

PR3 Help

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Digitrax PR3 Sound Programmer and Loconet PC Interface



The PR3 Hardware is used to program sound files into a Digitrax Sound decoder as well as read and write various CVs and send and monitor Loconet message traffic.

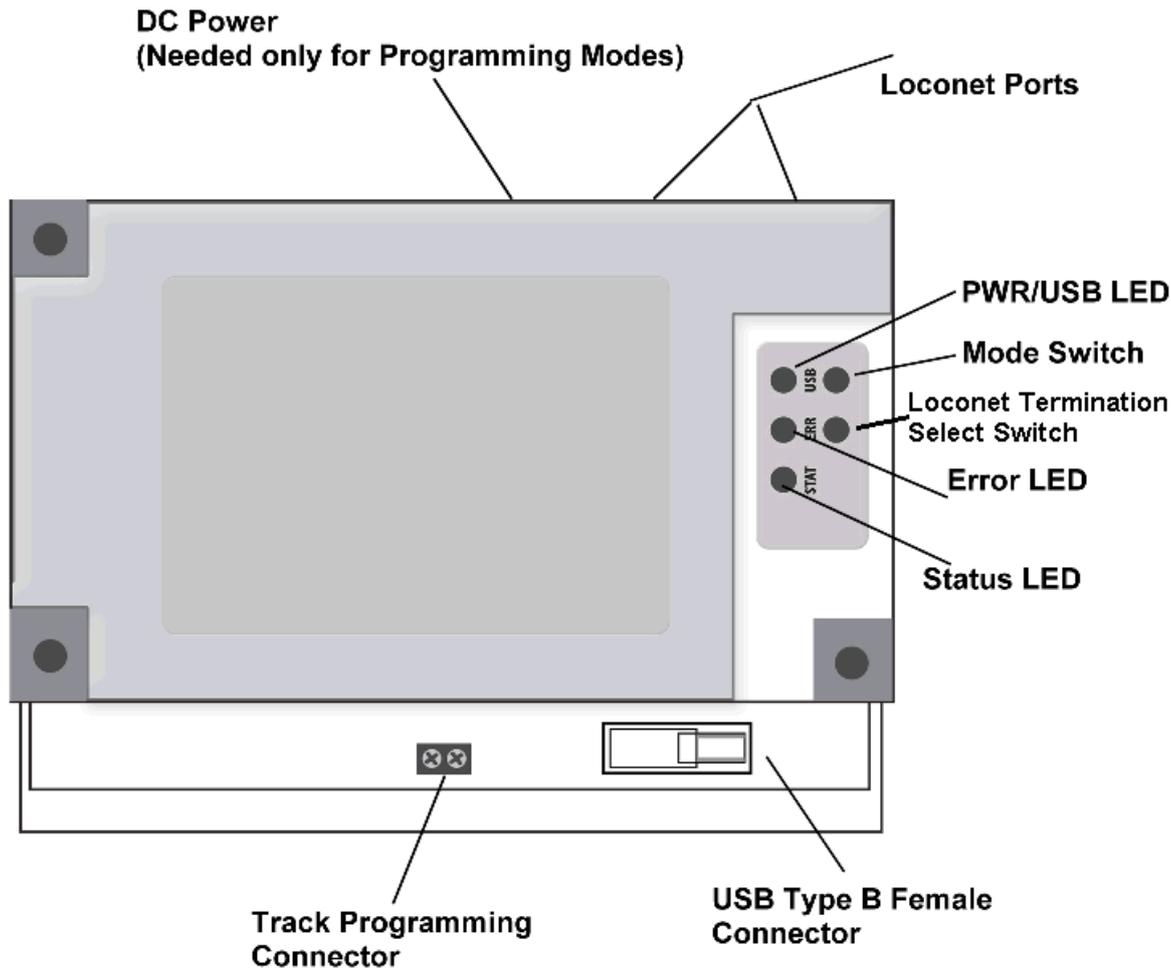
The PR3 consists of a USB virtual COM port that talks to the computer, a Programming Track driver, and Loconet port.

The PR3 is dual purpose in that it can operate as a Sound Programmer or it can operate as a PC to Loconet interface like an MS100 or other Loconet to PC interface device.

Features:

- Sound Programmer using a PC USB port and external DC power Supply.
- Loconet to PC interface using only PC USB for connection as well as power.
- Loconet interface provides message buffering and traffic statistics.
- Loconet Termination mode for use without a command station.
- Push Switch allows easy change from Sound Programmer to Loconet to PC interface mode.
- LED's indicate USB status, Programmer/Loconet Status, Data traffic and direction.

Hardware Features



- DC Power connection is a 2.1mm power jack requiring 12 to 18 VDC 200mA minimum. This is used for the programming track power. If the PR3 is used for MS100 mode emulation, the unit does not require any external power as it can run from the USB power.

- Two Loconet ports are available on the back of the unit for use in the MS-100 emulation mode.

- A 2 pin Sound Programming track connector is on the front of the unit and should be connected to an isolated piece of track for programming and testing sounds on a locomotive.

These pins should not be connected to any other active track as damage could result to the PR3.

- A Type B female USB connector is used to connect to the PC using a standard USB cable.

- Three LEDs are used to indicate various status and errors.

- Two momentary push switches are used to select the sound programmer mode or MS-100 emulation mode and select a Loconet Termination mode for Loconet use without a command station.

PR3 Setup

The PR3 is a USB device and requires PC driver software in order to operate. The PR3 will work on Windows 2000, XP, and Vista PC's as well as MACs.

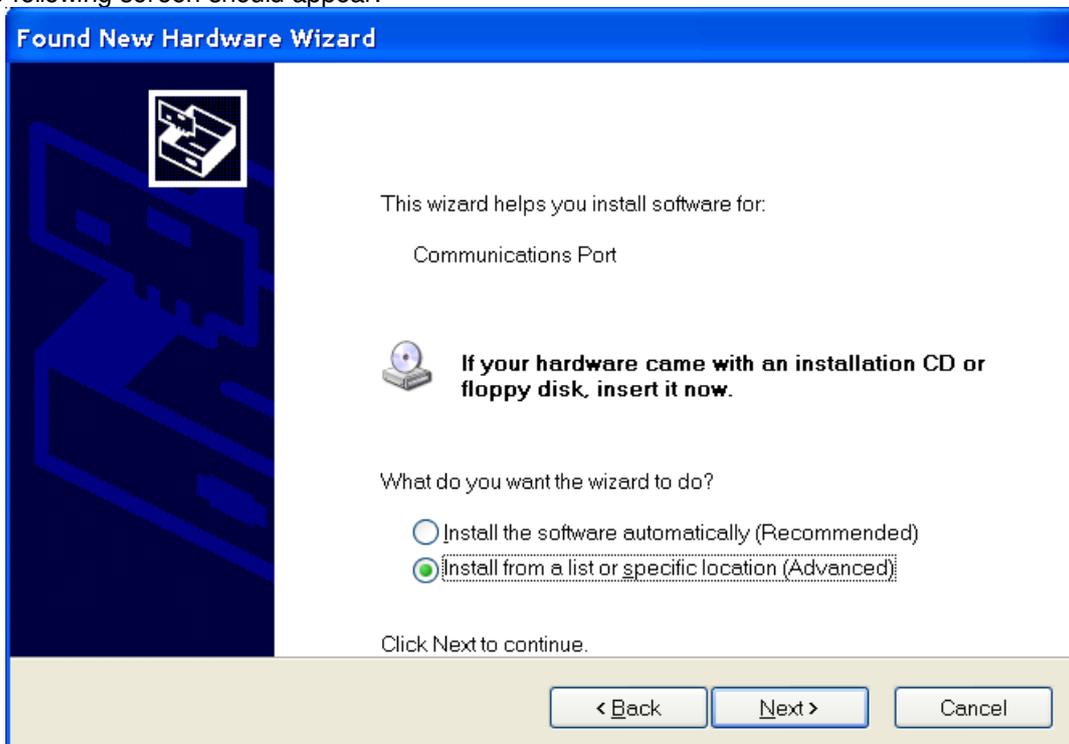
Windows XP Driver Installation.

