
Quadrangles 2016 source code Documentation

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Drivetrain

The drivetrain subsystem controls the six motors which drive the robot's tank drive.

1.1 Methods

1.1.1 TankDrive

Drives the drive train. Also automatically updates the SmartDashboard with the power levels the drive train is set to.

Arguments:

float leftAxis The power level to set the left set of motors to.

float rightAxis The power level to set the right set of motors to.

1.1.2 PowerDistOutput

Returns the current draw on LEFT_MOTOR_FOLLOWER according to the PDP board.

Arguments: `null`

Returns: Current draw on LEFT_MOTOR_FOLLOWER, as an `int`.

1.1.3 PowerSide

Gets the total current draw on a given side of the drive train.

Arguments:

int value An `int`, preferably 0 or 1, the specifies which side to get the current draw of.

Returns:

The current on the side specified by the `value` argument.

- If `value` is 0, the current draw of the left side is returned.
- If `value` is 1, the current draw of the right side is returned.
- For any other value, 0 is returned.

1.2 Variables

LeftTalonMaster

- Type: CANTalon
- Private: Yes

Notes: This is the **master** talon on the left side of the drive train. Driving it will (read: should) make the other ones follow it automatically.

LeftTalonFollower

- Type: CANTalon
- Master: LeftTalonMaster
- Private: Yes

Notes: This talon should automatically follow LeftTalonMaster.

LeftTalonFollower_2

- Type: CANTalon
- Master: LeftTalonMaster
- Private: Yes

Notes: See LeftTalonFollower

RightTalonMaster

- Type: CANTalon
- Private: Yes

Notes: This is the **master** talon on the right side of the drive train. Driving it will (read: should) make the other ones follow it automatically.

RightTalonFollower

- Type: CANTalon
- Master: RightTalonMaster
- Private: Yes

Notes: This talon should automatically follow RightTalonMaster.

pdp The power distribution panel.

- Private: Yes

Rollers

The rollers subsystem controls the roller on the front of the robot, along with the arm it's attached to.

2.1 Methods

2.1.1 Roll

Roll the roller.

Arguments:

bool forward Whether to roll forward or not.

double _speed The speed to roll at.

Returns: Void method

2.2 Variables

talon_rollers_lift_left Controls the roller lift.

- Type: CANTalon
- Private: Yes

Contributing

All documentation changes **must** be done on the branch `feature/documentation`, under penalty of commit reversion.

3.1 Previewing your changes

You should do this *before* you commit.

1. `cd docs`
2. OS-Dependent:
 - On Windows: `.\make html`
 - On Linux: `make html`
3. Open `_build/html/filename.html` in your browser of choice. (If that's IE, rethink your life choices.)

3.2 Creating Subsystem docs

1. Copy `_templates/subsystem.rst` into `docs/name_of_sub_system.rst`
2. Fill out the file
3. Add, commit, and push. Read The Docs should automatically build the new HTML pages for you.

Indices and tables

- `genindex`
- `modindex`
- `search`