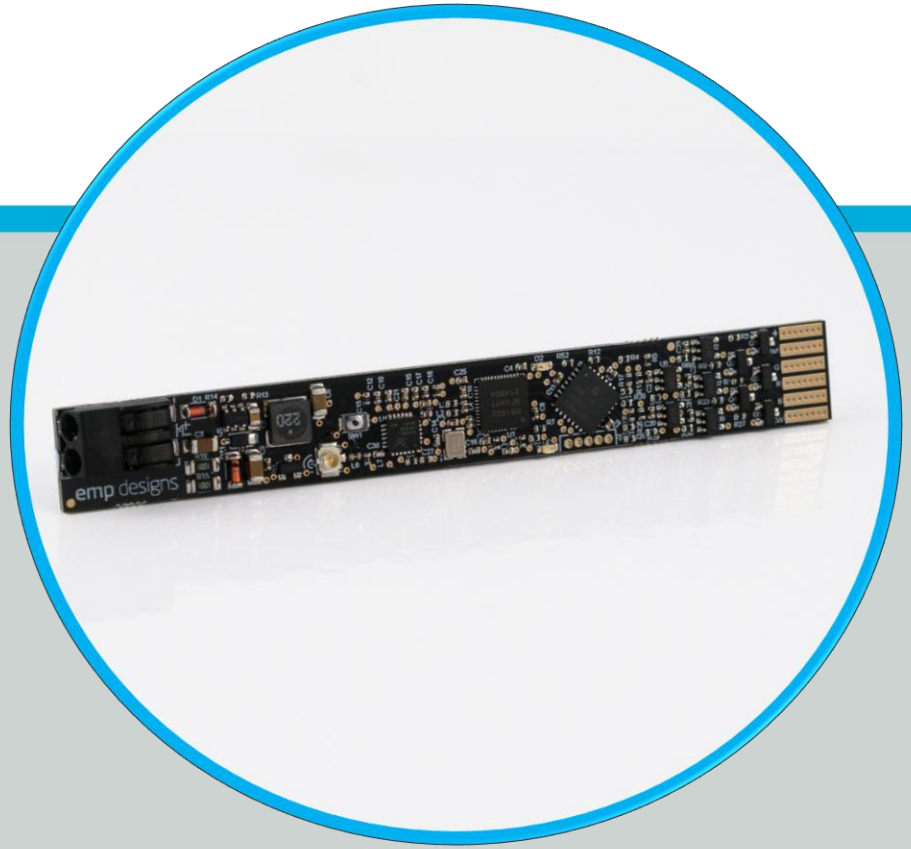
emp designs

5 Channel LED Strip Controller User Guide



DATE
8/10/2025

PREPARED BY
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IMPORTANT SAFETY NOTICE

Read this user guide in full before you attempt to use the 5 Channel Strip Controller.

On receipt of the 5 Channel Strip Controller, check no damage has occurred whilst in transit. If you suspect any damage, do not use the controller until you have discussed the issue with EMP Designs Ltd.

If you do not fully understand anything contained in the user guide, contact the manufacturer by email before use (info@empdesigns.co.uk).

The 5 Channel Strip Controller has been designed without a casing to maintain its compact size. As a result, its components are exposed and may be damaged, or the board may short circuit if it comes into contact with loose wires or metal objects. Handle with care and ensure the device is used in a clean, controlled environment to prevent potential issues.

Ensure that all electrical connections and interconnections between external LED's are properly made in accordance with the manufacturers' instructions and no short circuits between channels are made.

All external wiring remains the responsibility of the user.

Whilst EMP Designs Ltd. has made every effort to ensure the 5 Channel Strip Controller is safe to use and meets the client's specification, the client, prior to each application, should always complete on-site testing.

All external connections should only be made while the power is turned off.

Do not attempt to disassemble the controller in any way. Please return the controller to EMP Designs Ltd. if any servicing is required.

Damage may occur if the controller outputs are continually overloaded or short circuited.

Damage may occur if the power in polarity is incorrect.

Ensure a fuse is fitted to the input supply of the controller.

Avoid places subject to extremely high temperatures or humidity.

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Power Specification

Power Specification	
Current per channel max	2A
Voltage Input	12 - 24 Vdc
Voltage Output	12 - 24 Vdc

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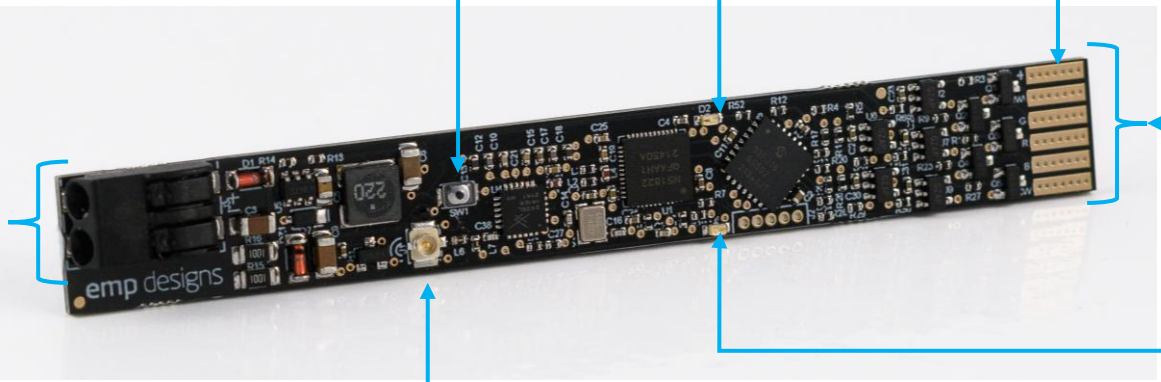
User Controls Guide



