



RoboJackets
FIRST - IGVC - BATTLEBOTS - ROBOCUP

2008 TE Sessions Supported by

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**NATIONAL
INSTRUMENTS™**

**Rockwell
Automation**



The George W. Woodruff
School of Mechanical Engineering



LabVIEW Part 3: Sensors

October 28, 2008

www.robojackets.org



Outline

- Motor control review
- Sensing
- Simple Autonomous
 - Possible complex autonomous!
- CRIO + LabVIEW Demo



Motor Control Review

- What block do I choose to make both motors run forward at the same time?
- What if I only want to run one motor?
- Turning?



Motor Control Review

- Let's do a warmup activity
 - Drive forward about a foot and stop



Sensors

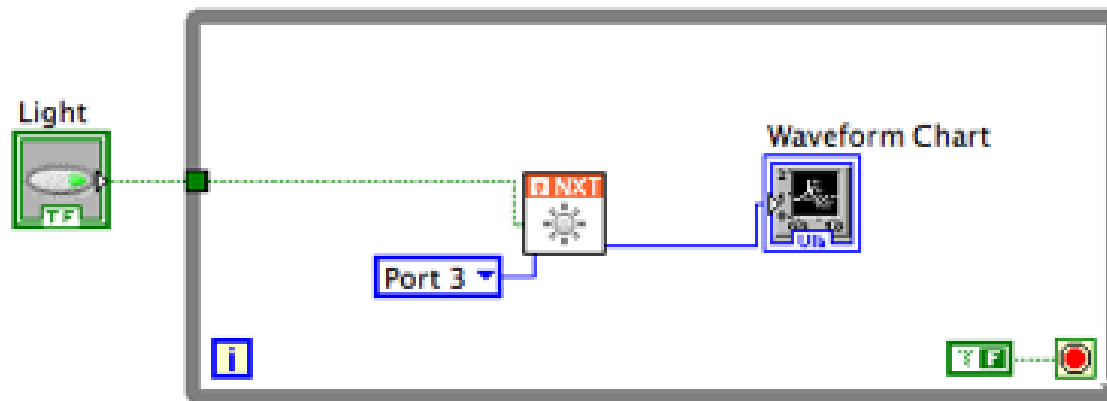
- Light
- Touch
- Ultrasonic (Distance)
- Sound (previously covered)
- Wheel Position (encoding)



