WMH-20 Installation

This document is online at http://www.wifitrax.com/appNotes/quickStart/WMH-20-Quick-Start.pdf. Please see our website for information on our limited warranty.

Package Contents

1 x WMH-20 Module in Static Shielding Bag
Getting Started: WMH-20 Installation (this document)
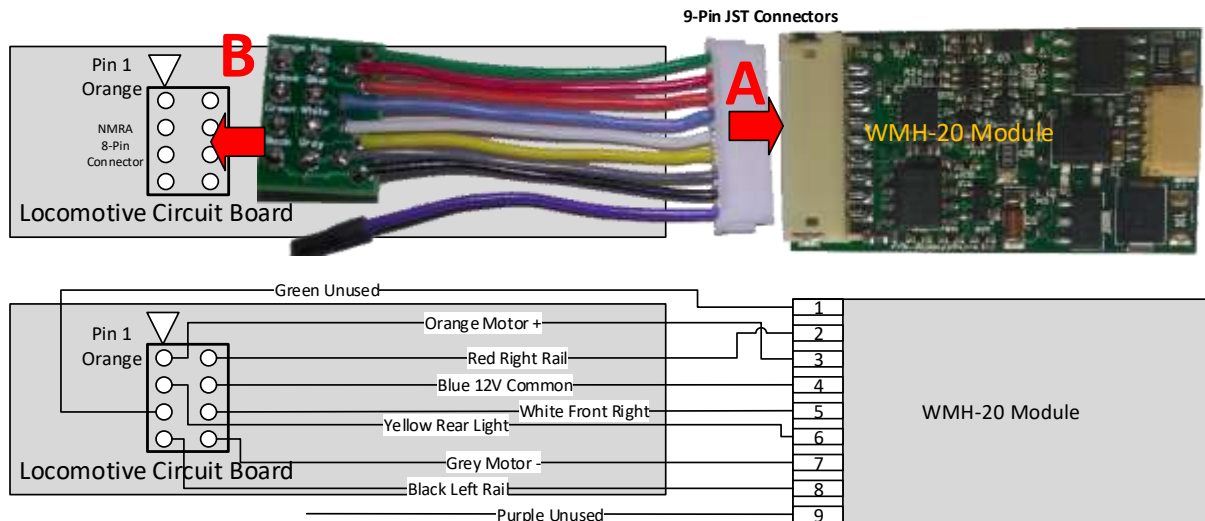Getting Started: Loco Operator App

Figure 1. Connection Diagram

Installation Instructions

(1) Ensure your locomotive is working properly. Do not install our unit in locomotives with damaged motors. Remove the plastic shell from your model 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 to the track, perhaps through the frame, you will have to re-wire the locomotive before you start. You will not have this problem with DCC-Ready Locos.

(3) Find the 8-Pin DCC Ready socket on the circuit board inside. Remove the jumpers. If your loco does not have an 8-pin socket you may be able to use our "flying-lead" harness and solder the wire ends.

(4) Check the intended location of the WMH-20 unit in the loco. Insulate any exposed metal that will be underneath it with electrical tape. **This is very important.** We do not recommend putting shrink wrap around the unit as this may cause it to overheat.

(5) Make sure you have bought a harness of the correct length. Any standard DCC harness that fits will be OK.

(6) Connect your chosen harness to the 9-pin JST socket. See **A** on Figure 1. Make sure it is the right way around. **Do not force it in the wrong way around or you will break the socket**.

(7) Connect the other end of the harness to the DCC ready 8-pin connector on the locomotive circuit board. See **B** on Figure 1. Make sure the pin marked Orange matches the Pin 1 or Orange label on the Locomotive Circuit Board. If you want the module the other side of the DCC-Ready connector, you can use one of our "Reversed" harnesses and flip the WMH-20 module over as in the second installation in Figure 2. Check everything carefully for pinched wires or accidental contacts.

(8) Place your locomotive on the track and apply power we recommend 12 – 14 volts (Note 3).

(9) Verify that the front and rear lights flash briefly when the track power is turned on. Replace the shell.

Notes and Cautions

1. **Be sure to insulate all metal parts of the module from the locomotive frame or any electrical connections. You can use a strip of electrical tape to do this.**
2. The 12V Common (Blue) 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. If your loco's LEDs are not bright enough, there may be a series resistor that you can remove. Our unit already has a 1KΩ series resistor. Alternatively, you can buy LED's from our website chosen especially for our units.
3. The track voltage must not exceed 18 volts. We recommend 12-14 volts. The polarity of the track voltage does not matter. If you run at 18 volts and full speed, you may overheat some locomotive motors and/or the unit may shut down due to its over-temperature protection. Try to locate the unit so that there is as much exposure to the air as possible.
4. The polarity of the motor connection does not matter as you can change the direction in the configuration variables during tuning.
5. If you need to remove the 9-pin JST connector, grasp ALL the wires firmly between your thumb and first finger of your left hand and the unit with the thumb and first finger of your right hand. Pull smartly. If you pull on only one or two wires you will pull them out of their crimped ends and break the harness. Be careful not to damage the JST connectors as they are rather delicate.

Figure 2 Typical WMH-20 Installations. Always put a piece of electrical tape underneath!

If you need more help please visit our website. There are very detailed application notes for a selection of locomotives as well as full specifications for the WMH-20. You can also find detailed tuning information on our website including giving it a name and making the loco run in the correct direction!

http://www.wifitrax.com

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

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