

# Command:DACK (D)

## Motorized Actuator

MS2000 or RM2000 syntax

<b>Shortcut</b>	D
<b>Format</b>	D [axis]=[ratio in mm/sec] ...
<b>Units</b>	ratio in mm/sec
<b>Remembered</b>	Using SS Z

Tiger syntax

<b>Shortcut</b>	D
<b>Format</b>	D [axis]=[ratio in mm/sec] ...
<b>Units</b>	ratio in mm/sec
<b>Type</b>	Axis-Specific
<b>Remembered</b>	Using [addr#]SS Z

Sets motor speed control ratio, in mm/sec, of movement per DAC count. A DAC count is a value change of one (1) in the 8-bit integer written to the motor speed control register. **MOST USERS DO NOT NEED THIS FUNCTION!**

### Example:

```
D X=.055
:A
D X?
:A X=0.055000
```

Incrementing/decrementing the motor speed control register by one DAC count increases/decreases X-axis stage speed by 0.055 mm/sec.

## MicroMirror

<b>Shortcut</b>	D
<b>Format</b>	D [axis]=[0 to 1] ...
<b>Units</b>	Unitless float between 0 and 1
<b>Type</b>	Axis-Specific
<b>Remembered</b>	Using [addr#]SS Z

This command is “recycled” for a different use in MicroMirror axes than for motor axes. For MicroMirror axes it sets up a calibration constant or scale factor that is used to attenuate the scanner motion when used in internal input mode (as the implementation is in software it does not apply in external input mode). In tests we found that the two axis of the MEMS MicroMirror does not tilt by the same amount when similar inputs are applied. This may be critical for some applications. This parameter sets an attenuation, so both axes can be made to tilt the same amount. For example, if the S axis was found to be doing 85% travel of R axis then we could

attenuate R to compensate by setting  $D R=0.85 S=1$ . Note that behavior is undefined if changed in the middle of a single-axis move or SPIM move on the same axis. **N.B: This command was retired in v3.14 of the firmware because it wasn't being used and the internal implementation was complex.**

**Example:**

```
D R=0.85 S=1
:A
```

Attenuates the travels of R axis by 15%.

[commands](#), [tiger](#), [ms2000](#), [micromirror](#)

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