Command:AIJ

Array Module

MS2000 or RM2000 syntax

Format	AIJ [X=i] [Y=j]
Units	Array Location
Required Firmware Module	ARRAY MODULE

Tiger syntax

Format	[addr#]AIJ [X=i] [Y=j]
Units	Array Location
Type	Card-Addressed
Required Firmware Module	ARRAY MODULE

Requires the `ARRAY MODULE` and an array specified with the ARRAY command.

No Arguments: `AIJ` returns the current array state.

X/Y: Move to the array location `(i, j)`, where `i` and `j` are the indices of the desired array location. The query `AIJ X? Y?` will return the `i` and `j` indices of the current array location. The AHOME location is position `(1, 1)`.

MS-2000 v9.54 or Tiger 3.53 required

Special Arguments: `AIJ X=0 Y=0` sets the indices to `(0, 0)` and doesn't move the stage. The next TTL pulse received will move the stage to position `(1, 1)`. Use TTL X=7 to enable TTL triggered array moves.

Note that if no move actually occurs if the `AIJ` command moves to the current position. For example, if you use `AHOME X Y` to set the current position to coordinate `(1, 1)` and then immediately issue `AIJ X=1 Y=1` then the motors will not move and no output TTL pulse (if configured) will occur. If the desire is to get a pulse out at the `(1, 1)` position, a workaround is to make a small relative move e.g. `R X=100 Y=100` between issuing the `AHOME` and `AIJ` commands.

The assignments of horizontal (“fast”) and vertical (“slow”) axes are done using the SCAN command. Most users will never need to change the defaults: the horizontal or X axis defaults to the card's first axis and the vertical or Y axis to the card's second axis.

Tiger MicroMirror Phototargeting

Format	[addr#]AIJ [X=horizontal_position] [Y=vertical_position]
Units	axis units
Type	Card-Addressed
Required Firmware Module	MM_TARGET

Moves to the specified location `(horizontal_position, vertical_position)` subsequently pulses the laser TTL signal. Positions are specified in axis units (the same as used

by the WHERE or MOVE command). If the X and/or Y argument is omitted, the corresponding position from the last AIJ command will be used. Note that the position is changed as a side effect of this command. The WHERE or MOVE command will change the beam position without pulsing the laser TTL signal.

The TTL output used was the micromirror card itself (rarely wired to anything) until v3.35, but as of v3.36 the laser trigger backplane line is used instead so that the signal is more accessible.

The settling delay before turning on the laser and the laser pulse high time are specified using the WAIT and RTIME commands respectively.

commands, tiger, ms2000, array, phototargeting