Triple BEAST Quick Start Guide

Safety Instructions

This Quick Start Guide is only intended for a temporary test setup with the standard configuration (4.2A motors, 48V power supply, mechanical reference switches). Be sure to read the manual completely before mounting the motors on a machine tool or using other accessories. **Have the connection of the power supply unit to the 230V mains supply carried out by a specialist if you are not trained to do so yourself**. Check all connections carefully before switching on. If you do not understand something, please ask the dealer where you purchased the product or Benezan-Electronics. No liability is accepted for damage to property or injury resulting from failure to observe the manual and the statutory regulations. **Protect the unit from flying chips, dust and cooling water**. Damage caused by metal chips or moisture will void the warranty.
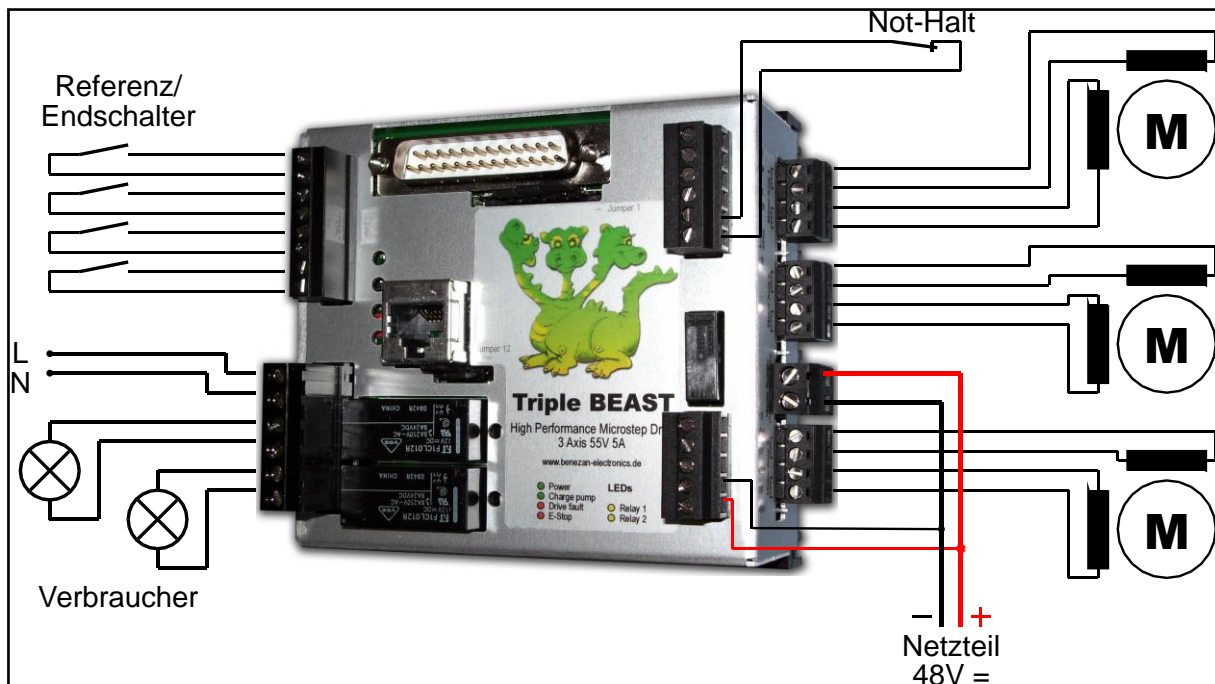
Commissioning

1. Set the DIP switches on the TripleBeast to the correct motor current. This is easiest to do if the device is not yet built into a housing. The adjacent picture shows the setting when you use three identical motors with 4.2A. Please refer to the printed table or the manual for settings for other motors.

2. Connect the power supply unit to the mains connection via a main switch. The main switch must switch off both poles (N and L). Make sure that both the power supply unit and the control unit housing are connected to the protective conductor.

3. Connect power supply output (48V) and motors according to the following wiring diagram. Make sure that the polarity of the power supply connection is correct. If you do not use an extra 24V supply, the 48V must be fed to both supply terminals X1 and "Motor Supply".


