

Grandpa's Railroad WIFI Module Programmer User's Manual



Nov 15, 2023

Purpose of WIFI Module Programmer:

The Module Programmer is used to change the WIFI Module number, WIFI network, and network password. The initial WIFI Module you receive with the base system is preset for the router also contained with that base system. While each module can handle up to 16 digital Input/Output elements and 16 proximity locators, you may at some point wish to expand your layout and use a second module or you belong to a club that uses a separate module for each physical layout module. In either of these cases, you will need to use the WIFI Module Programmer to select the module number and network specific to your layout. The program is easy to use and requires only a few steps.

If changing routers from the supplied one, the WIFI module is designed to work on a WPA or WPA2 network It is not designed for a WEP network which is less secure. Make sure you set up your router as WPA or WPA2.

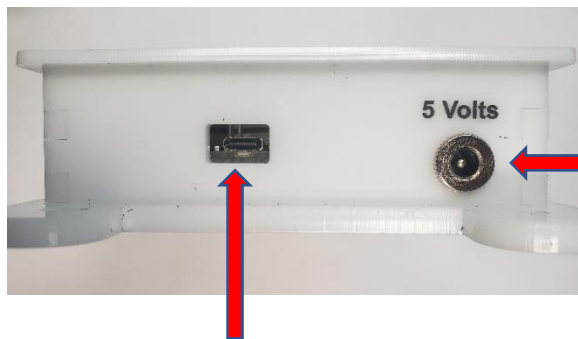
WEP stands for Wired Equivalent Privacy, and WPA stands for Wireless Protected Access.

Hardware Setup:

You will need your Grandpa's Railroad Mini PC (the programmer is preinstalled), a keyboard, mouse, and monitor. These components are all part of your basic Grandpa's Railroad Control Panel setup. The only additional hardware needed is the USB A to USB C cable included with the basic package.



Step 1: Remove the 5-volt power from the WIFI module.



Make sure the power is disconnected!

USB Port
Used for WIFI Module Programmer

The 5-volt power must be removed from the WIFI module before connecting the USB cable between the WIFI Module and the computer or damage to the module or computer could occur.

Step 2: Using the supplied USB A to USB C cable connect the WIFI module to any free USB port on the computer. Either the red and green or just green light should appear on the module.

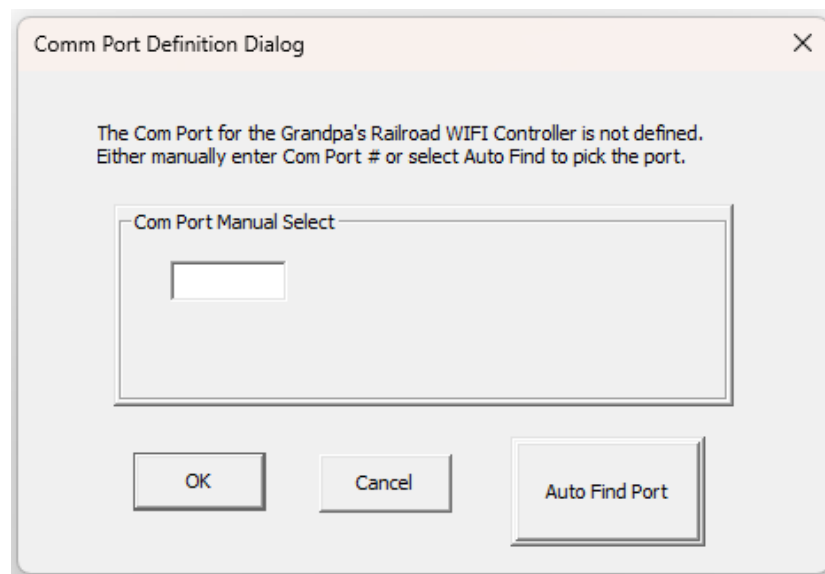
Step 3: Start the WIFI Module Programmer software and follow the instructions below.

Using the WIFI Module Programmer:

To use the WIFI Module Programmer simply follow the following steps:

Step 1: Start the program.

Step 2: The following dialog will appear when you start the program.

