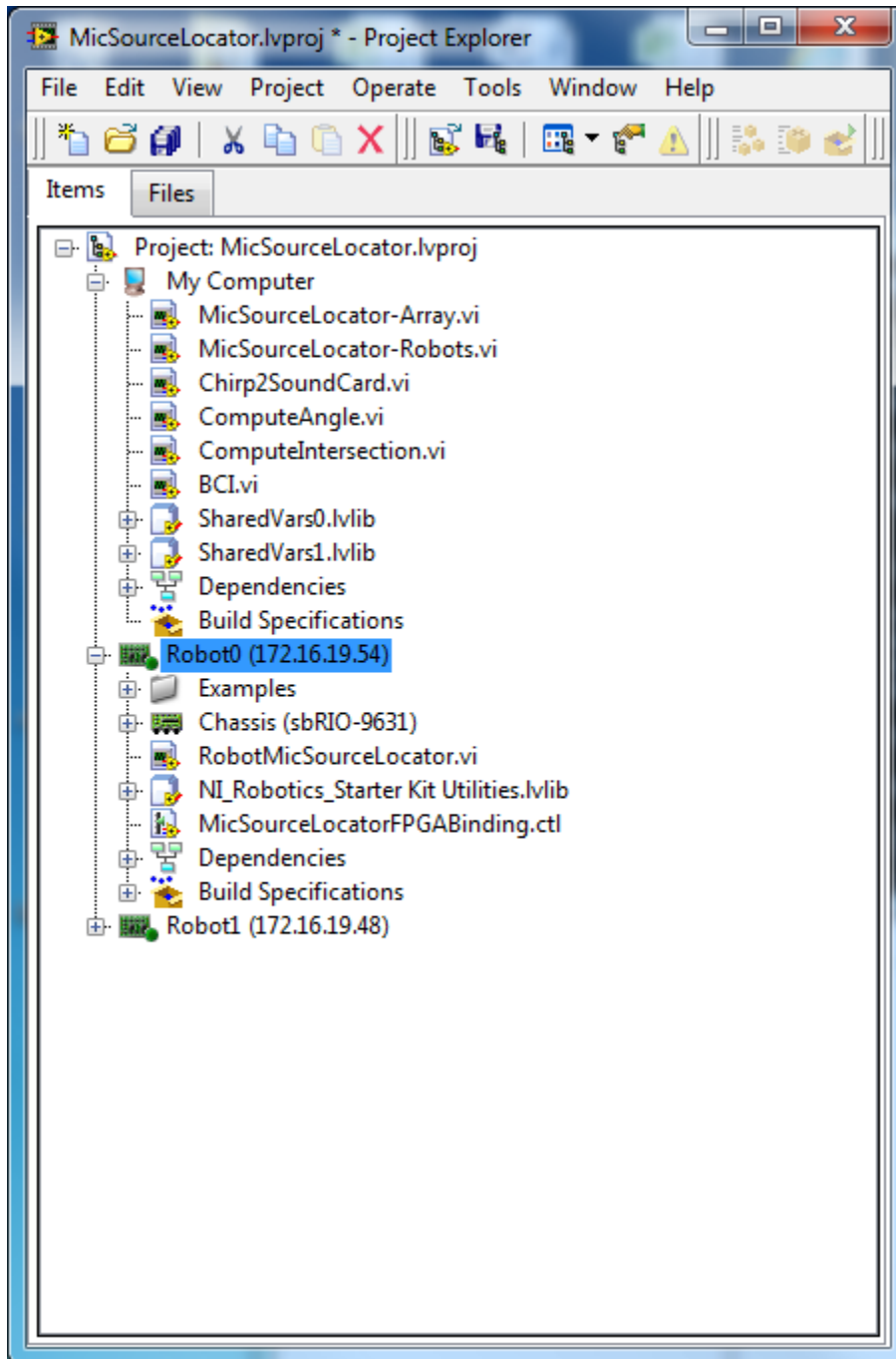


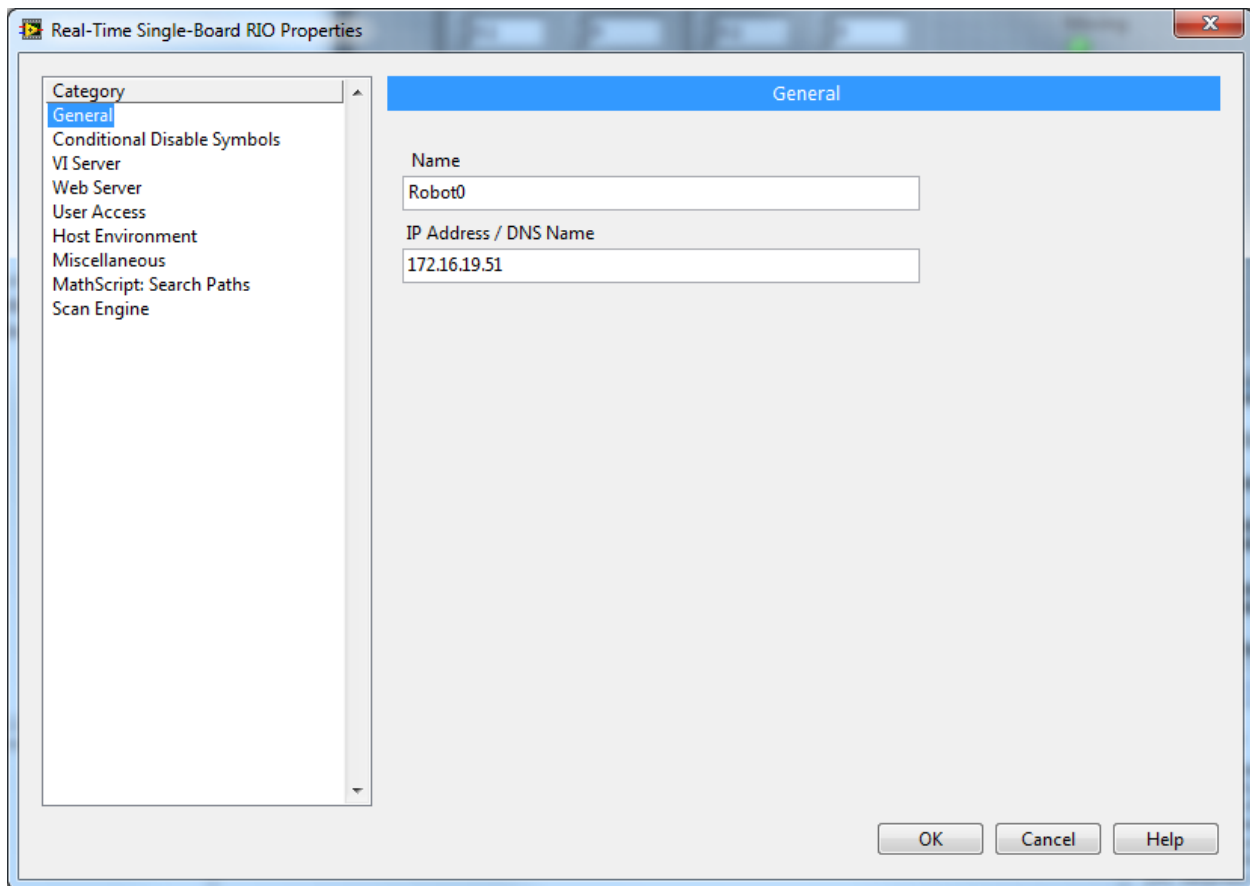
## Test, Change IP and Upgrade Firmware on sbRio robots

- [Test Robots](#)
- [Robot Battery Test](#)
- [Upgrade Firmware](#)
- [Change IP](#)

