

WFG-80 8-Way Lighting/General Controller Getting Started

WFG-80 Installation

This document is online at <http://www.wifitrax.com/appNotes/quickStart/WFG-80-Quick-Start.pdf>. Please see our website for information on our limited warranty.

Package Contents

1 x WFG-80 Module in Static Shielding Bag
1 x Mounting Kit (4 screws, 4 spacers, 4 nuts, 4 washers)
Getting Started: WFG-80 Installation (this document)

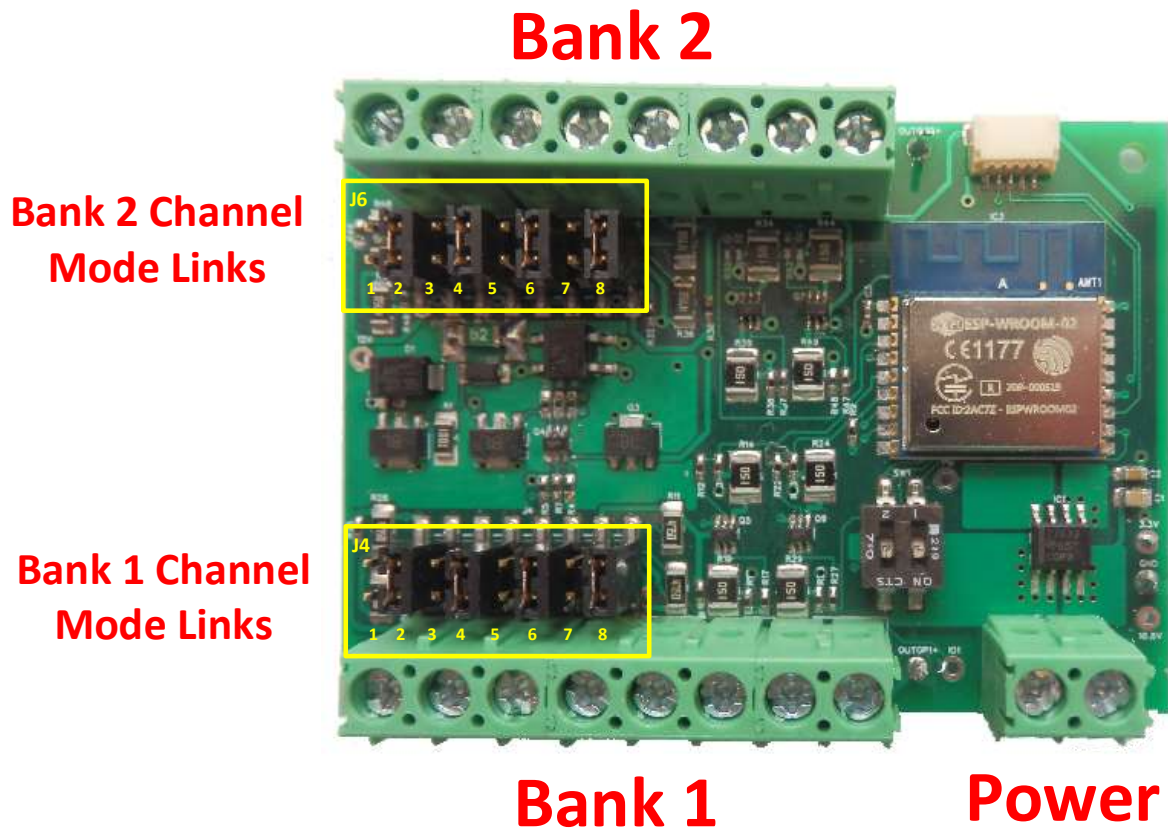


Figure 1. WFG-80 Module

Link	Linked	Open	Remarks
J4 1	OUT 4 Direct	Filament Lamp	
J4 2	OUT 4 475 Ohm	LED Bright	Leave open for 1K
J4 3	OUT 3 Direct	Filament Lamp	
J4 4	OUT 3 475 Ohm	LED Bright	Leave open for 1K
J4 5	OUT 2 Direct	Filament Lamp	
J4 6	OUT 2 475 Ohm	LED Bright	Leave open for 1K
J4 7	OUT 1 Direct	Filament Lamp	