Light Sensor

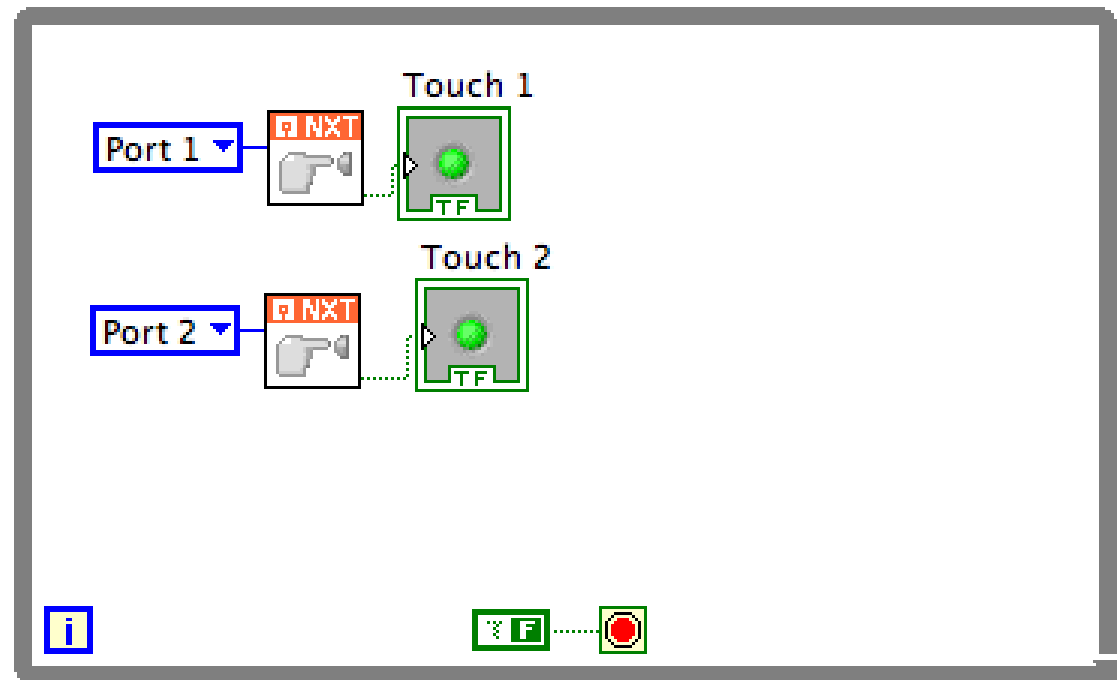


Let's do another demo!