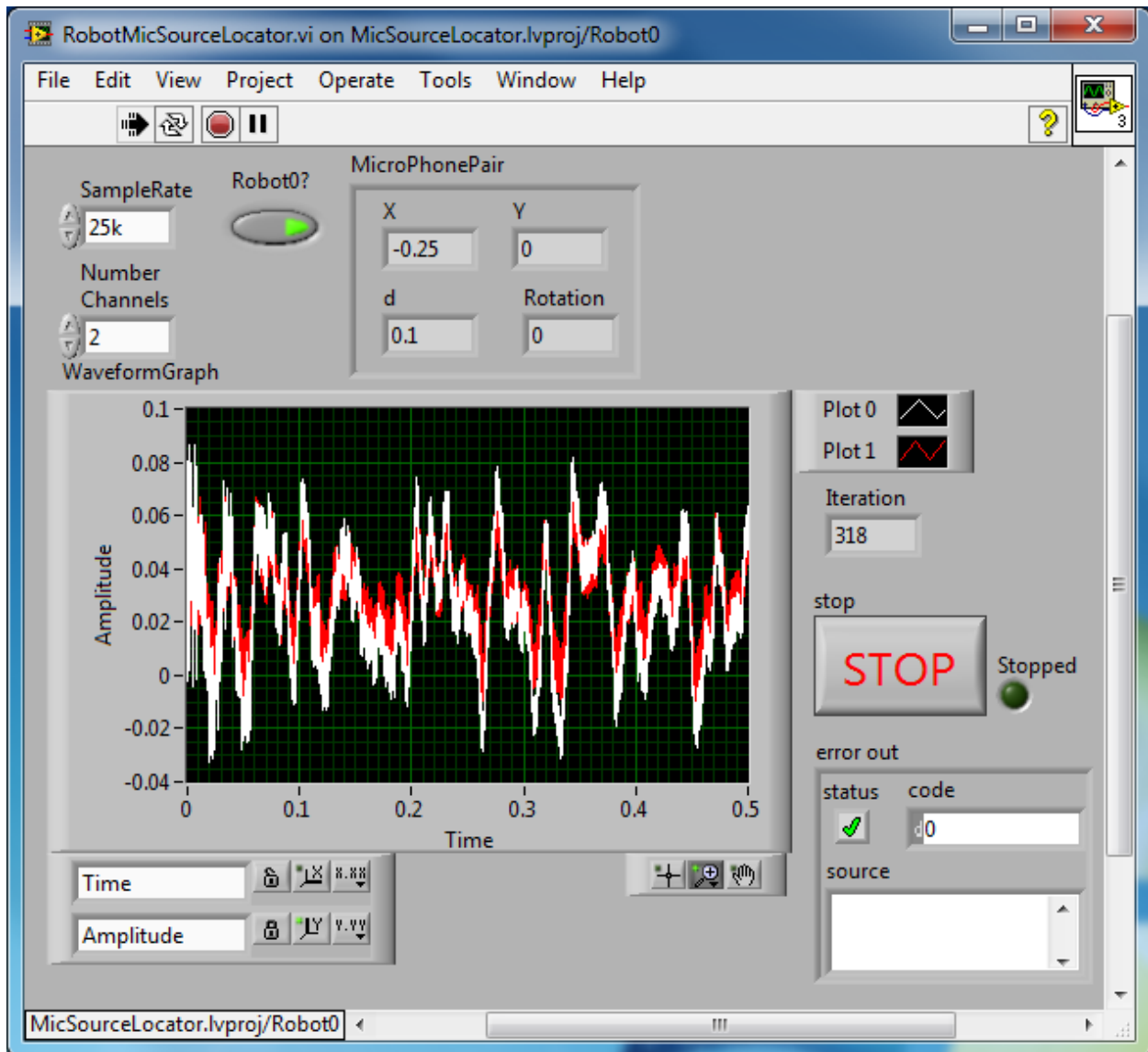
## Test Robots



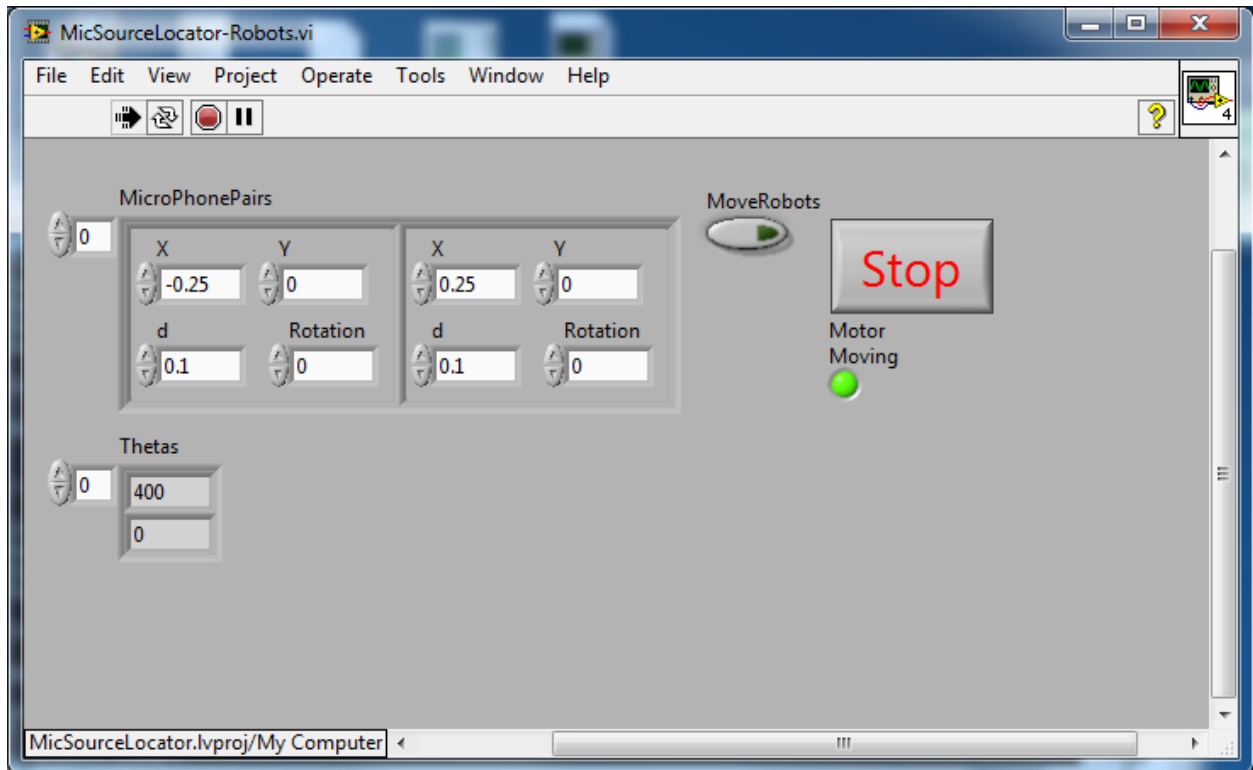
1. Open MicSourceLocator.lvproj from ESE297 webpage



2. Right Click on Robot0 and select Properties and change the IP to match the label on your robot.
3. Double click on Robot0 -> RobotMicSourceLocator.vi



4. Click the Run Arrow
5. Make sure that the Left Gain and the Right Gain on top of the Preamp is turned up to +48dB and that the Mix (on bottom) is in the middle and the Level (on bottom) is set to 10 and that the Phantom switch is ON. Verify that the Mic0 only activates the white trace and Mic1 only activates the red trace



