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INSTALL LOCOFI™ DECODER IN YOUR HO LOCOMOTIVE	DOWNLOAD AND INSTALL LOCOFI™ APP FROM PLAY STORE ON YOUR SMARTPHONE	LAUNCH APP, CONNECT TO LOCOFI™ ENABLED LOCOMOTIVE, OPERATE!

IMPORTANT:

- Always check for the latest version of the **Quick Start Guide (QSG)** from our website at www.wifimodelrailroad.com/resources
- Before attempting to install, please watch demo videos and read FAQs for better understanding of the install process. The more you are equipped with the right tools and knowledge, the smoother the install process will be, while being fun.
- If you have any questions at any point during the installation process, please do not hesitate to contact us.
- Although the install process is similar to DCC decoder install in some respects, in case you have prior experience with DCC installs, yet there are subtle differences. It is important to read the document in its entirety, prior to beginning the install process. Failure to do so may lead to defective installs and permanent damage to your decoder. Such defective installations will void the warranty, in addition to damage that may occur to your other equipment.
- Again, if you have any questions at any point during the installation process, please do not hesitate to contact us. We are here to help.
- Look for this symbol to watch related videos and help content at www.wifimodelrailroad.com/videos
- Look for this symbol to read more in the FAQ section at www.wifimodelrailroad.com/faq

Tools required: Soldering iron and supplies, wire cutter, wire stripper, multimeter, small sized screwdrivers, tweezers, electrical/mounting tape, plenty of patience and some creativity. Each locomotive make and model is different, and you may need some ingenuity and unconventional tools to complete the installation successfully.

1 INSTALL LOCOFI™ DECODER IN YOUR HO LOCOMOTIVE

1.A Remove shell

Take off the shell, taking care not to damage sensitive parts like rails, horn(s), etc. Keep small

parts like couplers in a safe place while installing the decoder, taking care not to lose them. Refer to manufacturer’s instruction manual supplied with the locomotive containing parts diagram and assembly / reassembly instructions, as required.

1.B Get locomotive ready for soldering LocoFi™ decoder

Depending on whether you have a DC, DCC Ready or DCC locomotive, please proceed accordingly. Before removing any existing decoders or circuit boards from the locomotive, ensure that you will have space for the LocoFi™ decoder including its speaker. **Certain locomotives may need mechanical modifications due to space constraints.**

DC locomotive with no decoder installed	DCC Installed or DCC Ready
<p>Isolate the Motor: Ensure that you have isolated the motor before proceeding with decoder installation. Failure to do so WILL DAMAGE your decoder.</p> <ul style="list-style-type: none"> • It is likely that your DC only locomotive will need to be isolated before installing the LocoFi™ decoder. In few exceptional situations when the locomotive is pre-isolated, isolation is not necessary by the user. An example of such a situation is presence of a lighting board pre-installed in the locomotive, indicating that the locomotive is pre-isolated. • Except for a situation where the locomotive is pre-isolated, DC locomotive motors are directly powered from the track where the right and left tracks connect directly to the motor terminals. The loco moves forward when right track is +tive and left track is -tive. • The wire from the motor terminal connected to the right track is +tive and will be connected to the orange wire of the LocoFi™ decoder. The other motor wire is -tive and will connect to the gray wire of the LocoFi™ decoder. 	<p>Remove the existing decoder (or DCC ready board in case of DCC ready loco). Please make note of the existing wire connections before doing so. You will need this information in step 1.C.</p>

If you need help with isolating the motor on your locomotive, please visit the FAQ section and watch videos on www.wifimodelrailroad.com for examples of how to do this successfully.

1.C Identify and solder wires appropriately to LocoFi™ decoder

IMPORTANT:

- LocoFi™ is NOT a “DCC decoder” (even though it is designed to run on DCC powered tracks). Consequently, it will not plug into a DCC ready 8-pin or any other such connector.
- LocoFi™ will NOT run on “dirty” DC power, which includes most older power packs, and even some newer current regulated supplies that come with starter train sets. These output “rectified AC” which is not pure or “clean” DC. We highly recommend using a high amperage “clean” voltage regulated power supply to achieve maximum performance. See FAQ on how to “clean” older pulsed / noisy / rectified AC power.

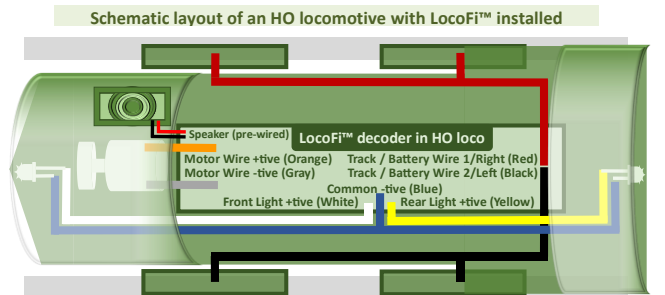


LocoFi™ decoder comes with 7 wires with NMRA-recommended color coding. Please solder the connections as described below.