- Make sure the SoundLoader Install CD is inserted in your PC's CD player.
- Plug the PR3 into a vacant USB slot on your PC using the supplied cable.
- The following screen should open when the PC finds the new hardware device.



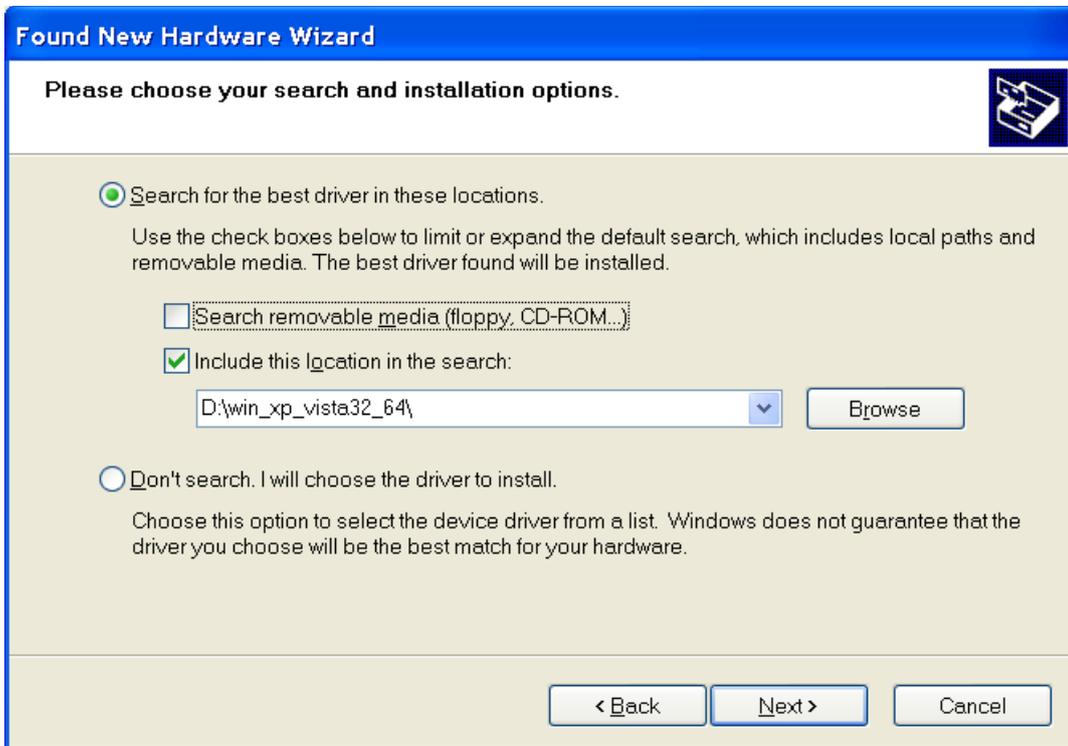
Select the "No, not this time" button to allow you to specify the driver file location.

Click Next. The following screen should appear.



Select the "Install from a list or specific location" button.

Click Next. The following screen should appear.



Click Browse and select the "win_xp_vista32_64" folder on the cd.

Click Next and the following Screen should appear.



Click "Continue Anyway" and the following Screen should appear after the driver is loaded.



Completing the Found New Hardware Wizard

The wizard has finished installing the software for:



Communications Port

Click Finish to close the wizard.

< Back

Finish

Cancel

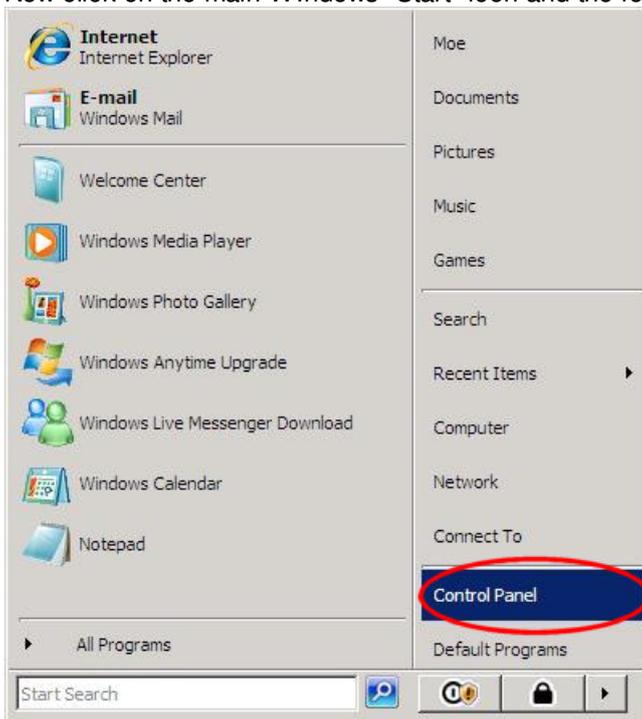
Windows Vista Driver Installation.

- Make sure the SoundLoader Install CD is inserted in your PC's CD player or the latest version of SoundLoader (version greater or equal to 1.21) has been installed.
- Plug the PR3 into a vacant USB slot on your PC using the supplied cable.
- The following screen should open when the PC finds the new hardware device.