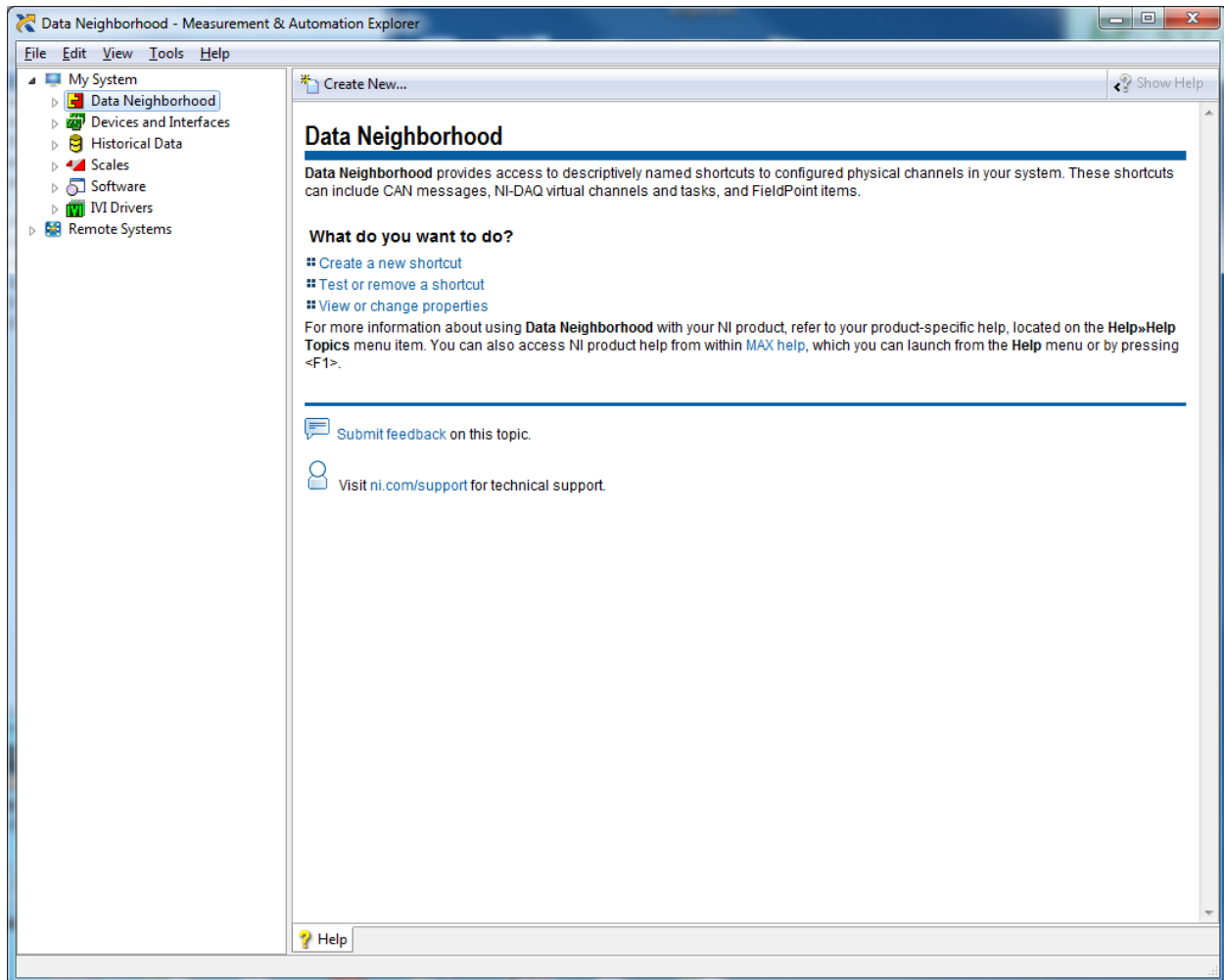
6. Double click on My Computer -> MicSourceLocator-Robots.vi and click the Run arrow.
7. Make sure that the Motor Moving light turns off after a few seconds and that Thetas[0] counts up.
8. Click MoveRobots and make sure that both wheels move in opposite directions  $\frac{1}{4}$  of a rotation.

## **Battery Test on Robots**

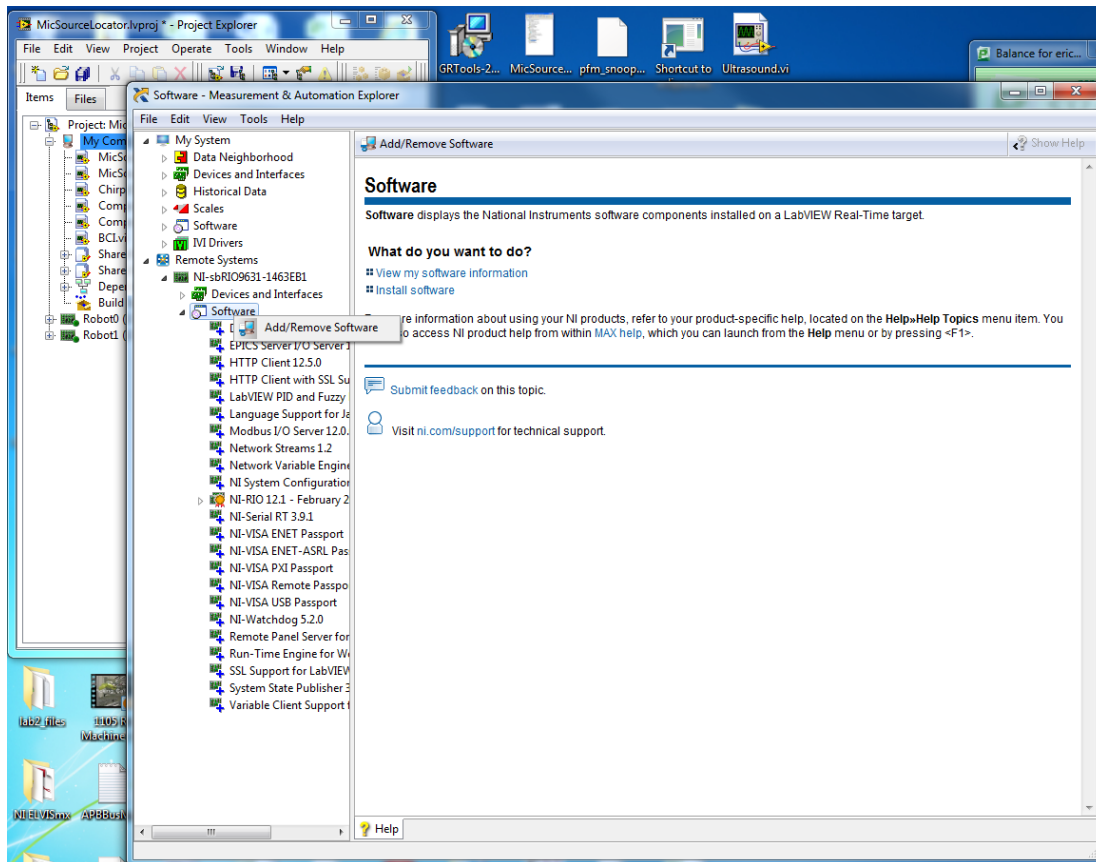
1. Follow instructions to test robots and verify all is working
2. Copy BatteryTest.vi from Ed's to your MicSourceLocator folder
3. Add BatteryTest.vi to your project under My Computer
4. Run Robot0 -> RobotMicSourceLocator.vi
5. Run My Computer -> BatteryTest.vi. This will move the motor every 5 seconds. The Iteration indicator should stop updating when the battery dies.