Sync Button

Power Indicator

Common Positive Connection Pad

LED Strip Connection Pads

Power Connections

Synchronisation Status Indicator

Antenna connection point

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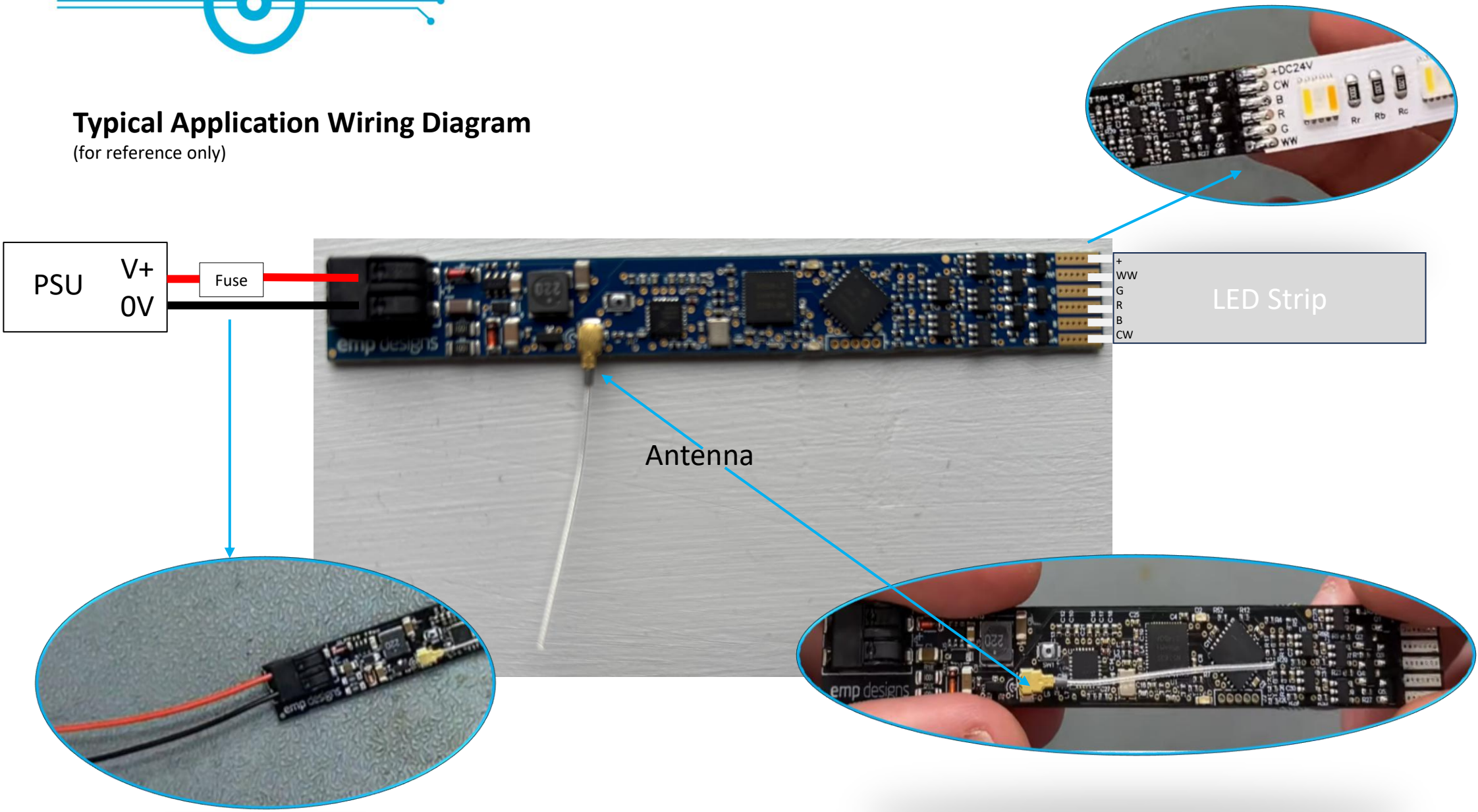
Typical Application Wiring Diagram

(for reference only)