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J4 8	OUT 1 475 Ohm	LED Bright	Leave open for 1K
J6 1	OUT 8 Direct	Filament Lamp	
J6 2	OUT 8 475 Ohm	LED Bright	Leave open for 1K
J6 3	OUT 7 Direct	Filament Lamp	
J6 4	OUT 7 475 Ohm	LED Bright	Leave open for 1K
J6 5	OUT 6 Direct	Filament Lamp	
J6 6	OUT 6 475 Ohm	LED Bright	Leave open for 1K
J6 7	OUT 5 Direct	Filament Lamp	
J6 8	OUT 5 475 Ohm	LED Bright	Leave open for 1K

Table 1. Link Option Settings

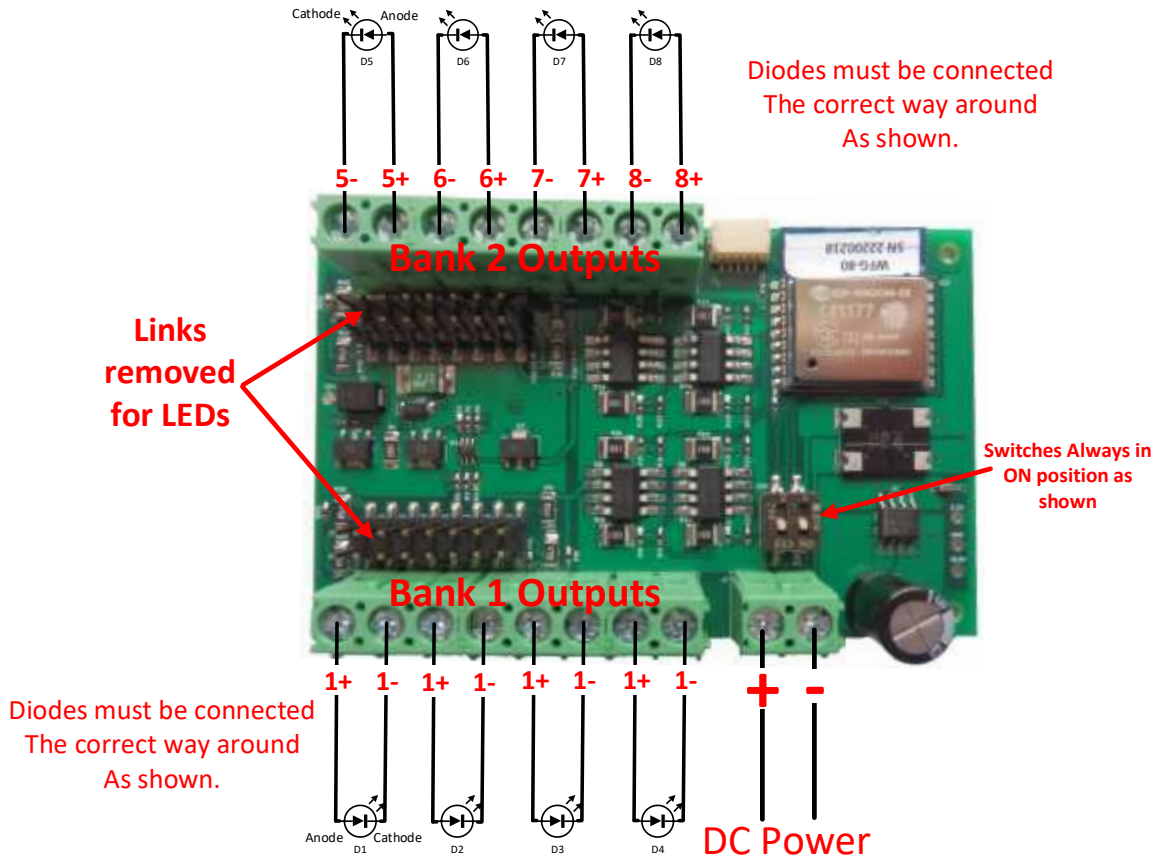


Figure 2. Connection Diagram for LED Lights

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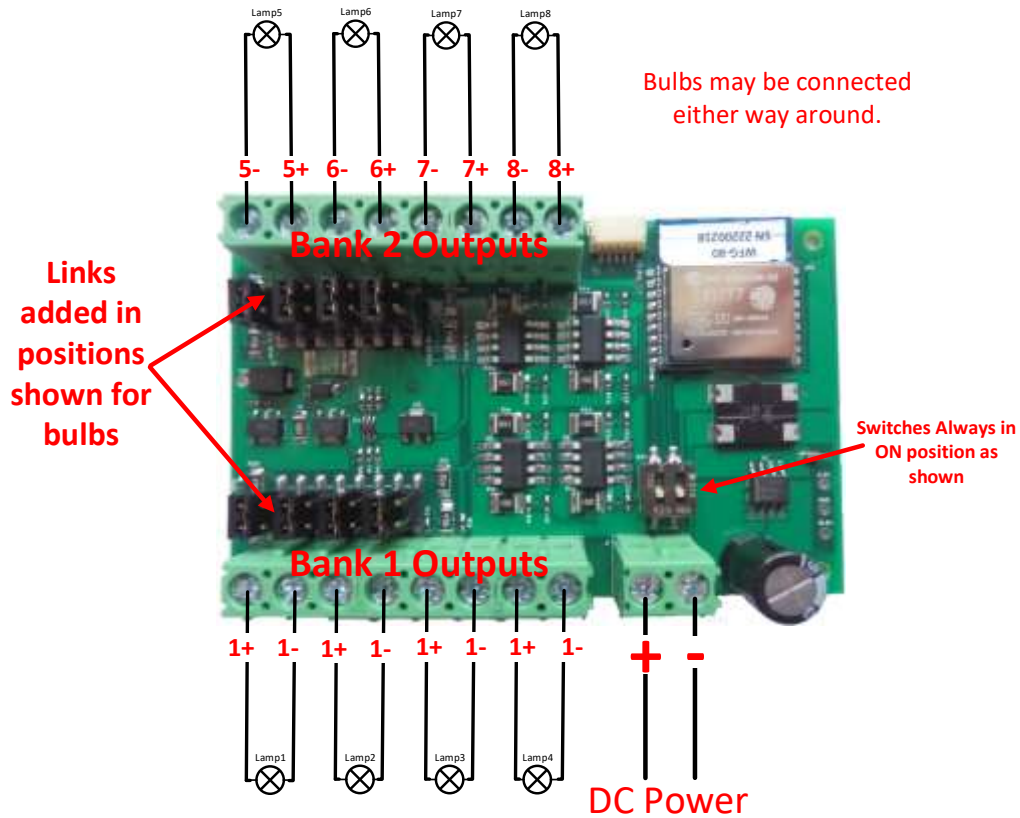


