**Speed profile**

Contents [[–](https://ponoor.com/en/docs/step-series/osc-command-reference/speed-profile/)]

* [/setSpeedProfile (int)motorID (float)acc (float)dec (float)maxSpeed](https://ponoor.com/en/docs/step-series/osc-command-reference/speed-profile/#setspeedprofile_intmotorid_floatacc_floatdec_floatmaxspeed)
* [/getSpeedProfile (int)motorID](https://ponoor.com/en/docs/step-series/osc-command-reference/speed-profile/#getspeedprofile_intmotorid)
* [/setMaxSpeed (int)motorID (float)maxSpeed](https://ponoor.com/en/docs/step-series/osc-command-reference/speed-profile/#setmaxspeed_intmotorid_floatmaxspeed)
* [/setAcc (int)motorID (float)acc](https://ponoor.com/en/docs/step-series/osc-command-reference/speed-profile/#setacc_intmotorid_floatacc)
* [/setDec (int)motorID (float)dec](https://ponoor.com/en/docs/step-series/osc-command-reference/speed-profile/#setdec_intmotorid_floatdec)
* [/setMinSpeed (int)motorID (float)minSpeed](https://ponoor.com/en/docs/step-series/osc-command-reference/speed-profile/#setminspeed_intmotorid_floatminspeed)
* [/getMinSpeed (int)motorID](https://ponoor.com/en/docs/step-series/osc-command-reference/speed-profile/#getminspeed_intmotorid)
* [/getSpeed (int)motorID](https://ponoor.com/en/docs/step-series/osc-command-reference/speed-profile/#getspeed_intmotorid)

**/setSpeedProfile (int)motorID (float)acc (float)dec (float)maxSpeed**

**Argument**

| **Argument** | **Range** | **Description** |
| --- | --- | --- |
| motorID | 1-4/1-8, 255 | motor ID |
| acc | 14.55 - 59590 [step/s/s] | acceleration |
| dec | 14.55 - 59590 [step/s/s] | deceleration |
| maxSpeed | 15.25 - 15610 [step/s] | maximum speed |

**Executable timing**

when the motor is stopped

**Description**

Sets the acc, dec, and maxSpeed of the speed profile together.

**Initial value**

| **Argument** | **Initial value** | **Description** |
| --- | --- | --- |
| acc | 2000 | acceleration |
| dcc | 2000 | deceleration |
| maxSpeed | 620 | maximum speed |

**/getSpeedProfile (int)motorID**

**Argument**

| **Argument** | **Range** | **Description** |
| --- | --- | --- |
| motorID | 1-4/1-8, 255 | motor ID |

**Executable timing**

Always

**Description**

Gets the acc, dec, and maxSpeed of the speed profile together.

**Response**

/speedProfile (int)motorID (float)acc (float)dec (float)maxSpeed

| **Argument** | **Range** | **Description** |
| --- | --- | --- |
| motorID | 1-4/1-8, 255 | motor ID |
| acc | 14.55 - 59590 [step/s/s] | acceleration |
| dec | 14.55 - 59590 [step/s/s] | deceleration |
| maxSpeed | 15.25 - 15610 [step/s] | maximum speed |

**/setMaxSpeed (int)motorID (float)maxSpeed**

**Argument**

| **Argument** | **Range** | **Description** |
| --- | --- | --- |
| motorID | 1-4/1-8, 255 | Motor ID |
| maxSpeed | 15.25 - 15610 [step/s] | maximum speed |

**Executable timing**

Always

**Description**

Set the maximum speed of the speed profile

**Initial value**

620[step/s]

**/setAcc (int)motorID (float)acc**

**Argument**

| **Argument** | **Range** | **Description** |
| --- | --- | --- |
| motorID | 1-4/1-8, 255 | motor ID |
| acc | 14.55 - 59590 [step/s/s] | acceleration |

**Executable timing**

When the motor is stopped

**Description**

Sets the acceleration of the speed profile.

**Initial value**

2000[steps/s/s]

**/setDec (int)motorID (float)dec**

**Argument**

| **Argument** | **Range** | **Description** |
| --- | --- | --- |
| motorID | 1-4/1-8, 255 | motor ID |
| dec | 14.55 - 59590 [step/s/s] | deceleration |

**Executable timing**

When the motor is stopped

**Description**

Sets the deceleration of the speed profile.

**Initial value**

2000[step/s/s]

**/setMinSpeed (int)motorID (float)minSpeed**

**Argument**

| **Argument** | **Range** | **Description** |
| --- | --- | --- |
| motorID | 1-4/1-8, 255 | motor ID |
| minSpeed | 0.0 - 976.3 [step/s] | Minimum speed |

**Executable timing**

When the motor is stopped

**Description**

Set the speed profile minimum speed. This value is also used for the motor speed of [/releaseSw](https://ponoor.com/en/docs/step-series/osc-command-reference/homing/#releasesw_intmotorid_boolact_booldir). When [Low speed optimization](https://ponoor.com/en/docs/step-series/osc-command-reference/motor-driver-settings/#enablelowspeedoptimize_intmotorid_boolenable) is enabled, the minimum speed of the speed profile is set to zero.

