

Grandpa's Railroad WIFI Module Programmer User's Manual



March 5, 2025

Purpose of WIFI Module Programmer:

The WIFI Module Programmer is used to change the WIFI module number, WIFI network, and network password. The WIFI module you receive is preset for the router used during testing. 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.

The Wi-Fi module is designed to work on a WPA or WPA2 network; it is not compatible with a WEP network, which is less secure. Make sure to set up your router with WPA or WPA2 security.

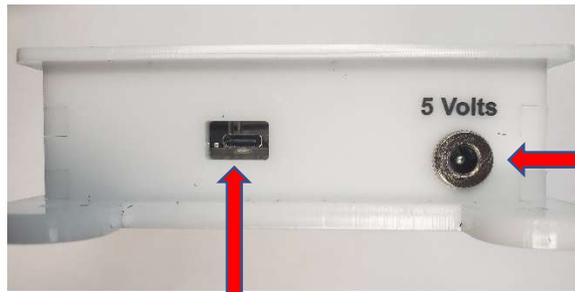
WEP stands for Wired Equivalent Privacy, while WPA stands for Wireless Protected Access.

Hardware Setup:

You will need your Grandpa's Railroad Mini PC (with the programmer preinstalled), a keyboard, a mouse, and a monitor. The only additional hardware required is the USB-A to USB-C cable included in the Mini PC 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 disconnected from the Wi-Fi module before connecting the USB cable between the module and the computer to prevent potential damage to either device.

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

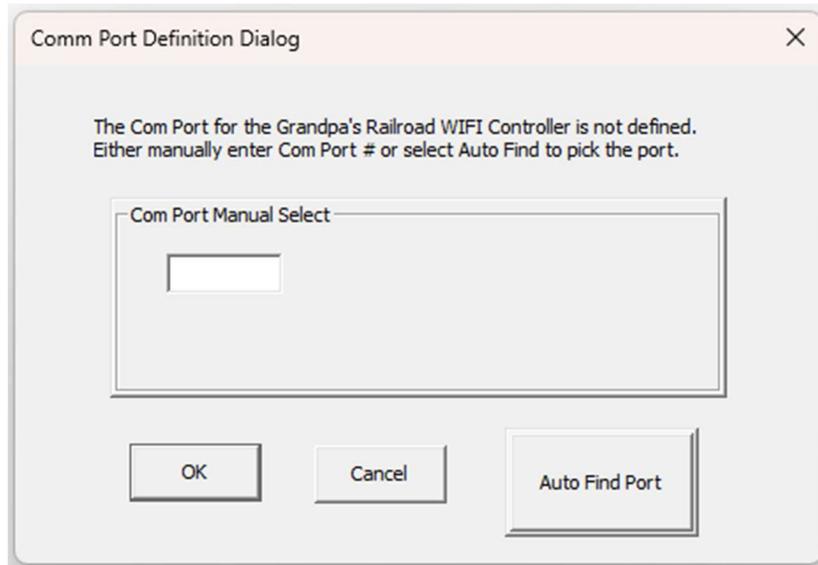
Step 3: Start the WIFI Module Programmer software and follow the instructions below.

Using the WIFI Module Programmer:

To use the WIFI Module Programmer, follow these steps:

Step 1: Start the program.

Step 2: When you start the program, the following dialog will appear:

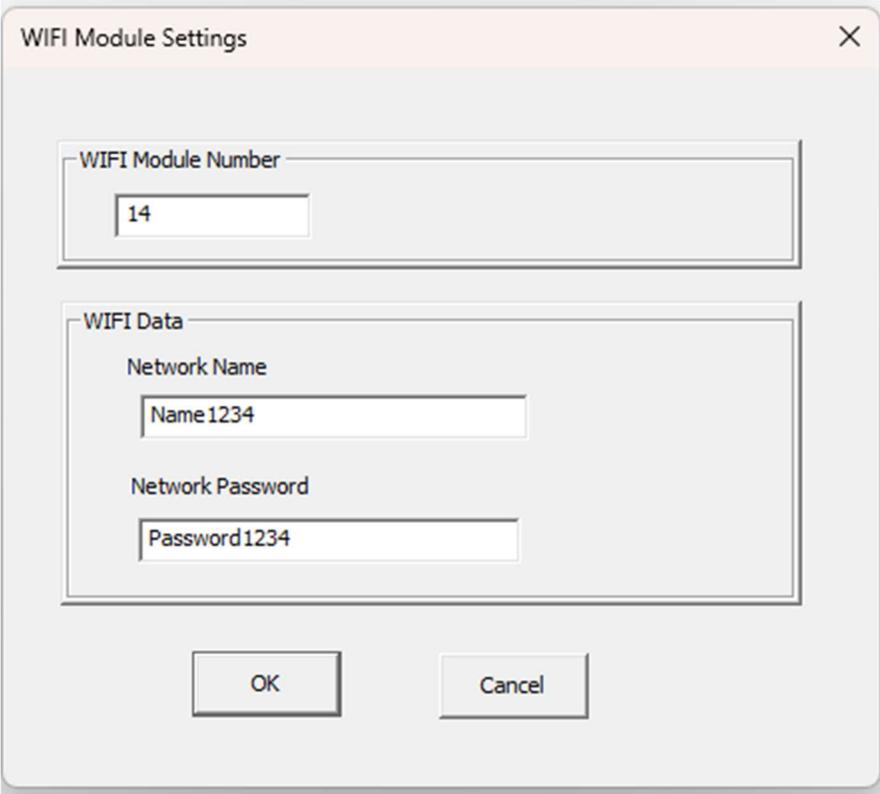


This dialog allows you to specify the USB serial port number that the WIFI module is connected to. You can either enter the port number manually (if you know it or have checked it in the “Windows Device Manager/Ports” under the “Windows Control Panel”) or use the **Auto Find** button.

The **Auto Find** button is the preferred and simplest method. It may take some time, but it will return the correct port along with the firmware version number of the WIFI module. Once the message containing this information appears, press **OK**, and the dialog will be automatically filled in. Then, press **OK** on the main dialog to proceed.

This step may take several seconds. If a suitable port is not found, try unplugging the module and plugging it back into the USB port. This procedure should also be performed if you exit the program—such as by canceling—and then restart it.

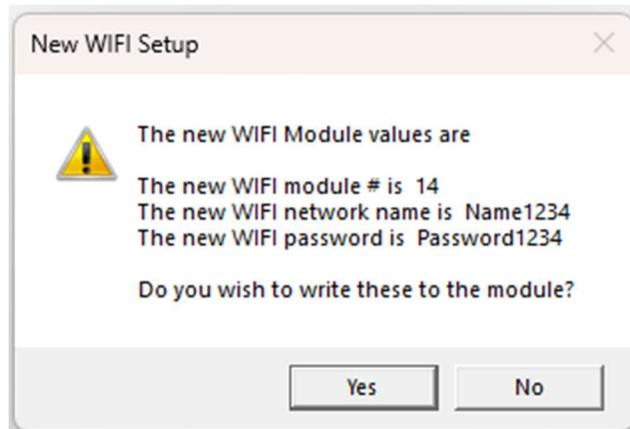
Step 3: After a few seconds, a new dialog should appear displaying the current module number, network name, and password:



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 "Name1234" and "Network Password" with "Password1234". At the bottom of the dialog, there are two buttons: "OK" and "Cancel".

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

Step 4: If you press the **OK** button, a confirmation message will appear asking you to verify your changes.



If you press **Yes**, the changes will be applied to the WIFI module. If the update is successful, the light on the WIFI module will turn green.

Verifying the Changes:

To verify the changes, simply rerun the program. After reviewing the settings in the **WIFI Module Settings** dialog, press **Cancel** to exit.

Before performing verification, disconnect the USB connector to power off the unit, then reconnect it.

Connecting to the Network:

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

The USB cable between the module and the computer must be disconnected before connecting the 5-volt power to prevent potential damage to either device.

If the network you selected (with the specified name and password) is available and within range, the light on the WIFI module will change from red to green, indicating a successful connection.