

Digitrax DT402D Duplex Radio Throttle Firmware Update

The following instructions are provided for upgrading Digitrax DT402D throttles to the latest Firmware Revision and optionally, when updating the RF24 Duplex Radio Module.

Additions to this document have been made for those that have a Locobuffer interface. Updates were made by John Griffin of the Hostler's Model Rail Road Club. The DigiIPL109 upgrade utility has been replaced by the DigiIPLII utility (and will be referred to throughout these instructions). To get this from the Digitrax web site you would have to install the newest SoundLoader utility. Because of this, the file has been uploaded to the club website. All updates/additions to this documentation will be in the same color as this paragraph.

Note: The screen shots in this document are the original screen shots. The numbers shown in them will be different than what appears on your screen.

Note: The *RF24 Duplex Radio Module* is part of the DT402D Throttle and the UR92.

These instructions assume that a Digitrax PR3/Locobuffer has been properly installed, is connected to a Command Station (DCS100 & 200, DB150, DCS50 or DCS51) and working properly. It is also assumed that the DigiIPLII Utility and any required *.DMF files have been downloaded from <http://www.digitrax.com> prior to this Firmware update.

All downloadable firmware upgrade files are located on the Digitrax website [here](#).

This update is *recommended* for Digitrax DT402D Throttles. It is an *optional update* for other DT402 Series Throttles.

These instructions must be followed step by step to ensure the DT402 Series Throttle(s) are updated correctly.

Multiple Throttles can be upgraded at the same time. A splitter can be used to provide additional LocoNet jacks.

When updating any device with the DigiIPLII Utility, nothing should be plugged in or unplugged from LocoNet.

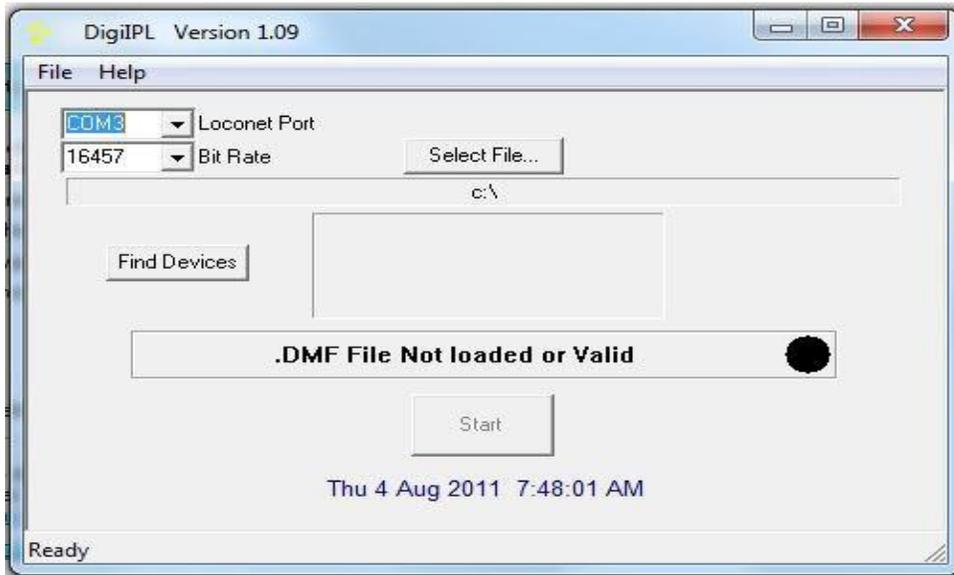
The following steps need to be taken before the Firmware Update can be started:

1. Disconnect **ALL** LocoNet devices from the Command Station with the exception of the PR3/Locobuffer. No other LocoNet devices should be plugged in at this time.
2. Insert a known **GOOD** 9-volt battery into the DT402 series Throttle(s) which are to be updated.
3. Plug the DT402D Throttle(s) into LocoNet. It can be plugged into your command station or a UP5 whichever you prefer.
4. To begin the Firmware Update, double click on the DigiIPLII.exe icon.

