

Getting more out of your WMR-10

Once you are happy with simple operation using either iPhone or Android, you really must consult the full manual for information about the great features available. For example, you can:

- Use the Home Net option. That way you can leave you phone or tablet connected to your home network. When you power up your WMR-10, your phone or tablet will connect much more quickly.
- Explore the WMR-10 web pages to see the features available.
- Use the WFD-60 Gateway to operate more than one WMR-10, WMH-20 or other Wifitrax modules such as Switch Machine Controllers and Wi-Fi/DCC interface modules.
- Use the WFD-60 Gateway to operate trains fitted with WMR-10 from your existing DCC system.
- Access the WMR-10 Manual at <http://www.wifitrax.com/manuals/WMR-10/WMR-10-Manual.pdf>

More Information

<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.



WMR-10 Getting Started Guide

This document is online at <http://www.wifitrax.com/appNotes/quickStart/WMR-10-Quick-Start.pdf>. Please consult the full WMR-10 manual for much more detail at <http://www.wifitrax.com/manuals/WMR-10/WMR-10-Manual.pdf>

Package Contents 1 x WMR-10 Module, 1 x WAL-10 LED, this document.

WMR-10 Wi-Fi Locomotive Controller

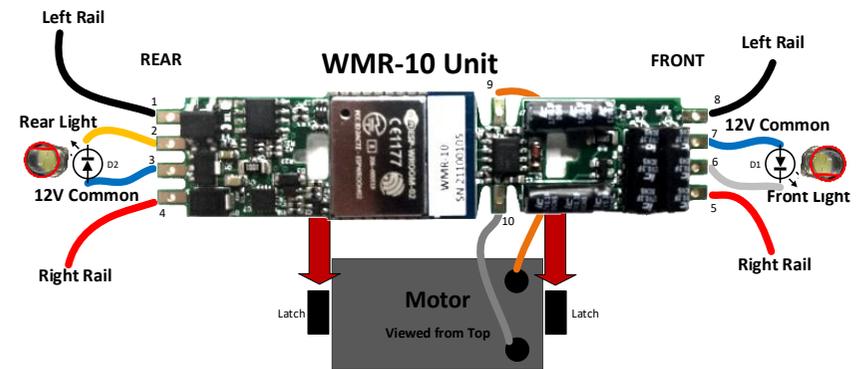


Figure 1 WMR-10 Connections

Pin Number	Lead Color on Diagram	Function
1	Black	Left Rail
2	Yellow	Rear Light
3	Blue	12V Common
4	Red	Right Rail
5	Red	Right Rail
6	White	Front Light
7	Blue	12V Common
8	Black	Left Rail
9	Orange	Motor +
10	Gray	Motor -

Table 1 Connection Information

What does WMR-10 Wi-Fi Locomotive Controller do?

The WMR-10 may be mounted in an HO or other small locomotive. It provides an ability to directly control the motor of a locomotive together with front and rear LED lights, using Wi-Fi.

- You can drive the train and configure the device over Wi-Fi, via the web pages generated by the WMR-10, using a web browser such as Safari, Chrome or Edge on a computer, tablet or smart phone.
- You can drive a train using a smart phone, tablet or computer using one of the recommended apps in Table 2. Apps that use the Hoffman WiThrottle Protocol will usually work with WMR-10.
- You can also use the UWT-100 Universal Wi-Fi Throttle manufactured by TCS.
- You can use the Wifitrax WFD-60 as a gateway to control multiple WMR-10, WMH-20, WFS Switch Machine controllers, Wi-Fi DCC interface modules etc., from your smart phone, tablet or TCS UWT-100
- You can give your loco a DCC address and control it via the WFD-60 from your DCC system.

