

Wheel.lvlib:Wheel_Set.vi

Help by FRC Team 836 - The RoboBees

This VI will set the desired Revolutions Per Minute (RPM) for a wheel.



MotorControlDevRef

DeviceStatus

status

status is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred.



Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

code

code is the error or warning code.



Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

source

source describes the origin of the error or warning.



Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

Type

PWM

PWM Channel

DeadBand

 **Name**

 **maxPositivePwm**

 **minPositivePwm**

 **centerPwm**

 **maxNegativePwm**

 **minNegativePwm**


 **angularRange**

CAN

 **Device Number**


 **Control Mode**

Semaphore

 **semaphore** is a reference to an existing or newly created semaphore.

 **Max Vout**

TalonSRX Control Mode

 **Control Mode** specifies how the Talon SRX will control the motor. Percent VBus is the standard open-loop mode that is also accessible via the PWM interface on the Talon SRX.

 **Invert**


 **Control Gains**

 **Period (ms)**


 **TBH Gain**

 **Priority**

PID gains

 **PID gains** specifies the proportional gain, integral time, and derivative time parameters of the controller.


proportional gain (Kc)

 **proportional gain (Kc)** specifies the proportional gain of the controller. The default is 1.

integral time (Ti, min)

 **integral time (Ti, min)** specifies the integral time in minutes. The default is 0.01.

derivative time (Td, min)

 **derivative time (Td, min)** specifies the derivative time in minutes. The default is 0.

 **Stable (sec)**

 **Range**

 **Shooter Wheel DevRef Out**

 **Shooter Config reference**

 **Shooter Data**

 **MotorControlDevRef**

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Max Vout

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Invert



Set Point



Actual

Error Out

error in can accept error information wired from VIs previously called. Use this information to decide if any functionality should be bypassed in the event of errors from other VIs.



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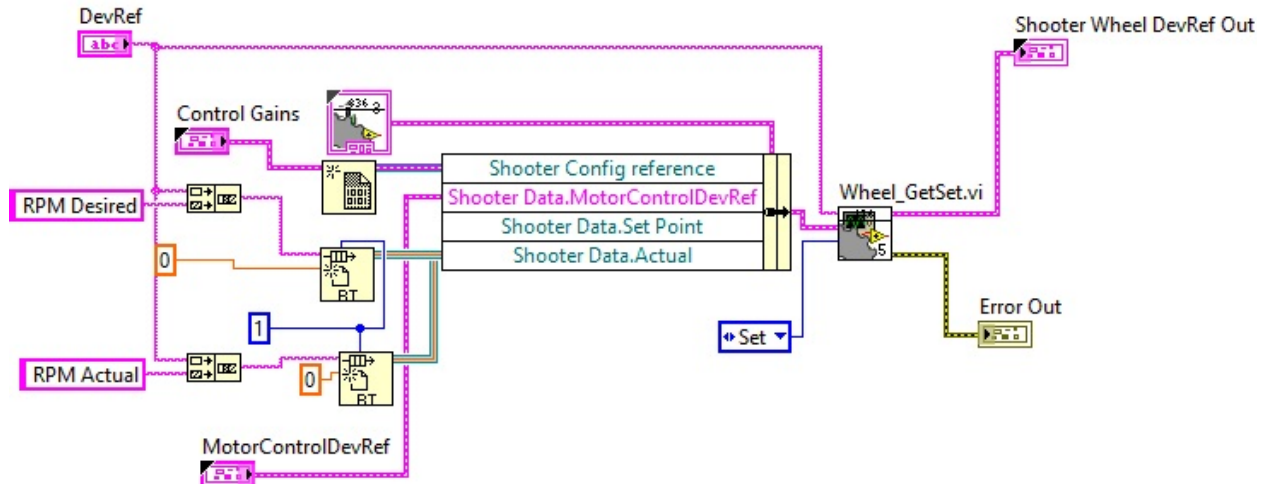
source

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Wheel.lvlib:Config.ctl



C:\Program Files (x86)\National Instruments\LabVIEW 2015\user.lib\836-Library\Motion Control\Shooter_Wheel\Config.ctl

