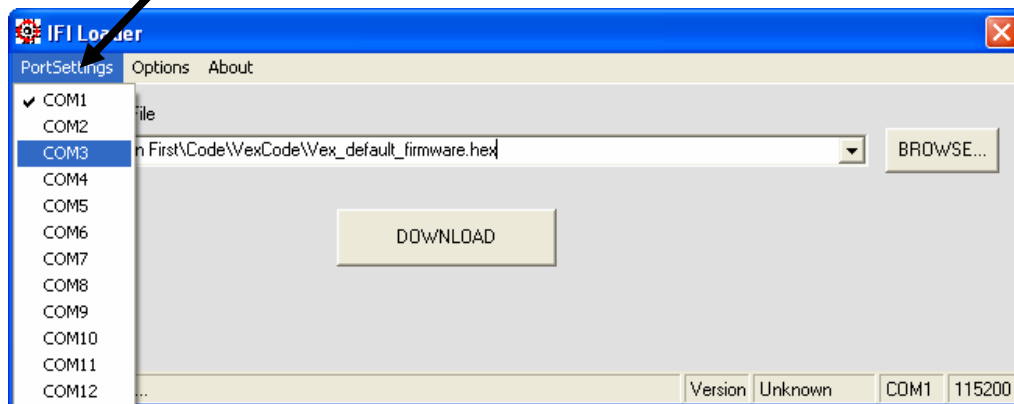
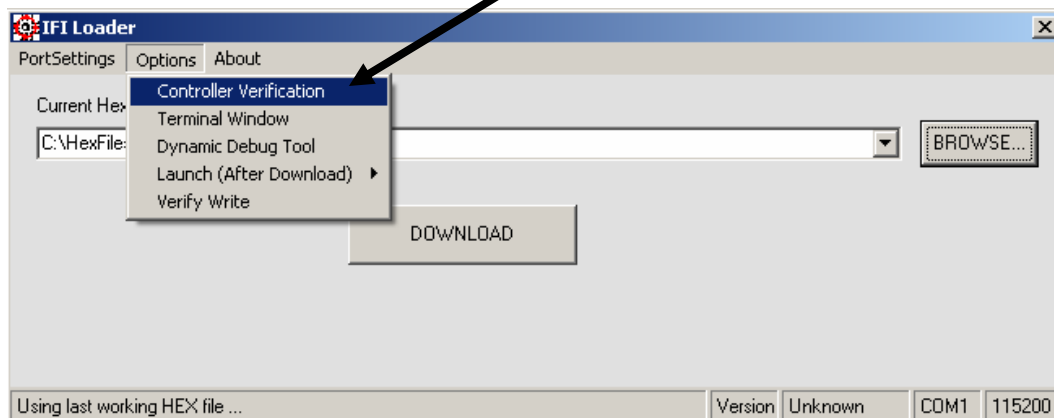


The following process is how to update firmware in the Master processor.

The **1st Step** is to make sure that the IFI Loader is configured on the correct Com Port. To do this, you must first find out what Com Port your PC is using for the USB Adapter. For Windows XP, look under Start, Control Panel, System, Hardware, and then Device Manager. Now click on Ports (Com & LPT) and if you are using the Vex USB Adapter you should see “Prolific USB-to-Serial Comm Port (COMX) where X is the Com Port number you need for the IFI Loader. Open the IFI Loader and click on PortSettings. Now click on the appropriate COMX.



The **2nd Step** is to make sure that the robot controller has been verified. Make sure there is a connect between the PC and the controller using the appropriate Programming Hardware prior to this operation and the controller is turned On. The IFI Loader supports many different controllers. The verification allows the Loader to select the appropriate protocol used during the download process. To do this, click Options and then Controller Verification.



IFI Loader

PortSettings Options About

Current Hex File

C:\VexCode\Vex_default.hex

BROWSE...

DOWNLOAD

Controller verification complete ...