Figure 3. Connection Diagram for Grain-of-Wheat Lamps

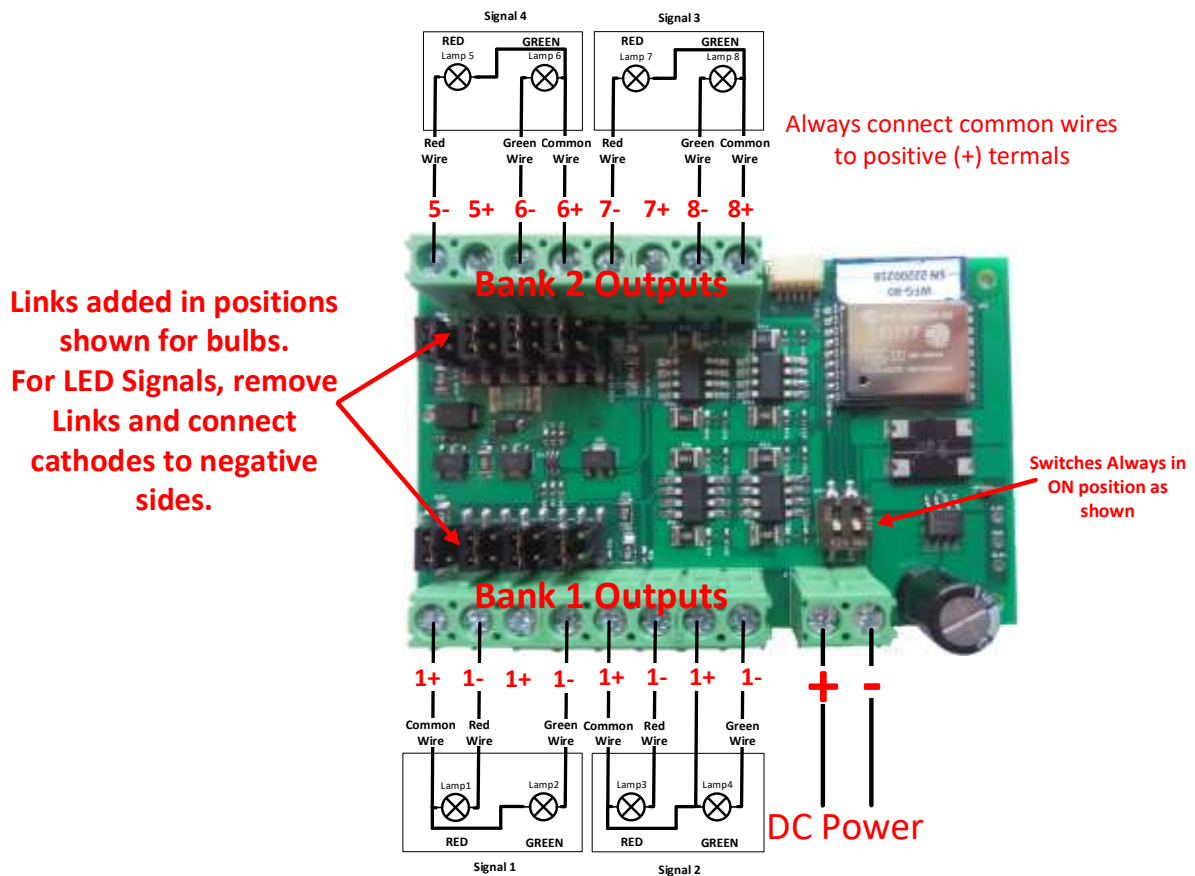


Figure 4. Connection