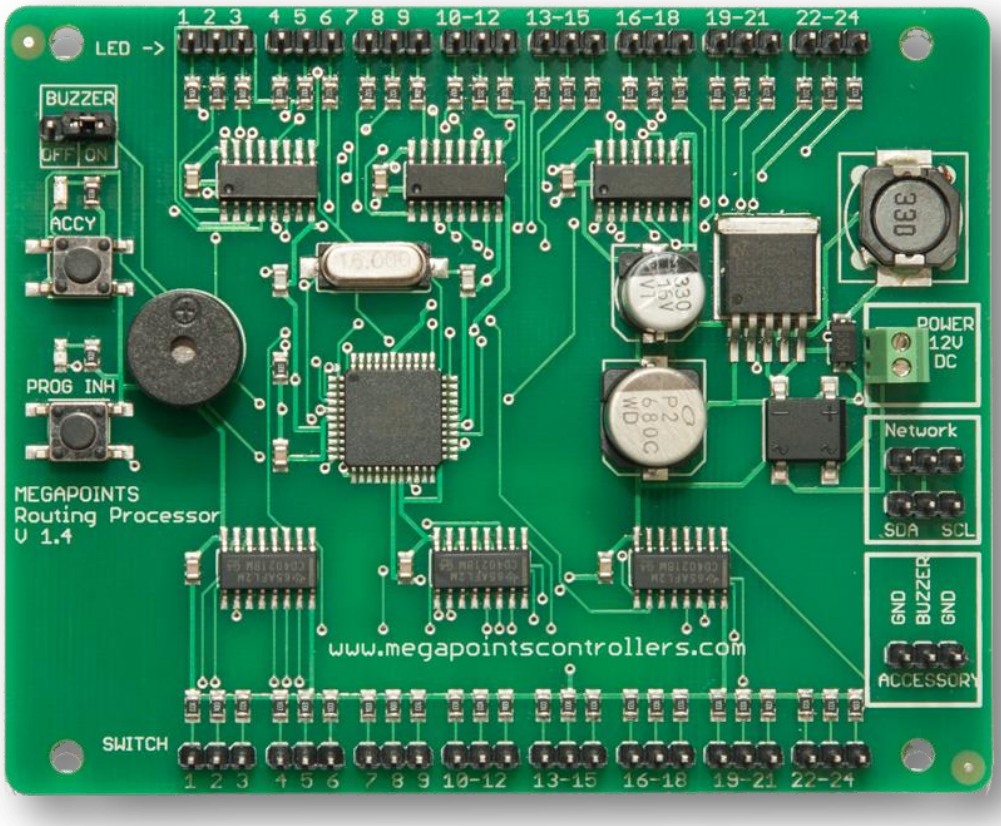
MegaPoints Route Processor

Control your entire layout with a single button.



User guide

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Designed and built in Great Britain

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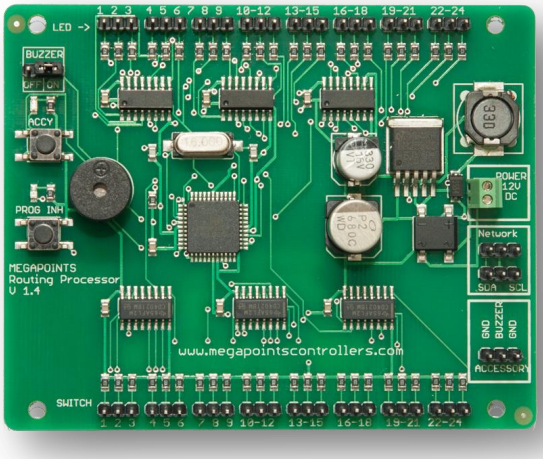
What's included

The following items are included with each Route processor:

- 1 x Processor board
- 1 x Network connector cable
- Alarm buzzer (*built in*)



Introduction

The route processor adds easy one touch route selection for your entire MegaPoints Controllers network. Selecting routes is as simple as pressing a button on your mimic or stackable route processor test panel. The route remains active until it is disabled via the routing processor, a conflict is detected or power is removed.

Specification

The routing processor can create up to 24 routes, each consisting of up to 192 devices (points, semaphores, gates, barriers etc.) meaning that the entire layout can be configured with a single route selection button. If you need more then 24 routes, just add another routing processor and increase the number of available routes in 24's.

