

LIVE at www.javad.com



G'day, Mate!

**Redefining Total Stations
and GNSS workflow.**

The “Total Solution”

From the company who brought you the best GNSS receiver on the planet, our latest innovation will allow you to break away from decades-old methods of measurement and positioning. Why employ a workflow designed for yesterday's gear?

See the video at www.javad.com for proof!

Introducing J-Mate



This is J-Mate

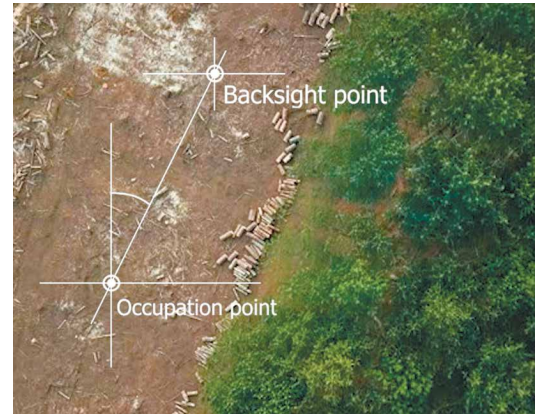
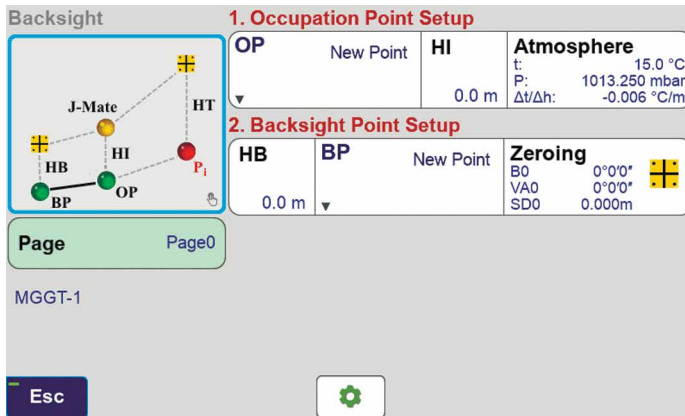


Why follow a workflow designed for yesterday's equipment?

J-Mate features a **camera** that can also find targets automatically, and a **laser module** for accurate distance measurements. It scans and examines the area around the intended target to ensure reliable identification. Two **precision encoders** measure vertical and horizontal angles to the target. Three **precision vials** allow a visual check on levelness of the instrument.

Backsight icon

If GNSS signals are available at the job site, click the J-Mate Backsight icon.



This screen appears which guides you to determine the accurate positions of the Occupation Point and the Backsight Point, to establish an azimuth and calibrate the J-Mate angular encoders.

- The tripod is setup at the “Occupation Point” (OP).
- The J-Mate is secured on the tripod.
- Next, TRIUMPH-LS is placed on top of the J-Mate with its legs registered to the matching features on the J-Mate.
- Next, Use the RTK Survey feature of the TRIUMPH-LS to quickly determine the accurate location of the Occupation Point. You can use your own base station or any public RTN.
- Next, slide the Plus sign target on top of the TRIUMPH-LS, lift it from the J-Mate and move to the “Backsight Point” (BP). The camera of the J-Mate will robotically follow the plus sign target. The camera’s view is visible from the TRIUMPH-LS screen, which mostly focuses on the plus sign. When at the Backsight Point, its accurate position is determined by the TRIUMPH-LS, and the Azimuth from the Occupation Point to the Backsight Point is established, and the J-Mate is calibrated and ready to shoot other points.
- After this calibration is complete, if the tripod is disturbed, the red LED on the front of the J-Mate will blink to show that re-calibration is required.
- We can now replace the TRIUMPH-LS on top of the J-Mate at the Occupation Point and proceed to shoot as many “Target Points” as the job requires. From now on the TRIUMPH-LS is used as a controller and you can hold in your hand too, but it is more convenient to put it on its place on top of the TRIUMPH-LS to have free hands.



