**Functions motor\_commands.h**

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| **Syntax** | void halt(int port) |
| **Purpose** | stop the current motor port |
| **Entry Conditions** | * port - the target motor port |
| **Code**  **Example** | //turn on the motor  run(127, port1);  //stop the motor  halt(port1); |

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| **Syntax** | void halt(motorSystem& target) |
| **Purpose** | stop all motors in the target motor system |
| **Entry Conditions** | * target - the target motor system |
| **Code**  **Example** | //turn on the motor system  run(127, rightDrive);  //stop the motor system  halt(rightDrive); |

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| **Syntax** | void run(int velocity, int& port) |
| **Purpose** | set a motor to a desired velocity |
| **Entry Conditions** | * velocity - the desired velocity for which the target motor will run at * port - the target motor port |
| **Code**  **Example** | //turn on the motor  run(127, port1);  //stop the motor  halt(port1); |

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| **Syntax** | void run(int velocity, motorSystem& target) |
| **Purpose** | set a motor system to a desired velocity |
| **Entry Conditions** | * velocity - the desired velocity for which the target motor system will run at * target - the target motor system |
| **Code**  **Example** | //turn on the motor system  run(127, rightDrive);  //stop the motor system  halt(rightDrive); |

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| **Syntax** | void runFor(int velocity, int time, int& port) |
| **Purpose** | run a motor for a desired amount of time at a desired velocity |
| **Entry Conditions** | * velocity - the desired velocity for which the target motor will run at * time - the desired amount of time in milliseconds * port - the target motor port |
| **Code**  **Example** | //engage the motor for 1 second  runFor(127, 1000, port1) |

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| **Syntax** | void runFor(int velocity, int time, motorSystem& target) |
| **Purpose** | run a motor system for a desired amount of time at a desired velocity |
| **Entry Conditions** | * velocity - the desired velocity for which the target motor will run at * time - the desired amount of time in milliseconds * target - the target motor system |
| **Code**  **Example** | //engage the right drive for 1 second  runFor(127, 1000, rightDrive) |

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| **Syntax** | void runToTarget(int velocity, int& port, int value,  sensor& witness) |
| **Purpose** | run a motor for a desired amount of time until a sensor value has been reached |
| **Entry Conditions** | * velocity - the desired velocity for which the target motor will run at * port - the target motor port * value - the target value for the sensor * witness - the sensor whose value will be observed |
| **Code**  **Example** | //have the motor run for 1 rotation  runToTarget(127, port1, 360, rightDriveSensor); |

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| **Syntax** | void runToTarget(int velocity, motorSystem& target, int value, sensor& witness) |
| **Purpose** | run a motor system for a desired amount of time until a sensor value has been reached |
| **Entry Conditions** | * velocity - the desired velocity for which the target motor will run at * target - the target motor system * value - the target value for the sensor * witness - the sensor whose value will be observed |
| **Code**  **Example** | //have the right drive run for 1 rotation  runToTarget(127, rightDrive, 360, rightDriveSensor); |