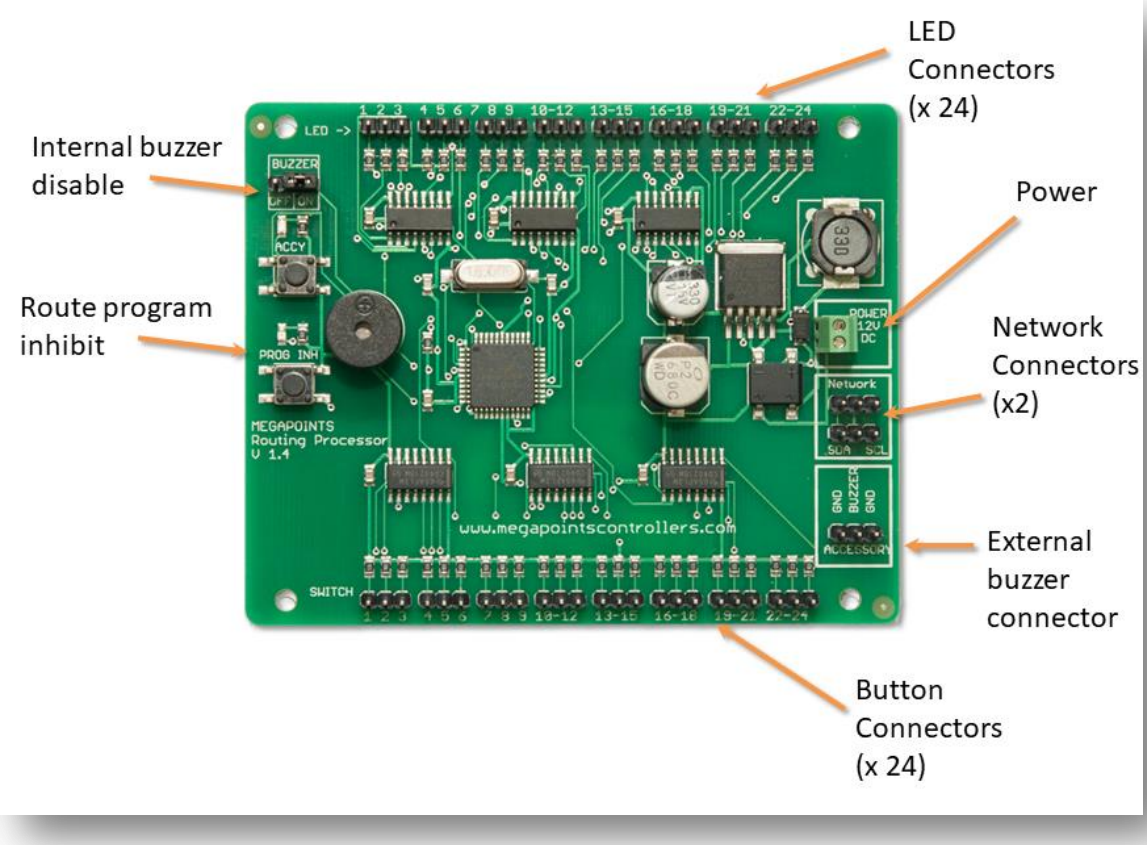
MegaPoints Controllers use static sensitive components that must be handled with care.

Avoid touching any components or the circuit printed on the bottom of the board.

Avoid placing the board on any metallic surfaces including track.

Hooking up

Use the following connection diagram to hook up the route processor board.



Power requirements

Supply 12 volts DC regulated (max 13.8 Volts) minimum 0.5 Amp.

Buzzer

The main buzzer is built in. If the unit is to be housed within an enclosure an external buzzer can be fitted. Ensure to disable the internal buzzer first. If using an external buzzer, connect the buzzer plug to the ACCESSORY connector on the right size of the route processor board. Ensure the red lead connects to the BUZZER connector and the black lead to either GND connector.

Network

Connect the network cable from one of the network connector plugs to the MultiPanel network connector. Ensure SDA and SCL match on each side of the connector. All devices on the network must be powered for the network to function correctly.

Switches and LEDs

The easiest way to test the routing processor is to pop on a stacking LED / Switch board for MultiPanel V 1. See *Stacking LED & Switch Panel* in the appendix for details. If using this board connect the fly lead to the unused GND connector on the ACCESSORY socket.

When wiring buttons and LEDs to your mimic panel follow the example in the MultiPanel guide for connection details.

Power

A regulated 12 volt (max 13.8 V) DC power supply is required. Connect the power to the connectors using any polarity.

