

# WifiTrax FAQ



A new approach to controlling your model railroad

*WifiTrax Frequently Asked Questions*

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## General Questions

What are the Advantages of WifiTrax?

- Low cost of ownership – all you need to buy is a WifiTrax Decoder for each locomotive and use your ordinary household network, no command controllers or boosters needed.
- No special wiring on the layout – all you need is power to the track, either DC or DCC. A simple power supply supplying 12V DC at 2A will do to start.
- Simple to use – our free App identifies all locos on the layout and allows easy selection and control.
- Compatible with DCC – you can run WifiTrax locos alongside DCC locos on the same layout.

Are WifiTrax Controllers FCC Certified?

Like all Wi-Fi devices, our Wi-Fi Controllers are all deliberate radiators as defined by the FCC. All our controllers use a Wi-Fi module (including micro-computer) that is FCC, CE and Wi-Fi Alliance Certified, and is marked with the FCC, CE and Wi-Fi certification. As with any board-level product, you as a hobbyist are responsible for any interference produced by your locomotives, outside of our control, such as brush noise.

## Model Railroad Design and Installation

Do I need to Understand Networking?

Yes, but only a little. Our application notes will help you do what is necessary to set up your Wi-Fi network for WifiTrax.

How do I install WifiTrax?

If you already have a Wi-Fi router, to set your layout up for WifiTrax, all you need to do is install one of our Wi-Fi Decoders in a locomotive and download our free Operator App either for a Windows Computer or for any Android Device. You do not need any other command system. Just follow the

instructions to add the loco to your network, then use the Loco Operator App to select the loco and start running it from your phone, tablet or PC.

### What if I already use DCC?

If you already have DCC, you can run your new WifiTrax equipped locomotive alongside your DCC locos. It will use the same DCC power but ignore DCC commands. You simply control it in a different way, directly from your tablet or PC. DCC and WifiTrax locos should be able to run on the same track section.

### Does WifiTrax Conform to NMRA Standards?

There are no NMRA Standards for Wi-Fi control of model railroads. WifiTrax conforms to NMRA Standards for DCC in the way it connects to an 8-pin socket on a DCC-ready locomotive. All the colored wires have the same function as in DCC. Also WifiTrax Controllers can operate from DCC power provided it is in the range 12V to 18V DC.

### Will NMRA Introduce Standards for Wi-Fi Control?

We expect Wi-Fi control gain popularity and displace DCC. There are no track signals, so standards are not necessary on that point. Track voltage and loco wiring standards can copy DCC. Perhaps standard commands could be agreed on between the operator apps and the controller units in the locos. This would enable people to write alternative operator apps.

### What if I don't Already have DCC?

If all your locos are currently DC controlled, or you are building a new layout, simply connect DC to the track. Any DC power supply that provides 12-18 volts at 2-3 amps will do to get you started. You can run as many WifiTrax locos as you like on the same block of track – limited only by your power supply. If you want to run more locomotives, your power supply will need to provide more DC current. Our WifiTrax controllers typically consume maximum 90mA to run their circuits. When your loco is running, you must add the current needed to run the motor which is usually less than 1A.

### Can I run my DC locomotives on the Same Layout?

Yes, but not on the same section of track. The reason is that, for a DC locomotive, you need to bring the voltage to zero to stop the loco. This means any WifiTrax locos will lose power. To run DC and WifiTrax locos, you will have to implement a block system so that full power can be applied when one or more WifiTrax locos are in the section.

Please see our application note [Run DC and WifiTrax Together](#) for suggestions on how to do this using our WifiTrax Universal Block Controller, currently under development.

## Networking

### What is an IP Address?

Very simple. An IP Address is simply a number so that each locomotive fitted with a WifiTrax Controller can be uniquely identified. Everything on your network has an IP Address assigned by your router. The IP Address is written as 4 numbers, each 0 to 255, such as 192.168.0.35.

### What is a MAC Address?

A MAC Address is a unique number assigned to every WifiTrax controller. It is different to the IP Address and cannot be changed. Your router uses it as a unique identifier for everything on your network.

My router uses DHCP. Is that an issue?

No. Our locomotive controllers use DHCP to obtain their IP Address from the router. Our Loco Operator App can scan the network to find the locomotives initially and any time the IP Address is changed by the router.

What happens if the router changes the IP Address of a locomotive controller?

You will need to re-scan your network to discover the locomotives before you can control them. This happens with other equipment such as printer/scanners. You can avoid it by using a reserved IP Address in your router. See [Managing your Model Railroad Wi-Fi Network](#) for details.

Can I use Fixed IP Addresses for my Locomotives?

No. You must use DHCP but you can use address reservation in your router to make sure any loco always gets the same IP Address. See [Managing your Model Railroad Wi-Fi Network](#) for details.

## Related Documents

You can obtain these from our website [www.wifitrax.com](http://www.wifitrax.com) from the Articles menu.

- (1) [Managing your Model Railroad Wi-Fi Network](#) – this will tell you in detail how to set up your Wi-Fi network to control your model railroad.

