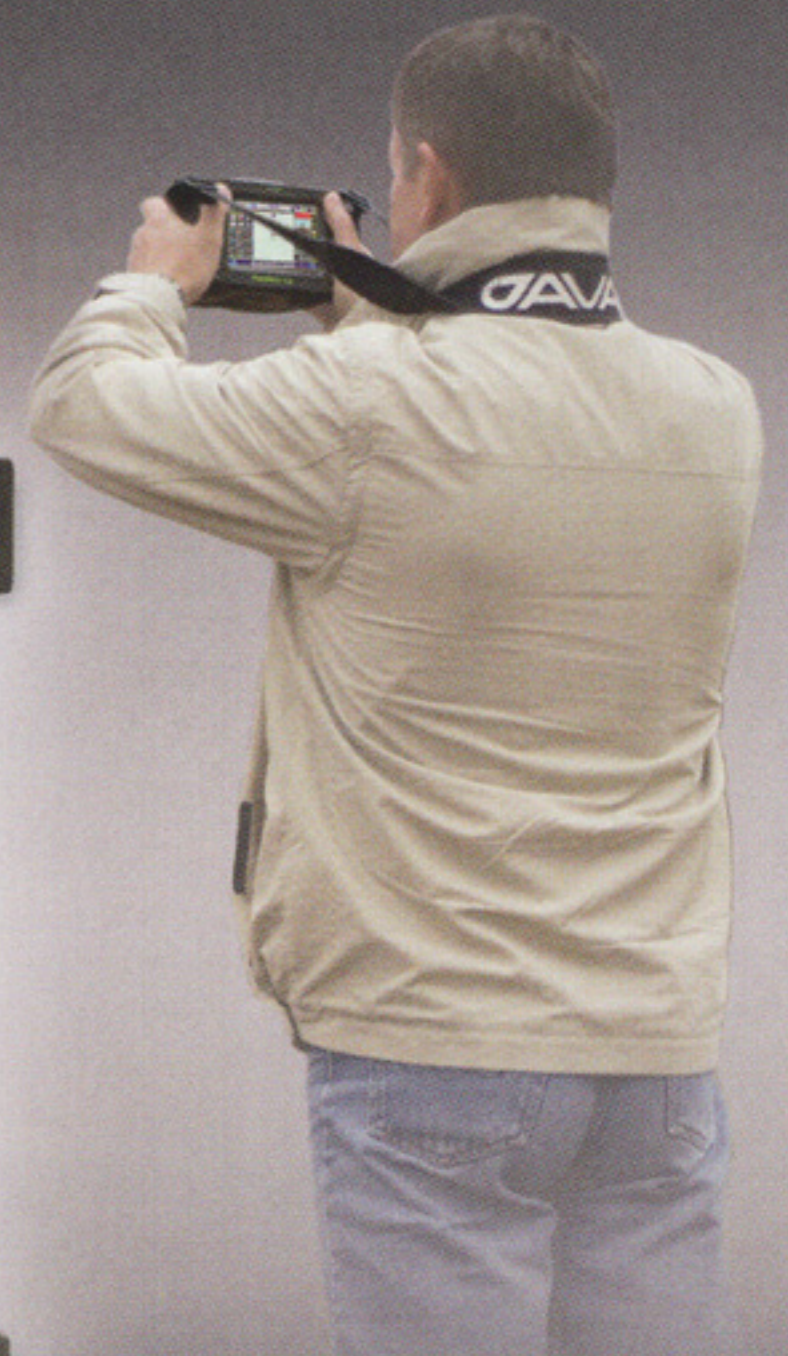
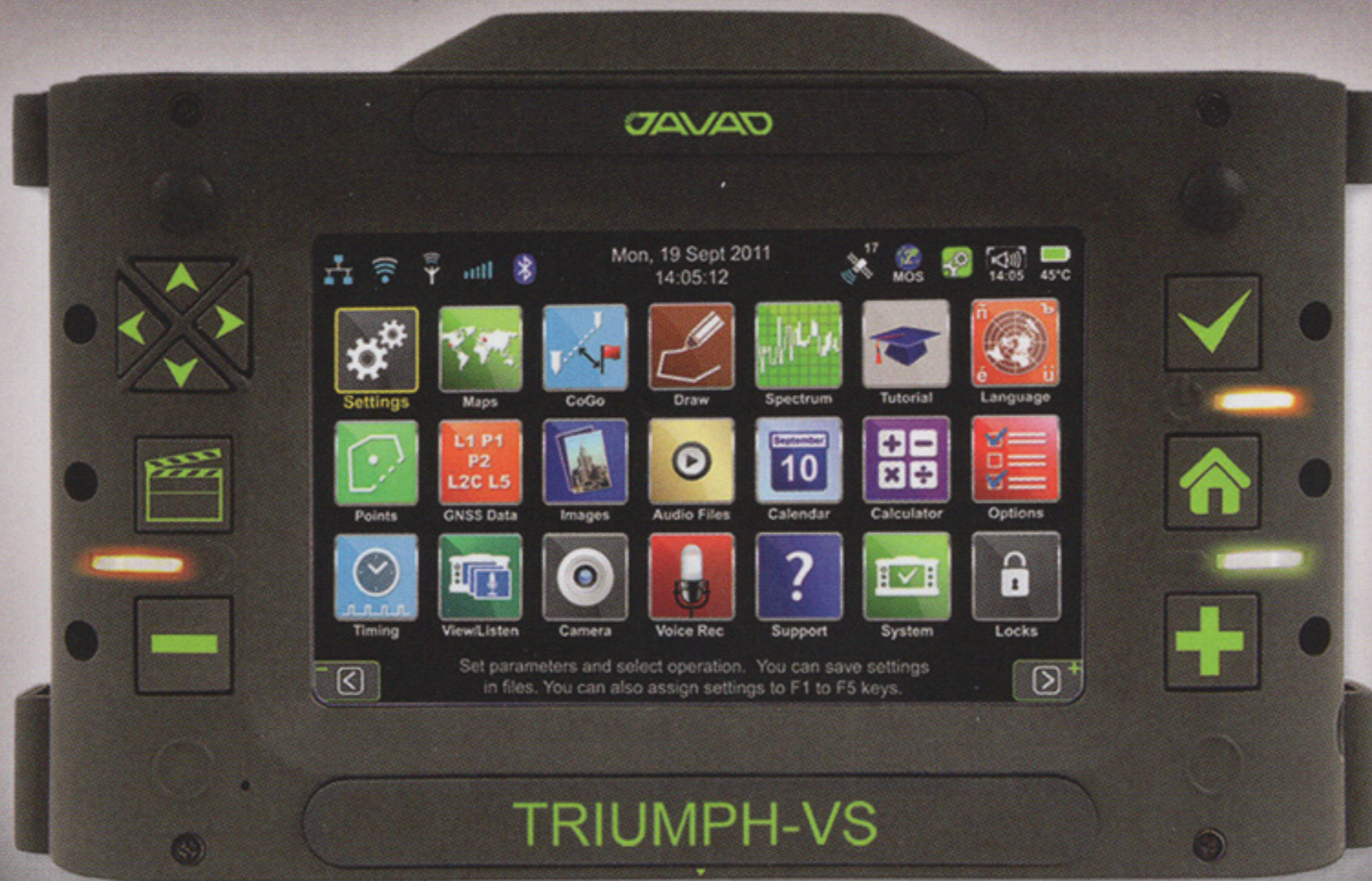