If the following Open File – Security Warning box is displayed, click ‘Run’



The DigiIPLII Utility should open and look similar to this:

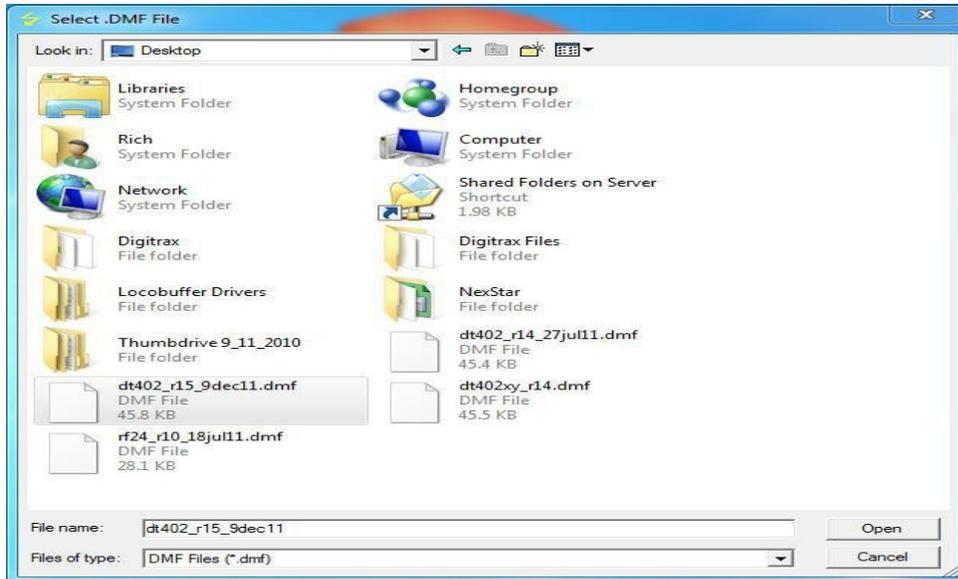


Verify that the proper PR3/[LocoBuffer](#) port is selected. This is the Com Port that the computer has assigned to the PR3/[LocoBuffer](#). [Table 1](#) shows the bit rate settings selection for your type of interface. The bit rate should be set to the appropriate value.

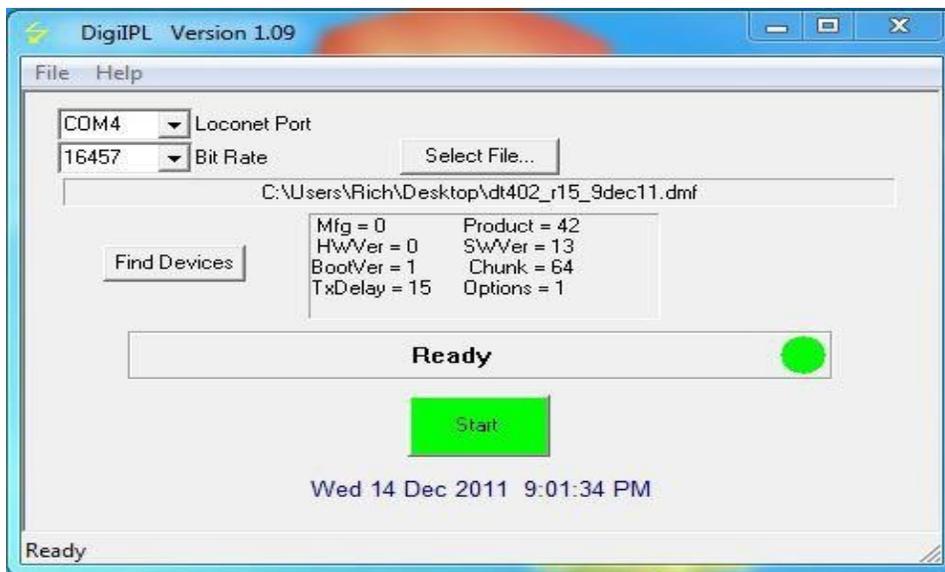
Table 1

Interface	Bit Rate
PR3	16457
LocoBuffer	57600

Click on the ‘Select File...’ box, navigate to the location where you saved the *dt402_10oct16.dmf* file, click on the filename to highlight it then click ‘Open’.



