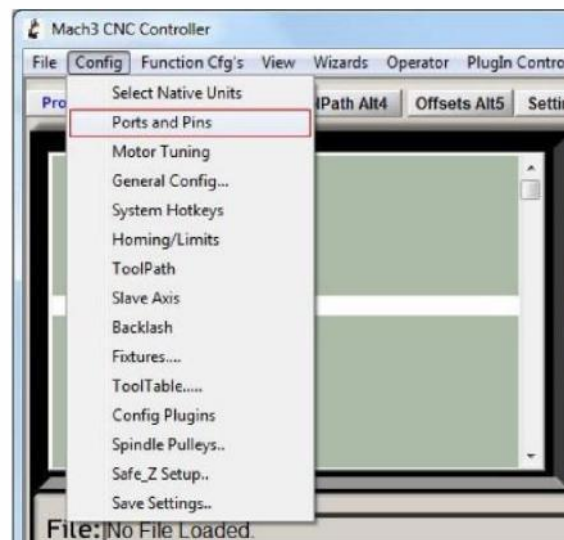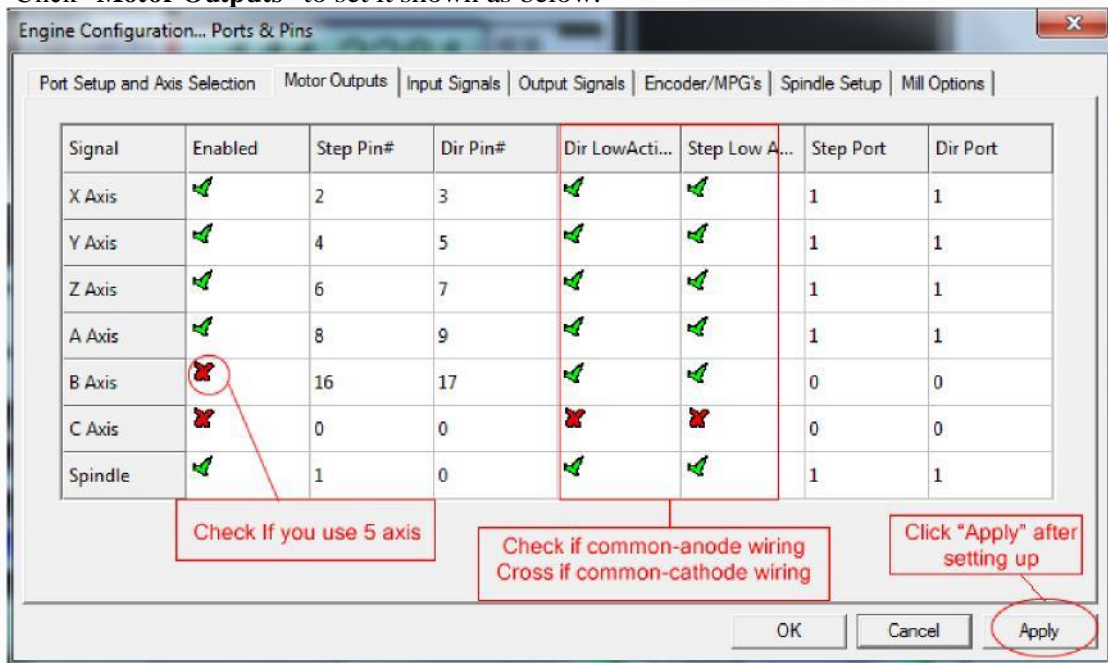
4. Enter in "**Port Setup and Axis Selection**" to set "**Port#1**" and "**Kernel Speed**" shown as below.
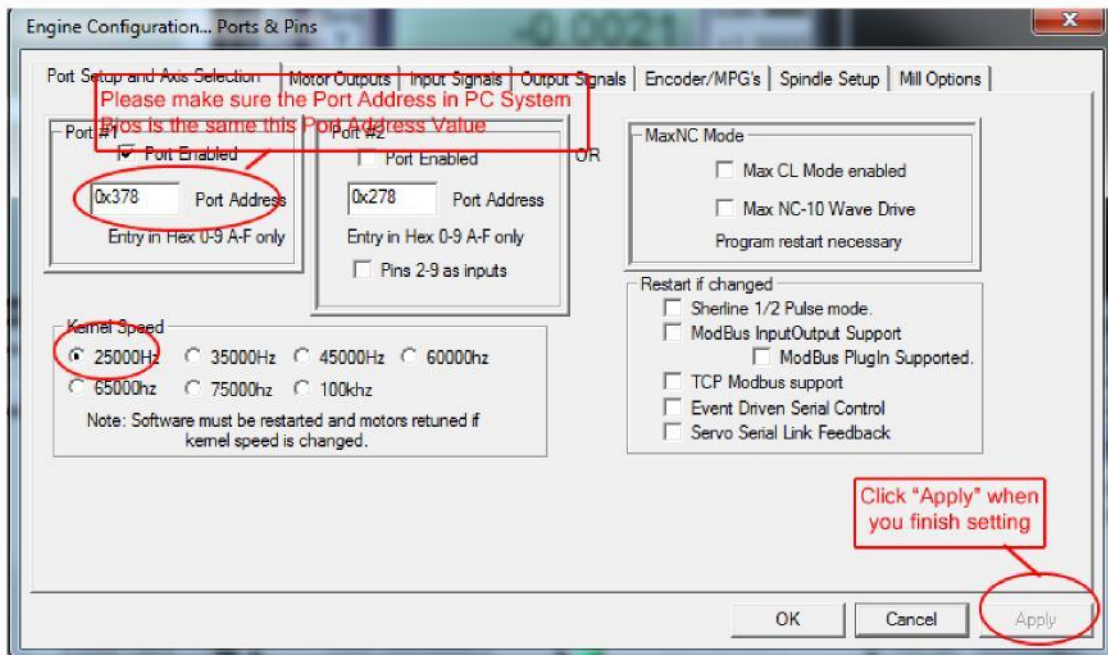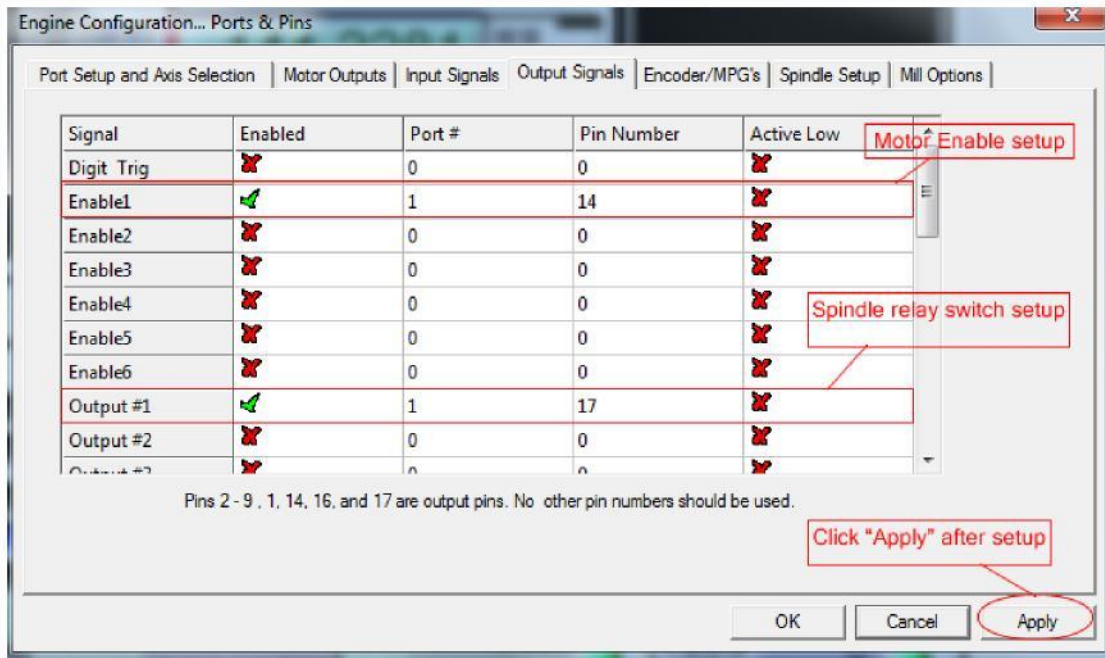

