

Hindbrain.vi

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Last modified on 2/27/2016 at 10:19 PM

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Connector Pane

Hindbrain.vi



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Front Panel

Left LIDAR Position
0

Left LIDAR Encoder Pos
0

Left Drive Status

Left Enable Drive ☐ Left Disable Drive ☐

Left Drive Status
Disabled

Left Drive Fault ☐ Left Temp Fault ☐ Left Vsop Present ☐

Right Drive Status

Right Enable Drive ☐ Right Disable Drive ☐

Right Drive Status
Disabled

Right Drive Fault ☐ Right Temp Fault ☐ Right Vsop Present ☐

Left Tilt Unit State, Settings & Command

Left Tilt Unit State

Index? ☐ In Init? ☐

Encoder Position
0

Position Error Status ☐

Left Tilt Unit Settings

Position PID Gains

Kp 4 Kd 200 Ki 0 ILim 1

Kv 0 Vff 0 Aff 0 Td 2

Current PI Gains

Proportional Gain 20

Integral Gain 10

Derivative Gain 0

Current Limit
105

Left Tilt Unit Command

Init? ☐

Position Setpoint
0

Init Current Output
0

Reset Position ☐

Right Tilt Unit State, Settings & Command

Right Tilt Unit State

Index? ☐ In Init? ☐

Encoder Position
0

Position Error Status ☐

Right Tilt Unit Settings

Position PID Gains

Kp 4 Kd 200 Ki 0 ILim 1

Kv 0 Vff 0 Aff 0 Td 2

Current PI Gains

Proportional Gain 20

Integral Gain 10

Derivative Gain 0

Current Limit
105

Right Tilt Unit Command

Init? ☐

Position Setpoint
0

Init Current Output
0

Reset Position ☐

Relay Control

Manual Override ☐

Current Heartbeat ☐

Leonardo_Offsets

x_offset 2000 y_offset 420 z_offset 1000

Theta_z 0.000000

Raphael_Offsets

x_offset 2000 y_offset 420 z_offset 1000

Theta_z 0.000000

DriveCommand

WheelAngle (Deg) 0

Velocity (MPH) 0

Brake ☐

DriveState

WheelAngle (Deg) 0

Velocity (MPH) 0.000000

Brake ☐

Throttle Controller Settings

PID gains

proportional gain (Kc) 5

integral gain (Kc*Ts/Ti) 0.007812

derivative gain (Kc*Td/Ts) 0

Voltage Offset
1.5

Position Reset
☐

Reset PID
☐

Max Brake Voltage
4.000000

Max Gas Voltage
4.000000

Min Brake Voltage
1.000000

Min Gas Voltage
1.000000

Throttle Loop Speed
500000

ESTOP Engaged
☐

Steering Wheel Endstops

Neg Steer Endstop ☐ Pos Steer Endstop ☐

Steering State

Within Lower Limit ☐ Within Upper Limit ☐

Motor Command Voltage in Range ☐ Deadband ☐

Position (Ticks)
0

PID Output
0

Motor Voltage
0.000000

Steering Controller Settings

PID gains

proportional gain (Kc) 3.000000000000

integral gain (Kc*Ts/Ti) 0.000000000000

derivative gain (Kc*Td/Ts) 0.000000000000

Position Reset
☐

Upper Voltage Limit
5.000000

Upper Encoder Limit
20600

Lower Voltage Limit
-5.000000

Lower Encoder Limit
-20600

Deadband High Threshold
0.01000976562

Deadband Low Threshold
0.000000000000

Allow Command Positive Voltage
☐

Allow Command Negative Voltage
☐

STOP MOTORS
☐

7 NATIONAL INSTRUMENTS
LabVIEW Home and Student Edition

Odometer (meters)
0

Throttle State

Gas Voltage 0.000000

Brake Voltage 0.000000

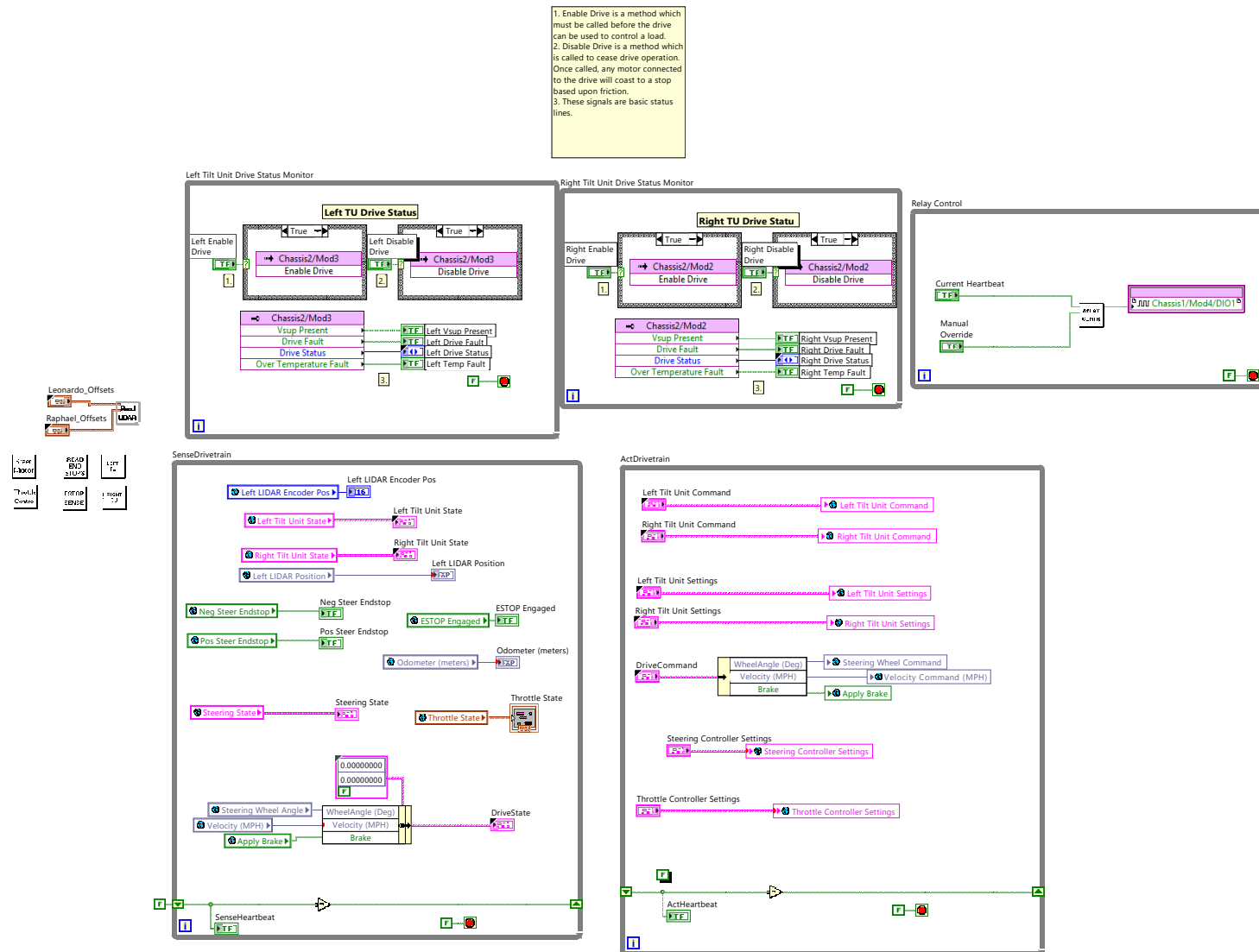
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Block Diagram



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