

WDMI-24 Installation

This document is online at <http://www.wifitrax.com/appNotes/quickStart/WDMI-24-Quick-Start.pdf>. Please see our website for information on our limited warranty.

Package Contents

1 x WDMI-24 Module in Static Shielding Bag
Getting Started: WDMI-24 Installation (this document)

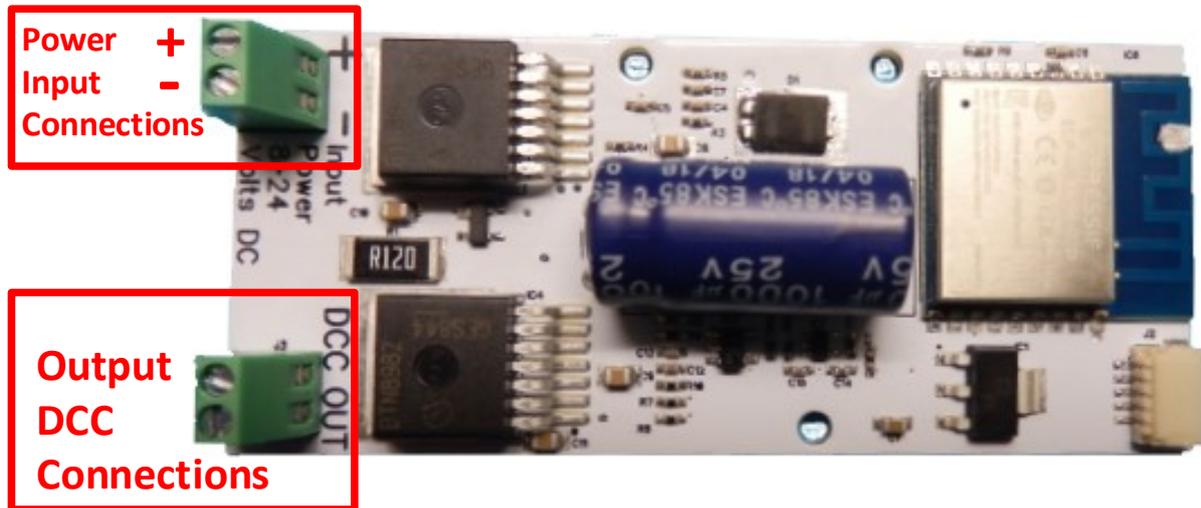


Figure 1. WDMI-24 Connections

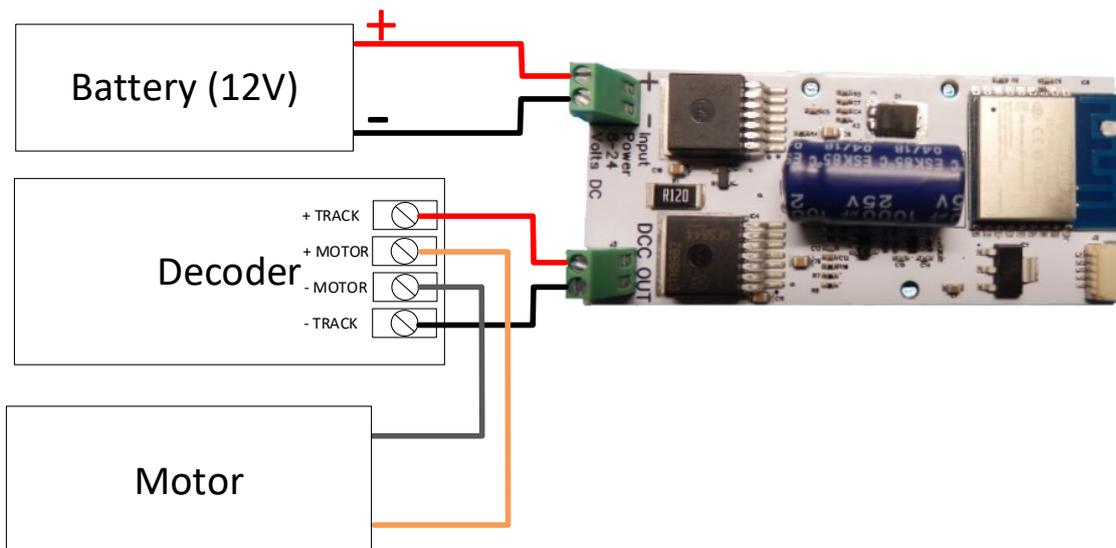


Figure 2. Connections to Battery and Decoder when mounted in Locomotive

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

The WDMI-24 may be mounted in a large-scale locomotive. It provides an ability to control a NMRA compatible DCC decoder over a Wi-Fi network. The DCC out connector provides NMRA compatible DCC power/track signals exactly as you would find on track supplied by an NMRA standard booster driven from a DCC Command Controller.

The WDMI-24 provides the ability to program DCC configuration variables without removing the module from the locomotive. No special programming track is required. Check the Loco Operator help pages for this.

Locomotive Mounting

- (1) The WDMI-24 module is intended to receive power from a 12-volt battery when mounted in a large-scale locomotive. The WDMI-24 is not fitted with a rectifier so its Input Power terminals must not be connected to the track as if the loco is turned around, power would be reversed!
- (2) Connect the DCC-Out connections to the +Track and – Track (Track Right, Track Left) inputs to your decoder as shown in Figure 2. The WDMI-24 acts in place of the pickups from the track.
- (3) Connect the +Motor and -Motor outputs from your decoder to the connections on the locomotive motor in the usual way.
- (4) Connect the power input + and – terminals to your 12 V battery. **Take great care to connect these correctly. A series diode should prevent damage if they are connected the wrong way around but it's better not to rely on it!**