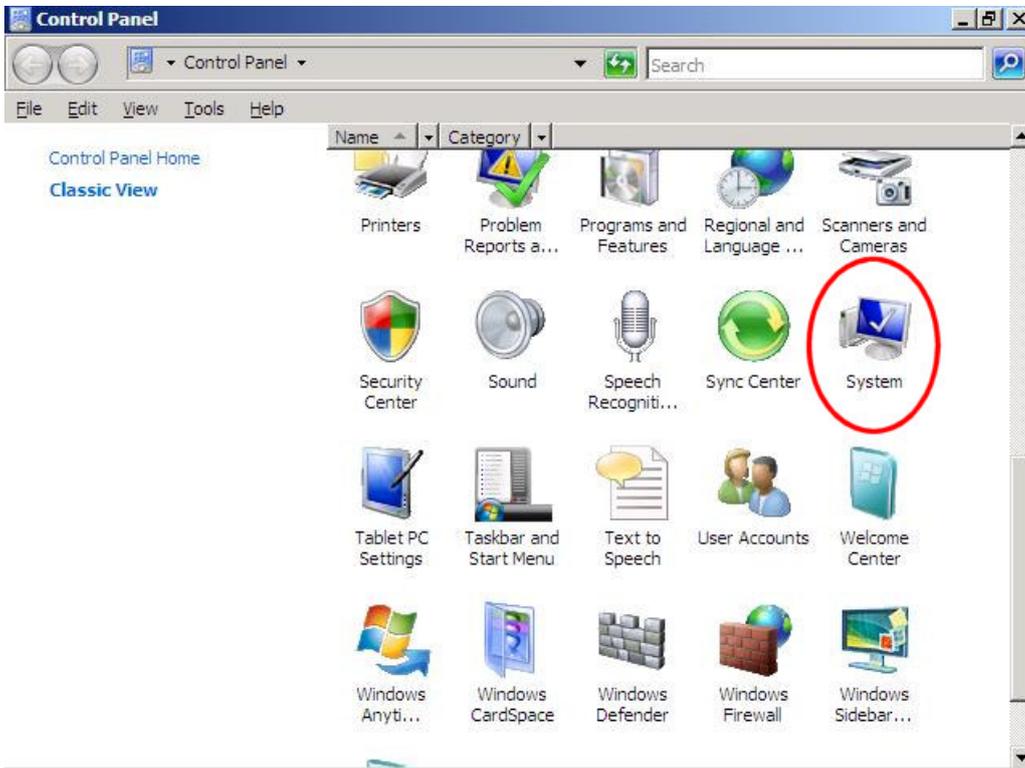


Click on the "Ask me again later" since you want to install the driver manually.

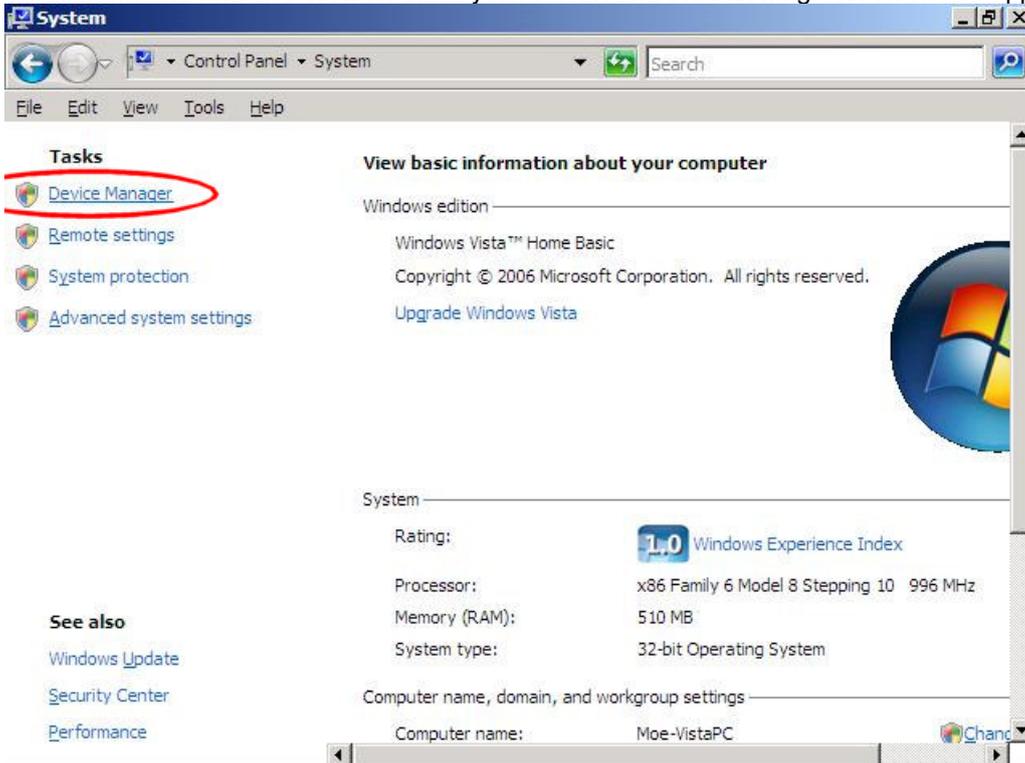
Now click on the main Windows "Start" icon and the following screen should appear.



Double click on the "Control Panel" button and the following screen should appear.

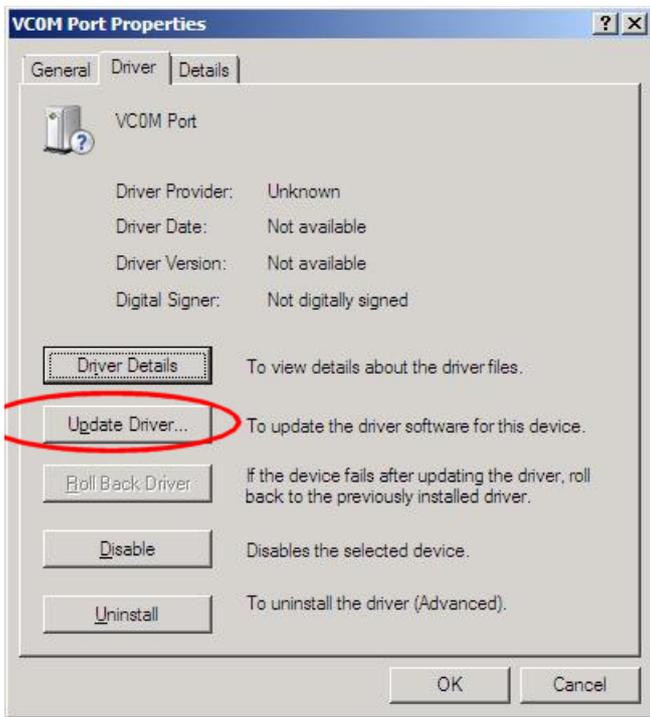


Scroll down and find and click on the "System" icon and the following screen should appear.

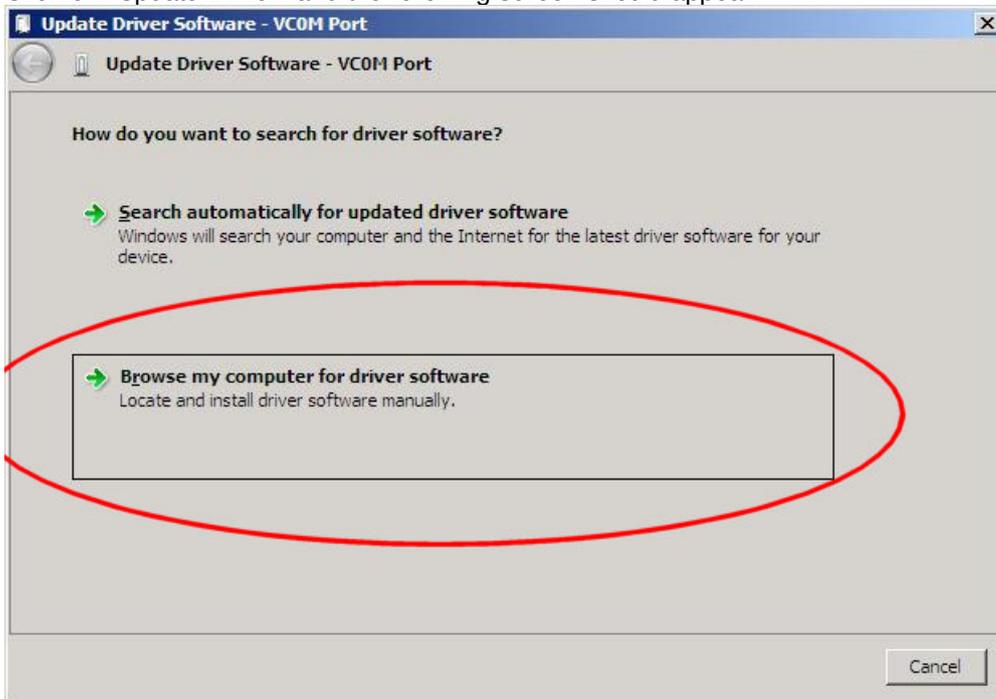


Double click on the "Device Manager" task and the following screen should appear.