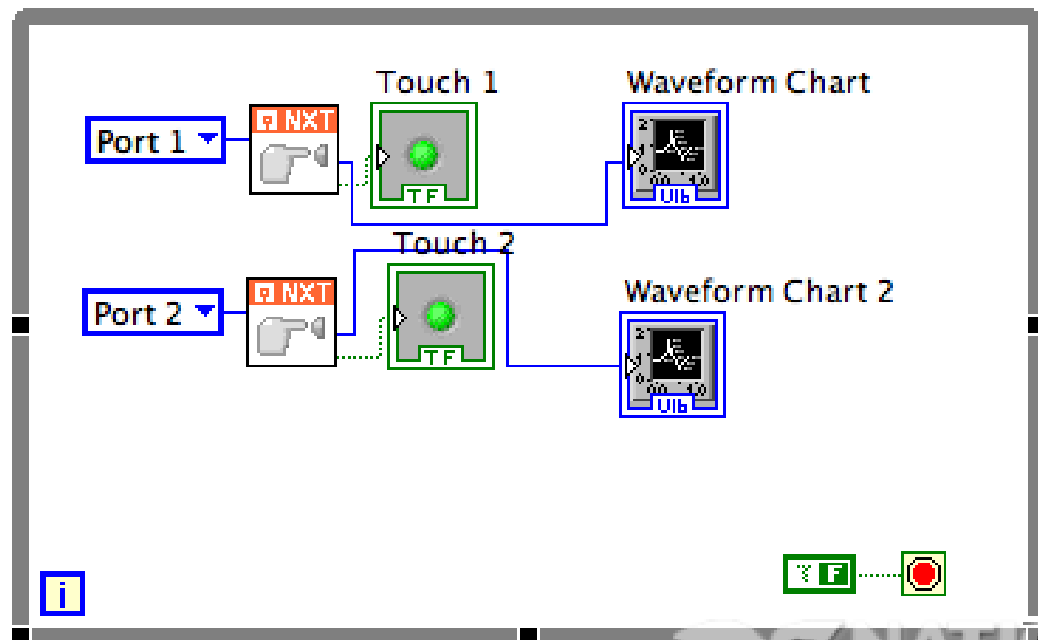


Touch Sensor





Touch Sensor

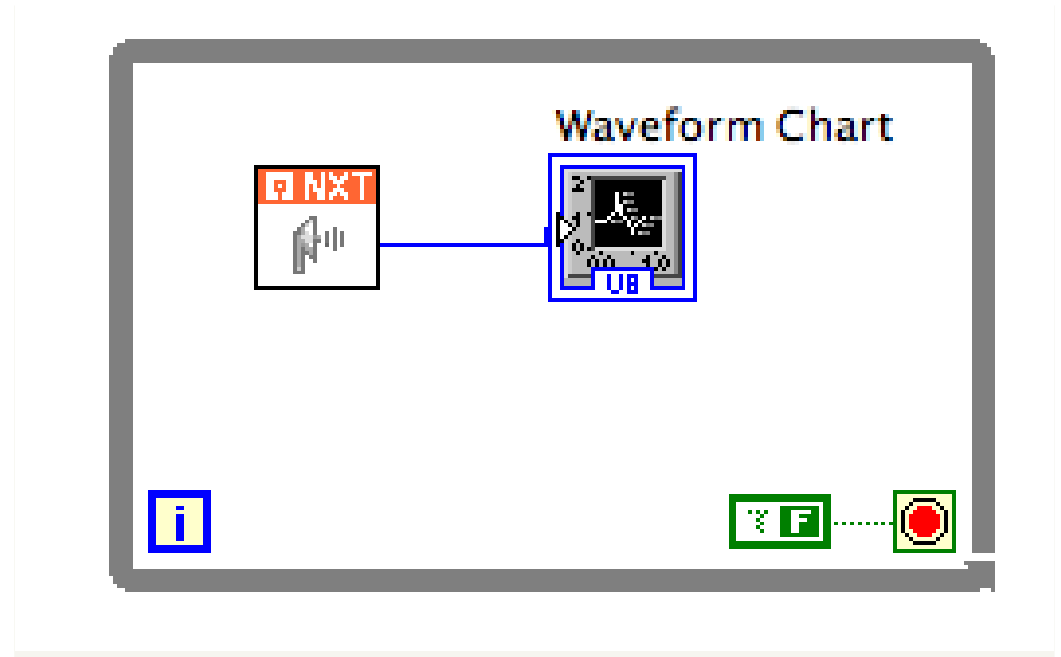




Ultrasonic Sensor



Let's do another demo!

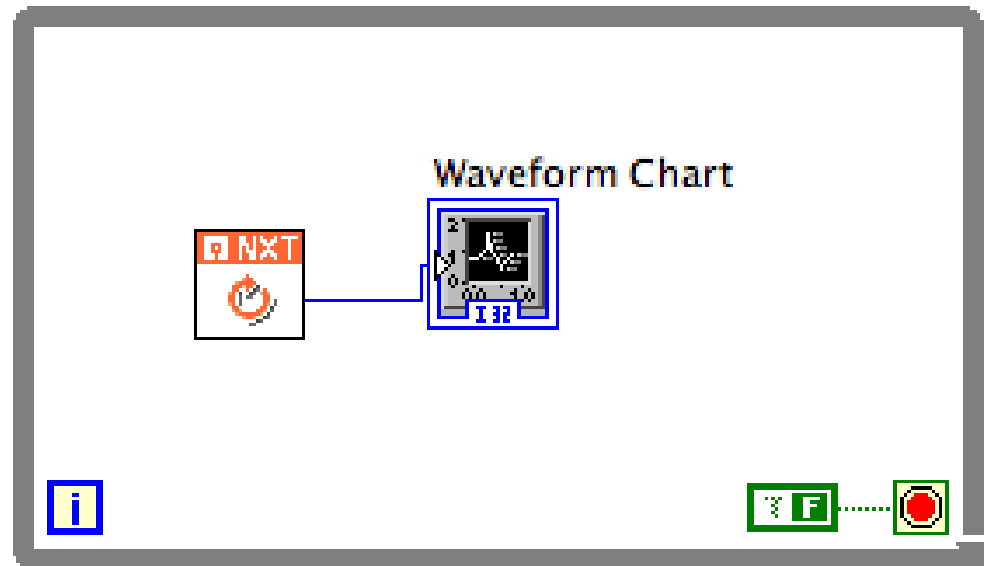
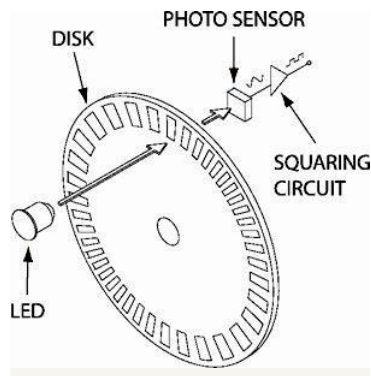