Diagram for 2-Light Signals

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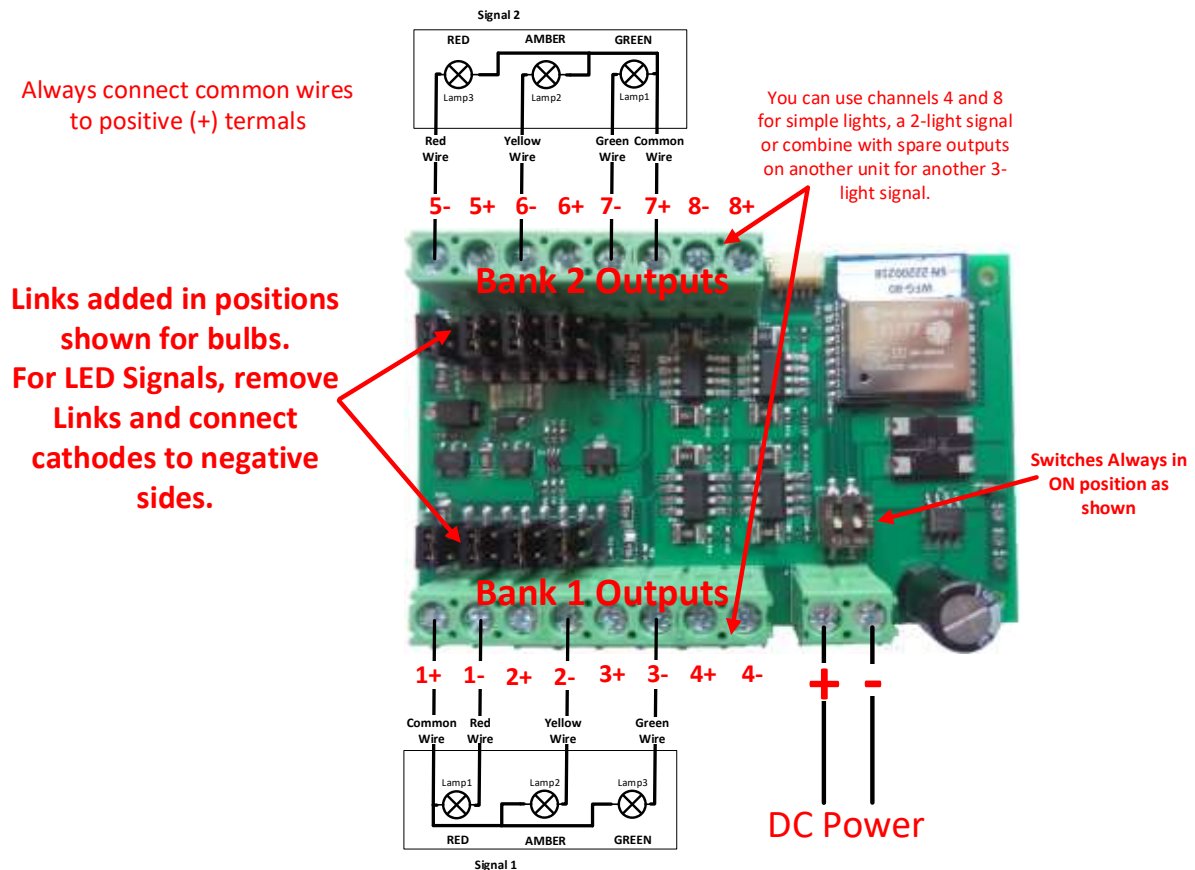