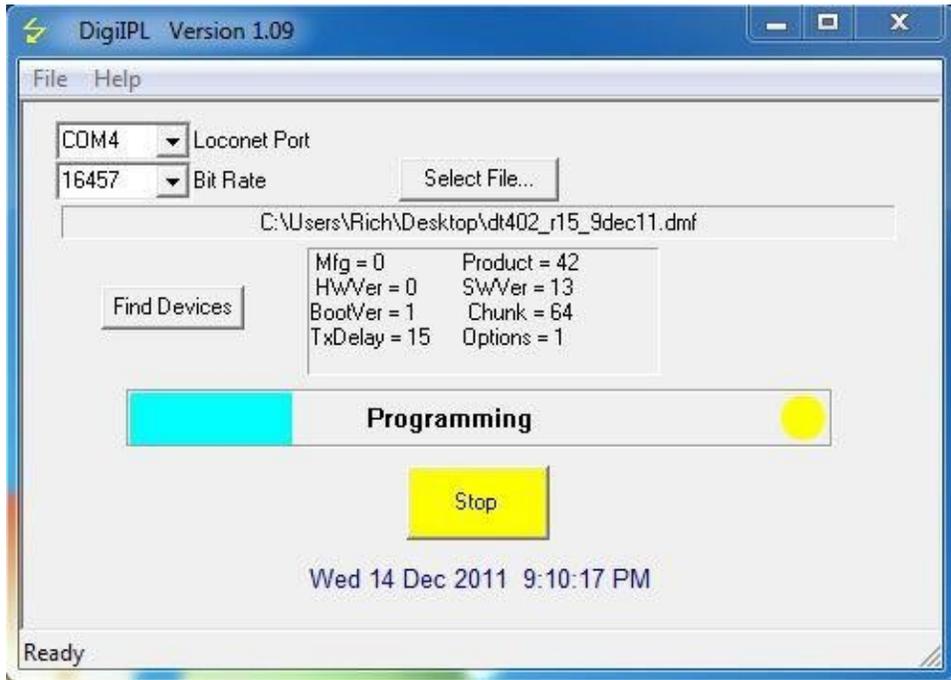
The program will go back to the main screen and look similar to this:



The product number will vary according to the product that is plugged into LocoNet.

Click on the 'Start' button.

A progress bar will be displayed and will look similar to this:



While the Throttle(s) are being updated, the white Flashlight LED will blink and the Throttle Display will display 'IPL Run'.

When the update completes, the Throttle(s) will reset and display **DT402D21**

The last 2 digits are the software version contained in the DT402's firmware.

Unplug the Throttle(s) from LocoNet.

Remove the battery from the Throttle(s) and then reinsert the battery. Plug

the Throttle(s) back into LocoNet.

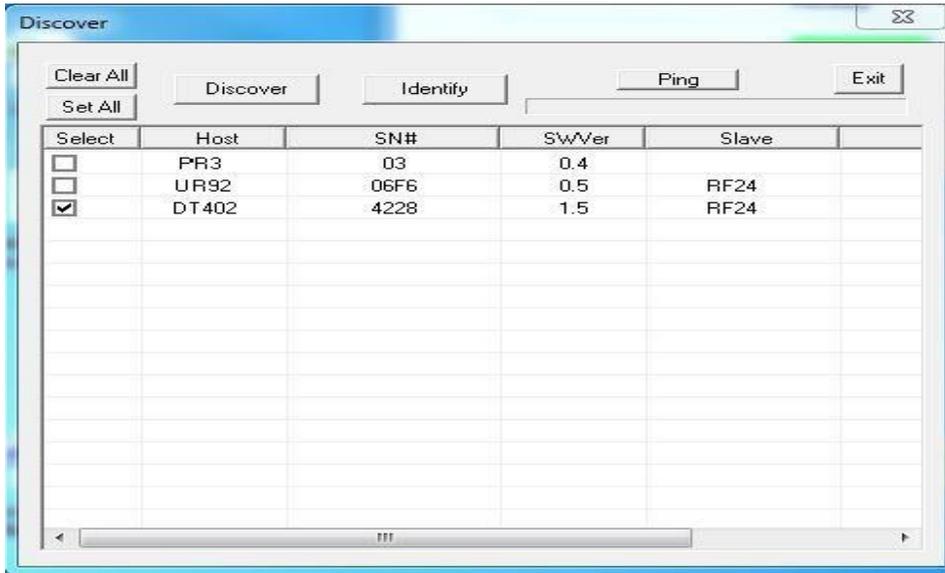
The Throttle(s) should read **DT402D21**. If the Throttle(s) display doesn't read **DT402D21** or 8 dim blocks are displayed, the update did not finish correctly and will have to be run again. Repeat the steps to reprogram the Throttle(s).

NOTE: You may have to update a Throttle more than once for the update to be successful. This is not a big deal and nothing to worry about. Just do the steps.

