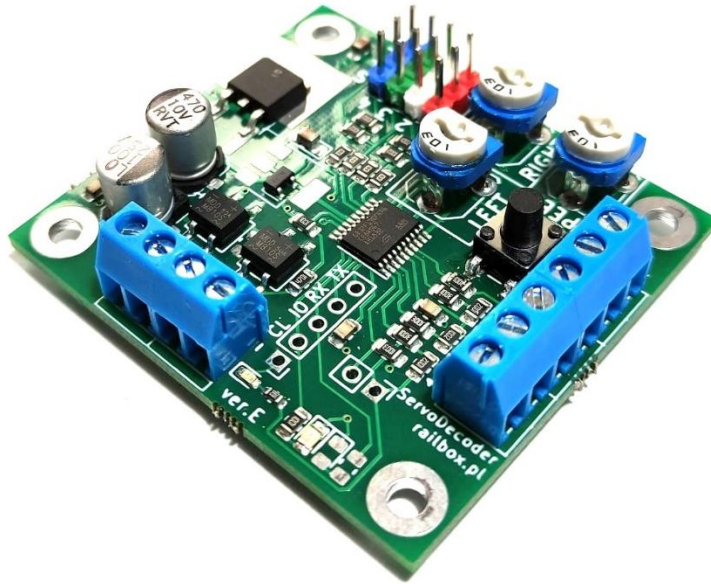




Servo Decoder



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Introduction

This Accessory Decoder is designed to control 4 servomotors with ability to change its position and speed.



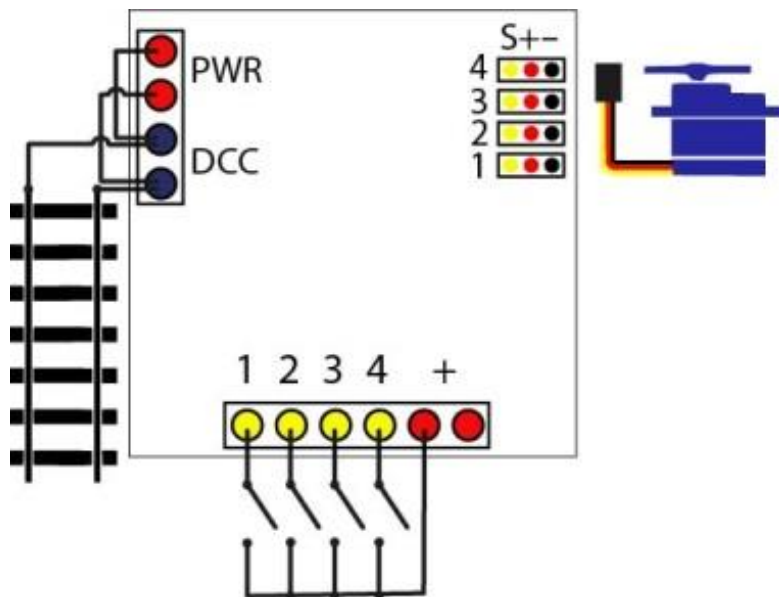
Basic functions:

- **4 independent servomotor outputs.**
- **4 manual inputs.** The external button could be connected to it to control a servo position manually
- **3 potentiometers.** Allows configuring of the left and right positions on the servomotors and changing its speed.
- **DCC input.** Allows configuring of the internal CV values and controlling decoder from the command station.
- **Power input.** Allows decreasing a current supply via DCC input from the Command station. (Useful for the bigger scale Model Railroad). Otherwise, decoder should be connected to DCC inputs if the external power is not used.

Technical specification

- **PWR Input: AC/DC 7-18V, min 1A**
- **DCC Input: AC/DC 0-20V**
- **Servo outputs: 5V, max 1A(4x250mA)**

Connection



Configuring servomotors (left/right positions and speed)

To configure one of the servo outputs User should repeat the following steps:

- Enter to the setup mode: while holding the programming button shortcut the required input to “+” connector. The green LED will be ON.
- Turn the right/left and speed potentiometers to required positions(While turning right/left potentiometers the motor will be moving to the required position)
- Save settings by pressing and holding programming button. The green LED will be OFF.



Configuring module DCC address

To configure module DCC address User should repeat the following steps:

- Press and hold the programming button
- Send from the Command Station accessory command with required address three times: on/off/on. After that module should start performing the base address action.
- Release the programming button.

List of available actions:

- Base address: servo 1 on/off
- Base address +1: servo 2 on/off
- Base address +2: servo 3 on/off
- Base address +3: servo 4 on/off

Programming

CV can be updated using Paged Mode, Direct Mode or on the main track (PoM).

Main configuration table:

CV	Value	Default value	Description
33	0..255	100	Speed of servo output 1 (100 – full turnaround in 1s, 50 – full turnaround in 0,5s)
34	0..255	100	Speed of servo output 2
35	0..255	100	Speed of servo output 3
36	0..255	100	Speed of servo output 4
37	128..255	255	Max position of servo output 1
38	128..255	255	Max position of servo output 2
39	128..255	255	Max position of servo output 3
40	128..255	255	Max position of servo output 4
41	0..127	0	Min position of servo output 1
42	0..127	0	Min position of servo output 2
43	0..127	0	Min position of servo output 3
44	0..127	0	Min position of servo output 4
45	0..1	0	Inverting servo output 1. 0 – not inverted, 1 - inverted
46	0..1	0	Inverting servo output 2. 0 – not inverted, 1 - inverted
47	0..1	0	Inverting servo output 3. 0 – not inverted, 1 - inverted
48	0..1	0	Inverting servo output 4. 0 – not inverted, 1 - inverted