

Testing using your DCC System

Use your DCC system to operate the WFG-84 via its accessory addresses as shown in the DCC Address column on the Light Channels screen. Consult your DCC System instructions to find out how to operate an accessory.

Getting more out of your WFG-84

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-84, your phone or tablet will connect much more quickly.
- Explore the WFG-84 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 Wifitrax Tower Operator to configure a schematic control panel to control your lights or signals.
- Access the WFG-84 Manual at <http://www.wifitrax.com/manuals/WFG-84/WFG-84-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.

WifiTrax

www.wifitrax.com



WFG-84 Getting Started Guide

This document is online at <http://www.wifitrax.com/appNotes/quickStart/WFG-84-Quick-Start.pdf>. Please consult the full WFG-84 manual for much more detail at <http://www.wifitrax.com/manuals/WFG-84/WFG-84-Manual.pdf>

Package Contents

1 x WFG-84 Module in Static Shielding Bag, this document, mounting Kit

WFG-84 8-Way Lighting/General Controller

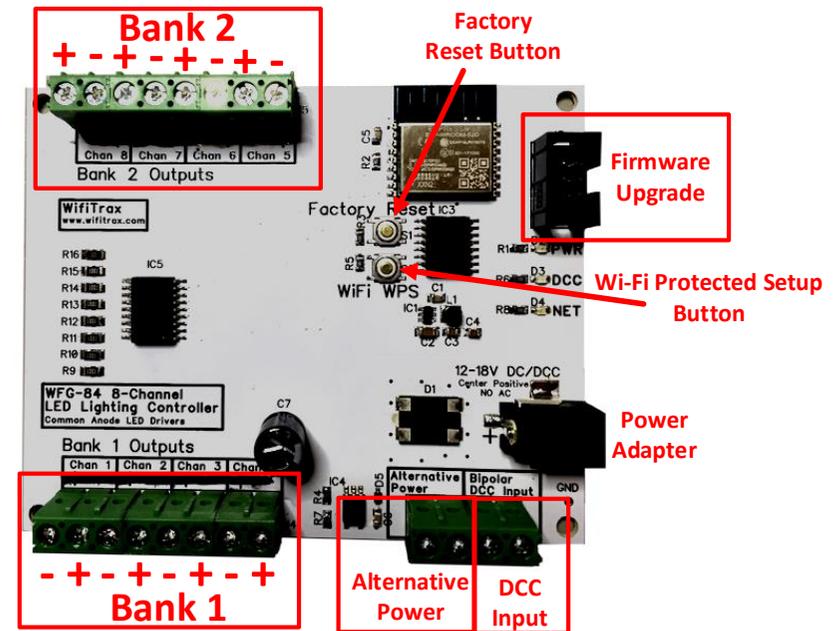


Figure 1 WFG-84 Connections

The WFG-84 provides control of 8 channels connected to LED lights. The LEDs can be individual lights or LEDs included in signals with a common anode. For signals with common cathodes use the WFG-82. You can control the LEDs either using the WFG-84's in-built web page, using a Wifitrax WFD-60, WFD-27, or the Wifitrax Tower Operator Application on Windows or Android. The LED channels can also be controlled via a DCC input connected to any DCC Command Station/Booster using the accessory addresses programmed using the WFG-84 web pages.