NOTE: If updating a Throttle other than a Duplex Equipped Throttle, the display will be different. The last two digits displayed should read **21**.

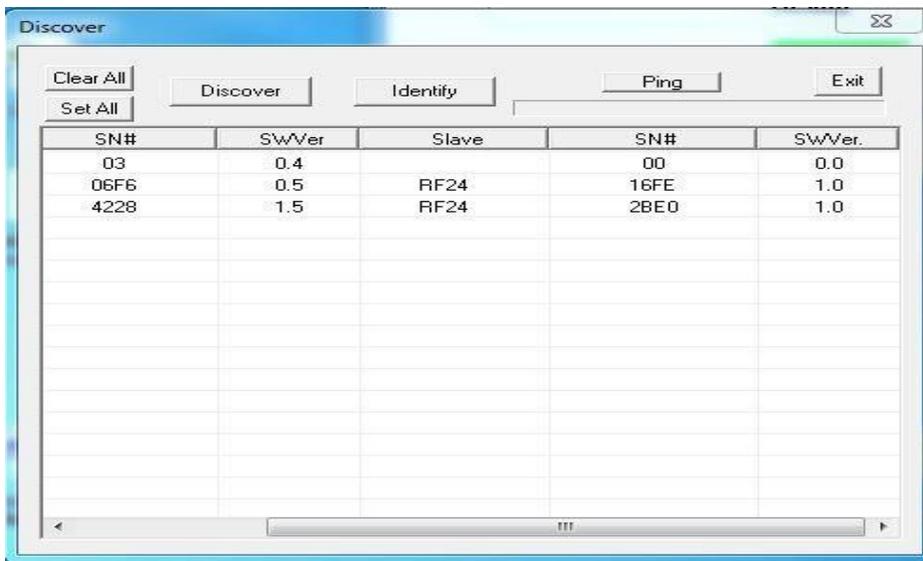
After successful completion of the update, click the 'Find Devices' box. A list of devices will appear in the Discover box.

Under the Select column click the row that displays DT402. The display will look similar to this:



Next use the scroll bar at the bottom of the Discover box to scroll all the way to the right.

The display should look similar to this:



The SWVer column next to the SN# column shows the current firmware version of each product detected. It should read 21 for your DT402 product.

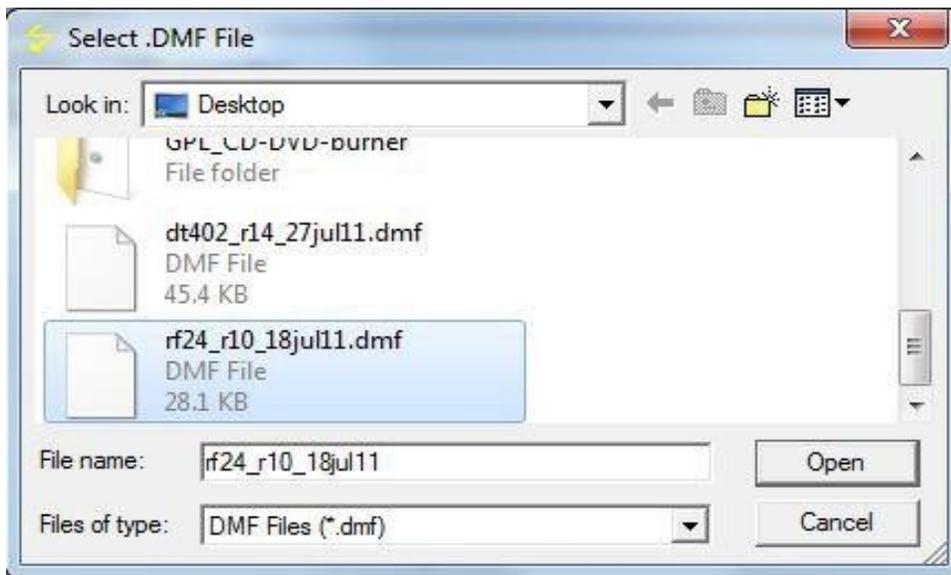
If the far right **SWVer** column reads **1.1**, no further updates are required.

Reconnect all the LocoNet devices that were previously disconnected. Close out any DigiIPLII display boxes that are still opened. Return the layout to normal operation.