## Upgrade Firmware

1. Plug in sbRio robot to active Ethernet port
2. Push Dip Switch 3 to the down position (IP Reset)
3. Launch NI-MAX

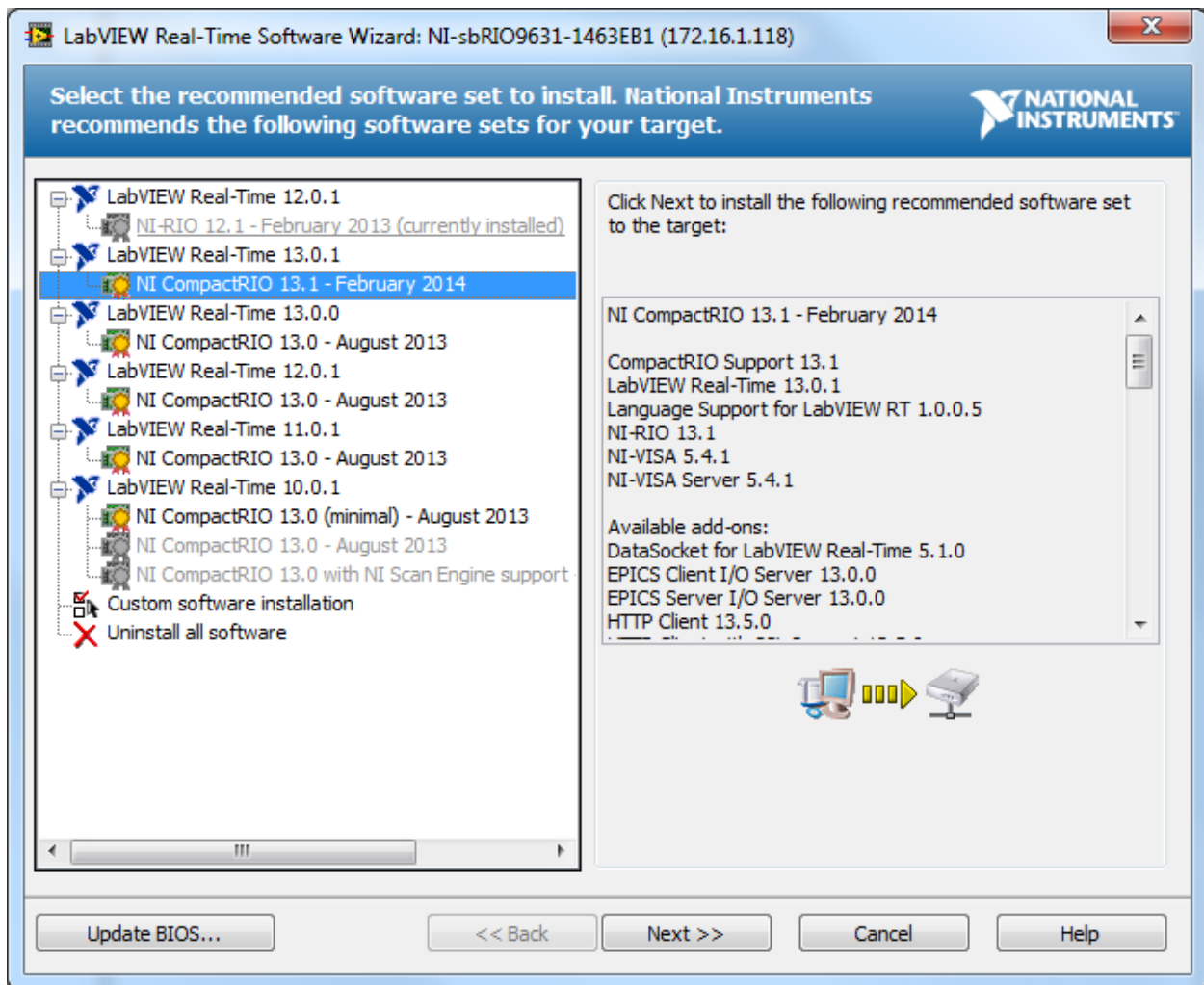