Under "Other Devices" a "VCOM Port" icon should appear with an exclamation symbol showing it is plugged in but there is no driver loaded. Double click on this icon and the following screen should appear.



Click on "Update Driver" and the following screen should appear.

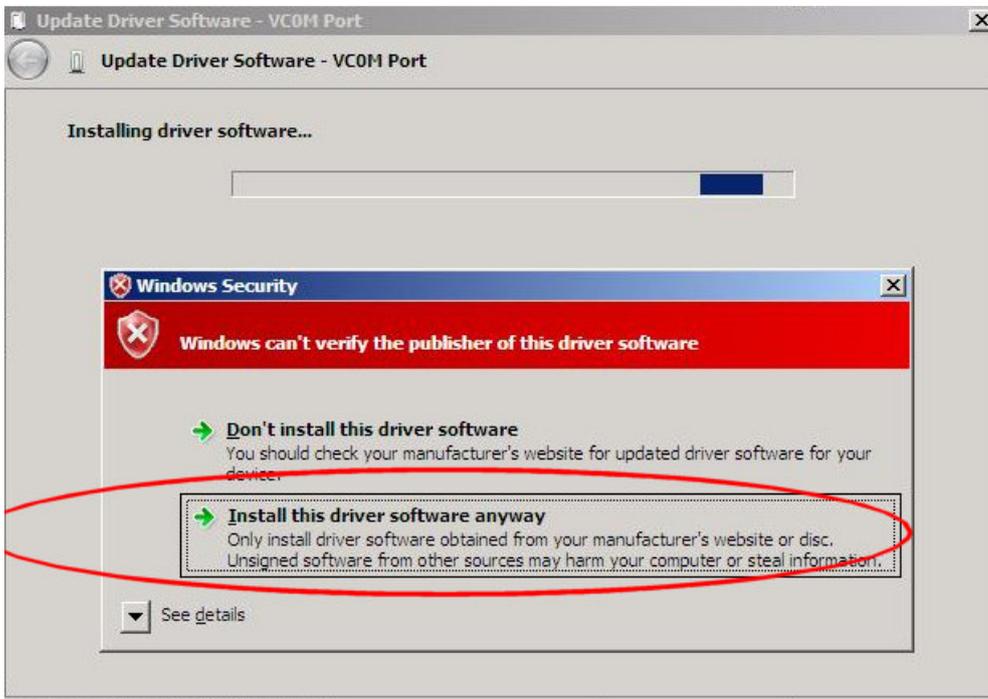


Click on the "Browse my computer for driver software" and the following screen should appear.

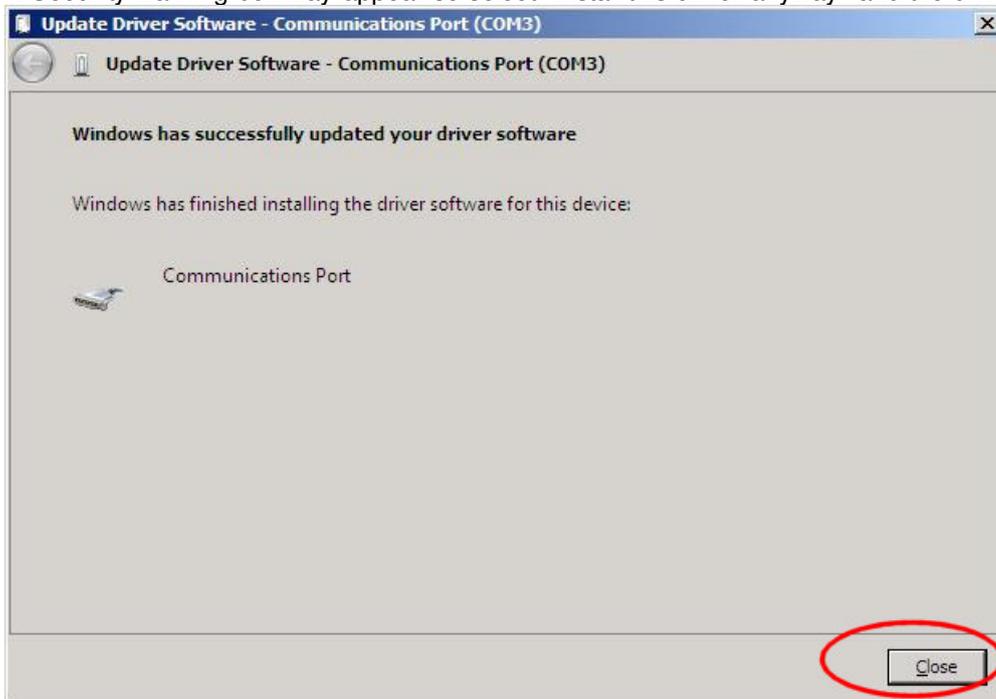
Click on "Browse" and select the location where the driver is located. If you have the Soundloader install disk in your CD drive it is in the "win_xp_vista32_64" folder.

If you have installed Soundloader on your hard drive, it can also be found in your "Program Files/Digitrax/SoundLoader/win_xp_vista32_64"

After selecting the proper "win_xp_vista32_64" folder, click Next and the following screen should appear.



A Security warning box may appear so select "Install this driver anyway" and the driver should be loader.