You do not need to install JMRI to operate the WMR-10

App Name	Author	Get From:	System	Comments
WiThrottle	Brett Hoffman	Apple Store	Apple IOS	Can access web pages.
Engine Driver	Steve Todd	Google Play Store	Android	Can access web pages.
Loco Operator 3	WifiTrax	Microsoft Store Google Play Store	Windows 10 Android	Speedometer in app.
Train Throttle	Drew Hoffman	Microsoft Store	Windows 10	
Web Browser	Chrome, Safari, Edge etc.	Already installed or search for download.	Apple IOS, Windows, Android	Configuration and simple running of trains.

Table 2 Recommended Apps that work with the WMR-10

- (4) In this mode, the WMR-10 acts as though it is a 126-step DCC decoder.

Tap the single right arrow button > to increase the speed by one DCC step or the right double arrow >> button to increase the speed by 10 DCC steps. Tap the left arrow button < to reduce the speed by one DCC step or the left double arrow button << to reduce the speed by ten DCC steps.

Alternatively use the slider with the mouse cursor or your finger by touching, dragging and releasing, or by tapping anywhere on the slider.

Change direction using the Forward/Reverse button and turn the lights on and off. The lights may not come on until the loco moves.

Using an App on your Tablet or Smart Phone

Consult the WMR-10 manual for details on installing and operating one of the apps in Table 2.

<http://www.wifitrax.com/manuals/WMR-10/WMR-10-Manual.pdf>

Note that you must always connect to the wftrx_WMR10_1_XXXXXXX_7 before starting the WiThrottle or Engine Driver app.

Using the TCS UWT-100

Consult the WMR-10 manual for details on use of the TCS UWT-100.

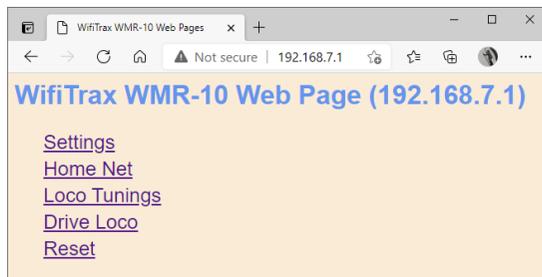
<http://www.wifitrax.com/manuals/WMR-10/WMR-10-Manual.pdf>

The TCS UWT-100 will need to be told to connect to the module's wftrx_WMR10_1_XXXXXXX_7 network before it will detect the module as a WiThrottle Protocol server.

