

Command:LOCKRG (LR)

This commands function changes if the system has a Phototrack module or CRISP module.

On CRISP systems

Tiger Syntax

Shortcut	LR
Format	[Addr#]LR [X=cal_gain] [Y= objective lens NA] [Z=lock_range] [F=cal_range] [T=loop_gain]
Type	Card-Addressed
Remembered	Using [Addr#]SS Z

MS2000 and RM2000 Syntax

Shortcut	LR
Format	LR [X=cal_gain] [Y= objective lens NA] [Z=lock_range] [F=cal_range] [T=loop_gain]
Remembered	Using SS Z

The LOCKRG command allows the user to control of several system variables. The X parameter, cal_gain, is the gain variable normally obtained from running the calibration sequence. Although not recommended, it can be changed with this command, but it will be reset upon running the calibration sequence.

The Y parameter sets both the cal_range focus depth (LR F) and also the in_focus_mm range (AFLIM Z) appropriately for the specified numerical aperture of the objective. The computed values can be read and/or overridden using the LR F and AFLIM Z commands respectively.

The Z parameter controls the maximum excursion of the stage before the system generates an error condition and unlocks. The value lock_range is in units of millimeters. The default value is 1.0 mm.

The F parameter controls the excursion of the stage when going through the calibration sequence. The default value for cal_range is 0.005 mm. Overridden when the objective's NA is set using LR Y.

The T parameter controls the gain multiplier or loop gain also set by KADC command. This is for convenience only, both have the identical effect. In this case the axis character does not need to be specified.

On Phototrack system

Shortcut	LR
Format	LR [X=cal_value] [Y=xy_lock_range] [Z=z_lock_range] [F=cal_range]
Remembered	Using SS Z

This command sets range limits for tracking and autofocus systems. For XY tracking systems, the excursion from the point of lock for both the X and Y axes in millimeters is set with the

lock_range value using the Y parameter. If the system encounters a lock_range or focus_range limit, servo tracking is terminated.

Cal_range is the distance in millimeters of the stage movement for automatic calibration of the Tracking or Focus system, set using the F parameter. The result of such a calibration is the cal_value, which can be set explicitly with the X parameter or queried using LR X?. The tracking parameters can be displayed on the serial terminal using LR Z.

Query: LR X? Y? F? returns the current value of the parameters.

[commands](#), [tiger](#), [ms2000](#), [crisp](#), [phototrack](#)

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