Resect icon

If GNSS signals are not available at the Occupation Point, click the “J-Mate-Resect” icon

Resect

1. First Backsight Points Setup

HB1	BP 1	New Point	Zeroing
0.0 m			B0 0°0'0" VA0 0°0'0" SD0 0.000m

2. Second Backsight Points Setup

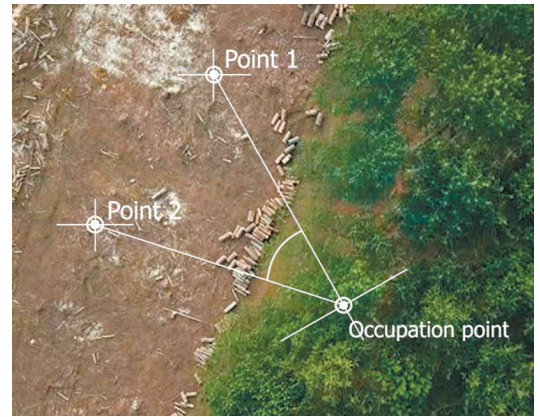
HB2	BP 2	New Point	Zeroing
0.0 m			B0 0°0'0" VA0 0°0'0" SD0 0.000m

3. Occupation Point

OP	New Point	Atmosphere
		t: 15.0 °C P: 1013.250 mbar Δt/Δh: -0.006 °C/m

Page Page0
MGGT-1

Esc



Shoot two or more known points to establish an accurate position and calibrate the encoders. Then continue to shoot the unknown points.

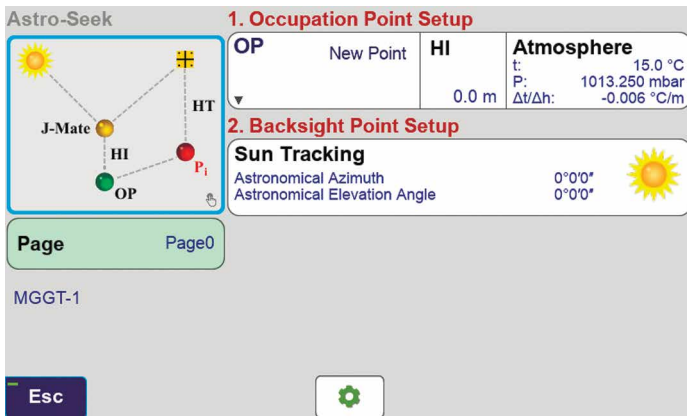
The “J-Mate Resect” automatically finds the plus sign “+” that you carry to two, or more, known points, and shoots them to determine the accurate position of the J-Mate and the azimuth to calibrate the encoders of the J-Mate and then you can proceed to shoot other points.



LIVE video at www.javad.com

Astro-Seek icon

And now our new feature!



We have added a new innovative feature to the J-Mate that it can automatically calibrate itself via its automatic Sun or other astronomical objects-Seeking feature.



If doing a sun-shot, attach the Sun filter to the J-Mate



Click the "J-Mate-Astro-Seek" icon
Then click the "Sun" icon in the screen which appears

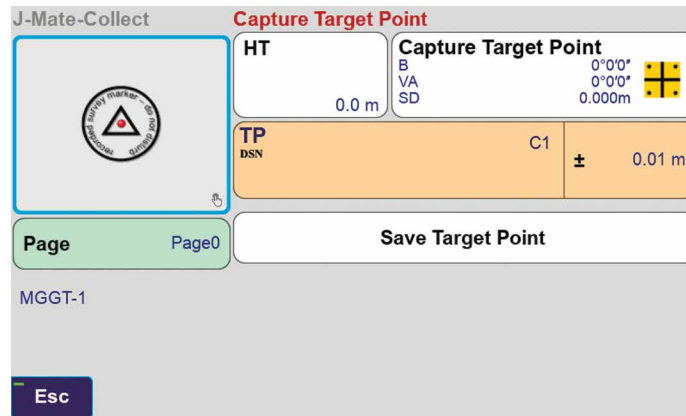


J-Mate will automatically find the Sun, and use its position to calibrate the angular encoders automatically.

