



Quick Start Guide

HAZ Strain Wave Gear Alt-Az GoTo Mount Models: HAZ31 and HAZ46



PACKAGE CONTENTS¹

- Telescope mount HAZ
- Hand controller (HC) – Go2Nova® 8409 with built-in WiFi
- 6P6C hand controller cable
- USB 2.0 cable
- AC adapter – 100-240V, 12V 5A DC output (for indoor use only)
- Carrying case
- Optional carbon fiber tripod (#8061A, as shown)
- Optional Leveling MiniPier for HAZ Mounts (#8042, as shown)

ONLINE RESOURCES (www.iOptron.com)

- User's Manual
- Hand controller and mount firmware upgrades (check online for the latest version)
- Computer control

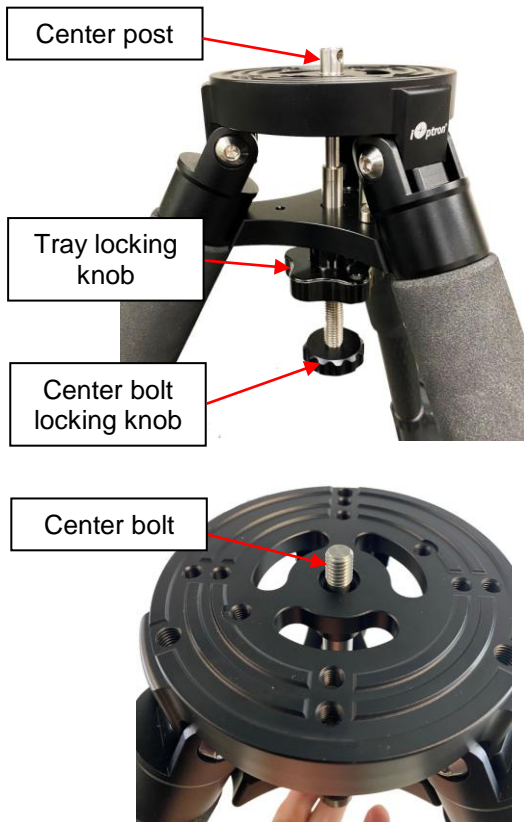
¹ Contents and design may change from time to time without notice.

HAZ is operated under unbalanced condition and could be tipped off if tripod is not secured.

1. Remove mount head from package.



2. Set up tripod: The mount can be attached to a tripod with a 3/8"-16 threaded post. Extend the tripod legs. Adjust the tripod height and level it. Tighten tripod leg locking knob to secure the tripod. Shown below is a carbon fiber tripod #8061A which can be used for multiple mounts. Remove center post and alignment peg, if there is any installed. Retreat tripod supporting tray locking knob so the tripod center bolt can be push up through the tripod head.



3. Attach mount head: Align the HAZ mount head base hole to the tripod center rod. Tighten the center bolt to secure the mount. Tighten the tray lock to secure the tripod legs.



Level the mount by adjusting the tripod legs. Use the built-in Bubble Level Indicator or an external leveler for this purpose.



4. Attach mount with a Leveling MiniPier: If an optional Leveling MiniPier is used,

(1) Check the stainless steel adapting screw and make sure it is tightened to the base.



- (2) Attach three leveling screws onto the tripod top;
- (3) Attach MiniPier onto the tripod with three leveling screws. Loosely tighten both tripod center bolt and tripod tray locking knob;
- (4) Attach the mount onto the MiniPier. Secure it by tightening the mount locking screw on MiniPier;



(5) Adjust the leveling screws with a screw driver or a Allen wrench;



(6) Fully tighten both tripod center bolt and tripod tray locking knob while monitoring the level.