- (5) Mount the unit suitably in your locomotive. Be sure that no part of the unit is touching any metal part of the locomotive.

Setup and Operating Instructions

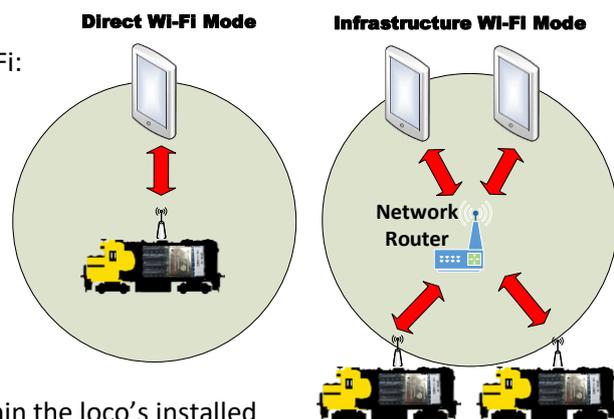
The WDMI-24 can be set up and operated from our free Loco Operator 3 App for Windows and Android. Loco Operator Version 3.2 (Beta 2) or greater is required.

Wi-Fi - Direct and Infrastructure Modes

There are two ways of driving your loco over Wi-Fi: Direct Mode and Infrastructure Mode.

When you set up your first installation of Loco Operator the Install Wizard gives you two choices in the way that you configure your Wi-Fi operation of locomotives, Direct Mode or Infrastructure Mode.

In direct mode, your computer, tablet or phone must be connected to the Wi-Fi Access Point within the loco's installed WDMI-24. In this mode, you can only operate one locomotive controller with each installation of Loco Operator on a computer, tablet or phone. In Infrastructure Mode, the locomotive and your computer, tablet or phone all connect as *Wi-Fi Stations* to your Home Network Router – your Home Net. You can then build a full model railroad network with many locos, switch machines, computers, tablets and phones. You can drive two locos with each installation of Loco Operator, you can run multi-unit consists and you can control switch machines and power. If you start in Direct Mode, you can later use the Loco Operator Install Wizard to convert to Infrastructure Mode which generally works best. Sometimes though, you may not want to use a router – such as in a Garden Railway – and stay in Direct Mode. As long as you are fairly near the loco you are driving it will work fine and if you do loose Wi-Fi contact, the locomotive will stop within a predefined interval.