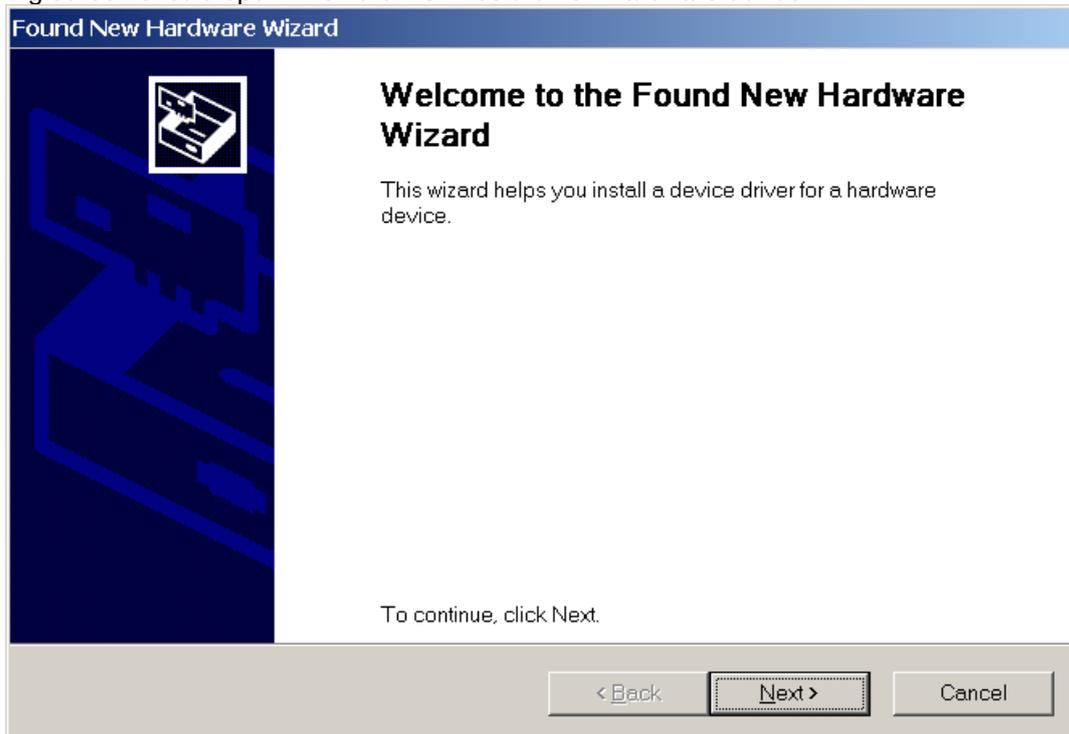


Click "Close" and the PR3 driver should be loaded and ready to run.

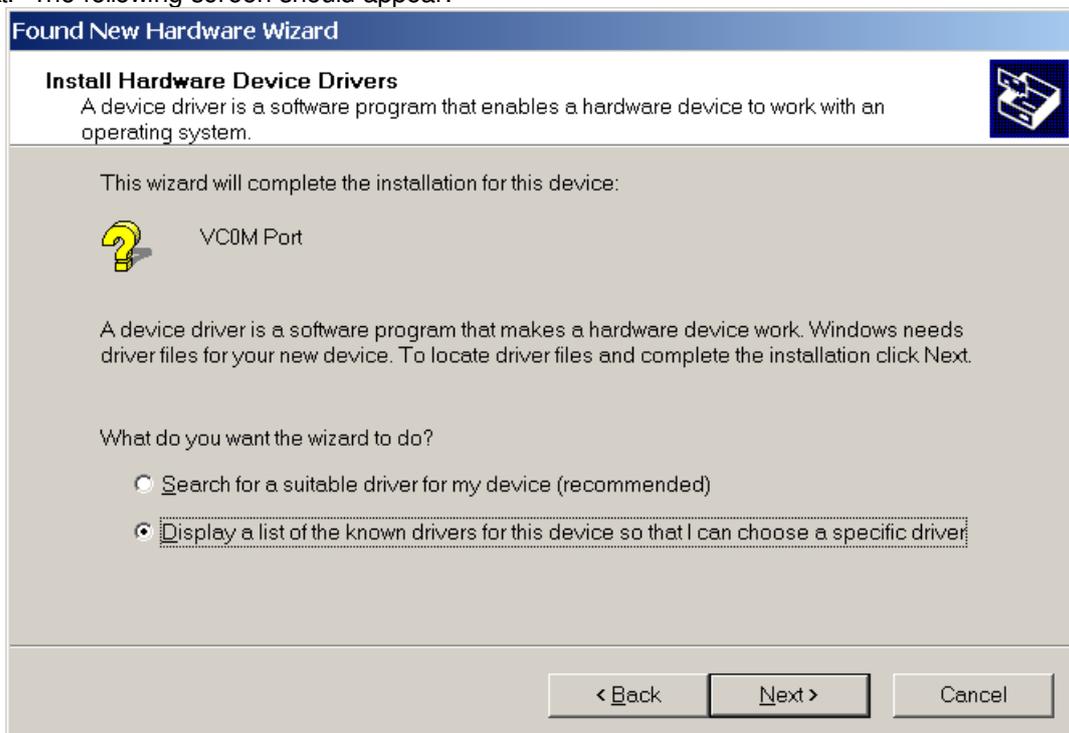
Note: Windows Vista may pop up security alerts depending on settings. These can be safely ignored during this install session.

Windows 2000 Driver Installation.

- Make sure the SoundLoader Install CD is inserted in your PC's CD player.
- Plug the PR3 into a vacant USB slot on your PC using the supplied cable.
- The following screen should open when the PC finds the new hardware device.

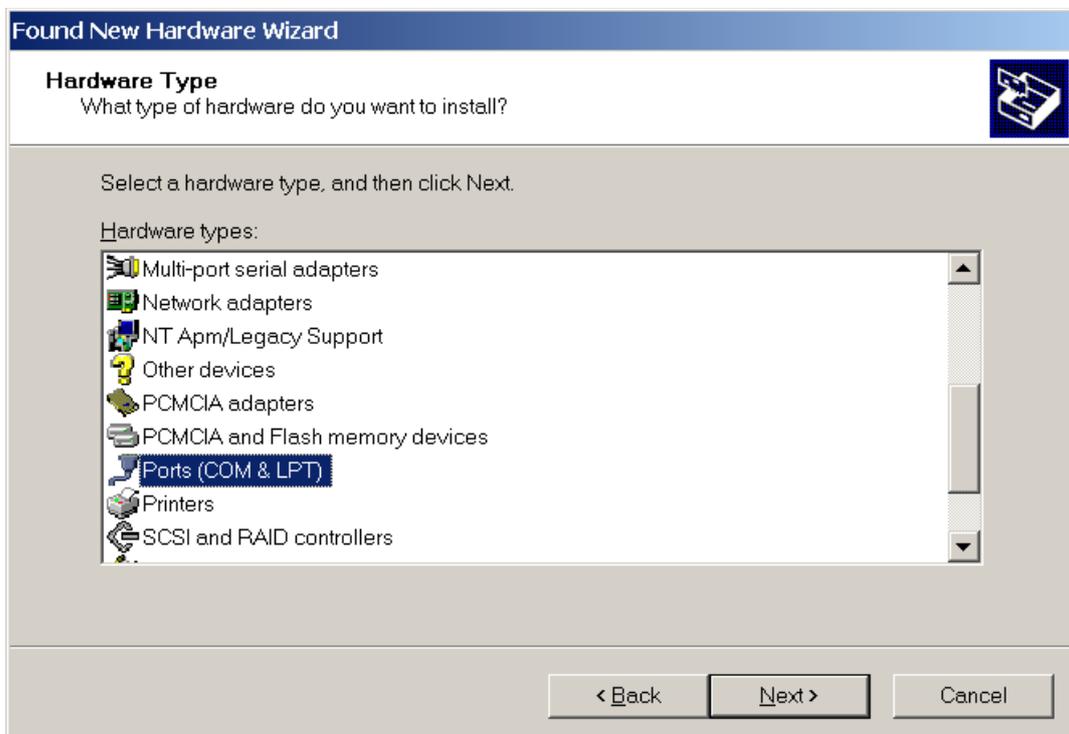


- Click Next. The following screen should appear.