JAVAD



TRIUMPH-VS

3 Products Packaged in One!

TRIUMPH-VS is a revolutionary new GNSS receiver that combines high performance 216-channel GNSS receiver, all-frequency GNSS antenna, and a modern featured handheld. All-in-one TRIUMPH-VS is a new word in survey.

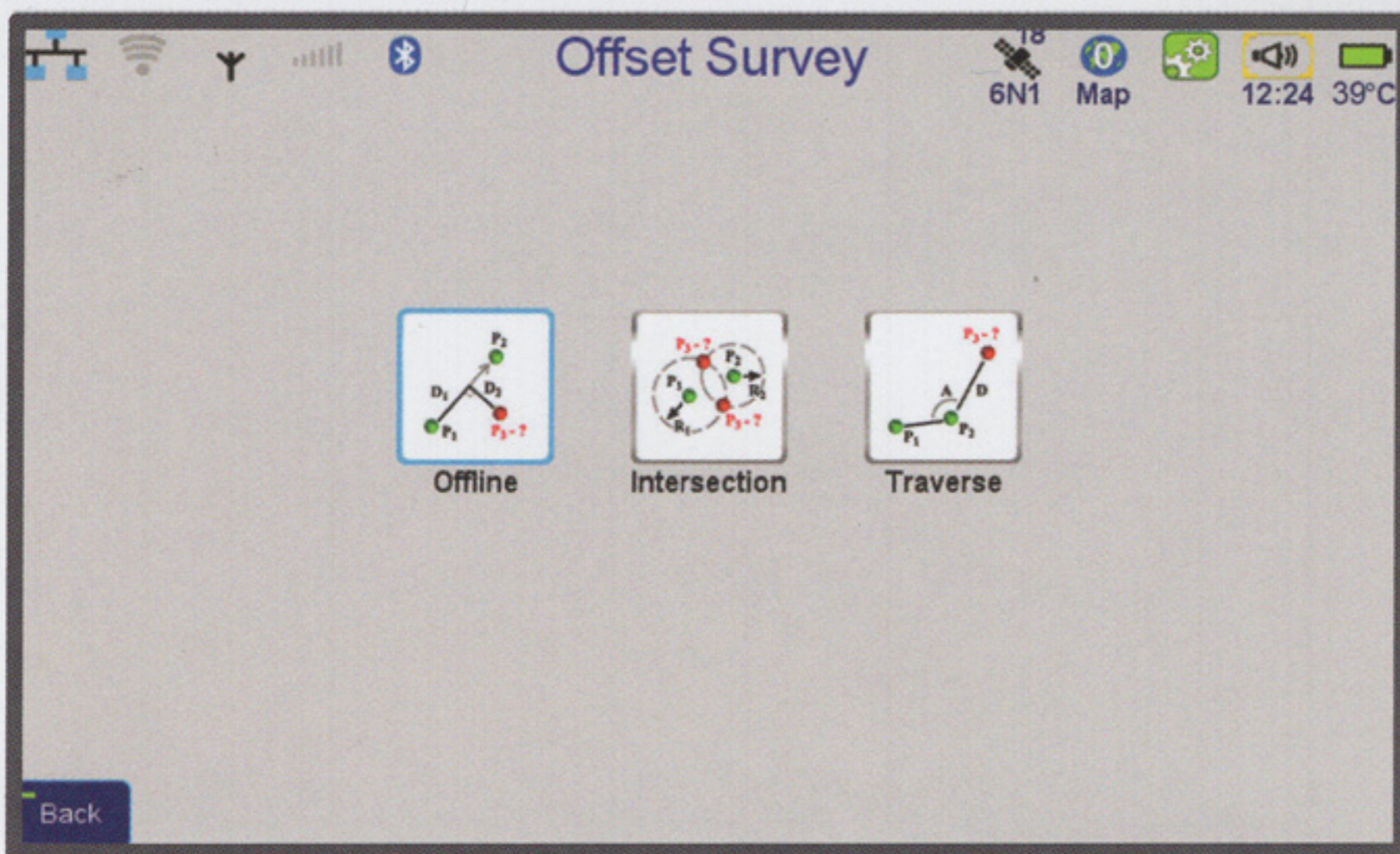


TRIUMPH-NT

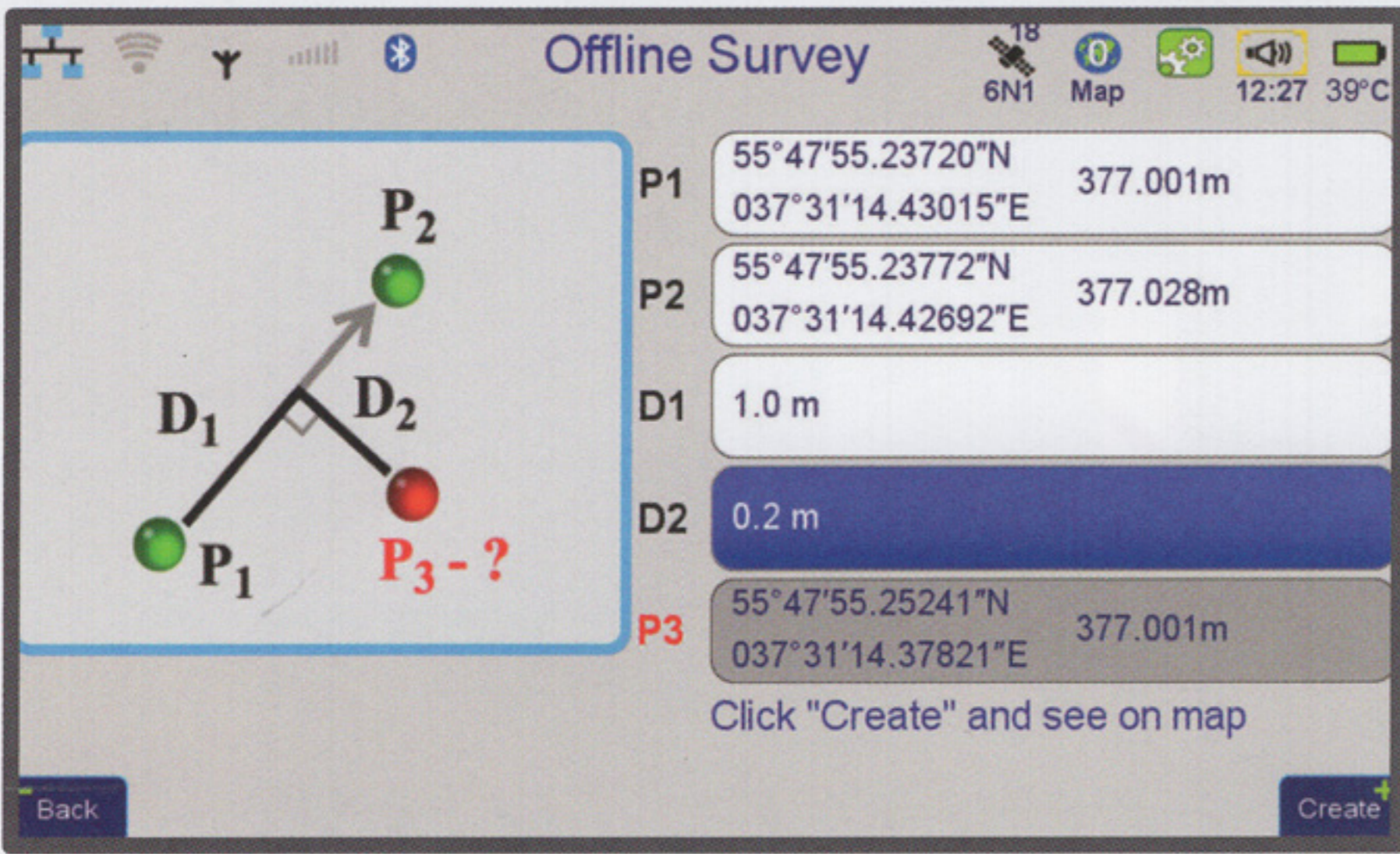
Same as TRIUMPH-VS but without internal GNSS antenna, inclinometers, compass and cameras.