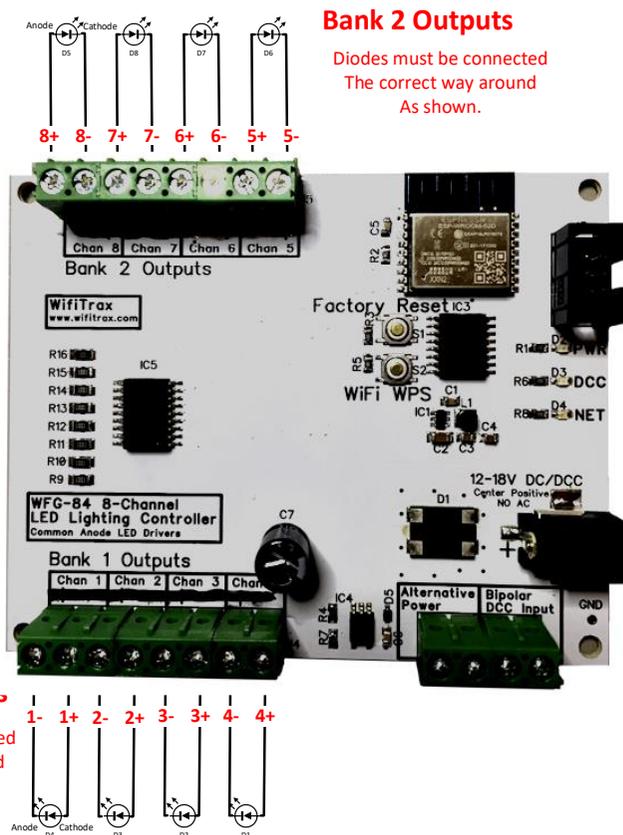
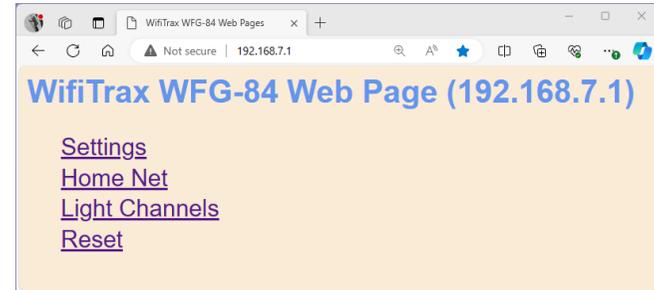


Figure 2. Connection Diagram for LED Lights

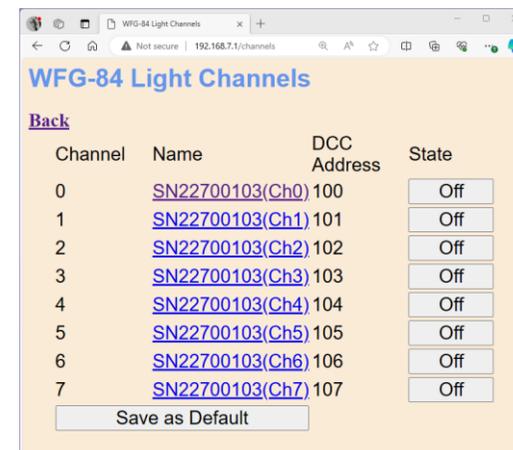
Testing using the WFG-84 Web pages

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 This is the IP Address of the WFG-84 web pages when you are connected to its wftrx_WFG84_1_XXXXXXX_7 network. You will not be able to access these pages until you are connected to the module's network.

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



- (2) 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:



You can change the names and DCC addresses by clicking on them.

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

- (6) CHECK YOUR WIRING!** Turn on the power. You may test the unit using WFG-84 Web Pages described in the next section. Later you may decide to use the Wifitrx WFD-60, the Wifitrx Tower Operator App or a DCC Command Station/Booster such as WFD-27, WFD-28 etc. or some other manufacturer's DCC system. 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-84

You can test and configure the WFG-84 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_WFG84_1_XXXXXXX_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-84 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.

Some signals may contain multiple LEDs such as Red and Green or Red, Amber and Green. Usually one side of each LED will be connected together and to a common wire. WFG-84 only supports LED groups with *Common Anodes*, i.e. the positive side is common. You can use the WFG-82 for those with common cathodes. See Figure 3 and Figure 4.