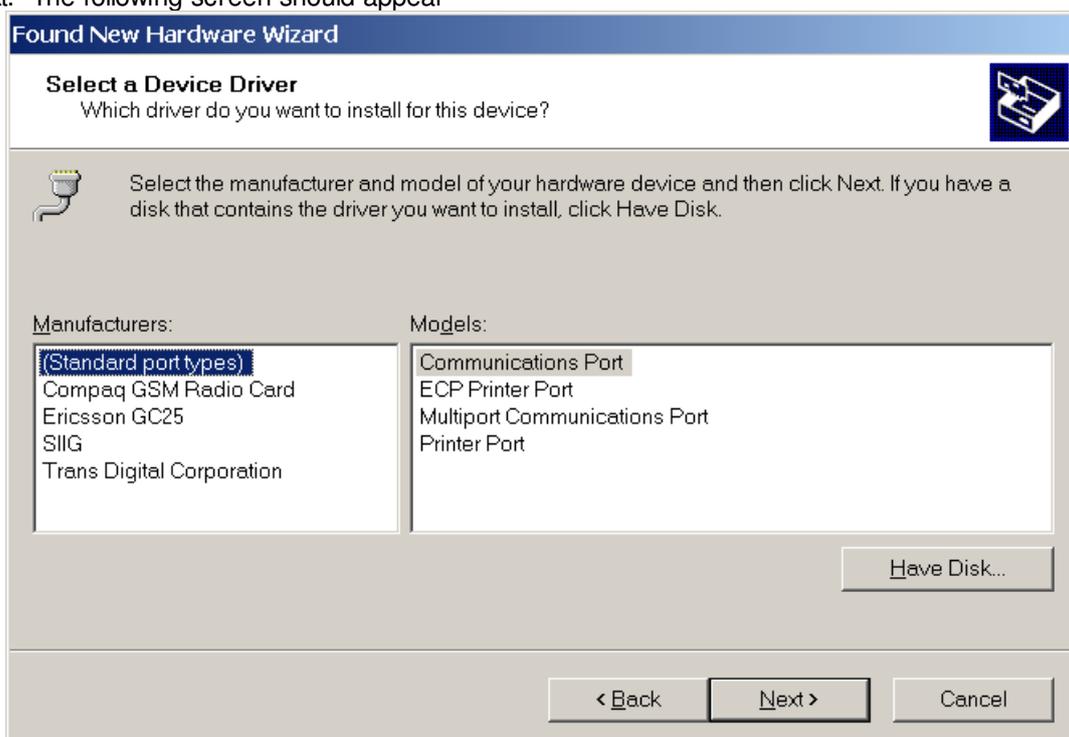
Click on the "Display a list of known drivers for this device..." button.

- Click Next. The following screen should appear.

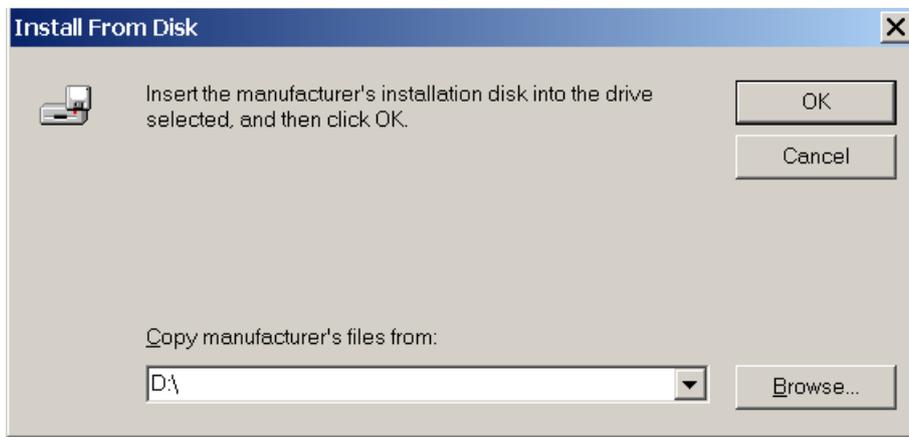


Scroll down and select Ports (COM & LPT) then

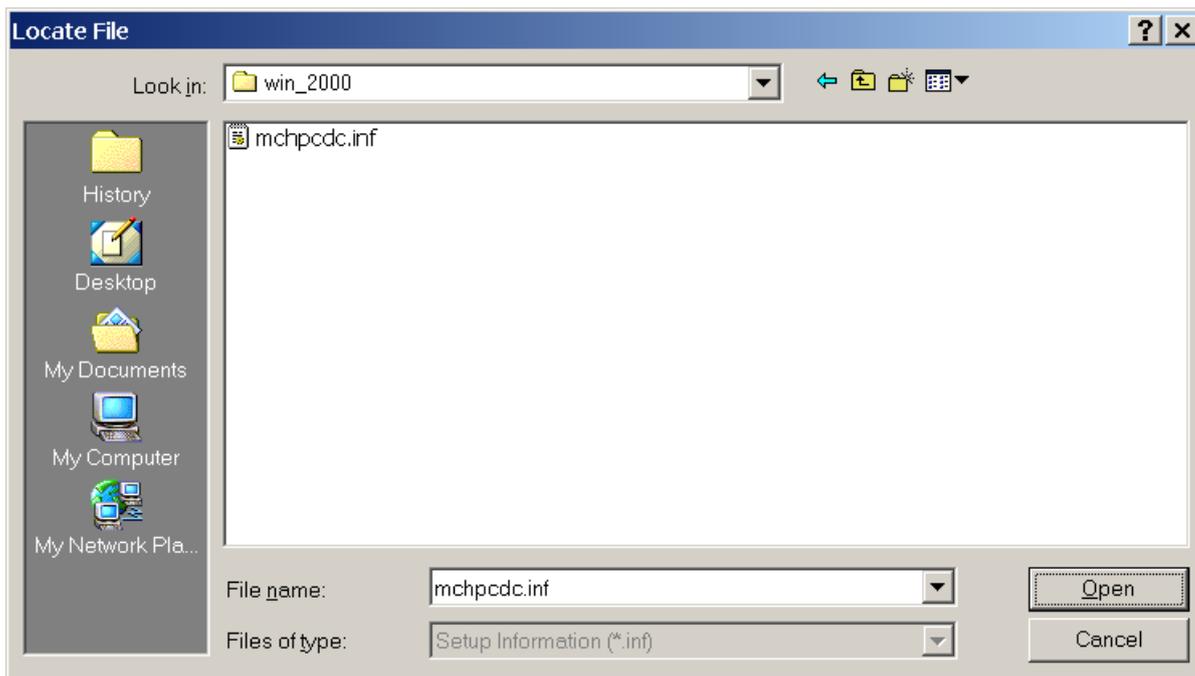
- Click Next. The following screen should appear



