

Martin M1™

Encoder Upgrade Kit Installation Guide

Introduction

This upgrade kit replaces all previous versions of the M1 Encoder. It is 100% compatible with all existing M1 controllers.

Included items

The Upgrade Kit contains the following items:

- M1 Encoder MKII PCB mounted on a metal frame
- 4 Encoder knobs
- 4 light guides



Anti-Static Precautions

Important! Static electricity can destroy electronic components. Follow these ESD precautions to prevent damage to the product and injury to the user.

Carry out the upgrade at an anti-static workstation.

Wear a grounded anti-static wristband.

Touch a grounded conductor every few minutes to discharge any static buildup.

Hold components by their edges only. Do not touch the surfaces or any of the contacts of the PCB.

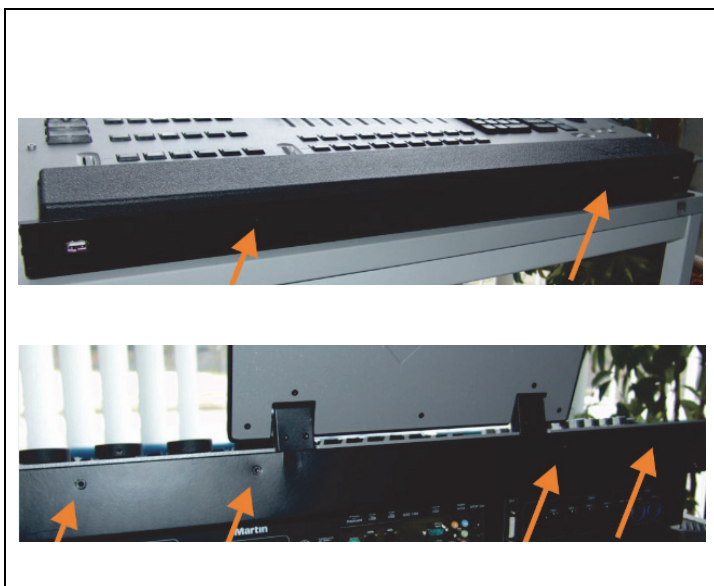






Encoder upgrade procedure

Have the following tools ready:



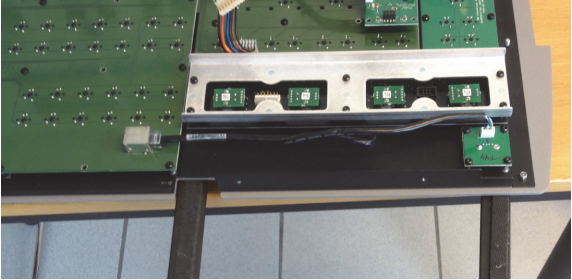
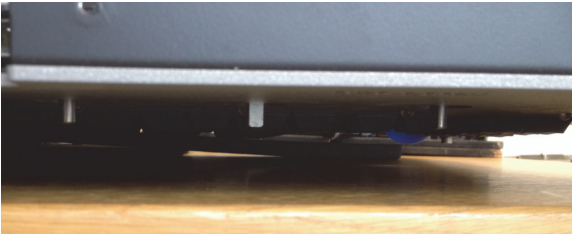
- Torx T20 driver
- Torx T10 driver
- Allen key N° 6 (3mm)
- Allen key 1.5mm

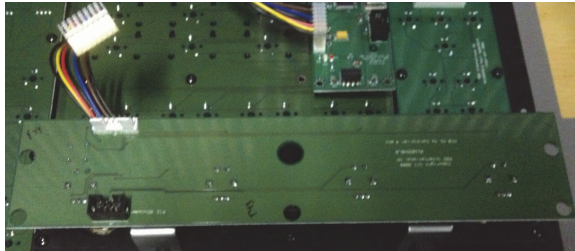
Warning! Disconnect power and all data connections from the controller before you start.

	<ol style="list-style-type: none">1. Place the M1 on a hard and perfectly flat surface.2. Remove two Torx T20 screws from the front and four Torx T20 screws from the back of the M1.
	<ol style="list-style-type: none">3. Loosen four 3mm hex screws from the top plate. They are captive and stay attached. Do not try to unscrew them completely from the plate.