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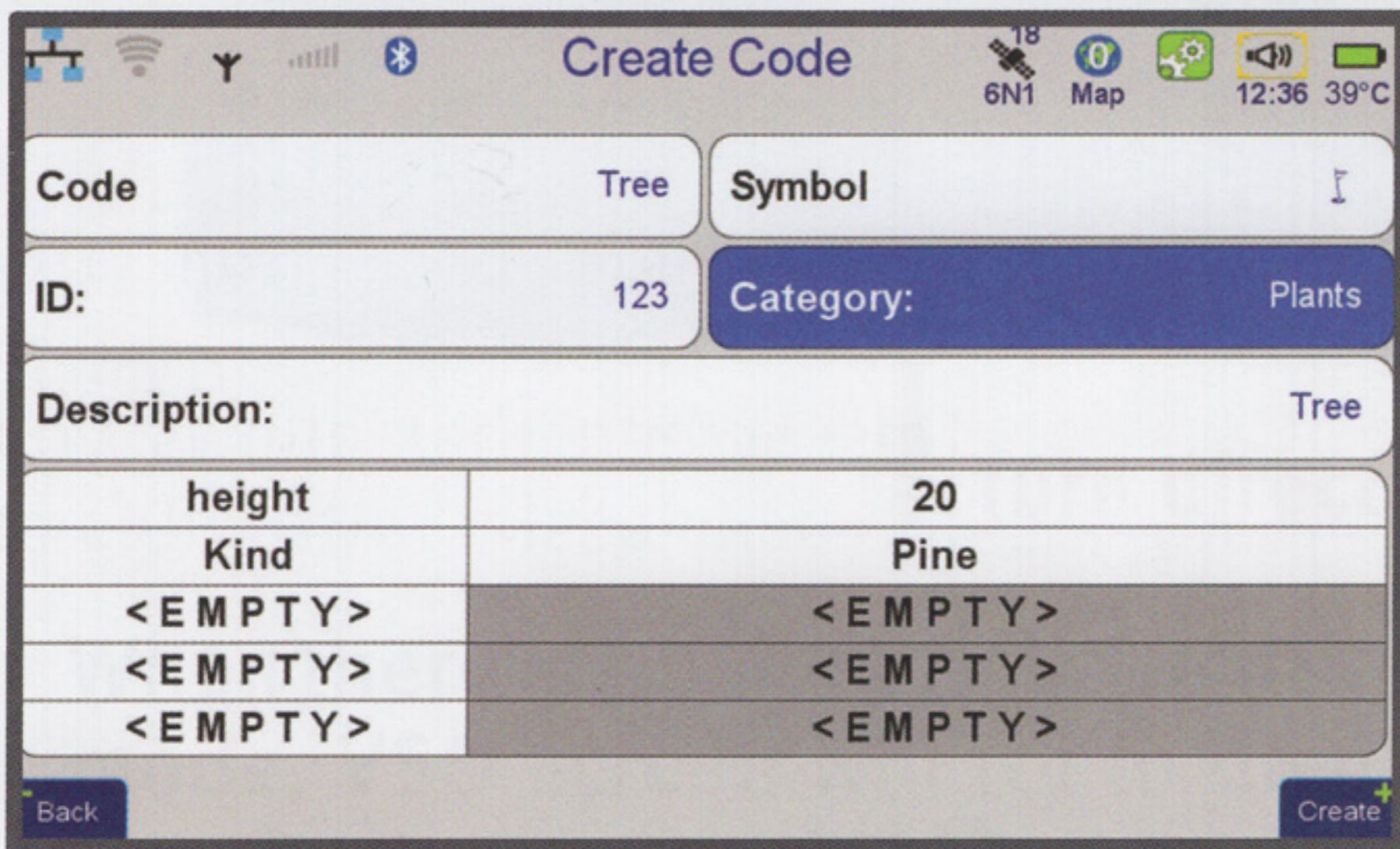
Have you seen our