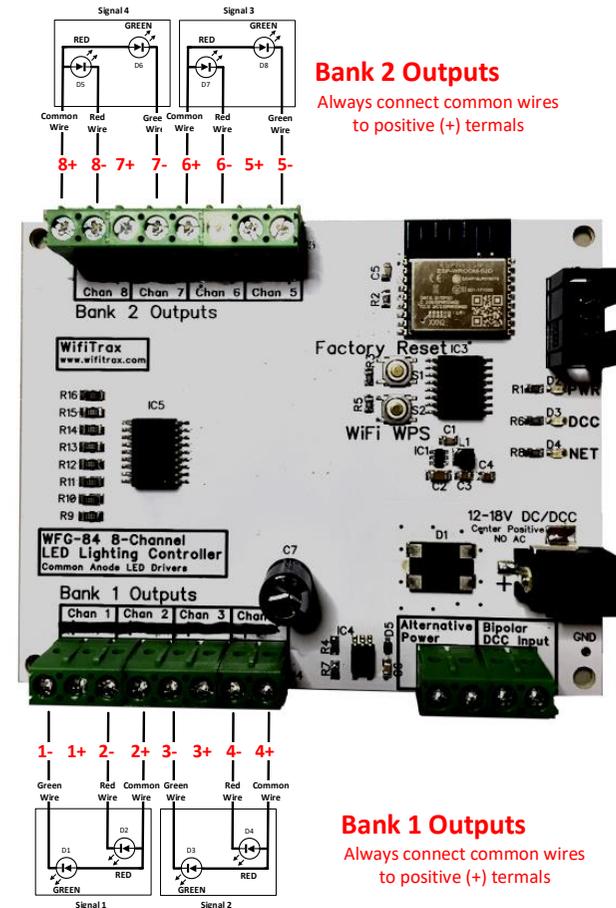


Figure 3. Connection Diagram for 2-LED Signals with Common Anodes

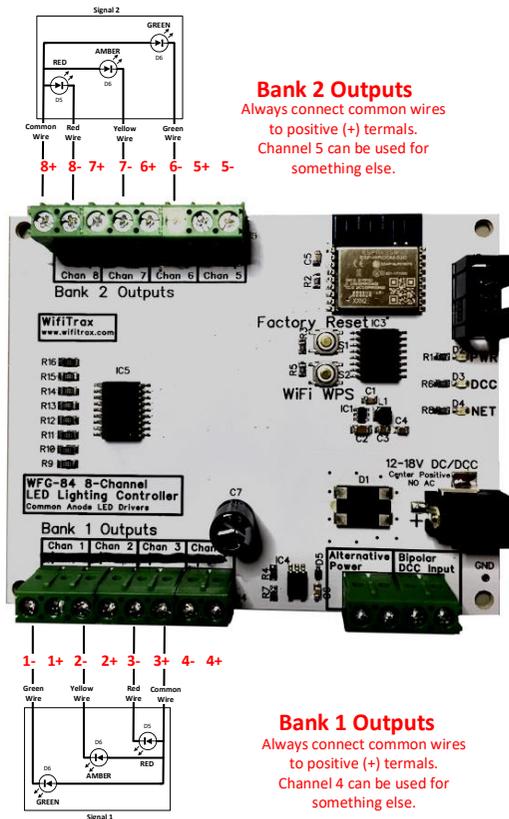


Figure 4. Connection Diagram for 3-Light Signals

Installation Instructions

- (1) WFG-84 will control one type of light: Light Emitting Diodes (LEDs). To control filament lamps such as "Grain of Wheat (GOW) use the WFG-82. You can make the lights brighter or dimmer by using a higher or lower power supply voltage such as 15 Volts instead of 12Volts. The module contains 1K (1000 Ohm) series resistors to protect the diodes from excessive current. When the light for any channel is turned on, the full power supply voltage, e.g. 12V or 15V is placed across the LED and series resistor combination. Another way to make the LEDs dimmer would be to include an additional series resistor connected between the LED and the WFG-84 terminal.

You can also combine channels to control features with multiple lights like signals. Modules such as the WFD-60, WFD-27 and the Tower Operator software allow you to assign channels to the signal device on the screen once the channels are physically connected.

- (2) Wire the WFG-84 to your lights or signals according to Figure 2, Figure 3 or Figure 4. 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, i.e. the anode of the LED. In the LED circuit symbol, the cathode is the bar as in Figure 2.
- (3) The power adapter must supply between 12 and 18 Volts DC with a Barrel Plug (2.5mm I.D. x 5.5mm O.D. x 9.5mm). A recommended power adaptor is available from WifiTrax:

<http://www.wifitrax.com/products/product-PA15-43-1-detail.html>

You can also connect to the Alternative Power connectors. **DO NOT CONNECT POWER TO THE WRONG TERMINALS. THIS MAY DAMAGE THE UNIT BEYOND REPAIR.**

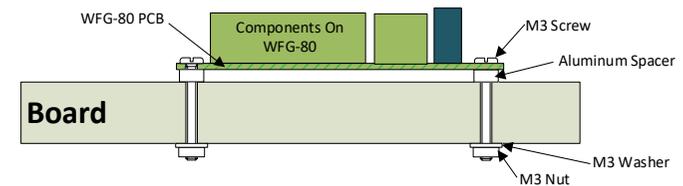


Figure 5 Mounting Suggestion

- (4) Optionally connect a bipolar DCC signal to the Bipolar DCC Input connections shown in Figure 1. If you are using DCC to control *and* provide power to the WFS-84 you should connect the DCC signal also to the Alternative Power connectors and omit the Power Adapter.
- (5) Mount the unit to your baseboard using the four M3 metric screws, nuts and spacers provided. The component side of the module should face away from the board as in Figure 5. 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.**