Installing Loco Operator - Loco Operator 3

These instructions cover both Windows 10 and Android. Follow the steps below according to your device.

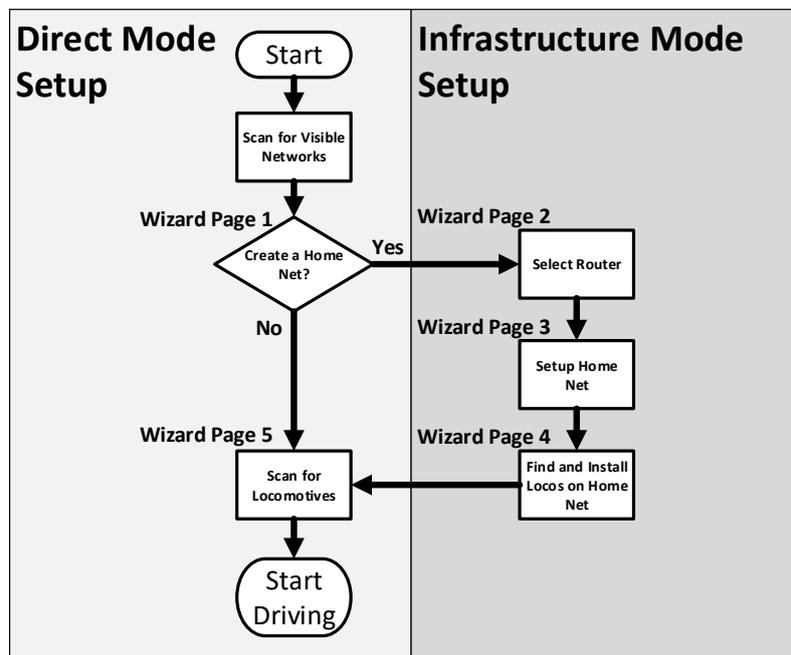
- (1) Go to either the Windows Store or the Google Play Store according to whether you have a Windows or Android computer or tablet. Search for Loco Operator 3. Alternatively go to our website, use the Products menu to go to the Loco Operator page, FIND Loco Operator 3 and click on “DOWNLOAD FROM WINDOWS APP STORE” or “DOWNLOAD FROM GOOGLE PLAY STORE” according to your device.
- (2) Follow the instructions on the Store Page to get and install the app on your device.

Running Loco Operator for the First Time

- (1) For easy set-up, have your first WifiTrax-controller, whether in a locomotive or mounted trackside, powered up on your layout before you run Loco Operator for the first time.
- (2) Android Only: When the app starts for the first time you may be asked to accept that the app will access files and the device location. You must accept these, then the screen goes black for a few seconds. Wait for the Install Wizard to appear.

This is standard Android behavior. Be advised that Loco Operator absolutely does not access your pictures, any personal files or any files other than those it generates and no data is uploaded to the internet. Also, the need to access your location is required to work with Wi-Fi. Loco operator does automatically connect your computer to the Wi-Fi access points of WifiTrax modules that you have installed and to your Home Network transparently, without prompting. When you have finished driving trains, you may have to reconnect to your home network to access the internet or other devices such as your printer.

- (3) If this is the first time you have run Loco Operator, you will automatically be taken to the Settings page and the Install Wizard will run.
- (4) The Install Wizard will start. The steps in the Wizard are explained on each screen. The flow chart here should be helpful. It is much easier to start in Direct Mode by saying No to the Home Net option. You can convert to Infrastructure mode later using the Wizard.



More Information

<http://www.wifitrax.com/appNotes/WiFi-DCC.pdf>

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