Rotation Sensor



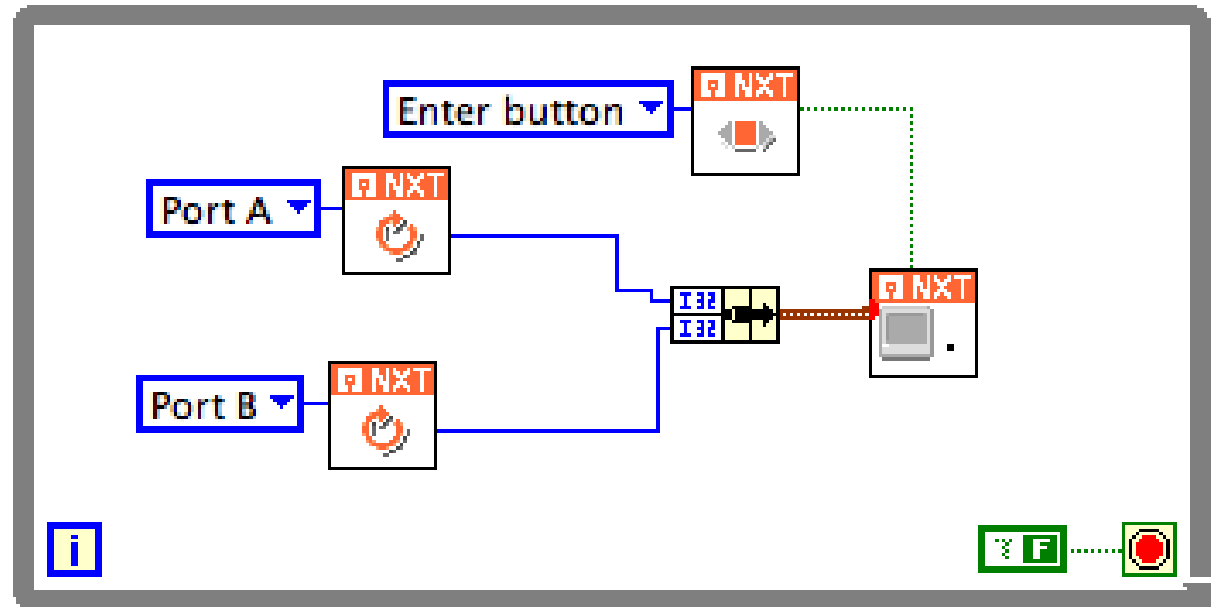
Let's do another demo!





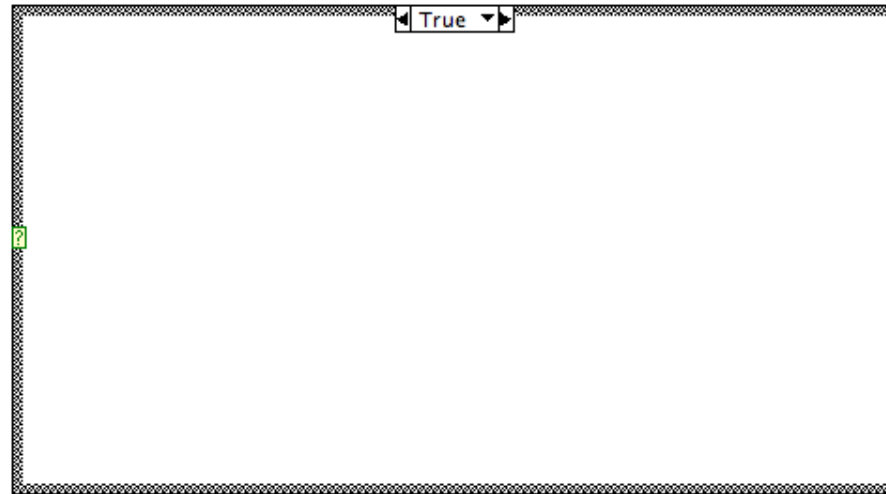
Rotation Sensor

Etch-A-Sketch!