- | Track Wires | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. | Red: connect to one of the locomotive track / battery wires |
| 2. | Black: connect to the other locomotive track / battery wire
<i>LocoFi™ decoder is equipped with bridge rectifier, and capable of outputting unipolar track current. However, to simplify and avoid confusion, connect the red wire to the right track / battery wire (+tive) as per the convention, and black wire to the left track / battery wire (-tive).</i> |
| Motor Wires* | |
| 3. | Orange: connect to the +tive (forward) motor wire on the locomotive |
| 4. | Gray: connect to the -tive (backward) motor wire on the locomotive |
| Function (Light) Wires** | |
| 5. | White (Front Light): connect to +tive terminal of the LED*** |
| 6. | Yellow (Rear Light): connect to +tive terminal of the LED*** |
| 7. | Blue (Common): connect to -tive terminal of the LEDs*** |
| <i>* Always check for correct orientation and polarity.</i> | |
| <i>** Please note that this is in contrast to DCC decoders, where White and Yellow wires connect to the negative terminals and the Blue wire connects to +tive terminals of the LEDs.</i> | |
| <i>*** Always test for the correct terminal polarity on an LED. If you need help with instructions on how to test LEDs for correct polarity, please read the FAQ section on www.wifimodelrailroad.com. </i> | |


1.D Reassemble locomotive and place shell back on carefully


Carefully mount and install the decoder, LED lights and speaker inside the locomotive using adhesive tape and glue gun (using low temperature glue gun is advisable, being careful not to touch the glue gun to the plastic loco shell at any time). Take care not to short by accidentally touching any bare wires/metal together. Use Kapton tape when in doubt. Take care not to get wires tangled in mechanical parts or keep them away. Re-assemble everything in reverse.



2
DOWNLOAD AND INSTALL LOCOFI™ APP FROM PLAY STORE ON YOUR SMARTPHONE

3
LAUNCH APP, CONNECT TO LOCOFI™ ENABLED LOCOMOTIVE, OPERATE!

If this is your first time running the app on the device, go to Google Play Store from your android smartphone or tablet. Download LocoFi™ app and install. Watch videos for more information. 

Place your locomotive(s) (yes, multiple locos can be added at the same time) on a DC (9V -24V) or DCC powered track. DC power must be “clean” and preferably voltage regulated. See FAQ on how to “clean” older pulsed / noisy / rectified AC power. 

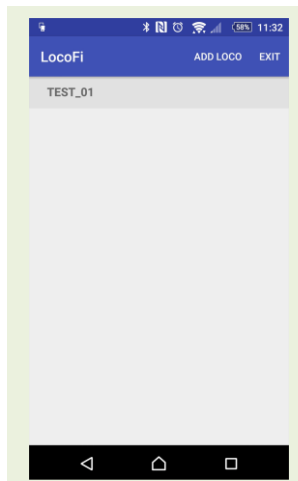
3 ways to connect:

- | | |
|--------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Single User, Single Loco | 2. Single User, Multi Loco 
3. Multi User, Multi Loco  |
| <ul style="list-style-type: none"> • Go to wireless settings. • Connect to the wireless network named ‘LOCO-xxxx’. | <ul style="list-style-type: none"> • Ensure the WiFi network you want to control your locomotive on is available, and your smartphone / tablet is connected to it. |

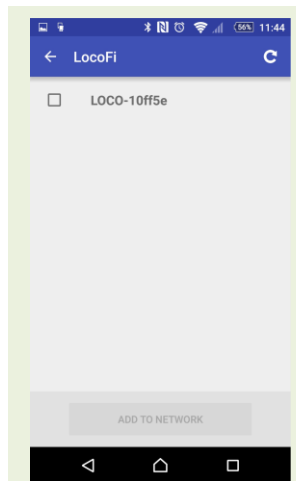
Please follow the steps below to launch app, connect to and operate your LocoFi™ enabled locomotive.



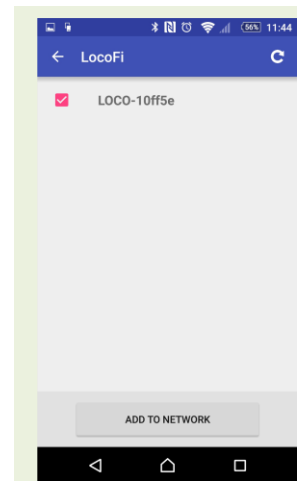
1. Launch LocoFi™ app. Enter your Engineer Screenname. Click OK.



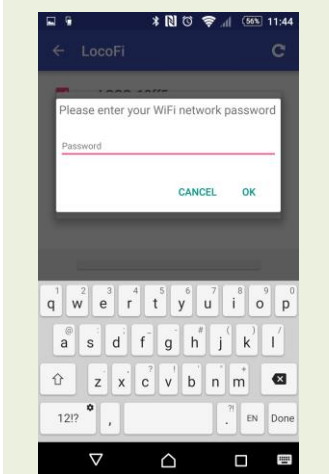
2. This is the Home Screen. Click ‘Add Loco’ to scan for available locomotives. Enable ‘Location’ and accept ‘Location’ permissions for this app, if running Android 6.0+.



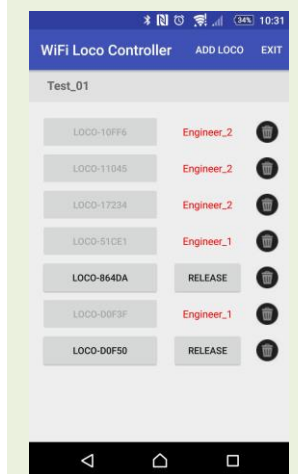
3. This is the list of locomotives available to be added to the network. If you do not see your locomotive here, try clicking refresh a couple of times to retry the scan.



4. Select the locomotive(s) you want to add to your roster and click ‘Add to Network’.




5. Provide WiFi network password when prompted (no password needed for open network).



6. Please wait while the locomotive(s) are added to the network and displayed on the main screen.

Congratulations! You are now ready to control and operate your locomotive using the LocoFi™ app.

If you unable to add your locomotive after multiple attempts, please read FAQ at www.wifimodelrailroad.com/faq  Or contact us.

At any point during the installation, if you have any questions regarding any of the steps above, please do not hesitate to reach out to us at wifimodelrailroad@gmail.com.

Simplify ... WiFi ... LocoFi™