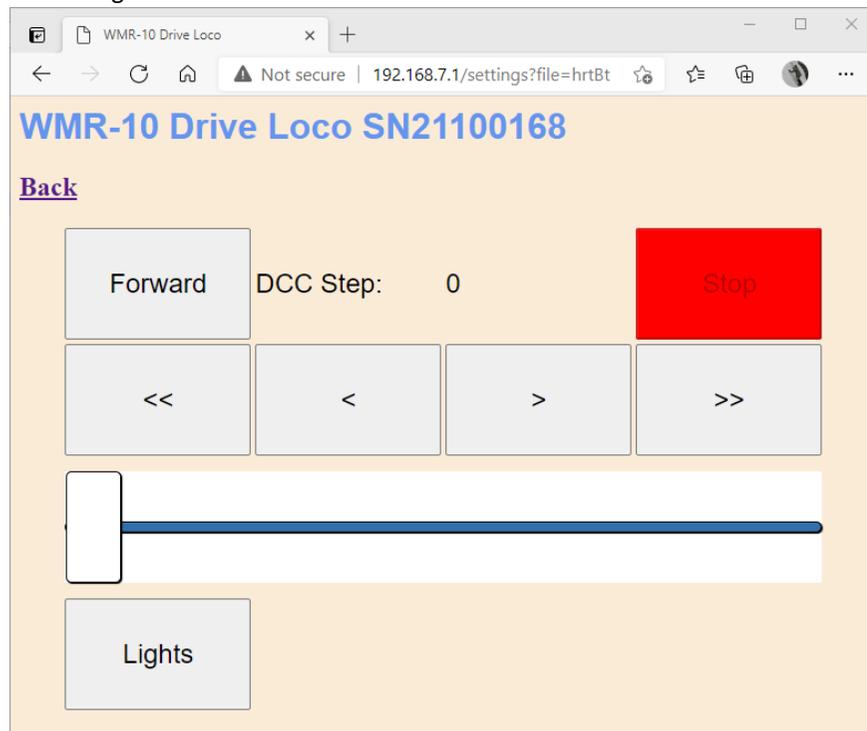
Connect to your Home Network

Use the Home Net option on the WMR-10 Web Pages to configure the module to automatically connect to your home Wi-Fi network. Then you can leave your hand-held devices permanently connected to your home network. Check the manual for more details.

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



(3) To test drive the locomotive, you do not need to install an app., click or tap the Drive Loco option. You will see the screen below. This is a basic hand-held throttle that will enable you to drive in forward and reverse as well as test the lights.



Installation Instructions

The WMR-10 is designed as a board replacement for a particular kind of locomotive, but you can install it wherever it will fit comfortably.

For more information, please see our website www.wifitrax.com

- (1) Ensure your locomotive is working properly. Do not install our unit in locomotives with damaged motors. Remove the plastic shell from your locomotive.
- (2) **Make sure that the motor is isolated from the track power!** This is most important – if one side of the motor is connected directly to the track, possibly through the frame, you will have to re-wire the locomotive before you start.
- (3) Make a note of the wire connections on the original circuit board. Remove all the wires connected to the locomotive circuit board. Keep any plastic clips as you can use these to reconnect the wires to the WMR-10. Alternatively, you can solder them, which is more reliable.
- (4) Remove the locomotive circuit board.
- (5) Clip the WMR-10 module over the plastic latches replacing the circuit board you removed.
- (6) Connect the wires to the motor as shown in Figure 1. Note that in the original circuit board, the motor connections are usually on the same side. On the WMR-10, they are on opposite sides. The polarity of the motor connections is not critical since you can reverse it as part of the configuration via the WMR-10 web pages.
- (7) Connect the wires from the trucks that make contact with the left and right rails as in Figure 1.
- (8) Connect the leads to the front and rear lamp LEDs as in Figure 1. Be sure to get them the right way around, so the flats are in the position shown in Figure 1.
- (9) Check everything carefully for correct connection, pinched wires or accidental contacts.
- (10) Place the loco on the track and apply power, the LED lights should flash briefly. If they do not, check to make sure they are the correct way around. They may need to be opposite in polarity compared to the original circuit board. You will not damage anything by connecting the LEDs the wrong way around.

Notes and Cautions

- (1) The 12V Common is provided by the WMR-10 module. DO NOT CONNECT THIS TO THE TRACK POWER. This is used to supply power to the LED front and rear lights.
- (2) The track voltage must not exceed 18 volts. We recommend 12-14 volts as the unit will run cooler. If you run at 18 volts and full speed, you may overheat the module which may shut down due to its over-temperature protection. The polarity of the track voltage does not matter.
- (3) If you use your locomotive's original LEDs and they are too dim, there may be a resistor in series. Our unit includes a 1K Ohm series resistor, so you could remove any additional series resistor or use the LEDs supplied with your WMR-10 unit.
- (4) Don't use this unit with old locos with motors requiring more than about 300mA at full speed.



Figure 2 WMR-10 Installed in a locomotive. Here the wires and the LEDs have been soldered to the tabs on the module.



(1) Figure 3 WMR-10 Installed in a locomotive. Here the wires have been attached using the original plastic clips.

Testing and Configuring your WMR-10

You can test and configure the WMR-10 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_WMR10_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 WMR-10 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.

Using the Web Pages

- (1) Once you are connected to the module's network, open a browser such as Safari or Chrome 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 WMR-10 web pages when you are connected to its wftrx_WMR10_1_XXXXXXX_7 network.