5. Click "**Motor Outputs**" to set it shown as below.

6. Click "**Iutput Signals**" to set it shown as below

7. Click "**Output Signals**" to set it shown as below

8. Click "**Spindle Setup**" to set it shown as below
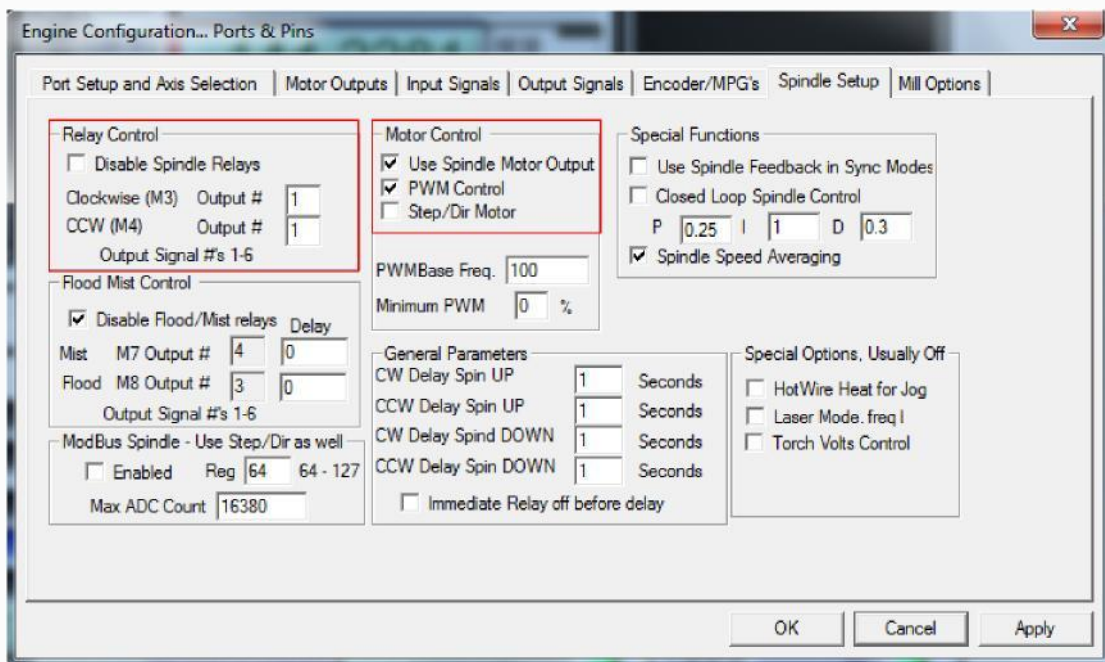
If you use PWM to control the spindle speed, you have to click "**Pulley Selection**" to set it shown as below.
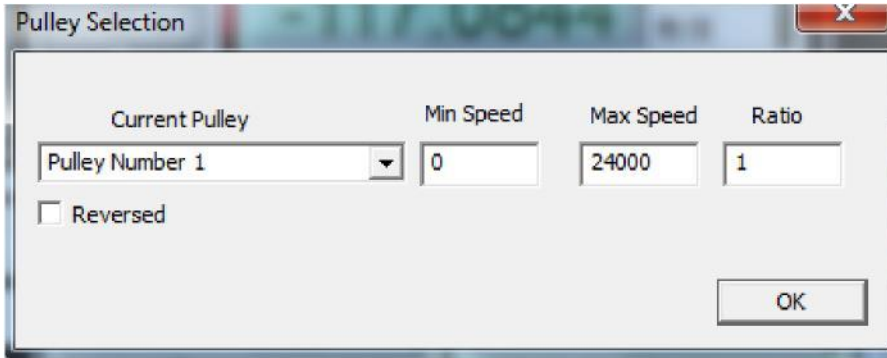
9. Motor debugging. Click **Config->Motor Turning and Setup**

Axis Breakout Board Interface Adapter

10. Click **System HotKeys Setup**. Set X, Y, Z axis hotkey shown as below. Then you can manual control the corresponding axis motor turning via hotkeys.