	<p>4. Carefully angle the screen backwards until it is parallel to the surface the M1 is placed on.</p>
	<p>5. Lift the top plate out of the controller by about 20mm until the supporting metal structure is free. Move it towards the front of the controller slowly until it clears the touch screen housing.</p> <p>6. Lift the top plate forward as if you were opening a hinged lid until it is at about 90 degrees to the work surface.</p>
	<p>7. On the back of the top plate are a large data connector and a small power connector. Unclip the data connector and remove it carefully. Release the power connector by pressing on its latch, then disconnect it.</p> <p>8. Remove the top plate from the controller and place it securely on a desk.</p>

Upgrading the Encoder section

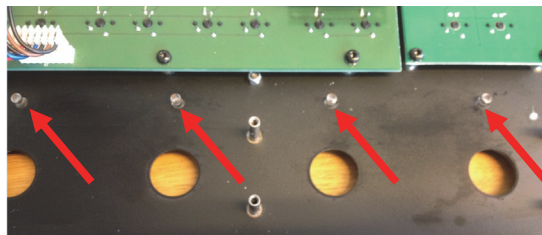
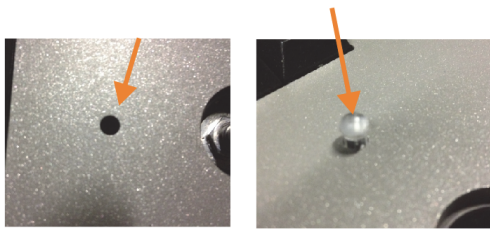
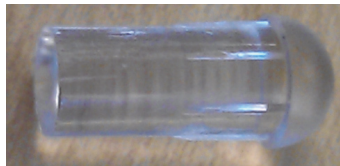
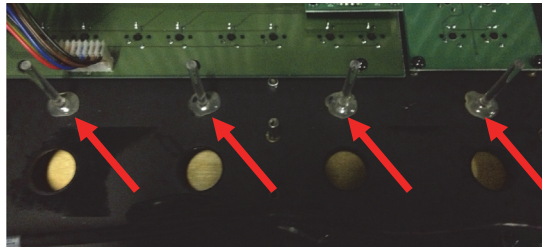
 	<ol style="list-style-type: none">1. Using a 1.5 mm Allen key, release and remove the 4 encoder knobs.
 	<ol style="list-style-type: none">2. Flip the front panel and support it underneath so that the encoder knob shafts do not touch the work surface.



3. Unplug the I²C data cable from the PCB



4. Remove the 6 Torx T10 screws and lock washers, and keep them for re-use.
5. Remove the whole encoder section from the front panel

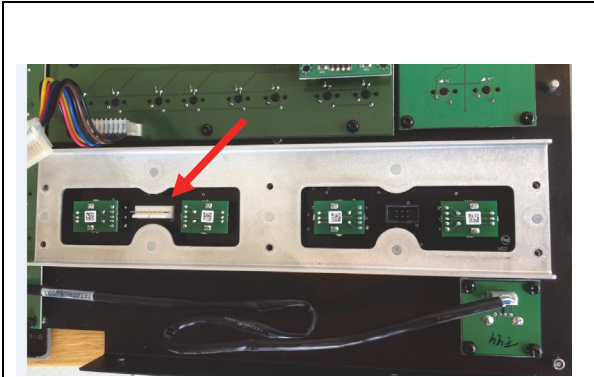


6. Break away the 4 light guides, and replace them by the 4 shorter ones supplied in this kit.

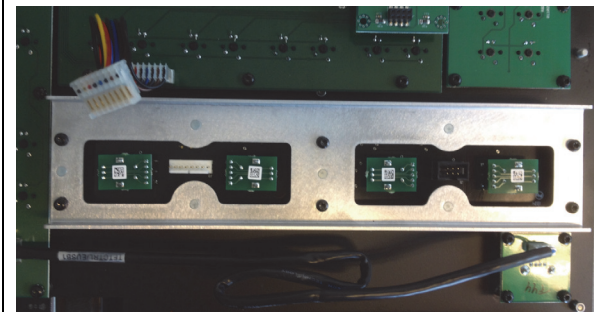
Insert each new light guide from the front and push it down until it locks in place. There is no need to glue it as it locks in place on its own.