**Initial value**

0[step/s]

**/getMinSpeed (int)motorID**

**Argument**

| **Argument** | **Range** | **Description** |
| --- | --- | --- |
| motorID | 1-4/1-8, 255 | motor ID |

**Executable timing**

Always

**Description**

Return the speed profile minimum speed.

**Response**

/minSpeed (int)motorID (float)minSpeed

| **Argument** | **Range** | **Description** |
| --- | --- | --- |
| motorID | 1-4/1-8 | motor ID |
| minSpeed | 0.0 - 976.3 [step/s] | Minimum speed |

**/getSpeed (int)motorID**

**Argument**

| **Argument** | **Range** | **Description** |
| --- | --- | --- |
| motorID | 1-4/1-8, 255 | Motor ID |

**Executable timing**

Always

**Description**

Returns the current motor speed.

**Response**

/speed (int)motorID (float)speed

| **Argument** | **range** | **Description** |
| --- | --- | --- |
| motorID | 1-4/1-8 | Motor ID |
| speed | -15625 - 15625 [step/s] | Current speed |

# HOME and LIMIT sensers

Contents [[–](https://ponoor.com/en/docs/step-series/osc-command-reference/home-and-limit-sensers/)]

* [Status Report](https://ponoor.com/en/docs/step-series/osc-command-reference/home-and-limit-sensers/#status_report)
  + [/enableLimitSwReport (int)motorID (bool)enable](https://ponoor.com/en/docs/step-series/osc-command-reference/home-and-limit-sensers/#enablelimitswreport_intmotorid_boolenable)
  + [/getLimitSw (int)motorID](https://ponoor.com/en/docs/step-series/osc-command-reference/home-and-limit-sensers/#getlimitsw_intmotorid)

## Status Report

### /enableLimitSwReport (int)motorID (bool)enable

**STEP400 only**

#### Argument

| **Argument** | **Range** | **Description** |
| --- | --- | --- |
| motorID | 1-4, 255 | Motor ID |
| enable | 0-1 | 1:Enable, 0:Disable |

#### Executable timing

Always

#### Description

Sets automatic response when conditional change on the specified motor's LIMIT switch terminal is detected. The sent message is as same as the response from[/getLimitSw](https://ponoor.com/en/docs/step-series/osc-command-reference/home-limit-sensors/#getlimitsw_intmotorid)command.

#### Initial value

0 (Disable)

### /getLimitSw (int)motorID

**STEP400 only**

#### Argument

| **Argument** | **Range** | **Description** |
| --- | --- | --- |
| motorID | 1-4, 255 | Motor ID |

#### Executable timing

Always

#### Description

Returns the status of LIMIT switch.

#### Response

/limitSw (int)motorID (bool)swState (bool)direction

| **Argument** | **Range** | **Description** |
| --- | --- | --- |
| motorID | 1-4, 255 | Motor ID |
| swState | 0-1 | Status |
| direction | 0-1 | Direction |

| **swState** | **Status** |
| --- | --- |
| 0 | Open, Undetected state |
| 1 | Closed, Detected state |

| **direction** | **Motor direction** |
| --- | --- |
| 1 | Forward |
| 0 | Reverse |

# Motor control

Contents [[–](https://ponoor.com/en/docs/step-series/osc-command-reference/motor-control/)]

* [Motor movement](https://ponoor.com/en/docs/step-series/osc-command-reference/motor-control/#motor_movement)
  + [/run (int)motorID (float)speed](https://ponoor.com/en/docs/step-series/osc-command-reference/motor-control/#run_intmotorid_floatspeed)
* [Stops](https://ponoor.com/en/docs/step-series/osc-command-reference/motor-control/#stops)
  + [/softStop (int)motorID](https://ponoor.com/en/docs/step-series/osc-command-reference/motor-control/#softstop_intmotorid)
  + [/hardStop (int)motorID](https://ponoor.com/en/docs/step-series/osc-command-reference/motor-control/#hardstop_intmotorid)

## Motor movement

### /run (int)motorID (float)speed

#### Argument

| **Argument** | **Range** | **Description** |
| --- | --- | --- |
| motorID | 1-4/1-8, 255 | motor ID |
| speed | -15625 - 15625 [step/s] | Rotation speed |

#### Executable timing

In motion start condition

#### Description

Rotates the motor at specified speed. The acceleration is controlled with the pre-set speed profile. The speed is limited by maxSpeed. It remains in the BUSY state until the motor reached to the specified speed.

## Stops

### /softStop (int)motorID

#### Argument

| **Argument** | **Range** | **Description** |
| --- | --- | --- |
| motorID | 1-4/1-8, 255 | motor ID |

#### Executable timing

Always

#### Description

After decelerating according to the speed profile, the motor stops while it is kept excited. Remains in the BUSY state until the motor stops. If it was originally in the High Z state, the motor will be excited while it keeps its position.

If it was in the servo mode, the mode will be released.

### /hardStop (int)motorID

#### Argument

| **Argument** | **Range** | **Description** |
| --- | --- | --- |
| motorID | 1-4/1-8, 255 | motor ID |

#### Executable timing

Always

#### Description

Immediately stops the motor and leaves it excited. Remains in the BUSY state until the motor stops. If it was originally in the High Z state, the motor is excited while it keeps its position.

If it was in the servo mode, the mode will be released.