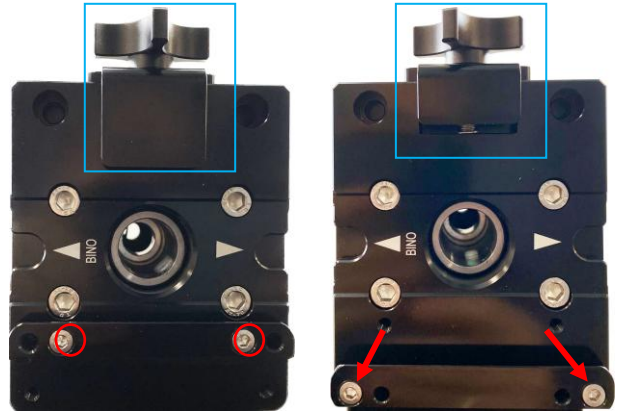


5. **Convert dovetail saddle:** HAZ accepts a Vixen or a Losmandy-D dovetail mounting bar. The default is Vixen-type one. Release the dovetail Saddle Locking Lever and slide the telescope dovetail plate into the saddle. Make sure that the arrow sign on the saddle is pointing forward. Tighten the Saddle Locking Screw.

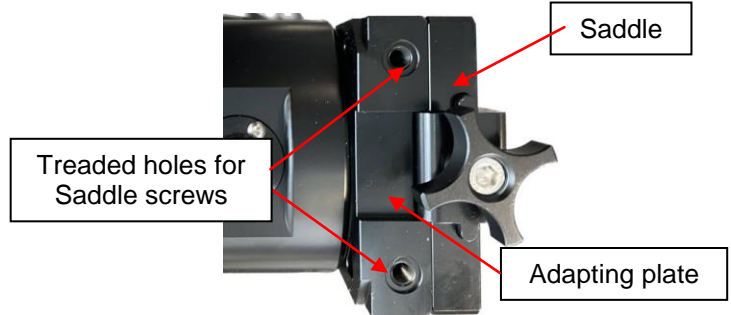
To convert dovetail saddle from a Vixen-type to a Losmandy-type.

(1) Remove two socket screws (red circled), flip and move the saddle fixed block outward.

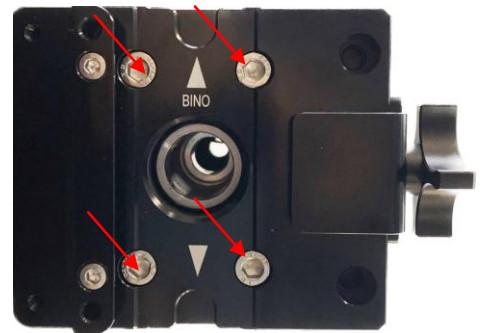
(2) Remove locking knobs and flip the sliding blocks (blue squares).



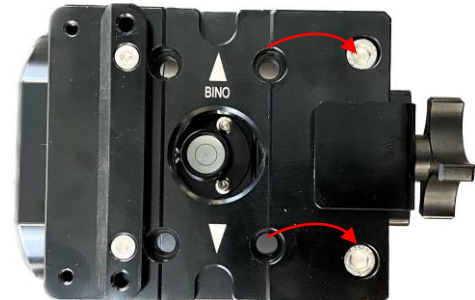
To convert dovetail saddle for binocular mounting.



(1) Remove dovetail saddle from the adapting plate by unscrew four socket screws;



(2) Attach the saddle onto the top of the adapting plate and secure the saddle using two screws.



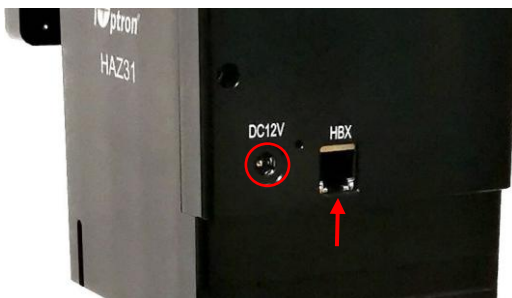


6. **Attach telescope:** There are two arrows on the dovetail saddle. One is for telescope mounting (dovetail saddle side-mounted) and the other is for binocular (dovetail up-mounted). Slide the telescope/binocular into the dovetail saddle. Make sure that the objective end is pointing to the direction as the arrow mark on the dovetail pointed to.

