

WUFP-40 4-Block Universal Power Controller Getting Started

WUFP-40 Installation

This document is online at <http://www.wifitrax.com/appNotes/quickStart/WUFP-40-Quick-Start.pdf>. Please see our website for information on our limited warranty.

Package Contents

- 1 x WUFP-40 Module in Static Shielding Bag
- 1 x Mounting Kit (4 screws, 4 spacers, 4 nuts, 4 washers)
- Getting Started: WUFP-40 Installation (this document)

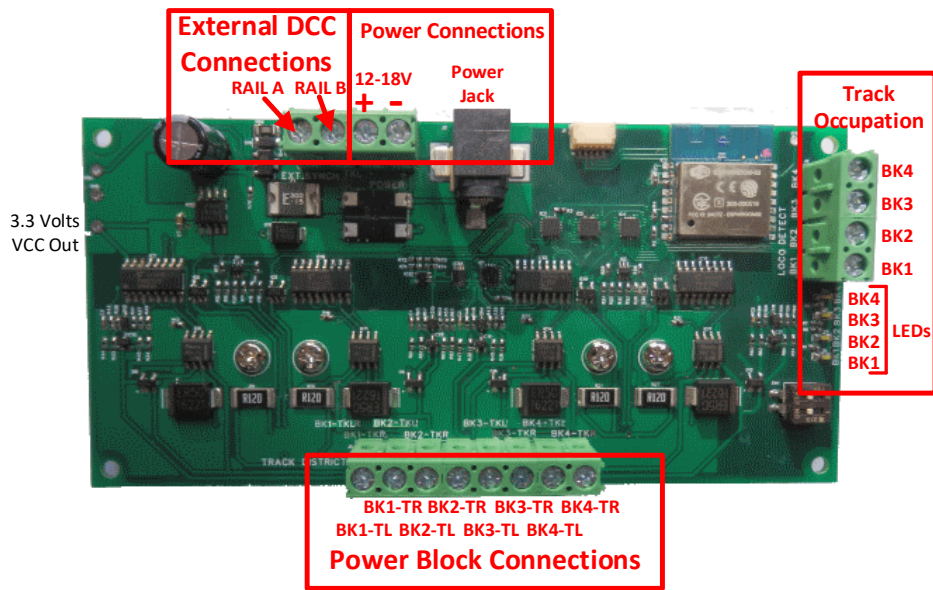
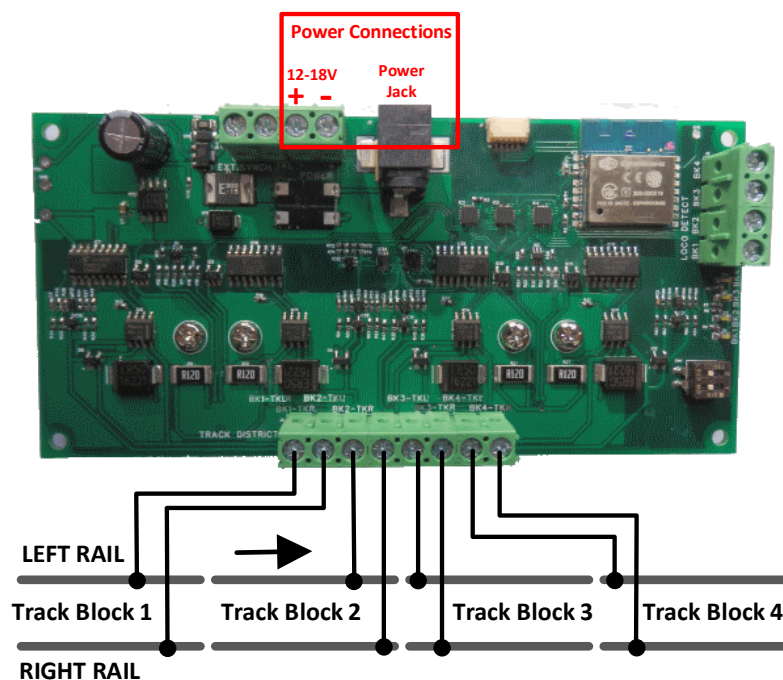