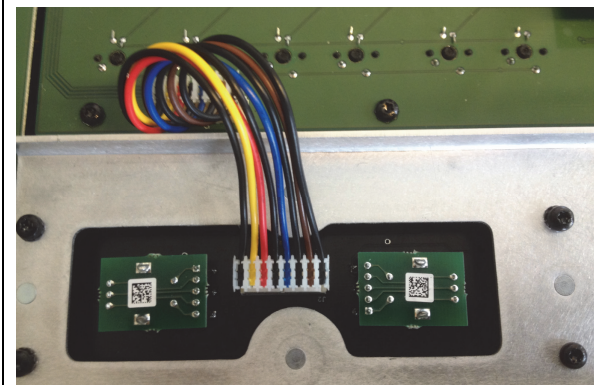
7. Check the DIP switch settings on the PCB:
 - 1 OFF (Up)
 - 2,3,4 ON (Down)



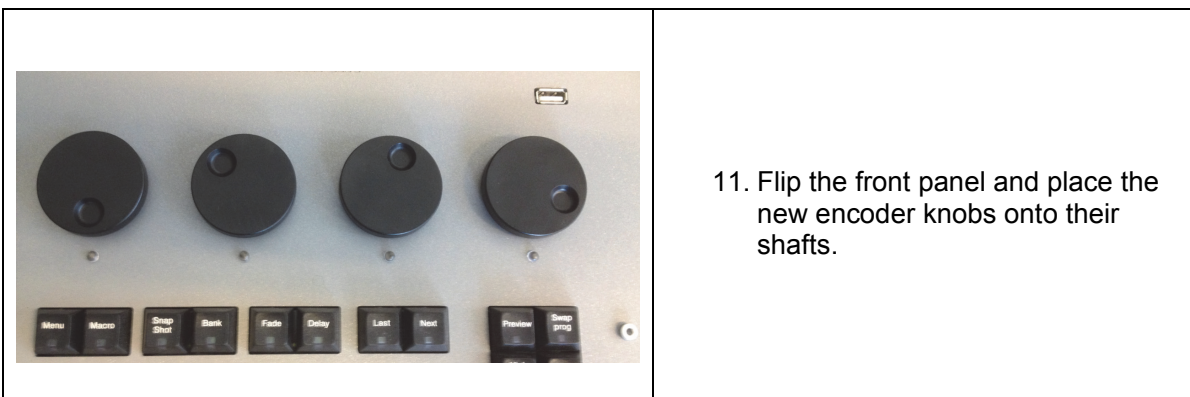
8. Place the new encoder section on the spacers. Note the connector side.