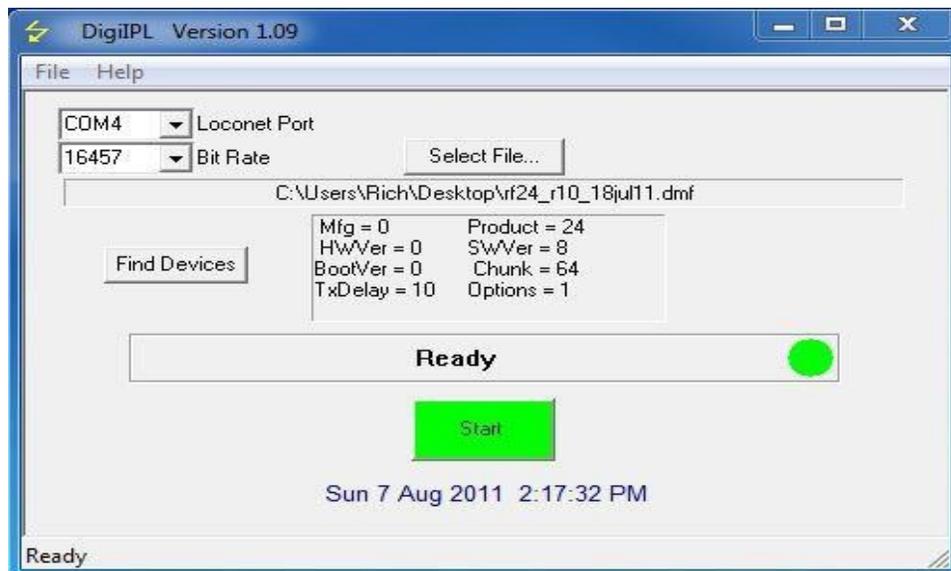
If the far right **SWVer** column reads something other than **1.1**, the RF24 Duplex Radio Module needs to be updated.

Use the following step to update the RF24 Duplex Radio Module:

Click on the ‘Select File...’ box, navigate to the location where you saved the rf24_r9_16jul15.dmf file, click on the filename to highlight it then click ‘Open’.

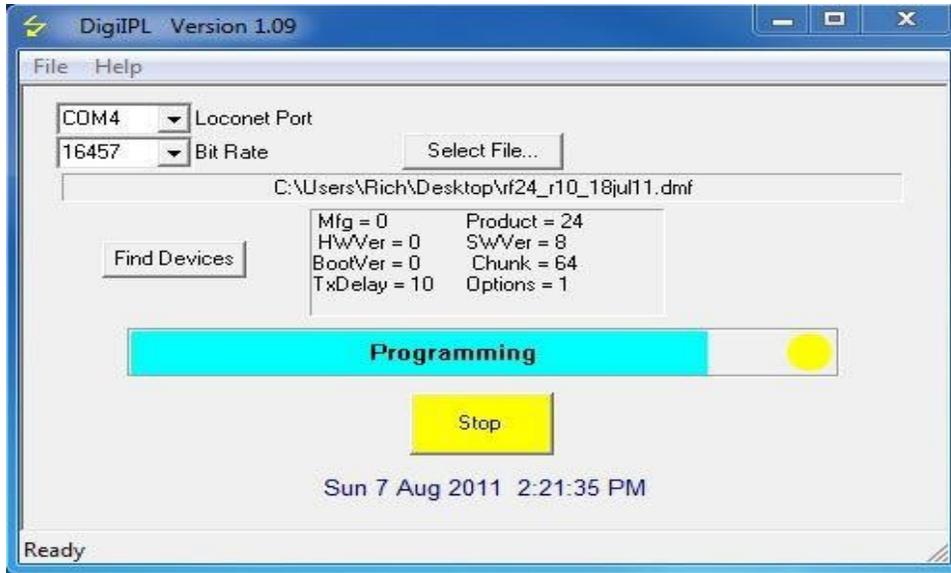


The program will go back to the main screen and look similar to this:



Click on the 'Start' button

A progress bar will be displayed and will look similar to this:



While the RF24(s) are being updated, the white Flashlight LED will blink and the Throttle Display will display 'RF24 IPL'

When the RF24(s) are finished updating, 'RF24 IPL' will still be displayed on the throttle(s) screen. This is **NORMAL** and an expected result when the RF24 is updated.