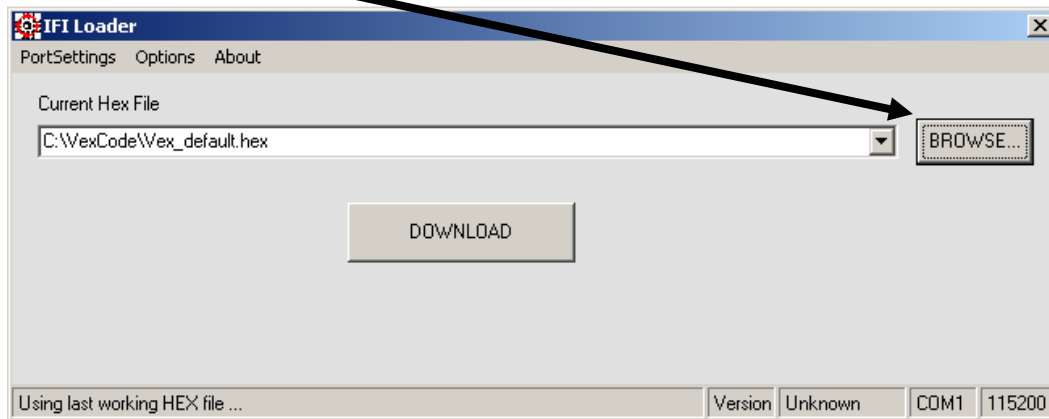
Version VEX

COM1 115200

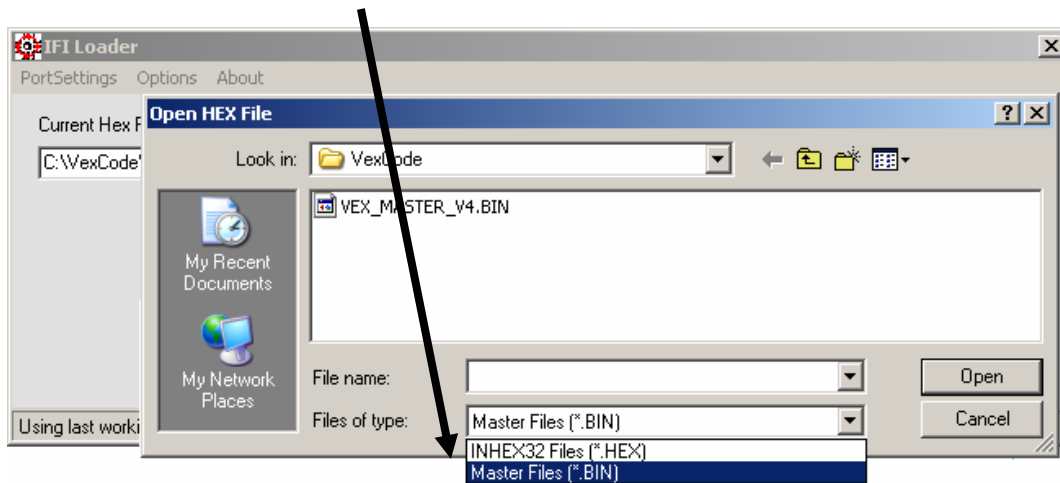
The screenshot shows the VEX-RTX software interface. On the left, there's a sidebar with options like "PortSettings" and "Current Hex File". The main window displays the "COM1 Terminal Window (Baud Rate = 115200)". Inside the terminal, the prompt "~IFI>" is visible, followed by the command "VEX - Master v4, User v2". Below this, a series of hexadecimal values are displayed in a grid-like format, representing data received from the device.

The text after the version numbers will vary and is determined by the print statements in the User Code. If there are no prints statements, there will be no text after the version status line.

The **3rd Step** is to download the BIN file. To do this, you must first find the BIN file by click on the BROWSE button from the Main IFI Loader window.