4. Click on the arrow to the left of Remote Systems

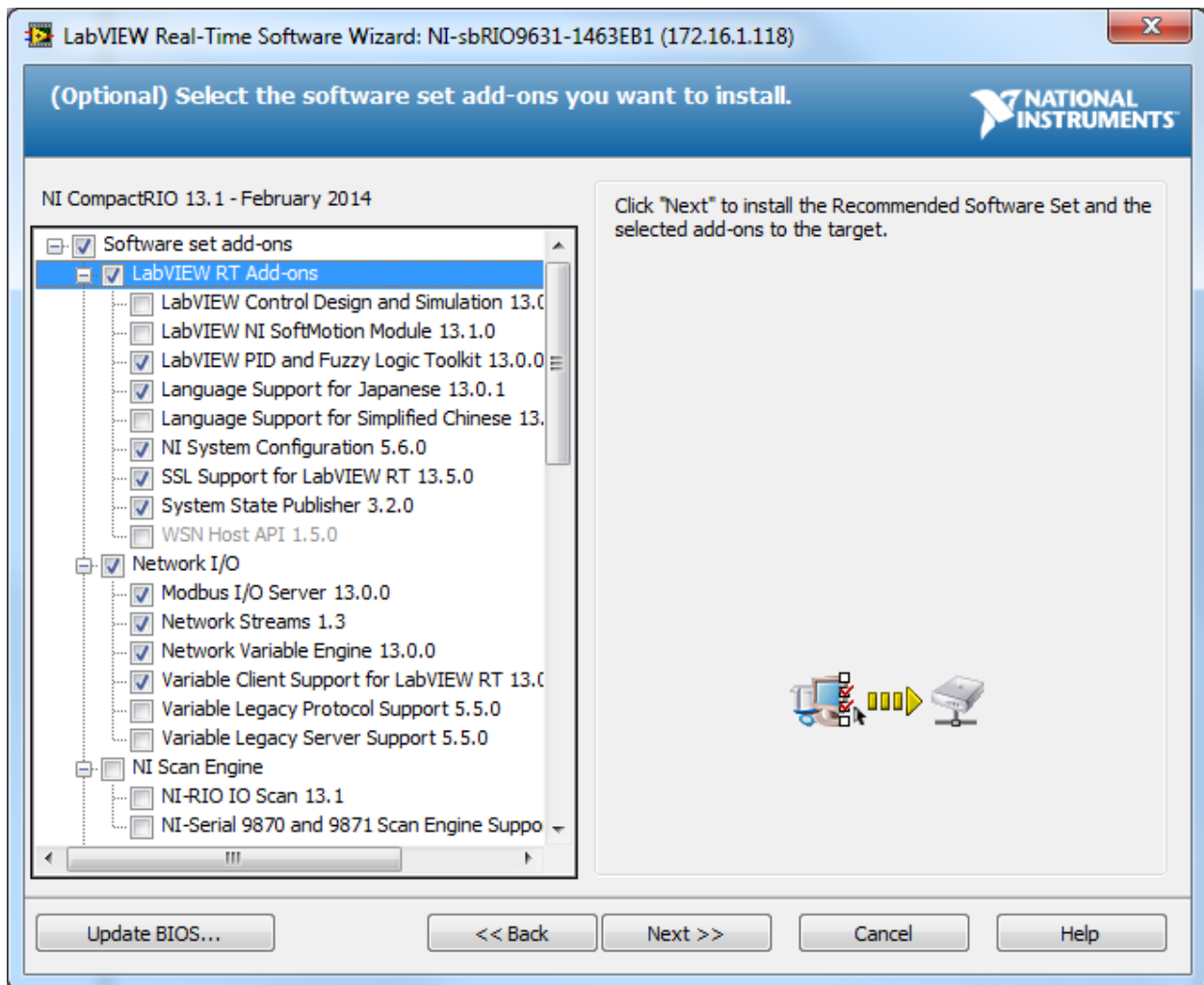


5. Right Click on Remote Systems -> sbRIO -> Software and select Add/Remove Software

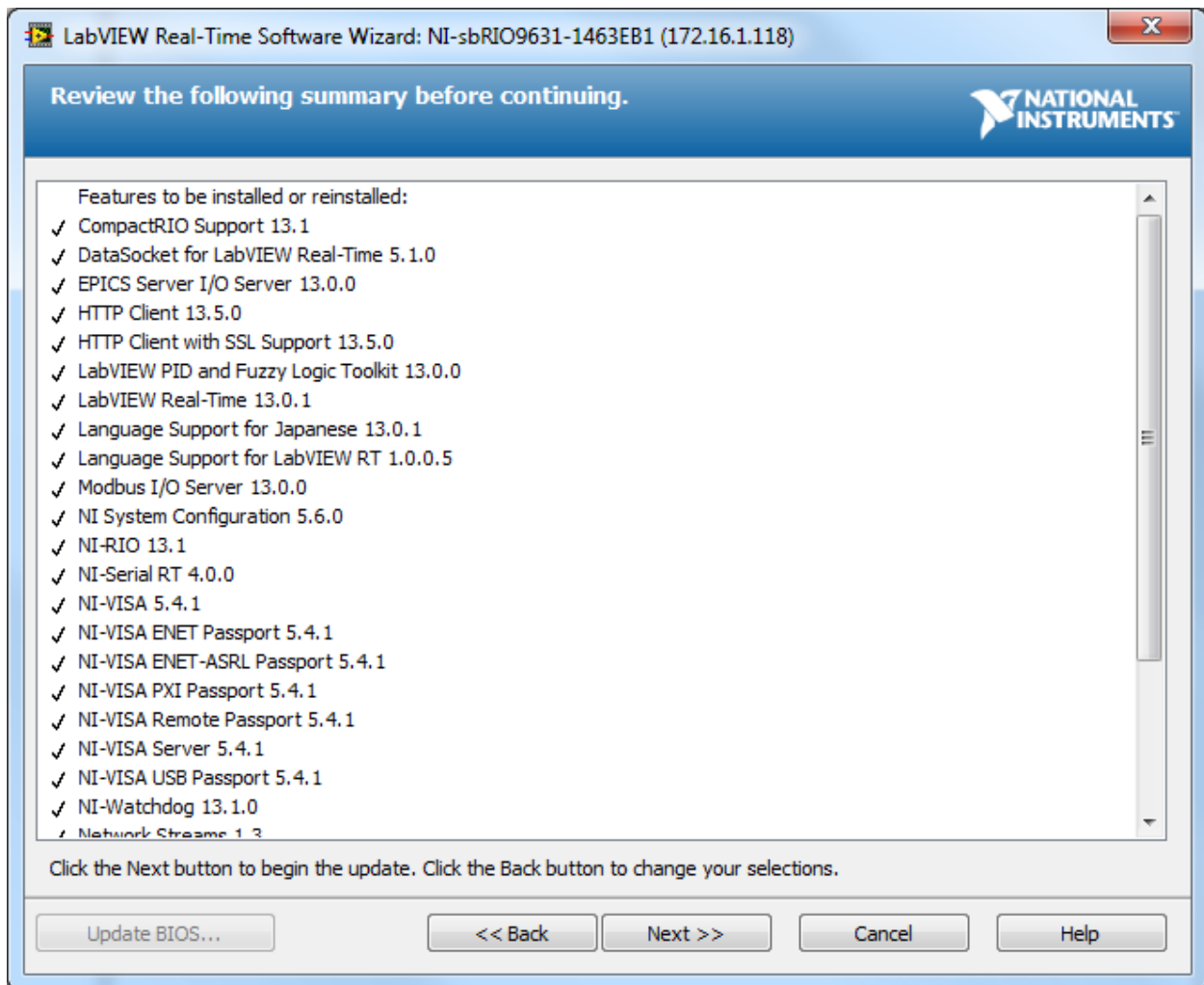




