

# MegaPoints Controllers – Starter Kit – Quick Start Guide (rev 3)

Congratulations on the purchase of your MegaPoints Controllers Starter Kit where you'll find everything you need to control up to 24 servos for model railway use.

In the box you'll find the following items:

- 2 x MegaPoints Servo Controllers
- 1 x MegaPoints MultiPanel Processor
- 1 x MultiPanel Stacking switch/LED board
- 1 x Servo Controller pop-on switch assembly
- 2 x Servo Controller hook up cables
- 8 x MultiPanel LED cables
- 8 x MultiPanel button cables
- 1 x Pull-up resistor

## Additional items

Before starting you'll need the following additional items:

### Power supply

12 volt with minimum 4 amps to drive two servo controller boards. This must be a regulated power supply. See the Common Questions section of our web site for recommendations. Please do not use transformers or the DC output of train controllers. They lack the required power and are generally not regulated.

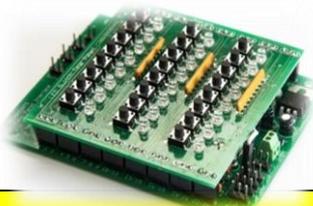
### Servos

We recommend the HK-15178 from Hobby King. Our web site contains links to the supplier.

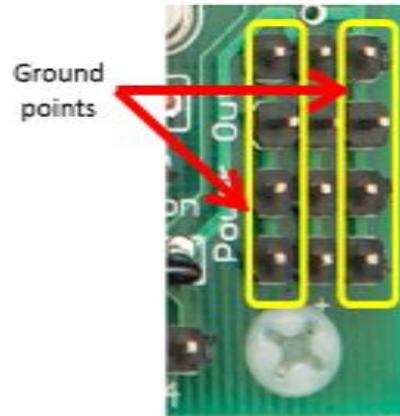
## Getting started

Why not watch the MultiPanel Starter Kit video on our web site?

The MultiPanel processor already has the stacking switch/LED board installed on top and should look like the photo below. The grounding lead should be on the lower



right and connected to one of the four inner or outer (*not centre*) ground points on the lower right of the MultiPanel Processor board (photo below).



Using one of the 50 cm leads (*same plug on both ends*) connect one end to the MultiPanel Processor network connector and the other end to a servo controller port "A" or "B" taking care to ensure correct polarity (*match the SDA and SCL connections both ends*). This is the beginning of a MegaPoints network which can be extended with additional Servo Controllers and DCC modules connected in a similar manner.

Connect a servo to output "1" of the servo controller (*top right – 3 pins*). Ensure the ground lead (*black or brown*) connects to the outer edge of the connector.

Hook up your regulated 12 volt power source to both the MultiPanel and servo controller.

### First time switch on.

The very first time we fire up a servo controller we need to set it to SLAVE MODE so that it will take instructions via the network cable you just connected. To do this, hold down the left button (*marked **LOW***) on the Servo Controller while applying power. You will observe both servo controller LEDs flash alternately followed by the left LED flashing

twice before entering its heartbeat flash to show all is well.

Pressing the top left button on the MultiPanel Switch Board will now toggle the attached servo between it's high and low positions. If additional servos are attached you'll see them also operate as you press the corresponding buttons.

The first 12 buttons will operate servos on the first Servo Controller.

### Adding the second servo controller

Before we can use the second servo controller we must set it to SLAVE mode and change its slave address to three (*the first servo controller is address 2*) so that it will respond to the second bank of 12 buttons on the MultiPanel.

Fit the Servo Controller pop-on switch board to the second servo controller (*picture below*)



and set switch S1 OFF and S2-S4 ON. All other switches should be in the off position. Connect power as before.

While holding down the **LOW** and **PROG** buttons on the servo controller apply power. You will observe alternate LED blinking followed by three distinct flashes on the left LED before the unit is ready for use.

Connect the second 50 cm cable (*same plug both ends*) from one of the unused network connectors on the first servo controller and

the other end to the second servo controller. Observe correct polarity.

Operate the second half of the push buttons on the MultiPanel (13 – 24) and you should observe any connected corresponding servos move to opposite positions as directed.

Congratulations, you just set up a control system for 24 points using low cost servos.

The servo controller pop-on board can be used to directly control servos with the switches. Before they will operate, the servo controller must be set to master mode so that it stops listening for network commands and reads the switches instead. To set master mode, press and hold down the **HIGH** button while applying power. When in master mode the servo controller will immediately start with the left LED flashing the heartbeat approx. once per second.

### Factory reset

If you aren't sure which mode the servo controller is in, or just want to reset the board back to the same settings it was shipped with, hold down both **PROG** and **HIGH** buttons while applying power. You will see the RED LED flash for about four seconds before the unit restarts. In this mode the board will read the pop-on switches and makes a great quick test circuit.

### Further information

Go to our web site for troubleshooting, how-to videos, the full documentation and links to the additional items you may need.

Web site address:  
[megapointscontrollers.com](http://megapointscontrollers.com)