

POINTS MASTER SERVO MODULE

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- Four channel servo controller
- DCC power and control
- Configurable range and speed
- Two wire connection to the track supply
- Programming on main support
- $1\mu\text{s}$ servo timing precision

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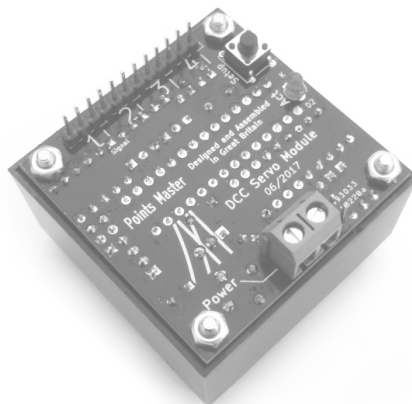
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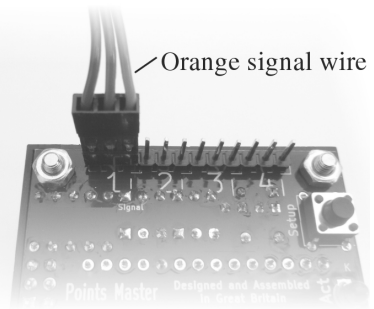


SETTING UP

The decoder is powered by and takes commands from the DCC supply. Locate the two screw terminals on the decoder. Connect a wire from each of these terminals to each wire of the DCC bus.

Connecting Servo Motors

Up to four servo motors can be connected to each Points Master module. Connect servos to the numbered ports on the decoder with the yellow or orange signal wire aligned with the pin marked 'signal'.



Centering Servo Motors

Pressing the setup button will move all connected servo motors to the mid point of their range to ease installation below a baseboard.

CONFIGURATION

The module requires no configuration to start using immediately. By default, the module has decoder address 1 and can be addressed as accessory numbers 1-4 from a DCC controller. If more than one accessory decoder is to be used on the same layout the decoder address must be changed. Additionally, the angular movement range and speed of the servos can be tuned individually.

Setting the Address

The easiest way to set the address is to use setup mode. Press the button on the module. The module will take the address of the next accessory instruction received.

On the Programming Track

The decoder can be programmed like any other DCC accessory or locomotive decoder by connecting it to the programming track outputs on the controller, or selecting 'programming' mode if the controller does not have a separate programming track output. CVs can be written in paged or direct mode.

On the Main Line

The module may be programmed on the main line using the controller's 'programming on the main' function. Caution is advised when setting the address using this method; it is better to set the address using the setup button.

Resetting the Module

If you need to reset the module (for instance, when moving the module to a different layout), issue a decoder reset command with the module connected to the programming track. This will reset all the CVs to the default values, including setting the address to 1. If your controller does not have a decoder reset function, or the reset function has no effect, instead write the value '8' to CV 8.

SERVO BEHAVIOUR

The movement speed and angular range of each servo can be changed by writing CVs.

Angular Range

The angular movement range of the servos is configured in degrees. The default range is 30°, which is suitable for most OO scale points. The range can be changed for individual servos by writing a new range in degrees (from 1° to 180°) to the appropriate CV: 51 for output 1, 52 for output 2, 53

for output 3 and 54 for output 4. These CVs may also be addressed as 563, 564, 565 and 566 respectively.

Movement Speed

The time taken for a servo movement to complete can be set for all four servos at once by writing to CV 40 (552). The time can also be overridden for individual servos by writing to CV 41 (553) for output 1, CV 42 (554) for output 2, CV 43 (555) for output 3 and CV 44 (556) for output 4.

Movement speed is expressed as the time taken for the entire movement to complete in 10ths of a second. The default value is 10, equating to 1 second.

By setting the movement speed to the maximum value of 250, movements as slow as 25 seconds can be achieved.

Contacting Help

If you have any queries regarding the Points Master which are not covered in this manual, in the first instance, send an email to contact@midlandscaleregulators.uk.

CV REFERENCE

<u>Number</u>	<u>Default</u>	<u>Description</u>
1	1	Base address
9	0	Upper address
40	n/a	Quick set servo speed
41	10	Servo 1 speed
42	10	Servo 2 speed
43	10	Servo 3 speed
44	10	Servo 4 speed
51	30	Servo 1 range
52	30	Servo 2 range
53	30	Servo 3 range
54	30	Servo 4 range