

- (5) Use the Back hyperlink to return to the Main Menu page, then select Dimmer Channels. Here you can adjust the brightness of each of two banks of four lights.
- (6) You can also click on each entry in the lights or dimmers list to edit the names and DCC addresses. DCC addresses are relevant if you use the WFD-60 WiThrottle/DCC gateway so your lights can appear as accessories on your DCC system.

Getting more out of your WFG-80

Consult the full manual for information about the features available. For example, you can:

- Use the Home Net option. That way you can leave your phone or tablet connected to your home network. When you power up your WFG-80, your phone or tablet will connect much more quickly.
- Explore the WFG-80 web pages to see the features available.
- Use the WFD-60 Gateway to control switches using IOS WiThrottle, Android Engine Driver, TCS UWT-100 or your DCC system, while also driving trains.
- Use Tower Operator to configure a schematic control panel to control your switches and select routes.
- Access the WFG-80 Manual at <http://www.wifitrax.com/manuals/WFG-80/WFG-80-Manual.pdf>

More Information

<http://www.wifitrax.com/help/TowerOperator/help.html>

Other resources:

<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.
Warning: This product contains chemicals known to the state of California to cause cancer, birth defects or other reproductive harm.

WifiTrax products are made in Australia using globally-sourced components and services. Check our website for warranty information.

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WFG-80 Getting Started Guide

This document is online at <http://www.wifitrax.com/appNotes/quickStart/WFG-80-Quick-Start.pdf>. Please consult the full WFG-80 manual for much more detail at <http://www.wifitrax.com/manuals/WFG-80/WFG-80-Manual.pdf>

Package Contents

1 x WFG-80 Module in Static Shielding Bag, this document, mounting Kit

WFG-80 8-Way Lighting/General Controller

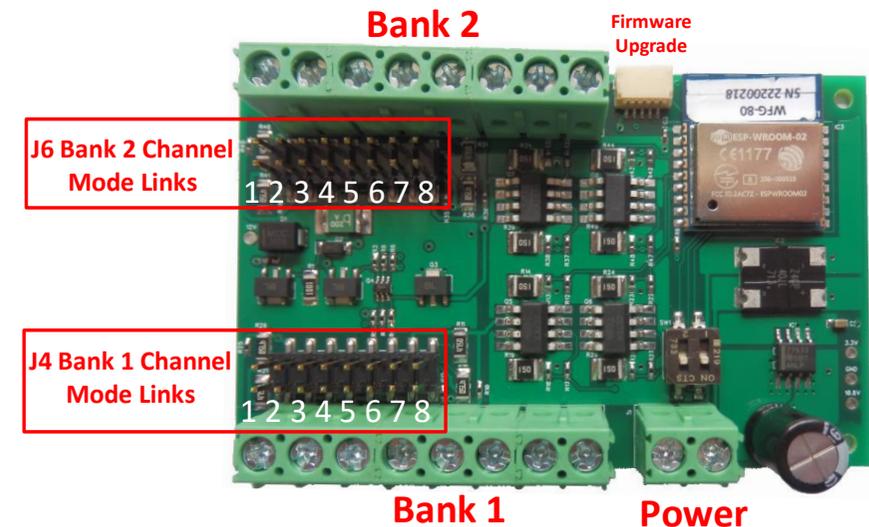


Figure 1 WFG-80 Connections

WifiTrax Model Science www.wifitrax.com

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

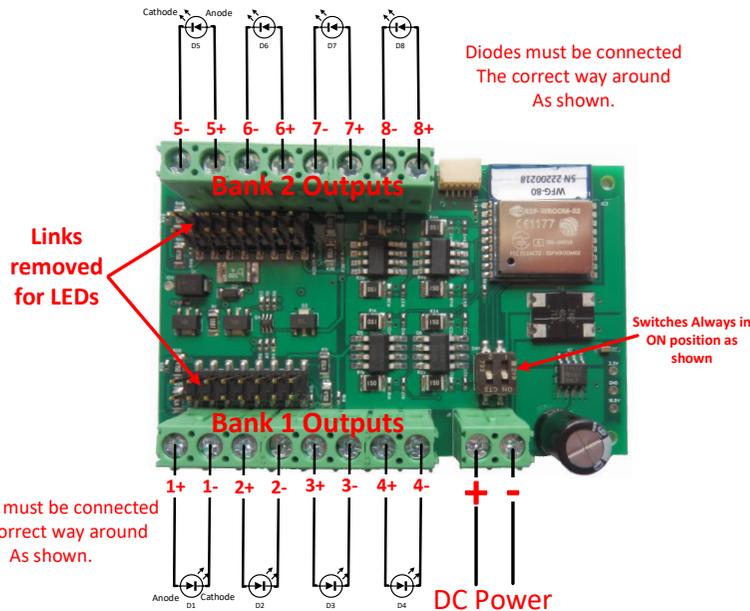
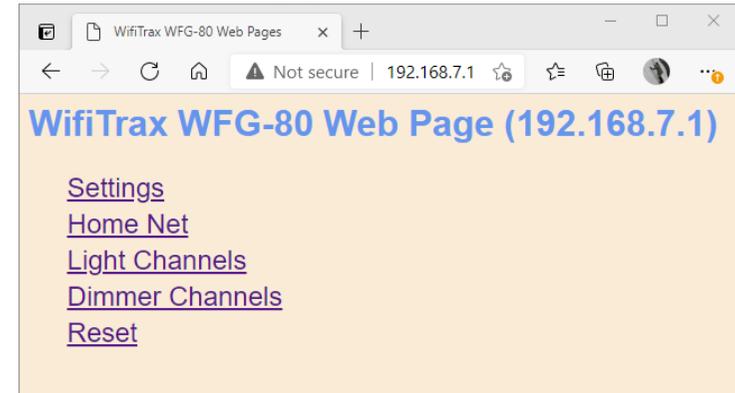