9. Use the 6 Torx screws and washers that you removed earlier to fasten the new encoder section in place.

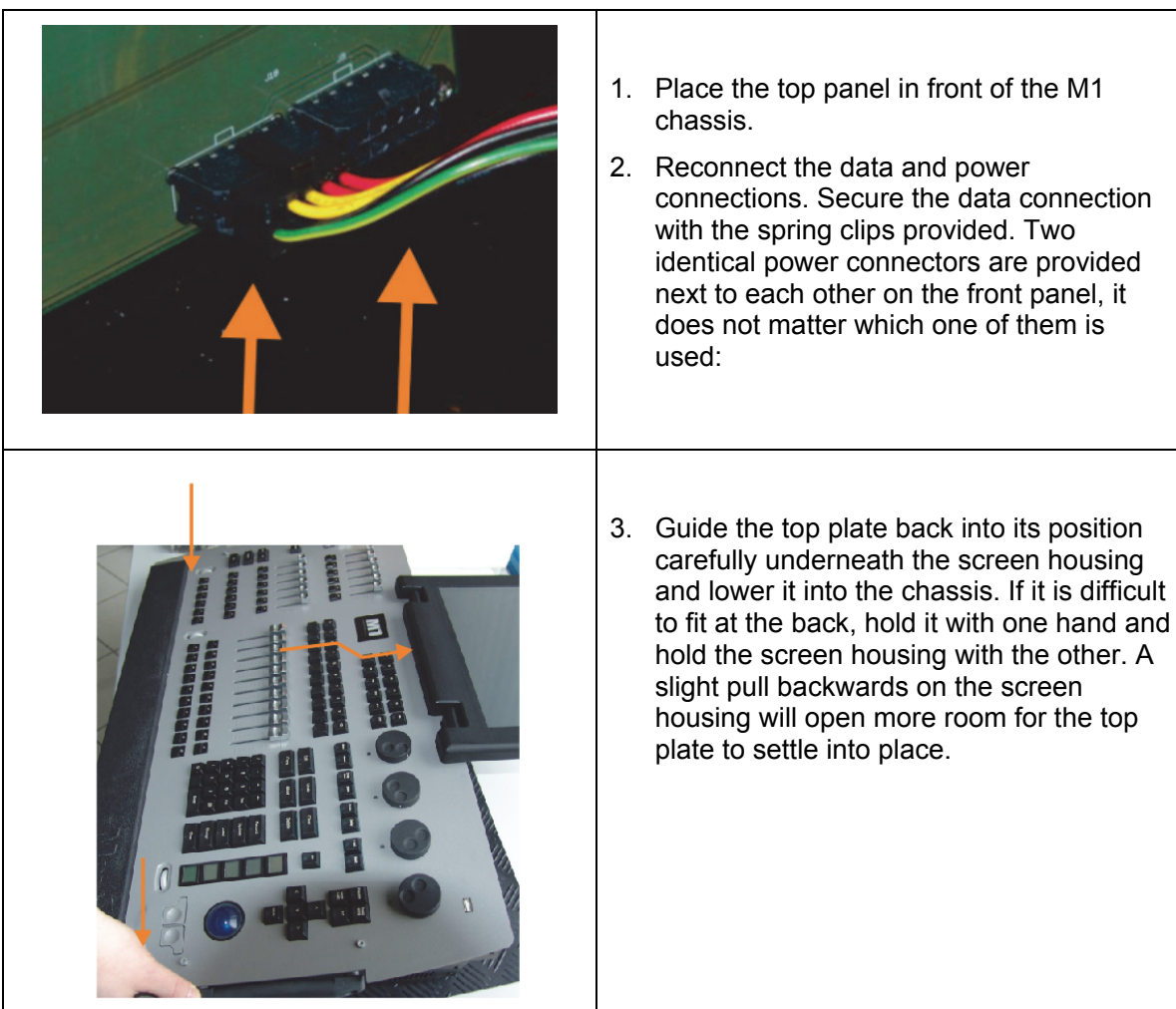


10. Reconnect the I²C data cable.



Reassembly

Place the M1 on a hard and perfectly flat surface during reassembly. Failure to do so may damage the chassis by twisting it.



4. Once the top plate is correctly in position, place the 6 Torx screws around the front and the back into their holes. Tighten them down lightly at first. Once they are in place, tighten them in the following order:
Front left, Front right, Back left, Back right, Monitor left, Monitor right.
5. Now check that the M1 is level by pushing on the corners to test for any wobble. If any of the feet are not resting squarely on the work surface, loosen the screws and adjust the plate and chassis, then repeat the above tightening procedure.
6. Next, tighten the four 3mm hex screws on the top plate, tightening gradually in a cross pattern:
Bottom left, Top Right, Top Left, Bottom Right
7. Reconnect all cables and power the M1 on.

Testing

1. Power up the M1 controller and select “Continue with current show”
2. Hit the Menu button and select:
→ System → Tools → Diagnostic → ConsoleTester
3. Check the new Encoder section by turning and pushing the new encoders.