4. If the motor cables are shielded (recommended), connect them to the bare 2.8mm flat plugs between the black terminals. These are conductively connected to the power supply ground and the heat sink.

5. Connect the reference/limit switches (if necessary) and the emergency stop switch. Exclusively for test purposes on freely rotating motors without mechanical connection to the machine, the emergency stop

switch may be replaced by a wire jumper. Depending on the danger potential of the machine, it may be necessary to additionally switch off the motor power supply with the emergency stop.

6. The supply voltage for the consumers switched with the relays (in the picture on the left, N and L) may be *either* 230V~ (router, coolant pump) *or* 24V= (contactors, pneumatic valves). Mains and low voltages must not be connected to the relays in a mixed way.

7. Check all connections again. Only then plug in the power plug and switch on the device. The motors should now have holding torque and the upper green LED "Power" should light up. At the side, green "Running" or yellow "Standby" lights up.

8. Turn off the controller again and connect to the LPT port of the computer. Install the software and make the settings for the pin assignment of the LPT port. The following shows the configuration of Mach3 as an example.
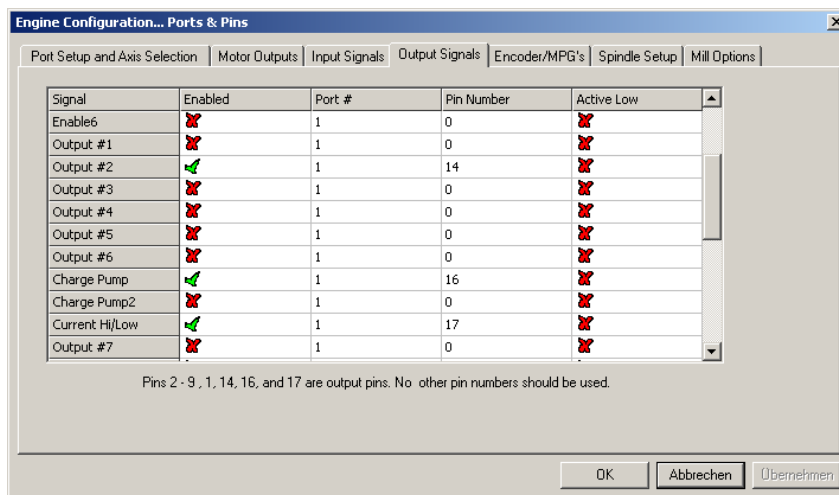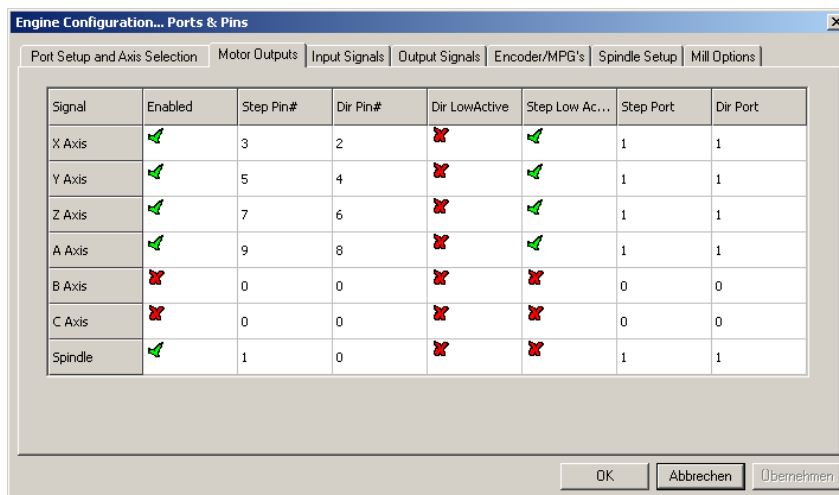
Further settings

- Ports&Pins Input Signals: XHome Pin 13, YHome Pin 12, ZHome Pin 10, AHome or length sensor (Probe) Pin 15
- Spindle Setup RelayControl: M3 and M4 → Output#1, M7 and M8 → Output#2
- Spindle Setup Motor Control: √ Use Spindle Motor Output √ PWM Control, PWM Base Freq. = 45, minimum PWM = 10%
- Motor Tuning: Step Pulse 2μs, Dir Pulse 2μs