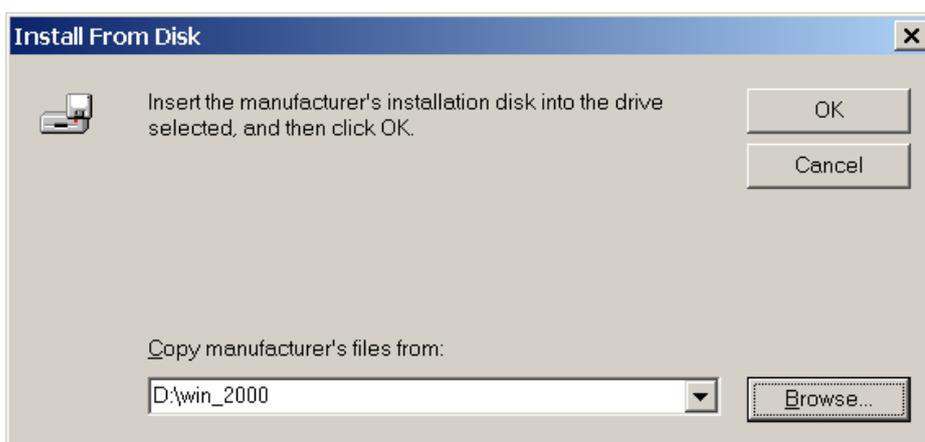
- Click on "Have Disk.." The following screen should appear



Click on Browse and go to the CD ROM and find the "win_2000" folder.



Click on "Open" and the following screen should appear



Press "OK" and the following screen should appear.

Found New Hardware Wizard

Select a Device Driver

Which driver do you want to install for this device?



Select the manufacturer and model of your hardware device and then click Next. If you have a disk that contains the driver you want to install, click Have Disk.

Models:

Communications Port

Have Disk...

< Back

Next >

Cancel

Press "Next>" and the following screen should appear

Found New Hardware Wizard

Start Device Driver Installation

The device driver will be installed with the default settings.



The wizard is ready to install the driver for the following hardware device:



Communications Port

Windows will use default settings to install the software for this hardware device. To install the software for your new hardware, click Next.

< Back

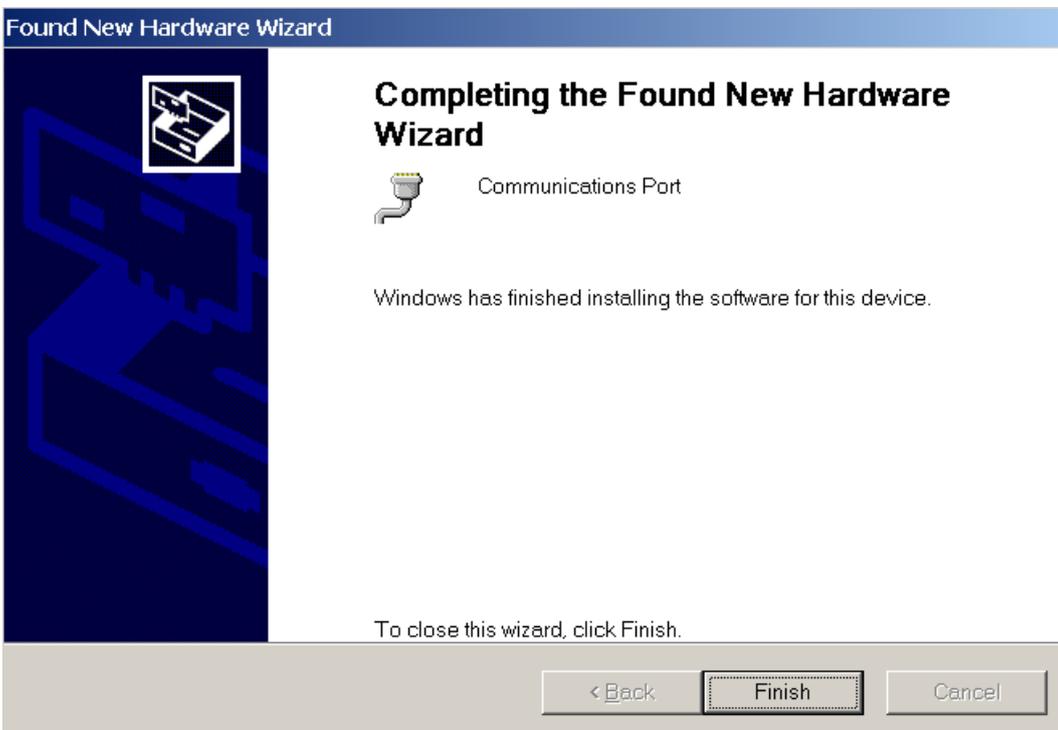
Next >

Cancel

Press "Next>" and the following screen should appear



Press "Yes" and the following screen should appear.



Press "Finish" and the driver should be installed.

Running the PR3 with JMRI on MAX OS 10.5 (Leopard)

1) Plug in the Digitrax PR3 to a USB port on an Intel-based Apple computer running MAC OS version 10.5. Within about a second the Green "USB" led on the PR3 should glow steady green showing a USB connection has been established with the MAC.

2) Open system profiler and under hardware>USB there should be a entry "Vcom" showing that the USB port has enumerated OK.

This optional step is simply to check the PR3 device was found

3) Goto JMRI sourceforge projects on the Web:

<http://jmri.sourceforge.net/install/MacOSX.html>

and follow the instructions to download JMRI projects.

Note; With our test new 2008-vintage Intel based Mac-Mini we did not need to load LibUSB drivers, since this machine recognized the USB device as a VCOM USB modem fine.

Additionally the Java version Apple factory installed (Java version 1.50_13) supported the JMRI version 2.0 with no problem, or updates required.

4) Run "Locotools" from the JMRI download folder or location saved at step 3.

Open e.g. LocoTools Preferences and select Layout Connection as "LocoBuffer USB" device , then for serial port select `"/dev/tty.usbmodem[****]"`,

where [****] is a unique identifier the MAC OS applies to the specific physical USB port the PR3 was connected to.

At this point the Baud rate and handshaking selections are irrelevant to USB operations, and can be ignored.