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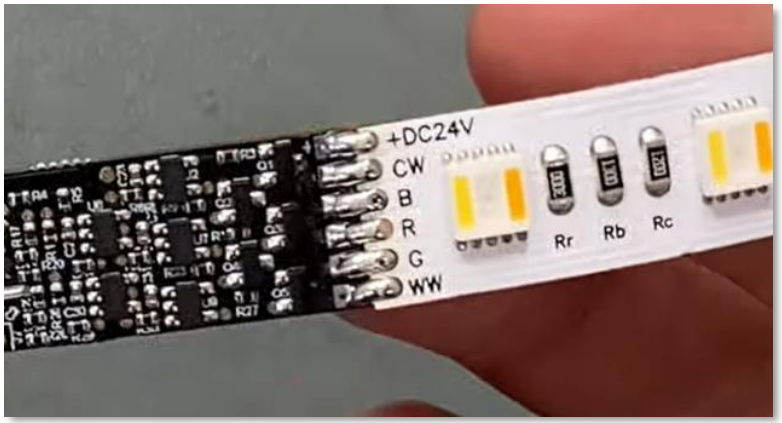
Using the 5 Channel Strip Controller

1. Connect the 5 Channel Strip Controller in accordance with the wiring diagram on page 6. This will require the LED Strip to be soldered directly to the Strip Controller.



2. Switch the power supply on ensuring that the voltage is set between 12 – 24Vdc.

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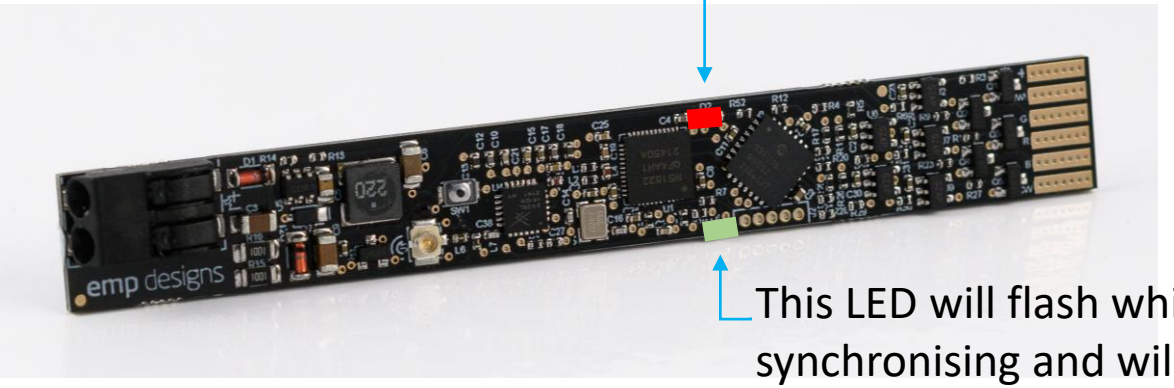
This LED will be on when power is connected.



This LED will flash whilst it is in the process of synchronising and will change to being ‘ON’ when it has synchronised.

Synchronising the Strip Controller to a Transmitter

3. Press the synchronise button on a compatible transmitter. The green LED will flash whilst it is in the process of synchronising and will change to being ‘ON’ when it has synchronised.

4. Once synchronised, it is possible to control the LED strip through the transmitter.

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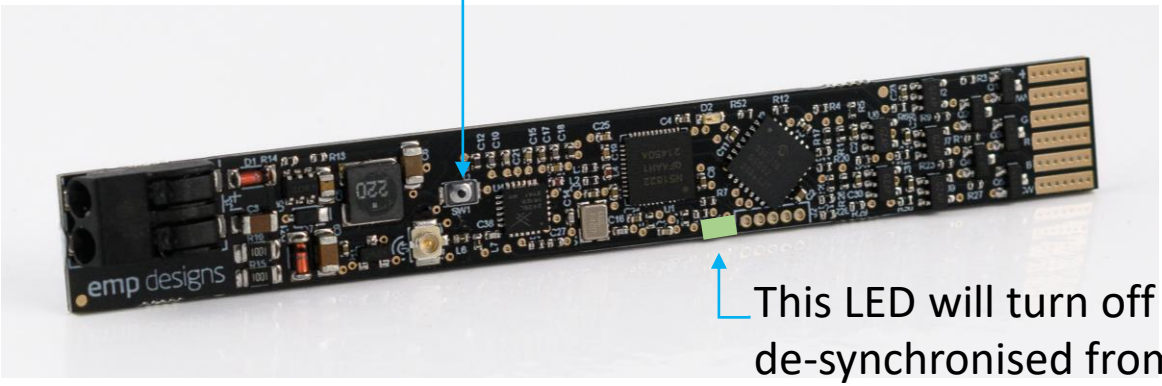
De-synchronising the 5 Channel Strip Controller from the Transmitter

5. To de-sync the 5 Channel Strip Controller from a transmitter press and hold the synchronisation button until the Radio Sync Indicator (green LED) goes out.

Sync button.



This LED will turn off when the controller has de-synchronised from the transmitter.

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Addressing the 5 Channel Strip Controller

6. Addressing for this controller is done through RDM and you will need an RDM capable transmitter.

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YouTube Support

We have a YouTube channel where there is a video demonstrating how to use the 5 Channel Strip Controller. The QR below will take you directly to the 5 Channel Strip Controller Instructional video.

Alternatively, visit our YouTube channel
https://www.youtube.com/watch?v=Mbez_UX12pc

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Get in Touch

If you require further support, don't hesitate to get touch.

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