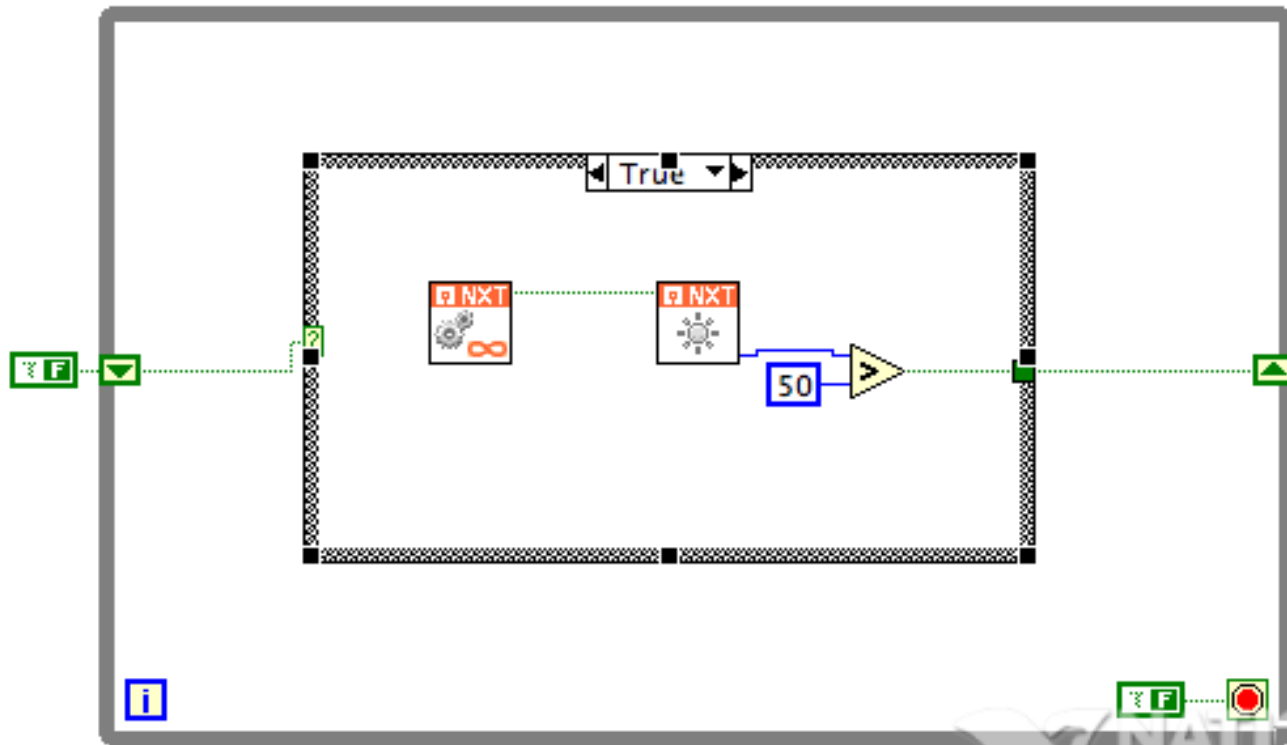


Case Statement





Drive Till Line Guided Activity





CompactRIO Demo

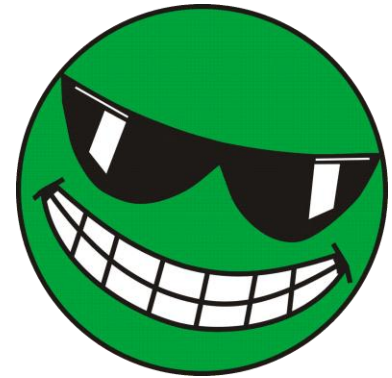


Forsyth Alliance



**An Alliance of Forsyth County Schools promoting
Technology, Math and Sciences via Robotic Design and Competition.**

- Rick Folea (rfolea@bellsouth.net)
 - PLEASE don't hesitate to ask for help
- REMINDERS:
 - Peachtree Regional is FULL!
 - If you haven't registered, we can still get you in
 - See Jeremy or Raquel ASAP
 - Full Day hands on Controller Session: Nov 15th
 - Sponsored by RoboJackets
 - We need a head count if you plan to participate





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<http://www.robojackets.org>

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For more information contact the RoboJackets.
(contact info available via the web)



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