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

SERVO can drive two 5V hobby servo motors. Motor driving circuitry and CV input circuitry are optically isolated without any ground connection. This avoids noise or power transfer between the motors and the modular circuitry. Therefore, it requires an external 7.5-12V DC power supply for driving the motors.

instruction

Before connecting the motors and their power supply, make sure that the polarity of the servo motors is not reversed. First, connect the module to the bus board power of your modular, then connect the motors. Power up the modular and then connect the power supply for the motors. The servos should go to the angle specified by ANGLE knob immediately. If they don't move - disconnect the power supply for the motors immediately!

The module has an A and B channel, which have identical controls and connections. The power supply provides both channels A and B with power.

❶

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.

❷

The servo connection pins follow the pinout of the most common hobby servo motors. Please make sure that the color code of the wires matches the signs on the panel. "+" should be RED , "-" should be BLACK and "~" should be ORANGE. The + and - power requirement is 5 volts. The servo must be specified for 5V use.

❸

The ANGLE knob sets the initial angle of the servo motor. Most hobby servos work from 0-180 degrees.

❹

The CV ATT/ANGLE 2 knob acts differently depending on whether the gate or the CV input is used.
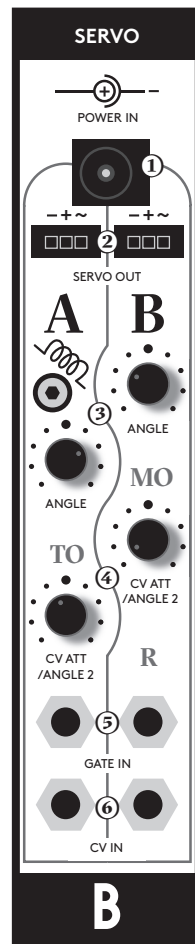
❺

When the GATE input is low, the servo is at the angle set by the ANGLE knob. When the GATE becomes high, the servo goes to the angle set by the ANGLE 2 knob.

❻

The CV input is bipolar, so if the voltage on this input is positive, the voltage is attenuated by the CV ATT knob and then added to the angle set by ANGLE knob. If the input voltage is negative, the attenuated voltage is subtracted from the initial angle.

BASTL

Servo

SERVO

POWER IN

SERVO OUT

A B

ANGLE

ANGLE

MO

TO

ANGLE

CV ATT /ANGLE 2

CV ATT /ANGLE 2

R

GATE IN

CV IN

B

B

technical details

- 5HP
- PTC fuse and diode protected 16pin power connector
- requires 5V in the bus
- 50mm deep
- current consumption: +12V: <5mA, -12V <5mA, +5V: <35mA

features

- two channel hobby 5V servo motor driver
- CV circuitry and motor circuitry are optically isolated
- external power supply for motors required (9-15V), positive polarity
- motors are driven thru onboard 5V regulator
- trigger/gate input per channel
- CV input per channel

Connecting module to your system

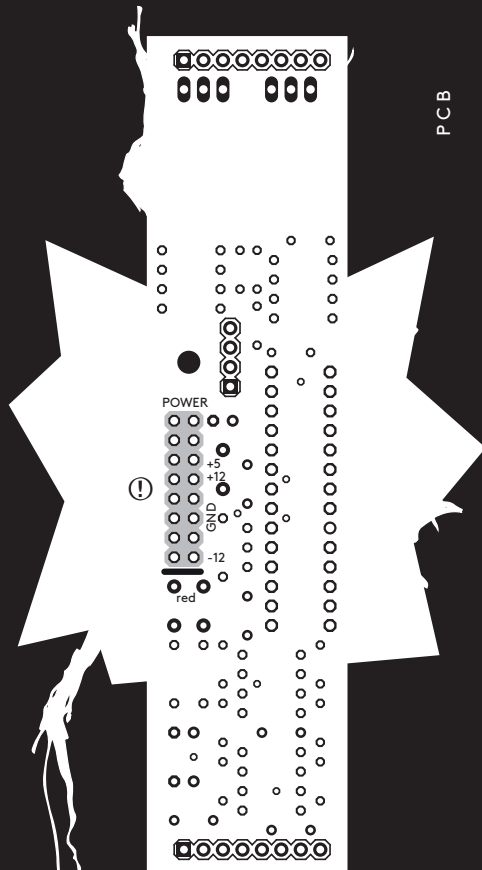**Before connecting the ribbon cable to this module disconnect your system from power !**

🛑 **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

POWER
+5
+12
GND
-12
red

(!)

Take it Carefully

B

\# ALL