# Command:UM

MS2000 or RM2000 syntax

| | |
|---|---|
| **Format** | UM [axis]= ### ... |
| **Units** | Integer |
| **Remembered** | Using SS Z |

Tiger syntax

| | |
|---|---|
| **Format** | UM [axis]= ### ... |
| **Units** | Integer |
| **Type** | Axis-Specific |
| **Remembered** | Using [addr#]SS Z |

#### Unit Multiplier

Specifies the multiplier for most serial commands such as MOVE and WHERE. Default for stages is 10000, which means 10000 units per millimeter or 0.1 µm/count. For rotary stages and micro-mirror devices the UM is 1000 corresponding to milli-degrees.

The Unit Multiplier can be saved with the SS Z command.

**Note:** The sign of the Unit Multiplier can be used to change the relative direction of motion for commanded moves, but using the CCA Z command is the recommended way to change the stage direction.

#### Reply

If there are no errors, a positive reply of :A is returned.

#### For Clocked Position Devices

UM command has no effect if the axis is a Clocked Device like Filter Slider, Objective slider or Objective Turret.

#### Example

```
UM X=10000
:A
```

```
UM X?
X=10000.000000 A
```

As of Firmware version 9.2l (for MS-2000) and 3.18 (for Tiger), when UM for a clocked Device is set to “1”, the WHERE (W) command prints the Axis position in millimeters instead of the slot position. The MOVE (M) command continues to work, while MOVREL (R) doesn't. This feature is meant for troubleshooting and diagnostic usage only and not meant for regular operation.

commands, tiger, ms2000