software... lately?



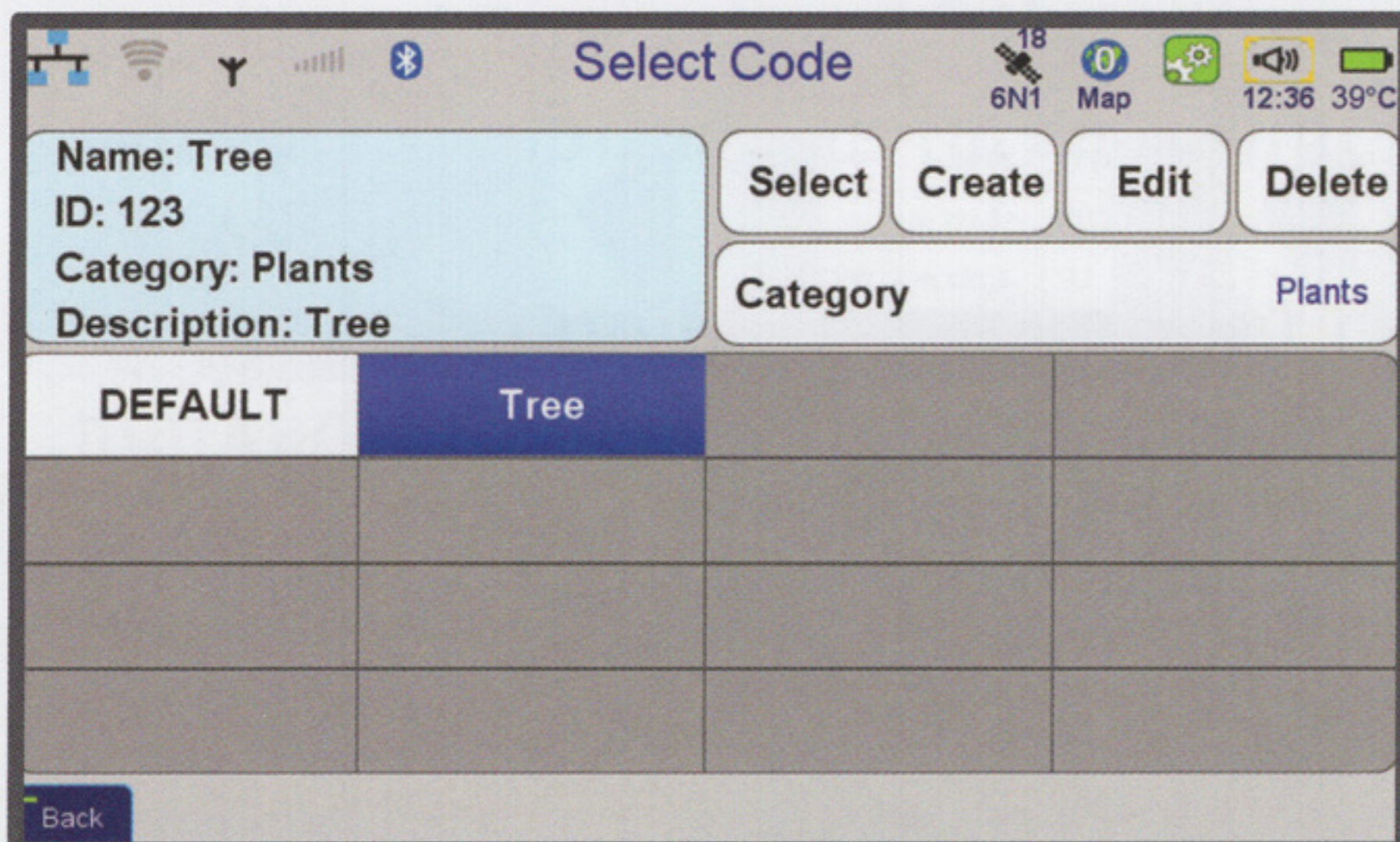
- Offset surveys can be reached from this screen.