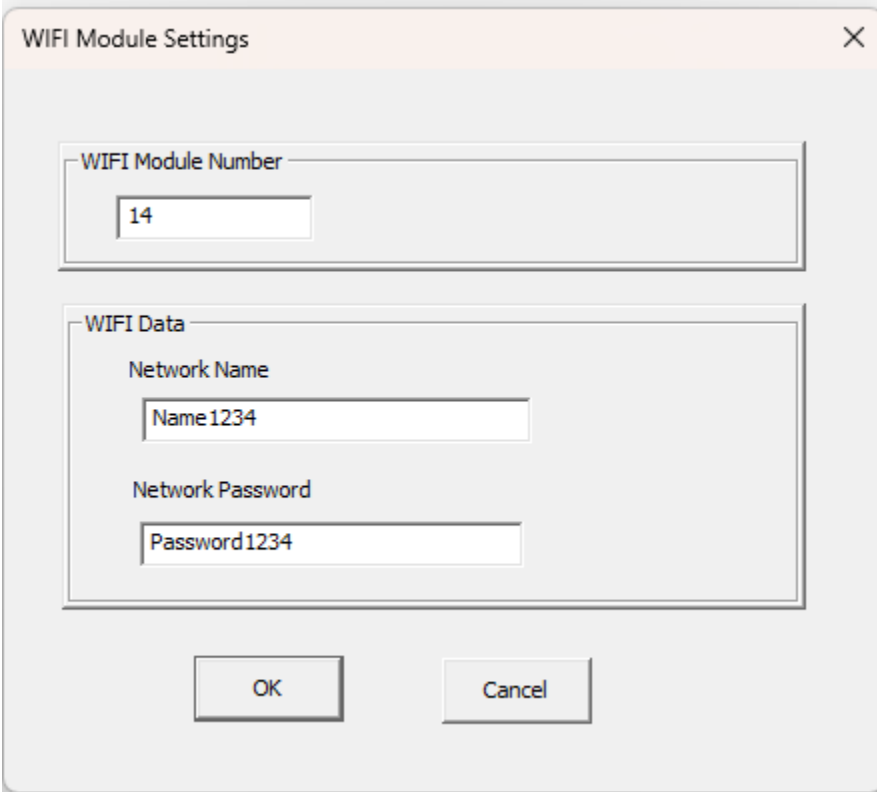


This dialog is used to specify the USB serial port number that the WIFI Module has been connected to. Either you can enter the port number if you know it or have learned it from looking at the “Windows Device Manager/Ports” under the “Windows Control Panel”. This method is described in the Windows 11 documentation and will not be covered here.

The second method is to simply select the “Auto Find Button”. This is the preferred and simplest method. It may take some time, but it will return the proper port with the Version Number of the WIFI Module Firmware. When a message appears containing this data just press **OK** and the dialog will automatically be filled in. Then press **OK** on the main dialog to proceed.

This step may take several seconds. If it does not find a suitable port, try unplugging and plugging the module back into the USB port. This procedure should also be carried out if you exit the program, for example by cancel, and then restart the program.

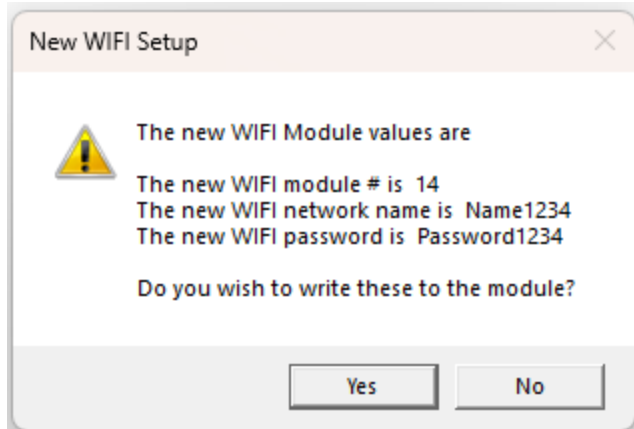
Step 3: After a few seconds a new dialog should appear that contains the current module number, network name, and password. See below:



The image shows a screenshot of a software dialog box titled "WIFI Module Settings". The dialog box has a standard Windows-style title bar with a close button (X) in the top right corner. It is divided into two main sections. The first section, labeled "WIFI Module Number", contains a single text input field with the number "14" entered. The second section, labeled "WIFI Data", contains two text input fields: "Network Name" with "Name 1234" and "Network Password" with "Password1234". At the bottom of the dialog, there are two buttons: "OK" and "Cancel".

The maximum length is 32 characters for the network name and 64 for the password.

Step 4: If you press the OK button a message will appear asking you to verify your changes. See below.



If you press **Yes**, these changes will be applied to the WIFI Module. If the changes are successful, the light on the WIFI Module will turn green.

Verifying the Changes:

If you wish to verify the changes, simply rerun the program and after verifying the settings on the "WIFI Module Settings" dialog, press **Cancel**.

Connecting to the Network:

After changing the setting unplug the USB cable and reconnect the 5-volt power supply.

The USB cable between the WIFI Module and the computer must be removed before connecting the 5-volt power supply or damage to the module or computer could occur.

If the network with the name and password you selected is on and within range, the light on the WIFI Module will change from red to green indicating the module is connected to the network.