LIVE video at www.javad.com

J-Mate-Collect

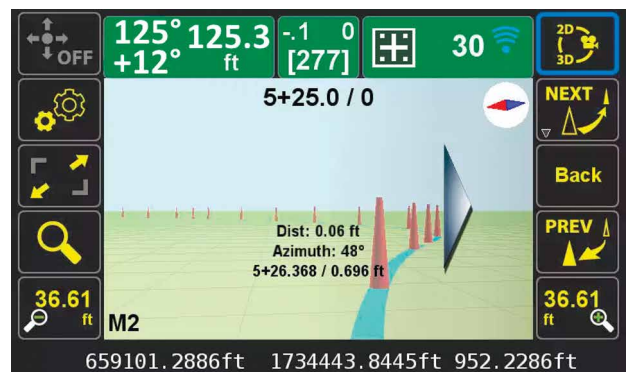
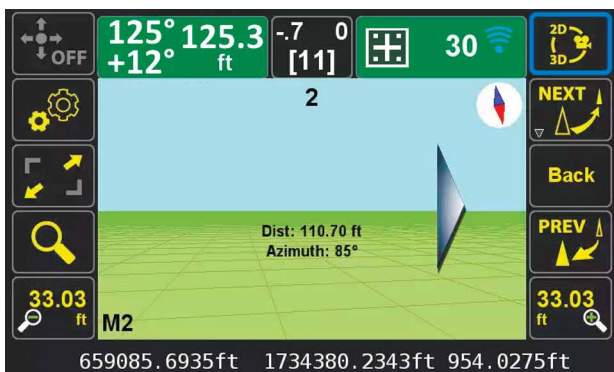
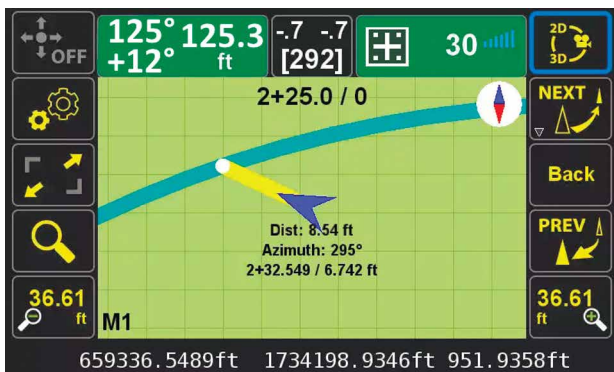
After calibration is performed, click the J-Mate Collect icon to shoot the unknown points.



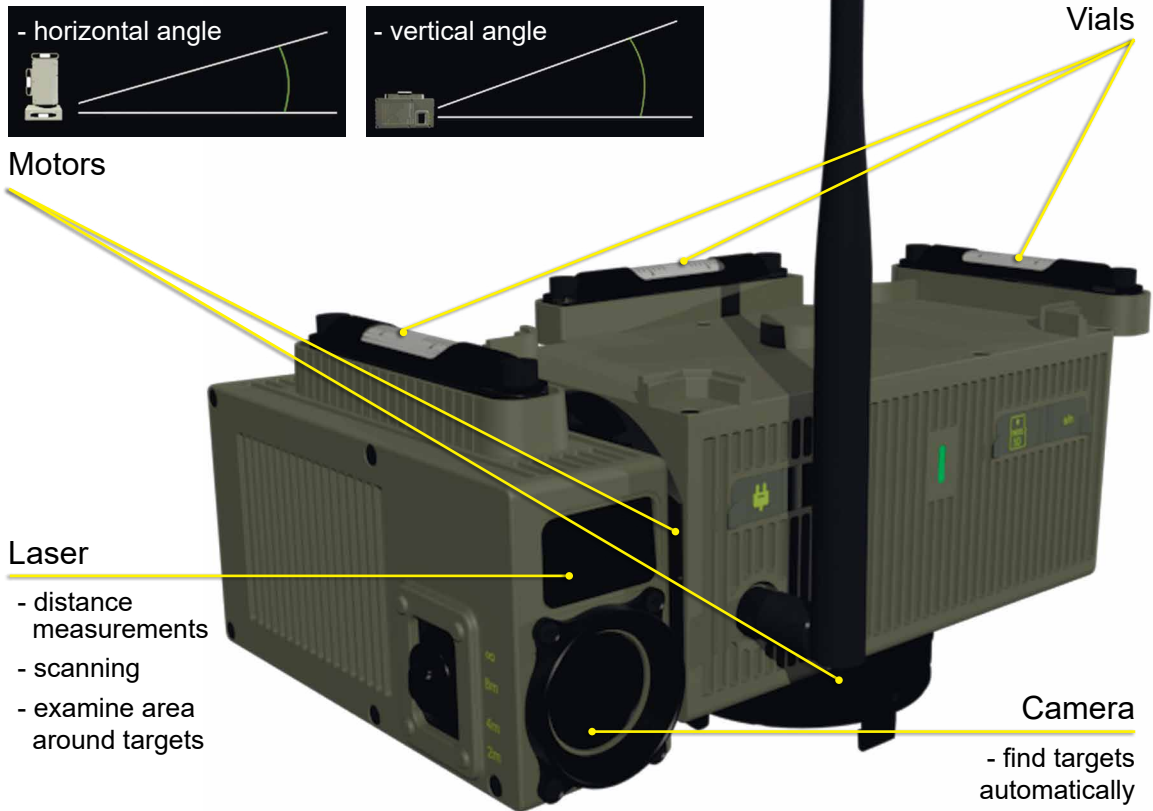
J-Mate-Stake

Click the J-Mate Stake icon to use the J-Mate for stakeout.