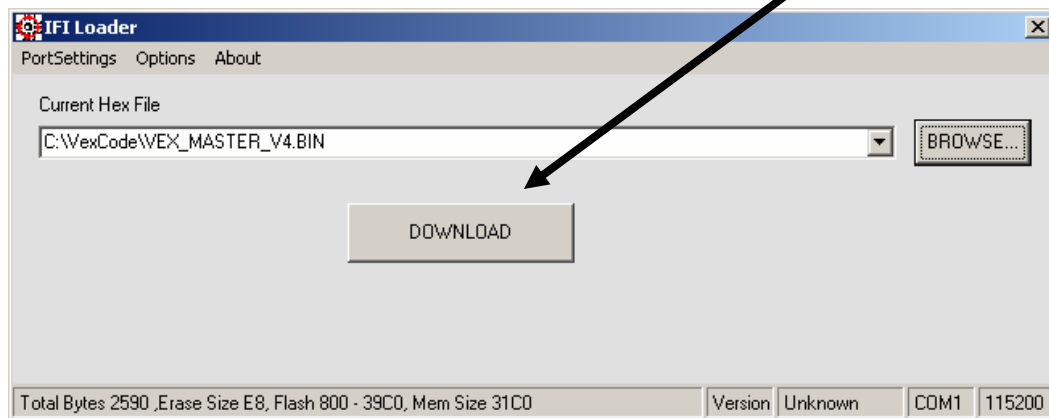


To view BIN files, select “Master Files (*.BIN)” in the “Files of type” combo box.

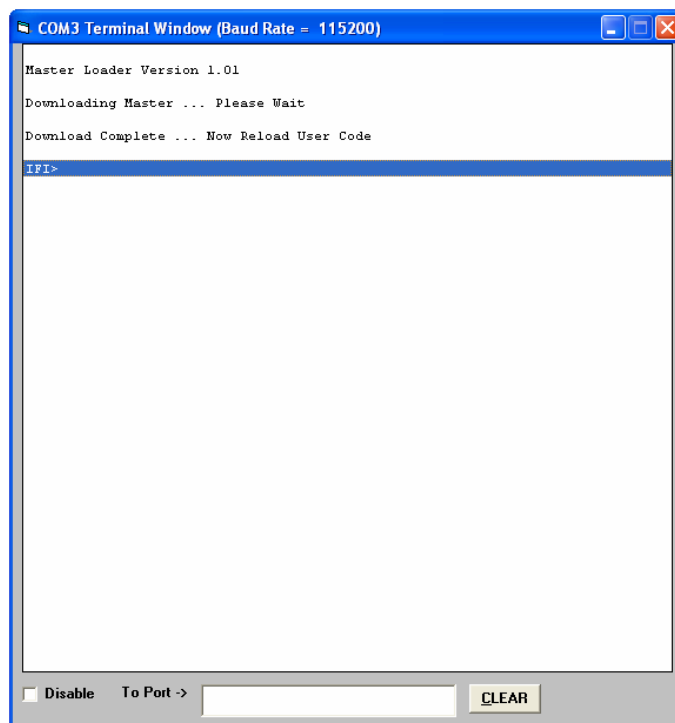


Navigate to the appropriate folder where you have stored the Master BIN file if it not currently displayed. Once the appropriate BIN file has been selected, click on the “Open” button which will return you to the main IFI Loader Screen.

You should now see the path to the Master file displayed in the “Current Hex File” window box. Now download the Master BIN file to the controller by clicking the DOWNLOAD button.



As the Master code is being downloaded, you will see a status bar indicating the progress of the download on the IFI Loader window. The following Terminal Window should be displayed when the Master Code has been downloaded.



The **4th Step** is to download the User Code. Once the master firmware has been updated, the User Code must be reloaded. In order to do this, repeat **Step 2**. Rather than selecting “Master Files (*.BIN)”, you must select the “INHEX32 Files (*.HEX)” option. After downloading the appropriate user code (file), the robot controller is ready for use.

To verify that the master code and user code is downloaded correctly, follow the procedure at the end of step 2.