Figure 1. WUFP-40 Connections



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Figure 2. Connections to Four Sequential Blocks on the Model Railroad

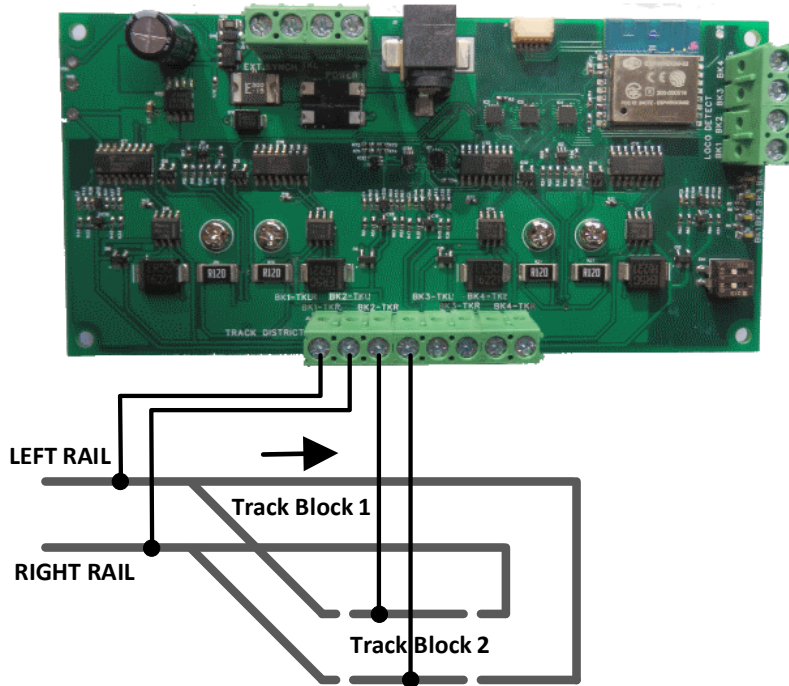


Figure 3. Connections for a Return Loop on a Model Railroad

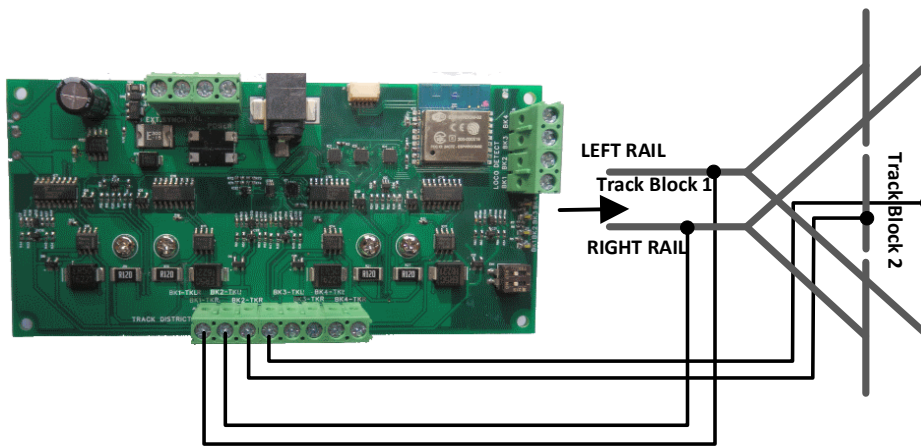


Figure 4. Connections for a Wye on a Model Railroad

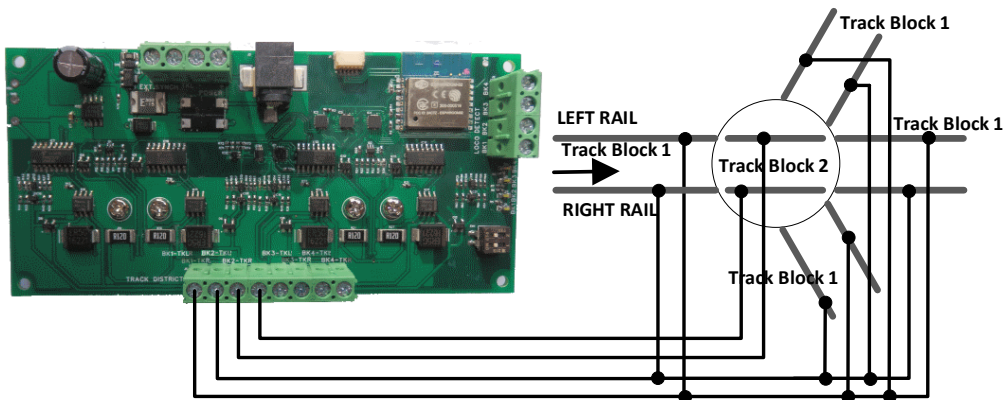


Figure 5. Connections for a Turntable on a Model Railroad

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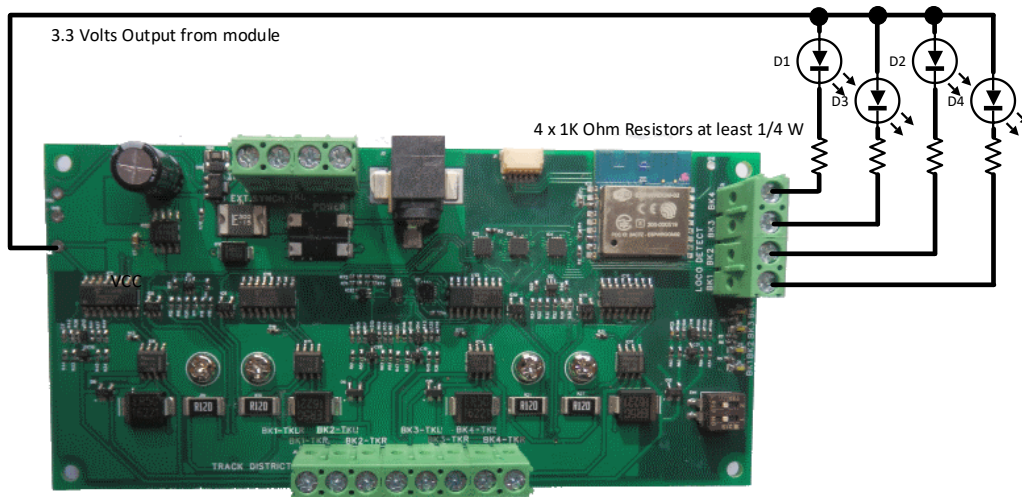


Figure 6. Connections for LED Occupation Indication

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

Installation Instructions

- (1) The WUFP-40 module provides and controls power to up to four track blocks for N, HO, or larger scales. The blocks must be separated by gaps in both rails. Figure 1 shows the module with its connections labelled. Power may be input to the module either via the two screw terminals labelled 12-18V + and – in Figure 1 or via the Power Jack using a mains adapter. Insertion of a power jack will not disconnect the + side screw terminal. 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>
- (2) The WUFP-40 supports several scenarios that you may encounter on your layout. These are shown in Figure 2, Figure 3, Figure 4 and Figure 5. Figure 2 is the simplest case in which the WUFP-40 controls four consecutive blocks. Figure 3, Figure 4 and Figure 5 show how the module may be used to handle a return loop, a wye and a turntable – three scenarios in which it is necessary to reverse the polarity on blocks as the locomotive traverses them to avoid shorts.
- (3) When you have organized your track with the appropriate blocks and gaps, wire the connections from the module to your track according to the diagrams. You can either solder wires to the track or use clips and plugs provided by manufacturers. Use at least 13 x 0.12 Stranded insulated wire – black and red is a good idea.
- (4) Optionally, install four LEDs each with a 1K Ohm ¼ Watt series resistors to provide remote block occupancy indication as shown in Figure 6. You will need to solder a wire to the 3.3 Volt output on the module. **Take great care not to short this power as it may damage the module. Do not omit the series resistors or the module and LEDs may be damaged!**
- (5) Mount the unit 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 7. 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.**