Usage

Powering on

When power is applied to the route processor all 24 LEDS will be illuminated while the route engine samples the current state of the layout. Once it has built up an internal image of the current layout status it is available for use. This can take between 5 – 20 seconds. As each memory block is sampled a corresponding LED is extinguished.

Route selection

Routes are selected by simply pressing the appropriate route button. The corresponding LED will illuminate to indicate the route is active.

Route de selection

To disable a route, press the route selection button again. The corresponding LED will extinguish to confirm the route is now deselected. Deselecting a route does just that. It stops any further route monitoring. It does not return any points or signals to their former position.

Active route monitoring

When a route is selected all points and semaphores associated with that route are monitored for changes. If any are changed while the route is active the buzzer will beep several times to indicate a

route has been broken. The LED associated with the broken route will flash to indicate which route(s) are affected.

If the points changed were part of several active routes all associated routes will flash to indicate they are no longer valid.

To re-establish a broken route just press the button for the route so the LED illuminates and route monitoring is established again.

Route programming

To program a route follow this procedure:

- Ensure the “PROG INH” LED is not illuminated (see below).
- Press and hold the desired route button until the associated LED flashes.
- Using the MultiPanel buttons set the points and semaphore signals appropriately.
- Press the route button so that the flashing LED extinguishes.

NOTE: If points are already in the correct position for your route you must change them so the route engine learns it is part of the route being programmed. Simply move the points back to the correct position once the MultiPanel LED stops flashing.

Disabling route programming

Once you have programmed your routes you can disable route programming so they cannot be altered again. To do this, press and hold the “PROG INH” button until the corresponding LED illuminates.

To enable route programming again, press and hold the “PROG INH” button until the LED extinguishes.

Clearing route memory

Specific memory

To completely clear an individual route memory, enter route programming mode for that route and then leave route programming mode without pressing any MultiPanel buttons.

All memories

To clear all route memories back to default settings press and hold the ACCY button until the corresponding LED illuminates. The route engine will erase most routes and restart.

Route 7 defaults to all points “ON” and LEDs illuminated.

Route 8 defaults to all routes “OFF” and all LEDs extinguished.

Disabling the buzzer

The buzzer can be disabled either by unplugging it or disabling via the jumper located on the top right of the processor board.

First time use

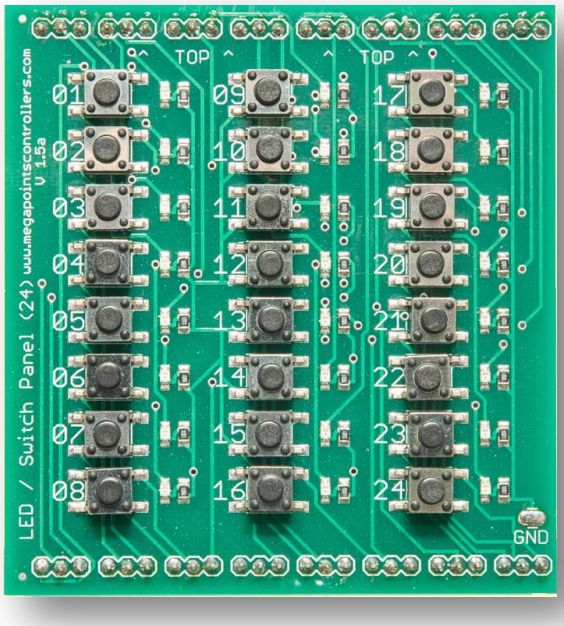
Follow this procedure to get the route processor up and running:

- Carefully install the stacking switch and LED panel (or wire up buttons and LEDs to the appropriate connectors. If using your own buttons and LEDs, follow the guidance contained within the MultiPanel document.
- Apply power to the route processor.
- Connect power (12 volts DC – regulated).
- Observe the 24 LEDs extinguish as the layout status is observed by the route processor.
- Follow the route programming instructions above to program a route.

Accessories

Stacking LED & Switch Panel

The stacking LED and switch panel is interchangeable with the MultiPanel. It is a highly recommended addition that will ease installation and initial testing. The MultiPanel documentation contains further details of this accessory.



Contacting us

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If you have any product improvement suggestions we’d be very pleased to hear from you.

NOTE: We operate on a policy of continuous improvement. Colours, specifications and even the placement of components may vary from time to time. Documentation will continue to be updated to reflect changes or answer frequent customer questions as they arise.