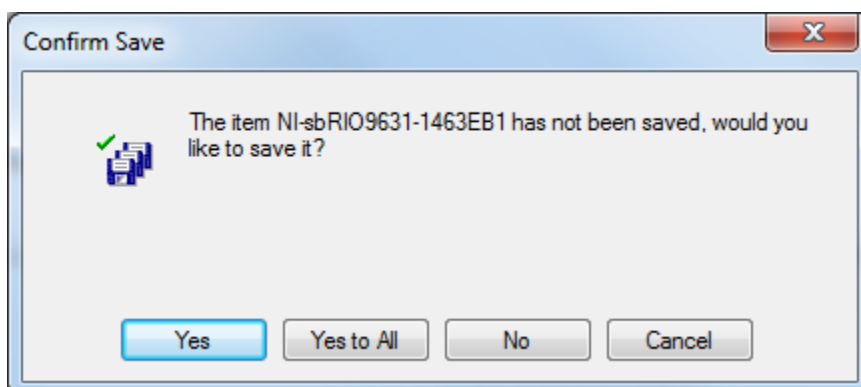
6. Select latest version under LabVIEW Real-Time and click Next >>



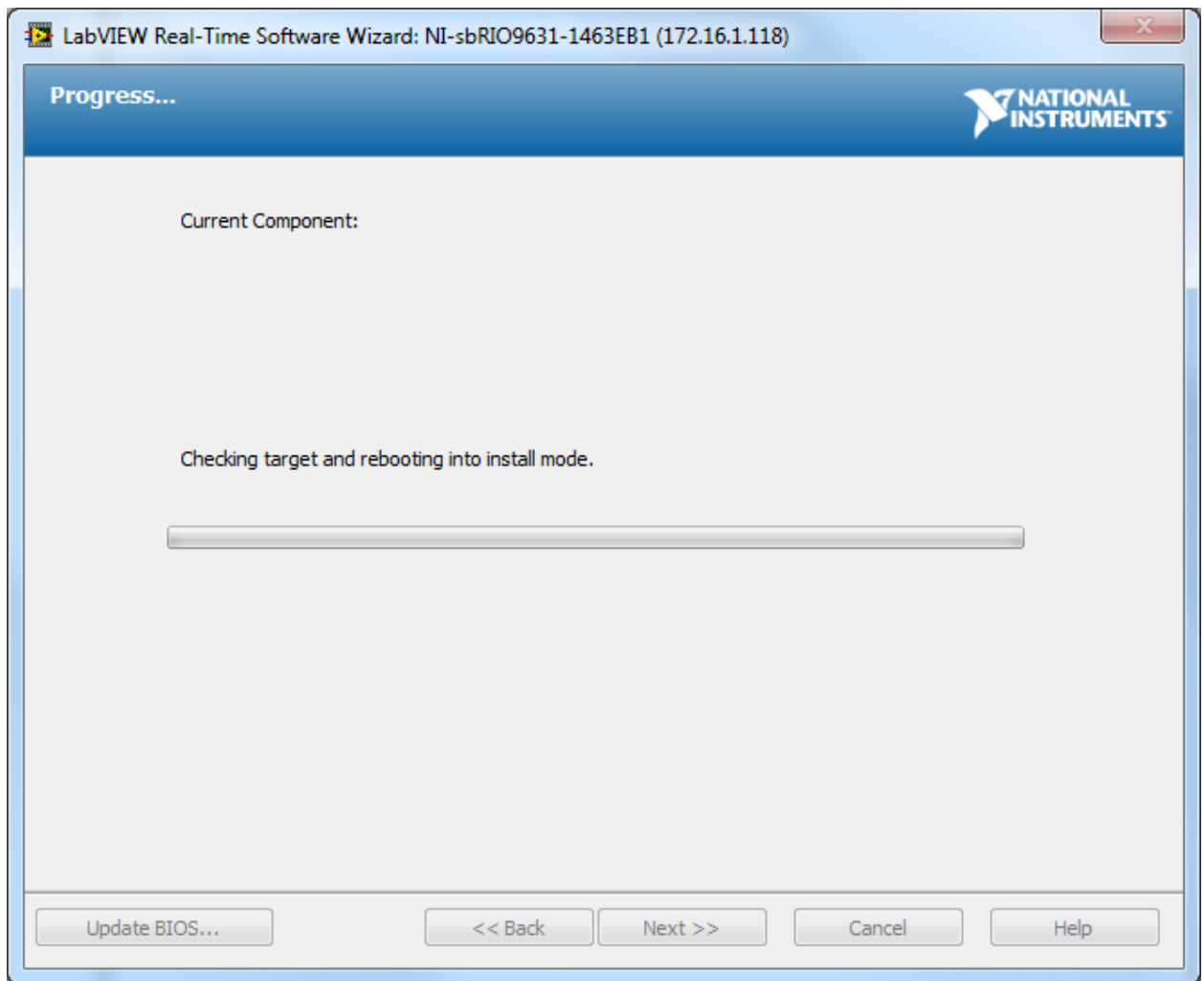
7. Click Next>>. The defaults selections are fine.



