

IMPORTANT ! please read the whole manual before connecting the motors and external power supply.

DC MOTOR can drive two DC motors. Motor driving circuitry and CV input circuitry are optically isolated without any ground connection. This avoids any possible noise or power transfer between the motors and the modular circuitry. The motors are driven directly from the motor power supply, therefore the voltage of the power supply has to match the specified voltage of the motors.

instruction

Most DC motors are not polarized which means they can rotate in both directions depending on the polarity of the driving voltage. Some computer fans have built in protection so they rotate only in one direction.

First connect the module to the bus board of your modular, then connect the motors. Power up the modular and then connect the power supply for the motors. The motors should start to move according to the settings of the knobs. If they don't move, disconnect the power supply for the motors promptly!

The module has two channels, A and B, which have identical controls and connections. The power supply is shared between both channels.

1

The power input jack has a standard 2.1mm power plug with center-positive polarity. I.e. "+" is in the middle, surrounded by "-". The voltage should be 7.5 - 12 V DC. Please make sure that no part of the motor power supply is touching the metallic front panels of another module. This would connect the grounds

and noise transfer could occur. The power supply for the motors should provide at least 1A, but the final current consumption depends on the type of motors used! We highly recommend to use modified PC power supplies that are protected. Please see www.bastl-instruments.com for more details.

2

The DC motor output connectors are standard power plugs with a 2.1mm socket. Please connect each DC motor to a connector that is already being driven (all knobs to fully right position) and check if it is moving. If it doesn't, disconnect it immediately and look for mechanical or electrical connection problems.

3

You can drive the DC motor in both directions with variable PWM modulation to control its speed. With the direction knob in the middle position, the motor should stay still. Moving it to the right adjusts speed in one direction and vice versa.

4

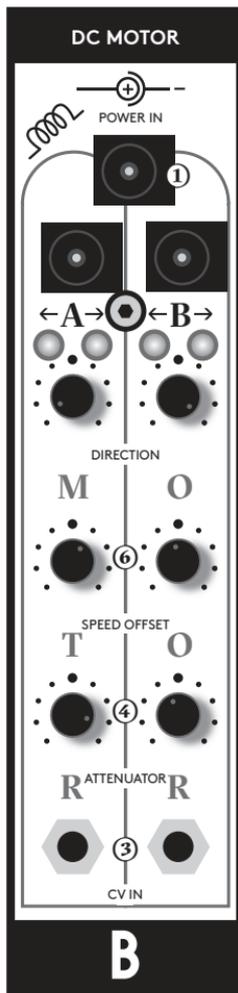
The speed offset knob sets how much speed offset is added in the center point of direction knob. Most motors start to move with some offset, depending of how much force they need to produce.

5

The CV input with its CV attenuator affects the same parameter as the directional knob. 0 volts on the CV input means no adjustment to the settings. Positive voltages adjust the direction control in one way and negative in the other.

B

DUAL BIPOLAR DC MOTOR DRIVER



B A S T L

DC Motor

technical details

- 6HP
- PTC fuse and diode protected 16pin power connector
- 50mm deep
- motor output: maximum peak current 1A, constant current 600mA

features

- two channel bipolar DC motor driver
- CV circuitry and motor circuitry are optically isolated
- external power supply for motors required
- motors are driven directly from power supply
- bipolar CV input with attenuator per channel
- speed offset knob per channel
- directional offset knob per channel
- maximum peak current 1A, constant current 600mA

Connecting module to your system

Before connecting the ribbon cable to this module disconnect your system from power !

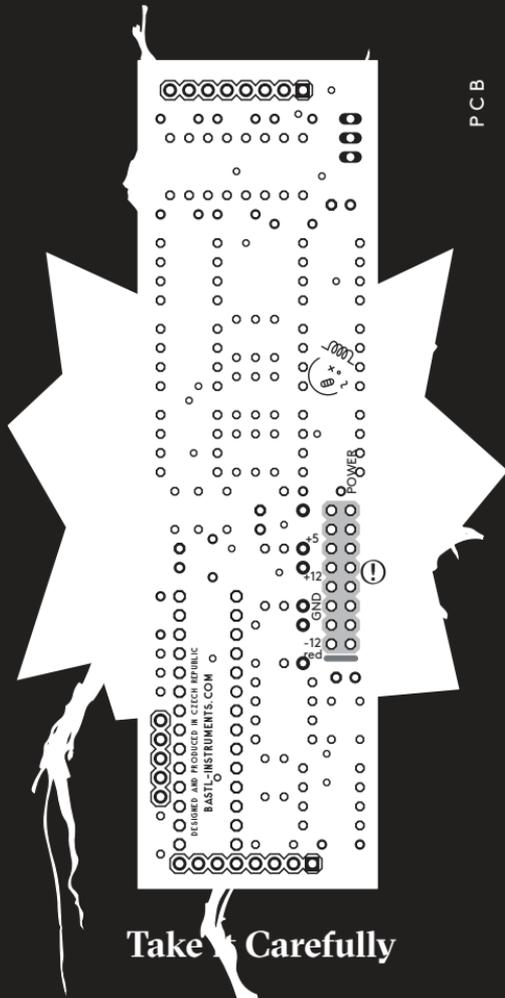
❗ Double check the polarity of the ribbon cable and that it is not shifted in any direction. the red cable should match the -12V rail both on the module and on the bus board !

please make sure of the following

- you have a standard pinout eurorack bus board
- you have +5, +12 and -12 power rails on that bus board
- the power rails are not overloaded

Although we put protection circuits in the device, we do not take any responsibility for damages caused by wrong power supply connection.

After you connected everything, double-checked it and closed your system, so no power lines can be touched by hand, turn on your system and test the module.



PCB

BASTL

B



Take Carefully