WPI_MotorControlDeviceRef.ctl



C:\Program Files (x86)\National Instruments\LabVIEW 2015\vi.lib\Rock Robotics\WPI\MotorControl\WPI_MotorControlDeviceRef.ctl

WPI_CANJaguar_ControlMode.ctl



C:\Program Files (x86)\National Instruments\LabVIEW 2015\vi.lib\Rock Robotics\WPI\CAN\Jaguar\SubVIs\WPI_CANJaguar_ControlMode.ctl

Wheel.lvlib:Data.ctl



C:\Program Files (x86)\National Instruments\LabVIEW 2015\user.lib\836-Library\Motion Control\Shooter_Wheel\Data.ctl

WPI_CANTalonSRX_APIControlMode.ctf



C:\Program Files (x86)\National Instruments\LabVIEW 2015\vi.lib\Rock Robotics\WPI\CAN\TalonSRX\WPI_CANTalonSRX_APIControlMode.ctf

FPGA_DIOPWMChannel.ctf



C:\Program Files (x86)\National Instruments\LabVIEW 2015\vi.lib\Rock Robotics\SystemInterfaces\DIO\FPGA_DIOPWMChannel.ctf

WPI_PWMDeadband.ctf



C:\Program Files (x86)\National Instruments\LabVIEW 2015\vi.lib\Rock Robotics\WPI\PWM\WPI_PWMDeadband.ctf

Wheel.lvlib:WheelControl.ctf



C:\Program Files (x86)\National Instruments\LabVIEW 2015\user.lib\836-Library\Motion Control\Shooter_Wheel\WheelControl.ctf

WPI_MotorControlType.ctf



C:\Program Files (x86)\National Instruments\LabVIEW 2015\vi.lib\Rock Robotics\WPI\MotorControl\WPI_MotorControlType.ctf

Wheel.lvlib:Wheel_GetSet.vi



C:\Program Files (x86)\National Instruments\LabVIEW 2015\user.lib\836-Library\Motion Control\Shooter_Wheel\Wheel_GetSet.vi

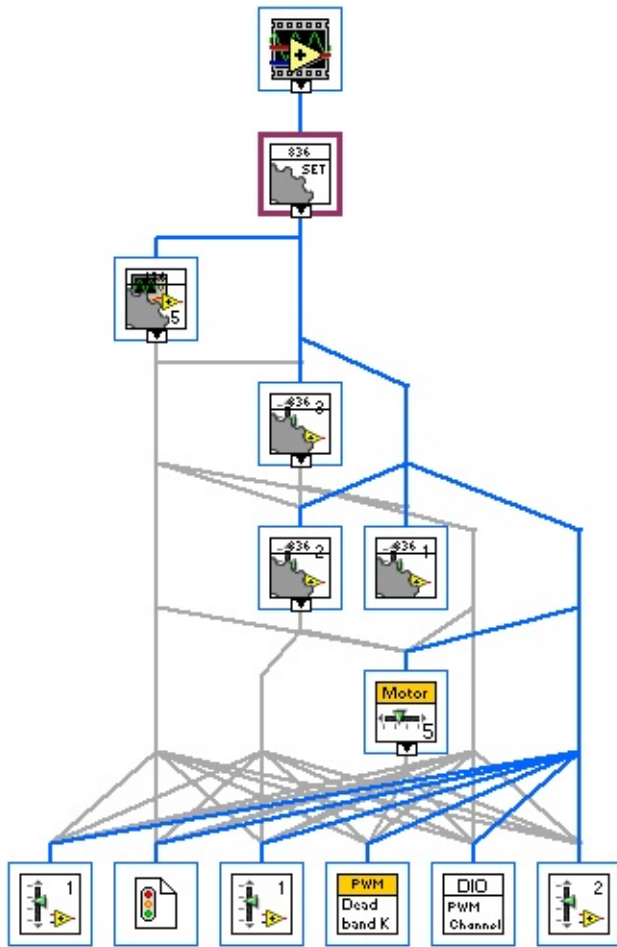
Semaphore RefNum

C:\Program Files (x86)\National Instruments\LabVIEW 2015\vi.lib\Utility\semaphor.llb\Semaphore RefNum

"Wheel.lvlib:Wheel_Set.vi History"

Current Revision: 85

Position in Hierarchy



Iconified Cluster Constants