- This screen guides you how to perform Offline survey and see the results on the map.



- This simple screen allows you to predefine codes and attributes and access them with a single click during survey.



- This is how code attributes can be selected. You click just a predefined code like "TREE" and all its predefined attributes will carry over.

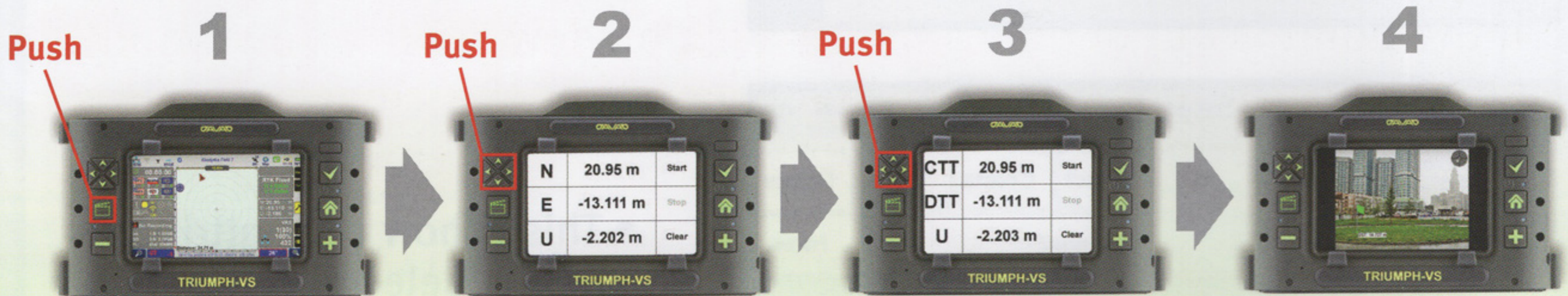
Using Visual Stakeout

Visual Stakeout purpose

- Visual Stakeout (VSO) is a convenience extension of the regular stakeout procedure. VSO makes it easier to find the target point in the field displaying the point on a special augmented reality screen which can be accessed during a regular stakeout process.



