



KODO Controller

Mount Motor Controls

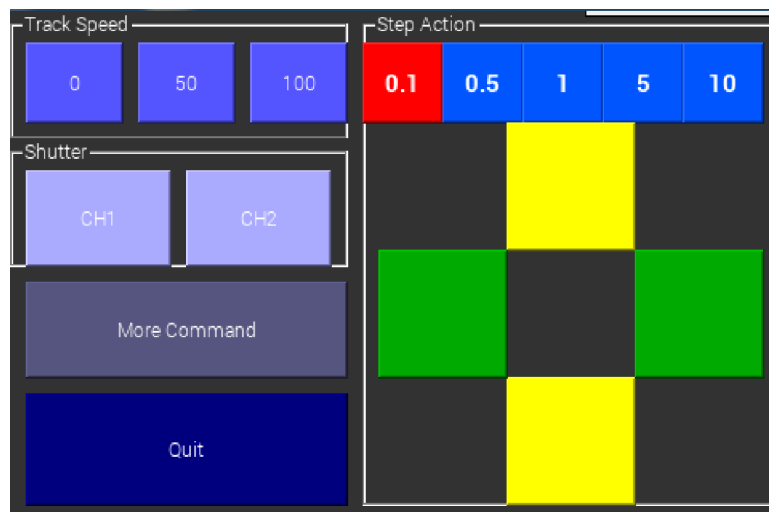
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Introduction

The Kodo controller provides control functions for an astronomical mount with stepper motors. While advanced go-to controls can be accessed from the Kodo main menu's [GOTO] function, direct manual operation of the mount is accessed via the [Motor] function on the Kodo main menu.

Main Screen



Step Action Section

The right side of the [Motor] main screen allows for manual movement of the mount using the yellow (Dec) control buttons and the green (RA) buttons which mimic the corresponding hardware buttons on the front panel of the physical Kodo controller box. The 5 buttons at the top of this section allows selection of the size of the step for each button press:

[0.1] / [0.5] / [1] / [5] / [10] degrees.

Track Speed Section

At the upper left, the tracking speed of the mount (% of sidereal rate) may be selected. [0] = mount stopped, [50] = $\frac{1}{2}$ sidereal rate, and [100] = sidereal rate.

Shutter Section

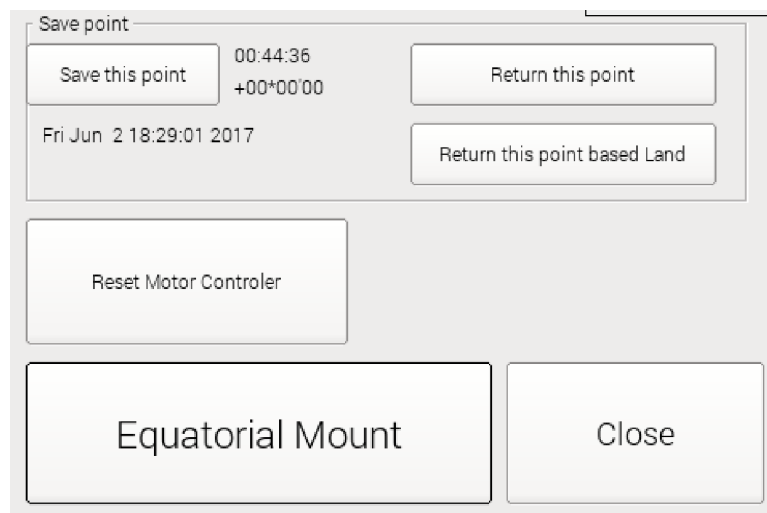
The shutter section allows for manual triggering of the two supported DSLR's. Press to open the shutter and press again to close the shutter.

[Quit]

[Quit] returns to the Kodo main menu.