The functions and features of the J-Mate stakeout are very similar to our conventional GNSS stakeout: RTK solutions guide you to the stake points. But with the J-Mate the camera follows the “+” sign that you carry and then the encoders and laser measurements (shown on screenshots) provide guidance to the stakeout features. This is similar to Visual Stakeout and other useful and innovative features of our TRIUMPH-LS GNSS RTK stakeout.



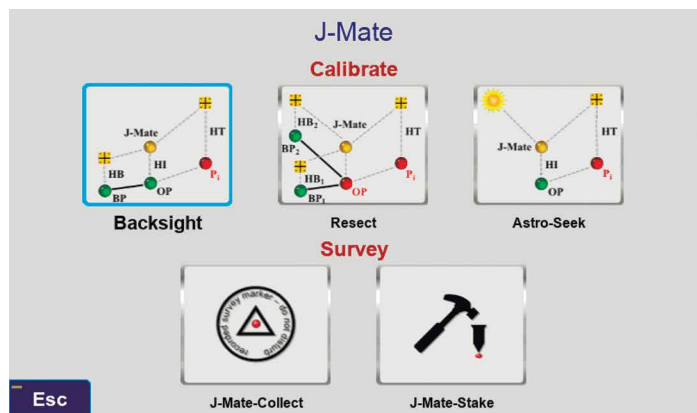
Take control with J-Mate + TRIUMPH-LS



Similar to using conventional total stations, to use the J-Mate you need first to establish its accurate position and calibrate its vertical and horizontal encoders. Then proceed to shoot the unknown points. This is similar to using any total station, but we have improved and automated the process.

With J-Mate you can establish your occupied position via three different ways: 1) **Backsight**; 2) **Resection**; or 3) our new **Astro-Seek** (more of that later).

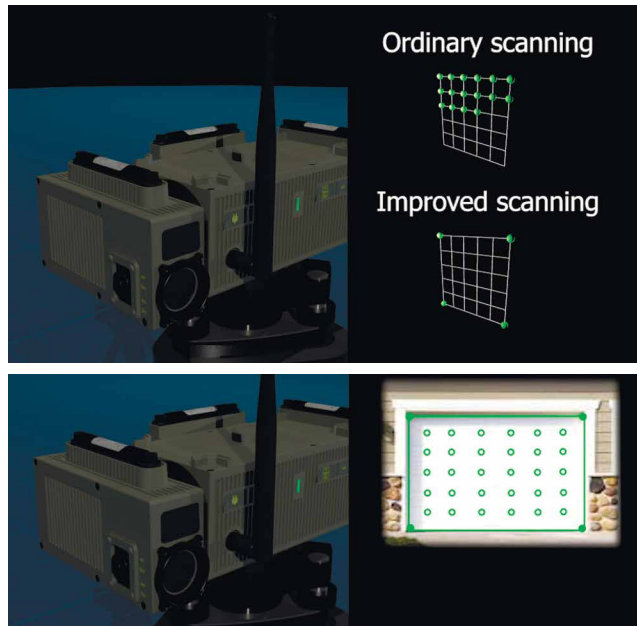
After the J-Mate is calibrated, you can proceed with your work as normal via the **Collect** or **Stake** icon.



We plan to ship by **September 2018**.

Smart laser scanner

J-Mate is also a camera-aided, smart laser scanner. The camera identifies redundant points that do not need to be scanned, but instead can be copied or interpolated from other readings without loss of information. That is, if the camera identifies a completely uniform flat area, it only scans the four corners of that area and interpolates in between. This feature can increase the effective speed of the scanner to much higher than its native 10-points-per-second speed.



The scanning feature can also be used to find items like wires and poles and “closest-in-view” items and shoot them automatically.

Seize the day with J-Mate + TRIUMPH-LS



And all components fit in this small carrying case.

So we have a “**Total GNSS**” with a “**Robotic Total Station**” and a “**Smart Laser Scanner**”. We call it our “**Total Solution**” and it can be operated by one person to perform jobs.