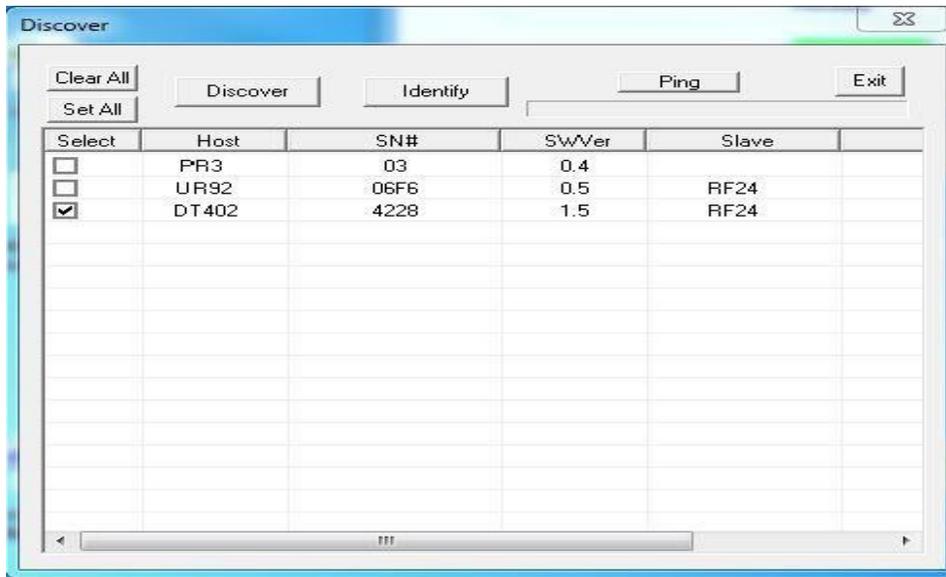
Unplug the Throttle(s) from LocoNet.

Remove and reinsert the battery from each

Throttle. Plug the Throttle(s) back into LocoNet.

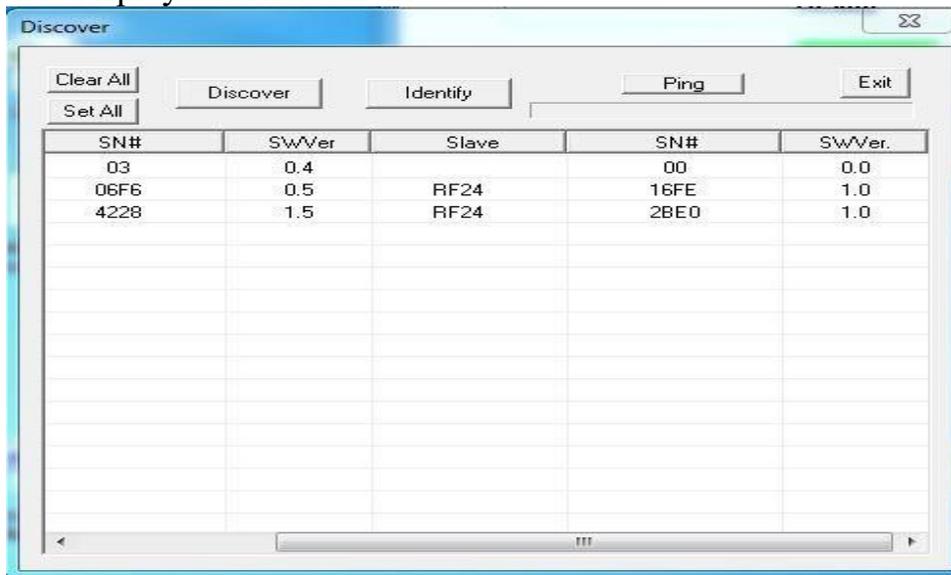
Click the 'Find Devices' box. A list of devices will appear in the Discover box.

Under the Select Column click the row that displays DT402. The display will look similar to this:



Again, use the scroll bar at the bottom of the Discover box to scroll all the way to the right.

The display should look like this:



If the far right **SWVer** column reads **1.1**, the RF24 Duplex Radio Module has updated correctly.

Reconnect all the LocoNet devices that were previously disconnected. Close out any DigiIPLII display boxes that are still opened. Return the layout to normal operation.

If you wish to update the firmware and RF module of UR9x product the procedure is the same as this except for different firmware files.

Please contact the Helpdesk (helpdesk.digitrax.com) with any questions.

Tech Support is not configured to diagnose issues related to computer, operating system, hardware, configuration or other possible problem areas that may cause problems with running the DigiIPLII utility.