Running Visual Stakeout



Start regular stakeout of some previously measured point

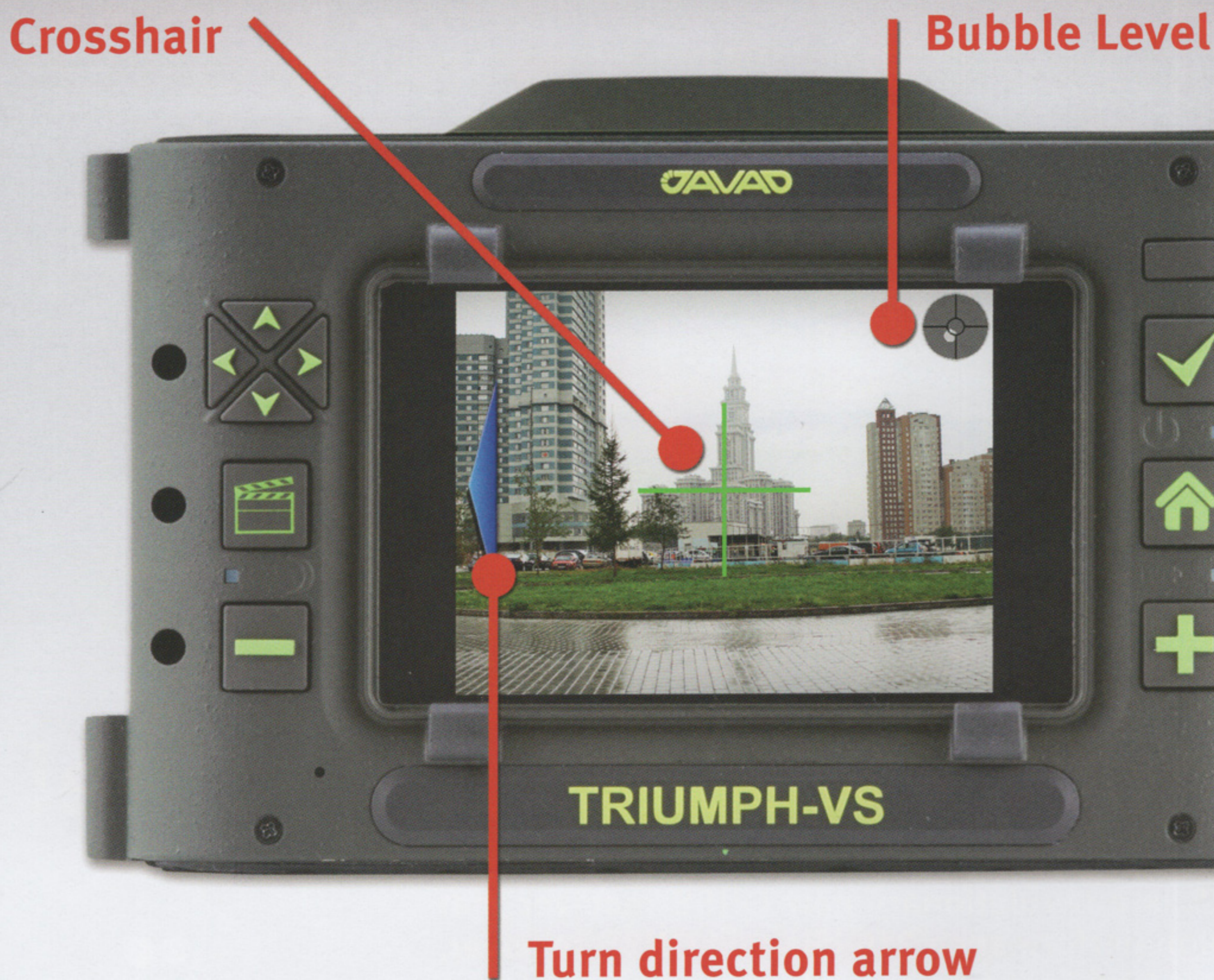
On the main stakeout Action Screen push "Fn" button to bring up secondary action screen

Use arrow buttons to cycle through the secondary action screen representations until the camera picture shows up

Note that the only way to return from the secondary action screen to the main one is pushing "Fn" again. Home button doesn't work in secondary action screen

Visual stakeout functioning

- While at VSO screen the **camera picture** will always be displayed. There will also always be a **virtual bubble level** in the top-right corner of the screen and a green **crosshair at the centre** of the screen. Virtual bubble level should act just like a real one placed on top of the device, helping to hold the device horizontally. Crosshair only shows the camera optical axis. Generally VSO precision is better when the target point is close to the crosshair.



- When there is a point target point selected for the regular stakeout mode, VSO screen will try to display it over the camera picture. If the point is out of the camera's field of view, wide arrow would appear at the edge of the screen pointing the closest turning direction to bring the target point to the field of view.
- If the target point is in the front camera's field of view, it will be marked with a small green circle and a flag of variable color. The green circle is displayed right at the target point and the flag should look like a real physical flag placed at this point. Note the green circle has a constant size, the flag is always scaled so that it looks like a 1.6-meter height one. E.g. it becomes larger as you approach the point.

