**LED 1 (BOTTOM)** indicates the status of the Declination motor
**LED 2 (TOP)** indicates the status of the Right Ascension motor

LED's are bright and steadily
- Normal Automatic Operations

LED has a steady 1 second period blink:
(a) That motor has been forced to manual by a command from the serial port
(b) That motor is sensing motor runaway

LED's flash fast
- Battery voltage falls below 11 volts

LED's are on very faintly, but steadily
- Serious problem with the CPU in the controller. Return the unit to factory for repairs

Press the **TOP LEFT and the TOP RIGHT** buttons on the handpad simultaneously, and both motors will be returned to automatic
HANDPAD

New or RF handpad type (there is no switch on a new type, there are only push buttons)

3 position jumper near the hand pad connector is toward the edge of the board.

[ALT] sometime is also called [RTN] for “return”
**HANDPAD By Function**

INCREASES DECLINATION [North].

DECREASES DECLINATION [South].

INCREASES HOUR ANGLE [RA +] Rotates the RA axis clockwise as seen from North.

DECREASES HOUR ANGLE [RA +] Rotates the RA axis counterclockwise as seen from North.

DECREASE TRACKING SPEED. [ESC]+[South]. It works ONLY AFTER scope Initialization.

INCREASE TRACKING SPEED. [ESC]+[North]. It works ONLY AFTER scope Initialization.

**LOCAL SEARCH**

START ( High Power EP) [ESC]+[South]
START ( Low Power EP) [ESC]+[North]

During local search
SLOWER [ESC]+[South]
FASTER [ESC]+[North]
REVERSE DIRECTION [South]
RESTORE DIRECTION [North]
PAUSE SEARCH [SPD]
RESTORE SESRCH [SPD] or [North] or [South]
EXIT [RA+] or [RA-]

PARK. [ESC]+[ALT]. Works if the motors are in automatic mode and Park position has been set

RETURN to AUTOMATIC. [ESC]+[ALT]. Works if the motors are in manual mode (led light flashing on the controller)

CHANGE SLEWING SPEED. [SPD]. It cycles among SLEW (Degrees per Seconds), PAN (Minutes per Seconds) and GUIDE (Seconds per Seconds)

START - STOP TRACKING. [ALT]. It works ONLY AFTER scope Initialization.
**HANDPAD By Button Actions**

**[RTN] = [ALT]**

**[North]** Increases scope declination.
**[North]** Restore search direction after START Local Search
**[North]** Resume search after PAUSE Local Search

**[South]** Decreases scope declination.
**[South]** Reverse search direction after START Local Search
**[South]** Resume search after PAUSE Local Search

**[RA+]** Increases Hour Angle (Rotates the RA axis clockwise as seen from North).
**[RA+]** Stops Local Search

**[RA-]** Decreases Hour Angle (Rotates the RA axis clockwise as seen from North).
**[RA-]** Stops Local Search

**[ALT]** Starts and stops Tracking but works ONLY AFTER scope initialization

**[SPD]** It changes the slewing speed cycling among SLEW (Degrees per Seconds), PAN (Minutes per Seconds) and GUIDE (Seconds per Seconds)
**[SPD]** PAUSE search (toggle) after START Local Search
**[SPD]** Resume search (toggle) after PAUSE Local Search

**[ESC]+[South]** Decrease tracking speed. It works ONLY AFTER scope Initialization.
**[ESC]+[South]** START Local Search for High Power EP
**[ESC]+[South]** SLOWER search speed after START Local Search

**[ESC]+[North]** Increase tracking speed. It works ONLY AFTER scope Initialization.
**[ESC]+[North]** START Local Search for Low Power EP
**[ESC]+[North]** Faster search speed after START Local Search

**[ESC]+[ALT]** Return the motors to automatic if they were in manual mode (led light flashing on the controller)
**[ESC]+[ALT]** Park the telescope. It works ONLY AFTER scope Initialization.