

Command:RBMODE (RM)

MS2000 or RM2000 syntax

Shortcut	RM
Format	RBMODE [X=control] [Y=axis_byte] [Z=buffer_pointer] [F=mode_byte]
Remembered	Using SS Z
Firmware Module Required	RING BUFFER

Tiger syntax

Shortcut	RM
Format	[addr#]RBMODE [X=control] [Y=axis_byte] [Z=buffer_pointer] [F=mode_byte]
Type	Card-Addressed
Remembered	Using [addr#]SS Z
Firmware Module Required	RING BUFFER

Provides control of movement and save operations involving the controller's internal 50-position ring-buffer (optionally to 250 positions, contact ASI). The [LOAD command](#) is used to fill the ring buffer.

The command, without any arguments, sets the TTL input interrupt flag and performs the same operation that a TTL IN0 input pulse would control as determined by the current IN0_mode. See [TTL command](#).

A move to the Next Position may be initiated by:

- a TTL pulse when the appropriate IN0_mode is selected (See [TTL command](#), IN0_INT Firmware Module Required).
- a short press and release of the @ button (as long as other special functions are not utilizing the @ button).
- by the RM command without arguments.

RM X? returns the number of positions defined in the ring buffer (Tiger firmware v2.89+ or MS2000 firmware v9.2g+).

The argument variables are defined as follows

control

- 0 - Clears the ring buffer (RING_BUFFER firmware required)
- 1 - Starts array scan (ARRAY_MODULE firmware required)

axis_byte

1-7: Binary value determines which axes are commanded to move; the same axes' positions are reported using `IN0_mode=5`. The ordering of axes is generally the order on the card, with the first axis getting the LSB.

buffer_pointer

sets or reads the pointer to the buffer position for the next move. The buffer pointer is zero-indexed, so its maximum value is the one less than the number of positions in the ring buffer.

mode_byte

On Tiger v2.81-2.88 these were on X pseudoaxis instead of F

Lowest two bits are used to specify the mode:

0 - reserved.

1 - TTL triggered mode (default). A TTL pulse or RM command without arguments moves to the next position.

2 - One-shot autoplay mode. A TTL pulse or RM command without arguments plays the ring buffer from the current position to end with a delay between points set by `RT Z` (make sure delay is set appropriately; e.g. setting 1ms won't work with motorized stage).

3 - Repeat autoplay mode. Upon a TTL pulse or RM command without arguments, plays from current position continuously in a loop with delay set by `RT Z` (make sure delay is set appropriately; e.g. setting 1ms won't work with motorized stage). While running, another trigger causes autoplay to stop. Also enables repeat mode for ARRAY module. Starting v3.24, this mode works on TGLLED card too. When `TTL X=21`, TGLLED cycles thru all LED channels without waiting for a TTL trigger.

Bits 3-7 are reserved.

MSB - read-only, set to 1 if ring buffer is auto playing and 0 otherwise

CAUTION: If you are using TTL mode 12 (see the [TTL command](#)), the values entered into the ring buffer using the [LOAD command](#) represent RELATIVE coordinates, not ABSOLUTE coordinates. You must drive the stage to the appropriate starting position before triggering a ring buffer sequence.

[commands](#), [tiger](#), [ms2000](#), [ringbuffer](#), [array](#)

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