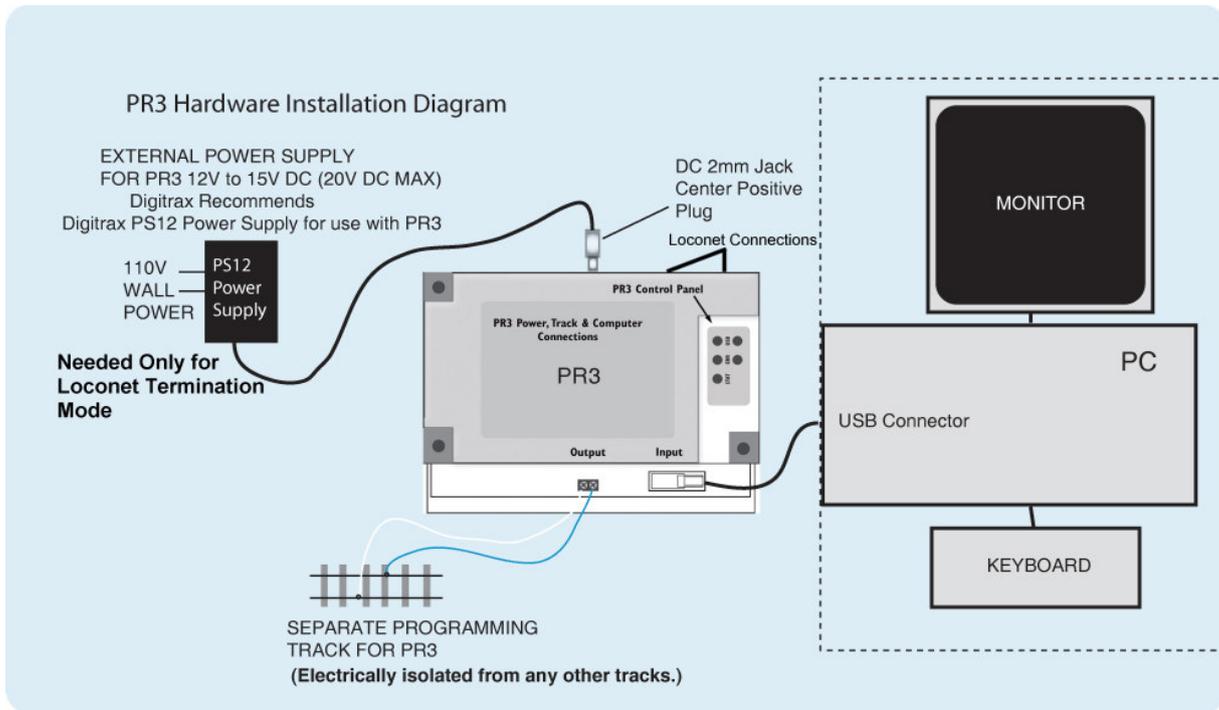
5) If the PR3 is connected to a LocoNet command station it should now be possible to run e.g. the LocoNet Monitor screen function and see messages on the Loconet. If you do not have a throttle connected you can turn the Command Station to "Sleep" and the GPOFF message should appear in the Monitor window.

This install was successful here at Digitrax with minimal effort, and other combinations of Apples PC's (e.g. based on PowerPC CPU's), VMWare Fusion, and OS versions may operate with user customization, but Digitrax cannot offer any opinion or support for these combinations since we have no direct knowledge of successful operation or integration.

PR3 Modes of Operation

Sound Programmer Mode

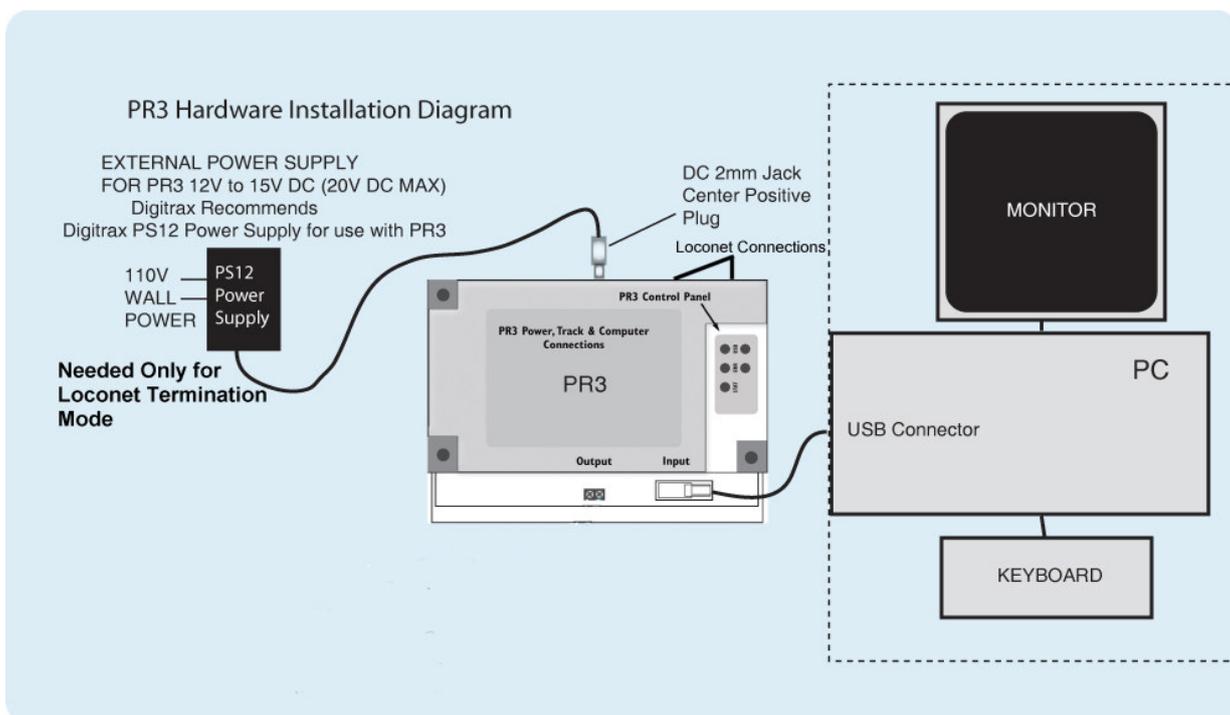
The PR3 can operate as a sound programmer (emulates a PR2 sound programmer) to change/test sounds on Digitrax Sound Decoders.



Loconet to PC Interface Mode

The PR3 can operate as a general purpose PC to Loconet Interface similar to the Digitrax MS-100 interface except that a USB port is used instead of a normal serial port.

A special Loconet Termination mode can be turned on to allow the use of the PR3 on a loconet without a command station attached. This mode requires an external +12 volt supply to be connected.



Switch Functions

The Mode Switch:

The Mode Switch next to the Green LED is used to toggle back and forth between MS-100 mode and PR2 Programmer Mode. The Green LED will wink once per second if in the MS-100 Mode or toggle every second when in the PR2 sound programming mode.

The Loconet Termination Mode Switch:

The switch next to the error LED is used only in MS-100 mode to activate the Loconet current source termination feature. This switch is active ONLY when a command station is NOT connected to the loconet and the red LED is solid on indicating there is no command station.

NOTE:

Do not turn on the Loconet Termination mode AND connect to a command station at the same time.

To turn on the Loconet Termination mode, press and hold the switch for at least 2 seconds then release. The red LED should go off indicating the current source mode is working. If the red LED is blinking, then the PR3 DC power is not connected or is too low.

To exit the Loconet Termination mode, press and hold the switch for 2 seconds and then release.

Factory Default Setting:

Pressing and holding both switches for 5 seconds or longer will reset the PR3 to its original factory settings (MS-100 mode with Loconet Termination mode off) The bi-color LED will toggle between red and green a few times to indicate that the default settings were taken.

LED Indicators

Condition	GREEN USB LED
No Power or USB	Off
No USB Connection or USB error	Blink once per second mostly off
USB Connected MS-100 Mode	Wink once per second mostly on
USB Connected MS-100 Mode Loconet Termination Mode	Wink twice per second mostly on
USB Connected Sound Programmer Mode	Toggles ON-OFF once per second

Condition	RED ERR LED
Loconet not connected or in sleep state	Solid On
+12VDC Power not connected or too low	Fast blink
No Errors	Off

Condition	RED/GRN STAT LED
MS100 Mode Data from PC to Loconet	Red blinks
MS100 Mode Data from Loconet to PC	Green blinks
MS100 Mode No Data activity	Off
Sound Programmer Mode(PR2 emulation)	Same status indications as on PR2 hardware