Figure 5. Connection Diagram for 3-Light Signals

Installation Instructions

- (1) First determine what kind of lights you wish to control. WFG-80 will control two basic types: Light Emitting Diodes (LEDs) and low power filament lamps such as “Grain of Wheat Bulbs”. You are advised to use those rated around 12 Volts. Higher voltage bulbs can be used but they will not be very bright. You can make the lights brighter by using a higher power supply voltage such as 15 Volts instead of 12Volts. Also note that you can turn the dimmers to a higher setting using Tower Operator. You can mix LEDs and filament lamps on the same board but you must be careful to place the links correctly. The links provide three options for each channel, Direct, 475 Ohm series resistor and 1000 Ohm series resistor. If you use LEDs you **MUST** use the 475 or 100 Ohm option for those channels. Direct mode will **DESTROY** LEDs. If you use filament lamps you need to use Direct mode for those channels or the lamps will be very dim. Table 1 shows the link settings. You can also combine channels to control features with multiple lights like signals. Tower Operator allows you to assign channels to the signal device on the screen once it is physically connected.
- (2) Wire the WFG-80 to your lights or signals according to Figure 2, Figure 3, Figure 4 or Figure 5. If you have multiple types of device, you can take account of more than one figure. Be sure to connect common wires to the positive side of each of the eight channels.
- (3) Note that each of the two banks can be dimmed independently through software using the Tower Operator app.
- (4) Note that the two DIP switches must be always in the On position. These are only used for factory configuration.
- (5) Connect power to your unit at TRKA and TRKB as shown in Figure 2, Figure 3, Figure 4 or Figure 5. It does not matter which way round you connect the power. You can also use DCC track power but NOT AC. The power should be between 12 and 18 volts.

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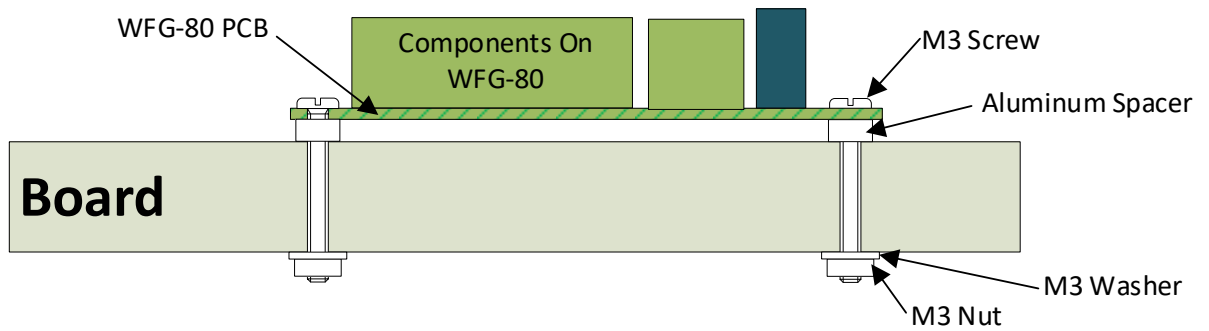


Figure 6 Mounting Suggestion

- (6) Mount the unit to your baseboard using the four M3 metric screws, nuts and spacers provided. Mount the unit on a suitable piece of board, either your baseboard (top or bottom) or a separate board perhaps at the front of your model railroad. The component side of the module should face away from the board as in Figure 6. If you omit the spacers be sure not to tighten screws so that the unit bends. Take care that no part of the unit touches any metal as this may cause a short circuit and result in permanent damage. Do not mechanically stress or bend the module as this may cause permanent damage. **Take care to ensure that there is adequate ventilation to avoid overheating.**
- (7) Turn on the power. You may test the unit using the Tower Operator App. Refer to the Tower Operator Quick Start, or Full Help Pages for instructions on setting up a schematic control panel on your Windows or Android computer or tablet.

<http://www.wifitrax.com/appNotes/WifiLayout-Quick-Start.pdf>

<http://www.wifitrax.com>

<http://www.wifitrax.com/appNotes/howToArticles.html>

This product is not a toy. Keep away from children. It is not suitable for use by persons under 14 years of age.