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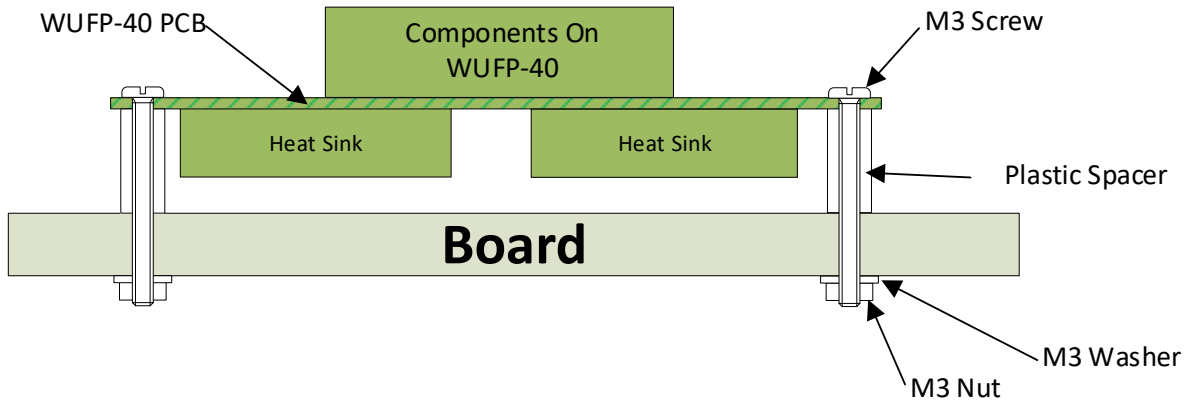


Figure 7 Mounting Suggestion

- (6) Turn on the power and test your installation. 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.

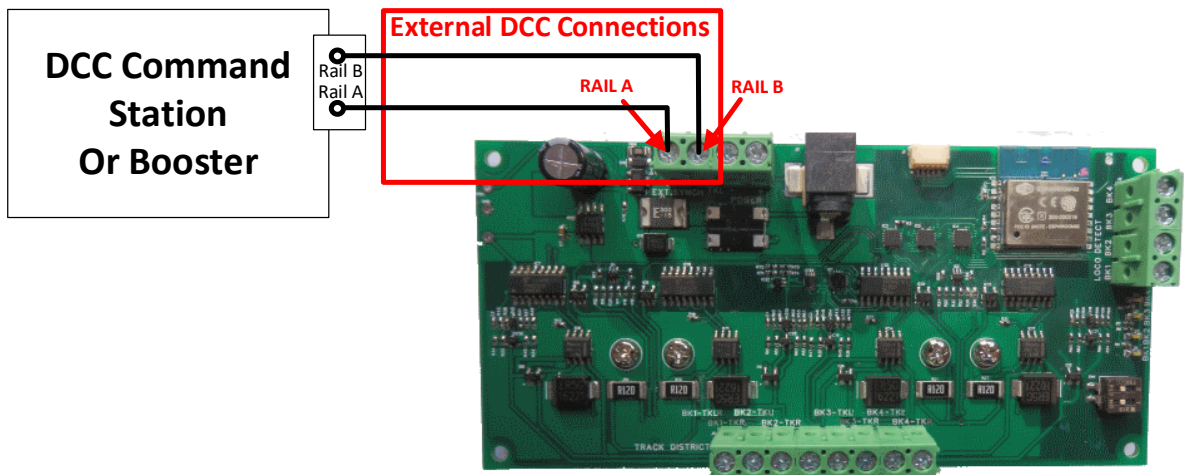


Figure 8 External DCC Connection

- (7) You can optionally connect a DCC Command Station or Booster to the Ext inputs as shown in Figure 8. Refer to the Tower Operator Help Pages to find out how to use this mode of working.

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

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

Designed and made in Australia from globally sourced components.