Tighten dovetail saddle locking screw to secure the telescope



7. **Connect cables:** Connect the Go2Nova® 8409 Hand Controller to the **HBX** port on the mount back. Plug in a 12V DC power supply (5.5/2.1mm plug, center positive) to the **DC12V IN** socket.



8. **Power the mount on and go:** *Just flip the power switch ON and wait!* You can choose the mount Assist Alignment Wizard. Just click ENTER button to let the mount find the Zero position: Zenith and magnetic south. If the mount picks up the GPS signal during 360 degree AZI rotation, the mount will go to alignment step automatically.

Note: The date and time displayed on the hand controller may differ from your local time. Just ignore it. You can change it later, as indicated in Step 13.

If the mount does not pick up the GPS signal, the mount will stopped and asks for “Please verify the following settings”. Press ENTER key to manually enter the date, time, UTC offset, DST and GPS location.

Then the mount will slew to a bright star/planet for star calibration. Follow the instruction on the hand controller screen to center the bright star in your eyepiece using four arrow keys. If the star displayed is blocked by a tree or building, just press the BACK button to go to next one. Now you can use **Select and Slew** to go to any objects!

Warning: During the daytime operation, the mount may choose Sun as the only alignment object. **DO NOT look at the sun through the scope, unless there is a solar filter installed.** You may just press ENTER to complete the process.

Note: In the event that the mount fails to perform self-calibration or you would like to skip this at all, please refer to on-line Instruction Manual for how to set up the mount manually.

9. **Go to an object:** Press **MENU** => “**Select and Slew**”. Select a category (for example, “**Solar System**”), then select an object of interest (for example, “**Moon**”). Press **ENTER** and the telescope will slew to the object and automatically start tracking.
10. **Sync to target:** If the object is not in the center of the eyepiece, use this function to center and synchronize the object to improve local GOTO accuracy. Press **MENU** => “**Sync to Target**”. Follow the on screen instruction to perform the function. (**TIP:** After slewing to an object, a list of nearby bright object(s) can be displayed by pressing “?” button.)
11. **Set controller:** Press the **MENU** button; then “**Settings**” => “**Set Time & Site**”.

```

2022-12-05 12:01:36
UTC -300 Minute(s)
W071d08m50s      DST: N
N42d30m32s      Northern

```

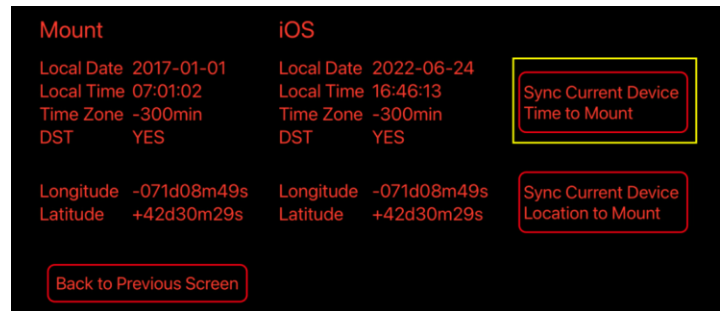
Enter the current date. Enter the time zone offset to the UTC; for examples:

- Boston is “UTC -300 minutes”
- Los Angeles is “UTC -480 minutes”
- Rome is “UTC +060 minutes”
- Sydney is “UTC +600 minutes”

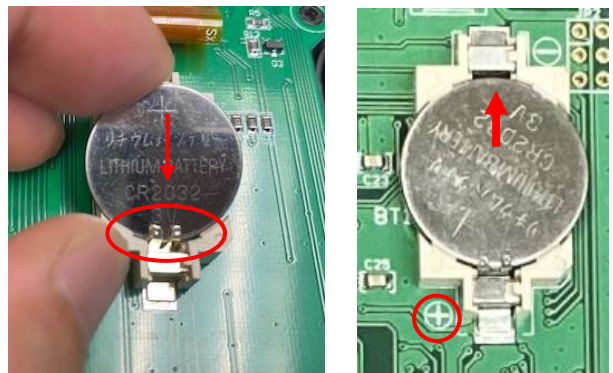
Enter longitude and latitude coordinates according your GPS information. Toggle the Daylight Saving Time (DST) between N(No) and Y(Yes) using arrow key. Move the cursor to the end of screen to select the Northern or Southern Hemisphere.