[More]

The [More] button opens a secondary menu screen of additional mount controls:



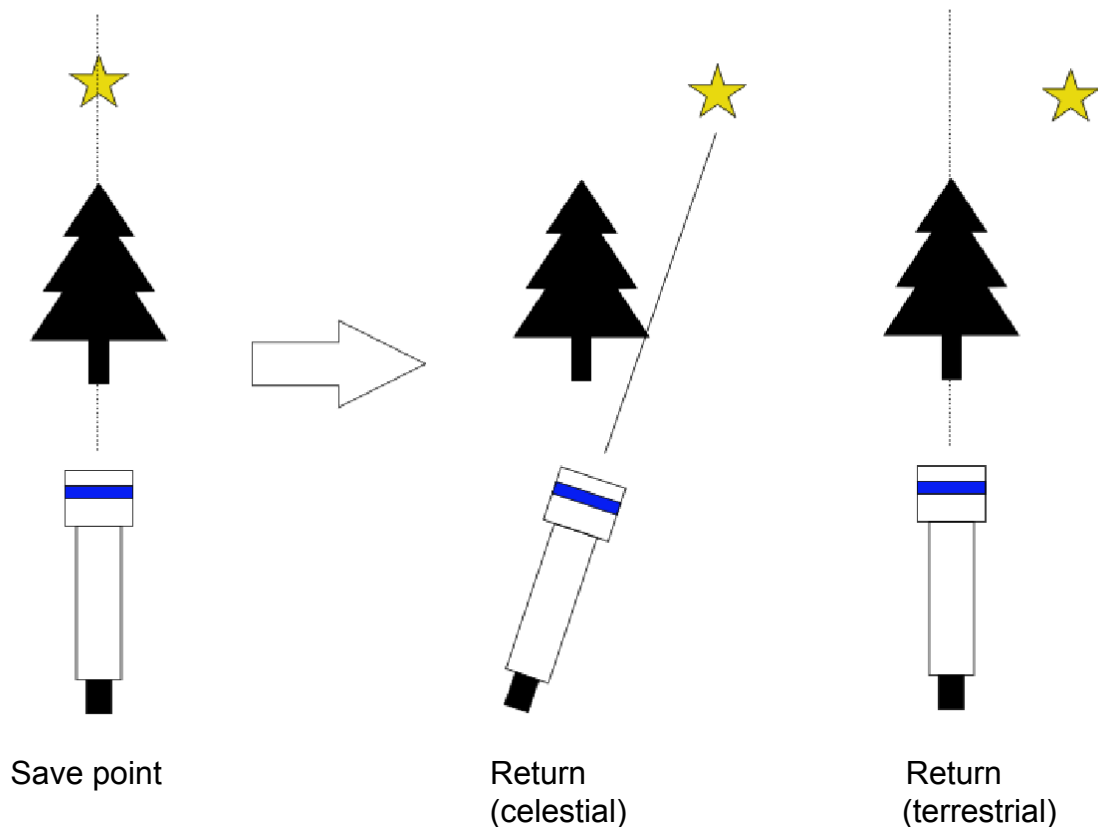
Save Point Section

The Save Point section provides controls for saving and restoring the mount's position.

[Save this Point] saves the current mount position (RA and Dec) for future use. The coordinates are displayed to the right of the button.

[Return this point] returns to the saved celestial coordinates, taking into account the time elapsed since the position was saved.

[Return this point based Land] returns the mount to point at the same position saved **without** correcting for elapsed time. This means the pointing position is the same terrestrial point, not a celestial point as illustrated below:



[Reset Motor Controller]

[Equatorial Mount]

The [Equatorial Mount] button opens a deeper menu which allows entering calibration setup information for the mount mechanical parameters. Press [Read] to recall the current settings. Click in a parameter box to enter a value using the numeric keypad buttons at right. Use [BS] to backspace or [CLR] to clear the current parameter box. Once all parameters have been entered, use [Write] to save the settings, and [OK] to return to the Motor menu. Restart the Kodo controller to activate the new settings.

RA		DEC				
Max Speed	300	Max Speed	300	7	8	9
Acc	3	Acc	3	4	5	6
Direction	+ -	Direction	+ -	1	2	3
Gear ratio	810	Gear ratio	810	0	BS	CLR
Motor Step	200	Motor Step	200			
High Voltage	127	High Voltage	127			
Low Voltage	60	Low Voltage	60			
Read		Write		OK		

Max Speed	Maximum slew speed.
Acc	Acceleration ramp. Specify the time (in seconds) to ramp from 0 to the maximum speed.
Direction	Specify each motor's direction. Select [-] in RA when the mount is used in the southern hemisphere.
Gear ratio	Gear ratio (motor rotations per rotation of axis).
Motor Step	Steps per rotation of the motor (typically 200).
High Voltage	Motor voltage used when in sidereal mode. Units are 0 to 255 corresponding to 0 - 12V. For example, use 127 for 6V.
Low Voltage	Motor voltage used when in startup. Units are 0 to 255 corresponding to 0 - 12V. For example, use 127 for 6V.