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

WFO-19 Getting Started Guide

This document is online at http://www.wifitrax.com/appNotes/quickStart/WFO-19-Quick-Start.pdf. Please consult the full manual for much more detail of it and associated modules at http://www.wifitrax.com/manuals/WFO-Series/WFO-Series-Manual.pdf
And the WFD-60 at http://wifitrax.com/manuals/WFD-60/WFD-60-Manual.pdf

Package Contents

1 x WFO-19 Module (or 4 x WFO-19 Modules) in Static Shielding Bag, this document

WFO-19 Single Channel DC/DCC Track Occupation Detector

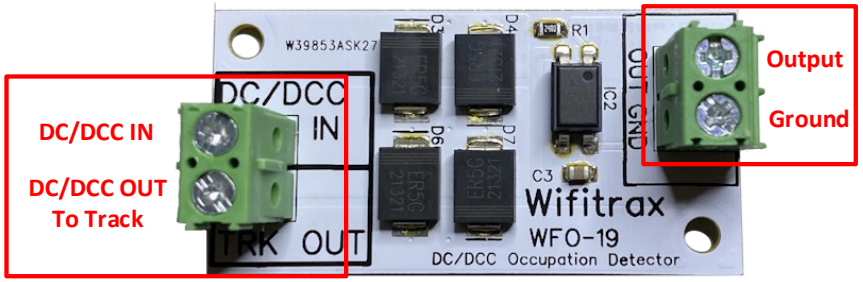

Figure 1 WFO-19 Connections

The WFO-19 provides one diode-based track occupation detection channel with an open collector OUT terminal designed to be pulled low when occupation is detected. This means that the screw terminal marked “OUT” is effectively connected to the terminal marked “GND”. This should not be regarded as a true closure of contacts however since the current must be limited to around 30mA.

It is intended to be used with the Wifitrax WFO-85 and can be connected to one of the WFO-85 inputs as shown in Figure 2. The next section gives details.

Connection of a Group of WFO-19 to a WFO-85

Figure 2 shows how a group of WFO-19 modules can be connected to a WFO-85 module. There can be up to eight WFO-19 connected as in the diagram where only two are shown. The power to the track, DC or DCC, for each block passes through that block's WFO-19 via the DC/DCC IN and TRK OUT terminals. These are electrically isolated from the terminals connected to the WFO-85 on the right-hand side of the module. On the right-hand side in Figure 2, there is a common collection ground connecting each WFO-19's Ground terminal to the Ground on the WFO-85. A single wire from the OUT terminal of each WFO-19 connects to one of the Inputs of the WFO-85 (IN1 to IN8).

Once these are connected, the WFO-85 must be placed on a home Wi-Fi network along with a WFD-60 or some other Wifitrax Layout Controller to provide Mimic Panels that show a schematic track diagram and indicate occupation of track blocks in the layout.

Power to the WFO-85 is provided via its POWER terminals and can be the same DC/DCC as the track or a separate DC Power Supply. See the WFO-85 guide for details.

When a locomotive occupies one of the track blocks so that at least 4mA flows through one of the modules between the DC/DCC IN and TRK OUT, a small voltage drop occurs across the diodes which is detected by an opto-isolator causing the OUT and GND terminals to be joined with low resistance. This pulls one of the WFO-85 inputs low and is detected by the WFO-85 firmware and communicated via Wi-Fi to one or more Layout Controllers such as WFD-60 or WFD-65.

For complete information, consult the WFO-85 Getting Started Guide at

http://www.wifitrax.com/appNotes/quickStart/WFO-85-Quick-Start.pdf

and the manuals for the WFO Series and WFD-60 at

http://www.wifitrax.com/manuals/WFO-Series/WFO-Series-Manual.pdf
And the WFD-60 at http://wifitrax.com/manuals/WFD-60/WFD-60-Manual.pdf

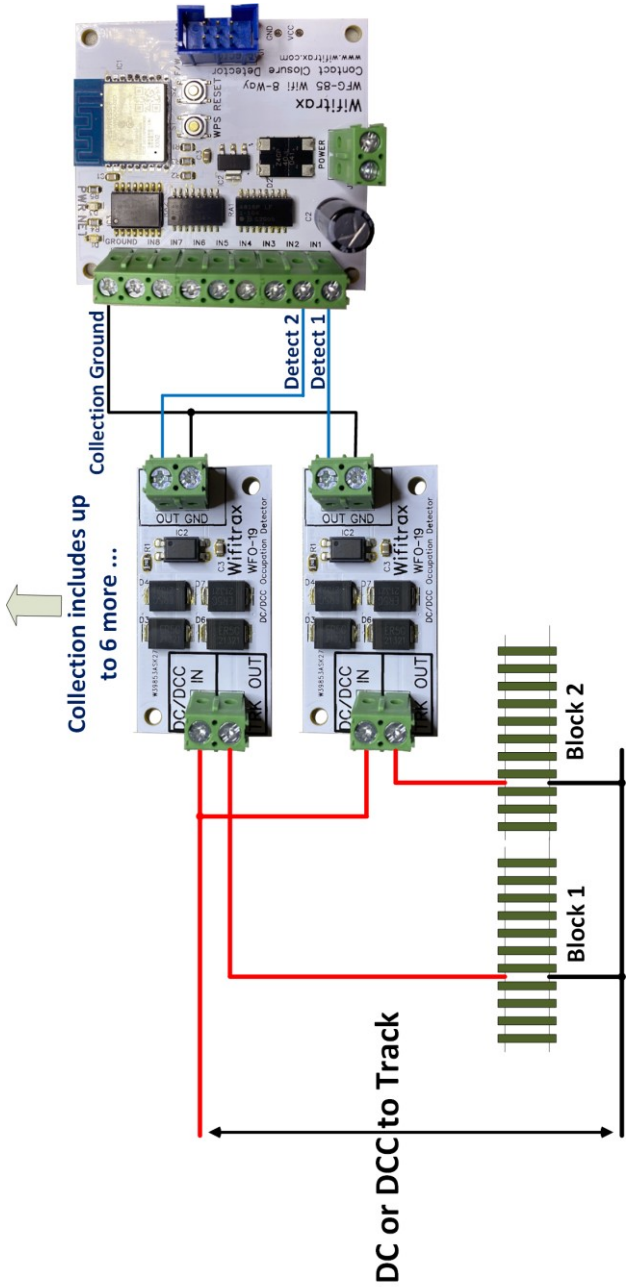

Figure 2. Connection of a group of WFO-19 to a WFO-85 Module

WifiTrax Model Science www.wifitrax.com