[TIPS: All time zones in N. America are “UTC -XXX minutes”. Latitude and longitude coordinates can be obtained from GPS-equipped devices (navigator, phone), or from internet, if you are entering them manually. “W/E” = western/eastern hemisphere; “N/S” = northern/southern hemisphere; and “d” = degree; “m” = minute; and “s” = second. Use arrow and number keys to enter location information.]

When iOptron Commander Lite is in action (WiFi version ASCOM), one may easily import the GPS info from a smartphone to the mount/hand controller. There is no worry about lacking internet, WiFi, and cell phone signals in rural areas; Commander Lite can always get GPS info from a smartphone to the mount/hand controller, no dead corner.



12. **Install hand controller battery:** The hand controller uses a CR2032 button battery to keep the Real Time Clock running. The HC is shipped without battery installed due to shipping restrictions. Open the HC back cover. With battery + sign facing up, slide the battery under two small metal hooks on the positive side first. Then push the battery down to make a good contact.



13. **Mount control via a computer/SmartPhone/Tablet:** One can control the HAZ mount via USB on 8409 hand controller or a built-in Wi-Fi. It supports ASCOM for Windows, third party INDI driver for MacOS or Raspberry PI, iOptron Commander Lite or SkySafari Pro for iOS/Android. Some software also has iOptron mount driver embedded.
14. **Put the mount back into the package/carrying case:** It is recommended to return the mount to Zero Position at the end of the observing session.

Use support@ioptron.com for technical supports.

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IOPTRON TWO YEAR TELESCOPE, MOUNT, AND CONTROLLER WARRANTY

A. iOptron warrants your telescope, mount, or controller to be free from defects in materials and workmanship for two years. iOptron will repair or replace such product or part which, upon inspection by iOptron, is found to be defective in materials or workmanship. As a condition to the obligation of iOptron to repair or replace such product, the product must be returned to iOptron together with proof-of-purchase satisfactory to iOptron.

B. The Proper Return Merchant Authorization Number must be obtained from iOptron in advance of return. Contact iOptron at support@ioptron.com to receive the RMA number to be displayed on the outside of your shipping container.

All returns must be accompanied by a written statement stating the name, address, and daytime telephone number of the owner, together with a brief description of any claimed defects. Parts or product for which replacement is made shall become the property of iOptron.

The customer shall be responsible for all costs of transportation and insurance, both to and from the factory of iOptron, and shall be required to prepay such costs.

iOptron shall use reasonable efforts to repair or replace any telescope, mount, or controller covered by this warranty within thirty days of receipt. In the event repair or replacement shall require more than thirty days, iOptron shall notify the customer accordingly. iOptron reserves the right to replace any product which has been discontinued from its product line with a new product of comparable value and function.

This warranty shall be void and of no force of effect in the event a covered product has been modified in design or function, or subjected to abuse, misuse, mishandling or unauthorized repair. Further, product malfunction or deterioration due to normal wear is not covered by this warranty.

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Some states do not allow the exclusion or limitation of incidental or consequential damages or limitation on how long an implied warranty lasts, so the above limitations and exclusions may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

iOptron reserves the right to modify or discontinue, without prior notice to you, any model or style telescope.

If warranty problems arise, or if you need assistance in using your telescope, mount, or controller contact:

iOptron Corporation
Customer Service Department
6E Gill Street
Woburn, MA 01801
www.ioptron.com
support@ioptron.com
Monday-Friday 9AM-5PM EST

NOTE: This warranty is valid to U.S.A. and Canadian customers who have purchased this product from an authorized iOptron dealer in the U.S.A. or Canada or directly from iOptron. Warranty outside the U.S.A. and Canada is valid only to customers who purchased from an iOptron Distributor or Authorized iOptron Dealer in the specific country. Please contact them for any warranty.