Figure 2. Connection Diagram for LED Lights

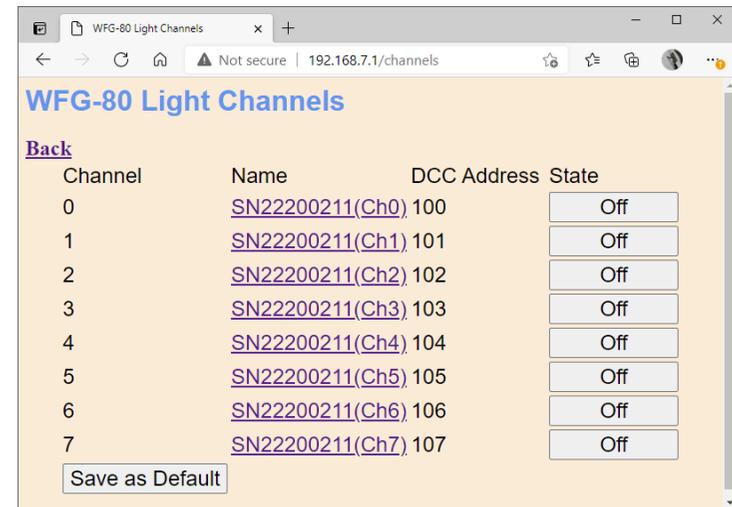
Using the WFG-80 Web Pages

This is the IP Address of the WFG-80 web pages when you are connected to its wfrx_WFG80_1_XXXXXXX_7 network. You will not be able to access these pages until you are connected to the module's network.

(2) You will see the Main Menu page as below:



(3) To test the lighting channels, click or tap the Light Channels option. You will see the screen below. The names of each channel default to the serial number plus the channel number as shown:



(4) Assuming your lights are connected properly, tapping the button in the State column will toggle the light on and off.

- (5) **CHECK YOUR WIRING!** Turn on the power. You may test the unit using WFG-80 Web Pages described in the next section. Later you may decide to use 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.

Testing and Configuring your WFG-80

You can test and configure the WFG-80 using its web pages which are accessible from any browser on IOS, Android or Windows.

Connecting using an Apple IOS Phone or Tablet

- (1) Tap the Settings icon on your iPhone or iPad



- (2) Tap Wi-Fi on the left-hand menu. Under Other Networks on the right, the list should include one like wftrx_WFG80_1_XXXXXXXX_7, where XXXXXXXX is the serial number of your unit that appears on its label. Tap that Wi-Fi Network. **You must always connect to this Network to access the WFG-80 web pages** until you operate in home-net mode.

Connecting using Android

- (1) Press the Home button and tap the Settings icon:



- (2) Tap Connections, then Wi-Fi and select the module's network as above.

Connecting using Windows

On your Windows 10 desktop or laptop, click the networks icon in the system tray and select the network described above.

Testing using the WFG-80 Web pages

- (1) Once you are connected to the module's network, open a browser such as Safari, Chrome or Edge and type the following in the URL bar followed by the Enter or Go key: 192.168.7.1