8. Click Next >>

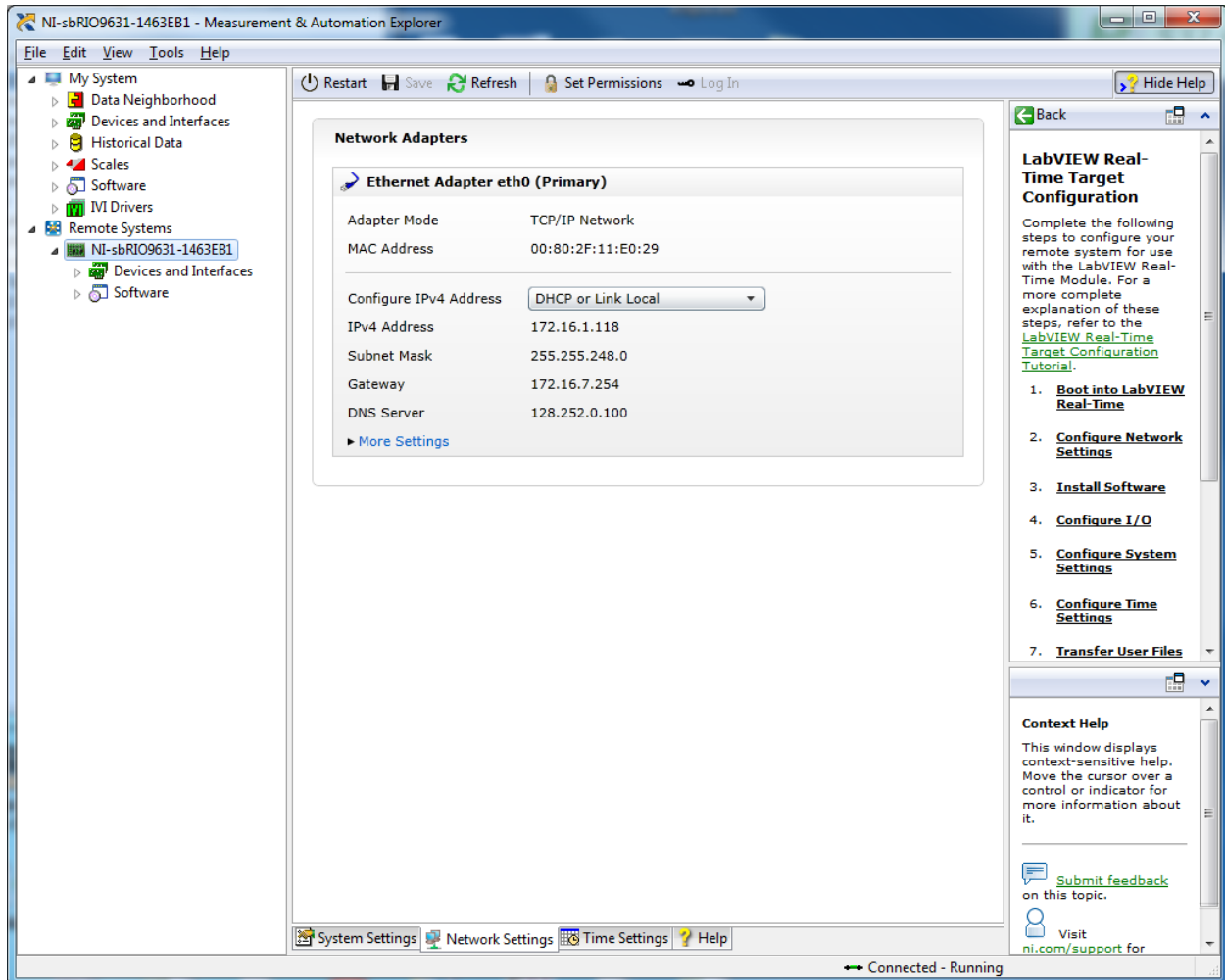


9. Click Yes to All

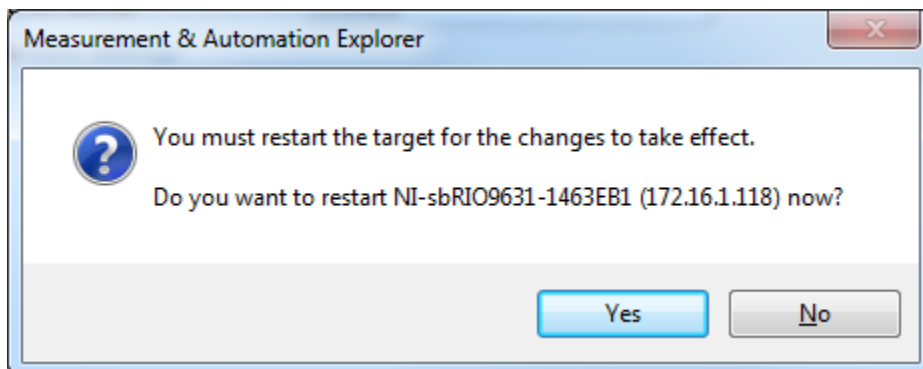


10. Wait patiently – this takes a few minutes. Click Finish when done.

## Change IP



1. Click on Network Settings and change Configure IP4 Address to Static. Then change the IP to match label on robot. Subnet Mask is 255.255.255.0. Click Save.



2. Click No. Then switch Ethernet cable to wireless adapter and reboot sbRio manually.
3. Open a Command Window and make sure you can ping the new IP from the computer.