Command:SPEED (S)

MS2000 or RM2000 syntax

Shortcut	S
Format	SPEED [axis]=[max speed in mm/sec]...
Units	mm/sec
Remembered	Using SS Z

Tiger syntax

Shortcut	S
Format	SPEED [axis]=[max speed in mm/sec]...
Units	mm/sec
Type	Axis-Specific
Remembered	Using [addr#]SS Z

Sets the speed at which the stage will move during the middle of a commanded move (e.g. using MOVE, MOVEREL, or the home joystick button; speed during joystick moves is separate and set using the JSSPD command). The start of the move has a ramp-up period and the end of the move has a ramp-down period plus a separate landing phase. Duration of the ramps is set by the AC command, and the landing phase is discussed on the tuning page.

Speed is set in millimeters per second. Maximum speed setting is is ~7.68 mm/s for standard 6.35 mm pitch leadscrews (4 TPI). See the page on lead screw pitch options. Default speed is ~67% of the max speed.

The stage might not be able to keep up with the firmware-set maximum speed depending on mechanical load and internal friction, and for that reason the advertised maximum speeds are a bit less than the maximum firmware setting (but advertised max speeds are always attainable with typical loads).

The maximum possible speed setting can be determined by setting the speed to a very high number, querying the resulting speed, and then restoring the original setting.

Reply

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

Example

```
s x? y?
:A X=5.745920 Y=5.745920
S X=1.23 Y=3.21 Z=0.2
:A
```

In the example, the X-axis maximum speed is set to 1.23 mm/s, the Y-axis is set to 3.21 mm/s, and Z-
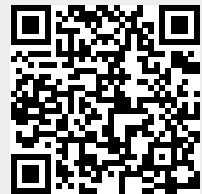
axis is set to 0.2 mm/s.

Special use for MMIRROR_SLAVE on Micro-mirror card

On a Micromirror card with the MMIRROR_SLAVE define the SPEED command has a special meaning (it is otherwise unused with micro-mirror cards) starting in v3.18. It sets the scaling of the slave axis. The default scale is 0.5, meaning the electrical outputs corresponding to the invisible slaved axis will move half as far as the main axis.

commands, tiger, ms2000, micromirror, SPEED, VECTOR

From:
https://asiimaging.com/docs/ - **Applied Scientific Instrumentation**

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Last update: **2023/08/31 04:03**