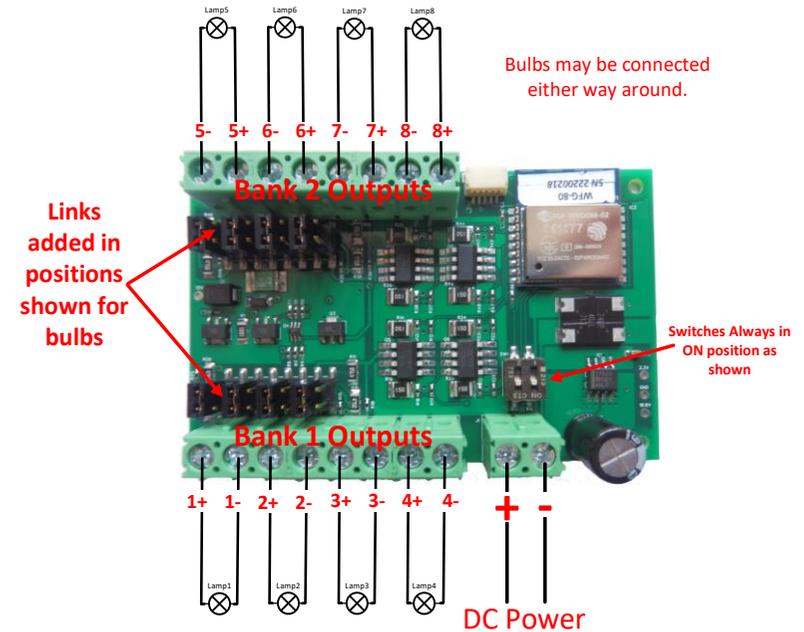


Figure 3. Connection Diagram for Grain-of-Wheat Lamps

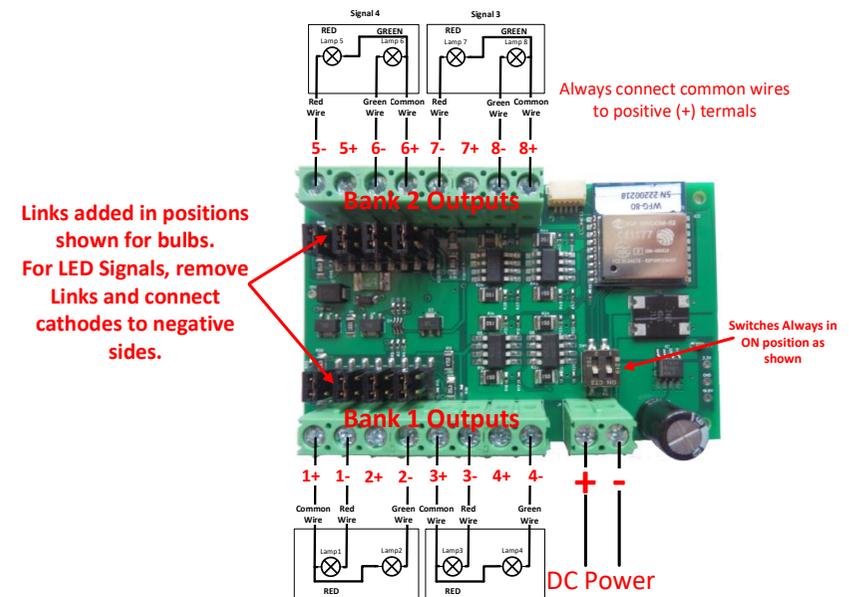


Figure 4. Connection Diagram for 2-Light Signals

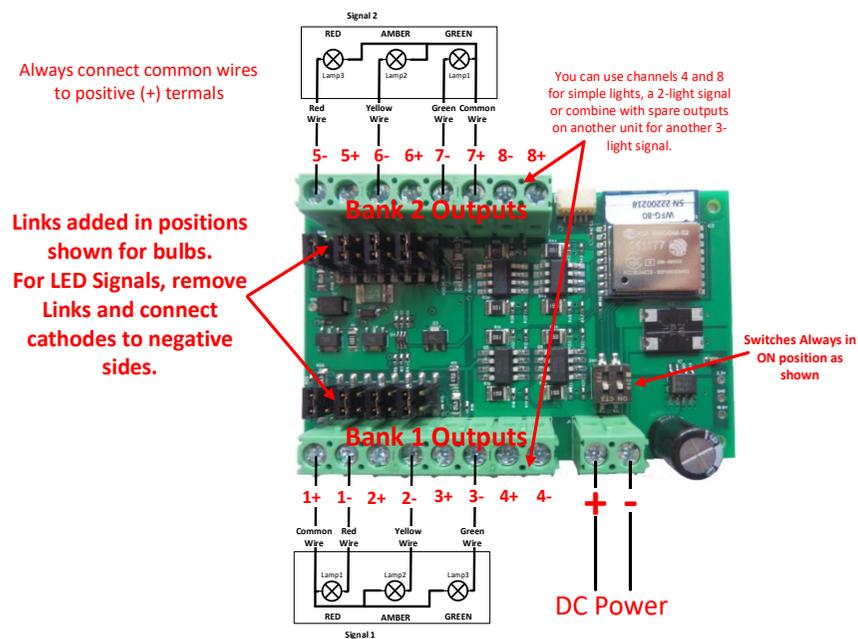


Figure 5. Connection Diagram for 3-Light Signals

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 or less. 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 or the WFG-80 Web pages. 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 1000 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 WFG-80 Web Pages or the Tower Operator app.
- (4) Note that the two DIP switches must be always in the On position. These are only changed for firmware update.
- (5) Connect power to your unit at TRKA and TRKB as shown in Figure 2 through 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.

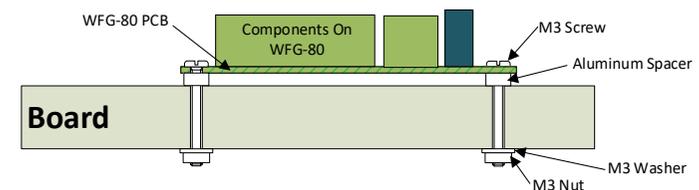


Figure 6 Mounting Suggestion

- (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.**