- **Near the target point** the planar distance to it is displayed. The distance is displayed in meters if it's smaller than 1 km and in kilometers otherwise.
- **The flag color** represents current position solution type: it can be green, yellow or red, indicating RTK Fixed, RTK Float and Stand-alone solutions.



RTK Fixed



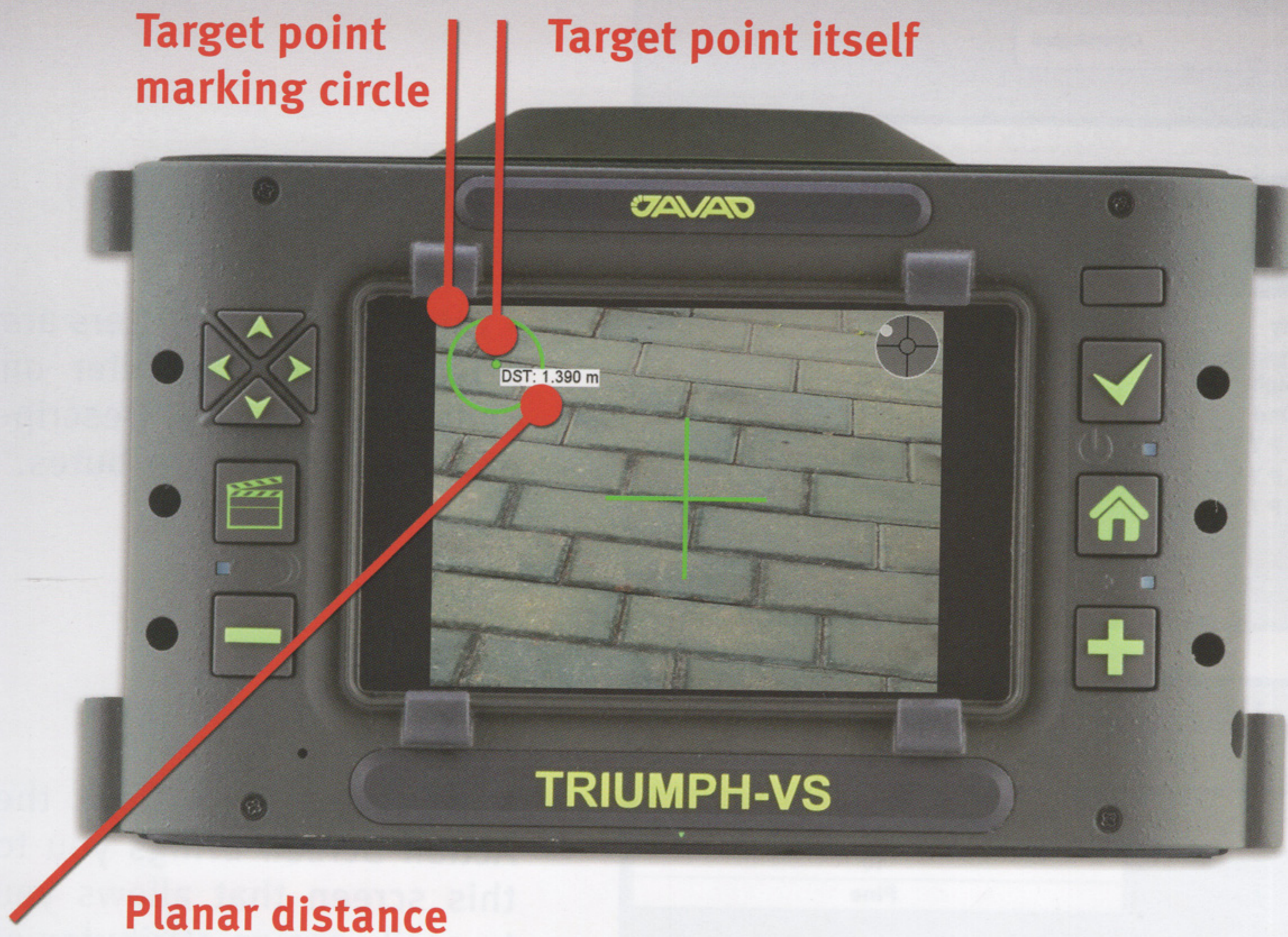
RTK Float



Stand-alone

- When you come close enough to the target point the device will automatically switch view to the bottom camera.

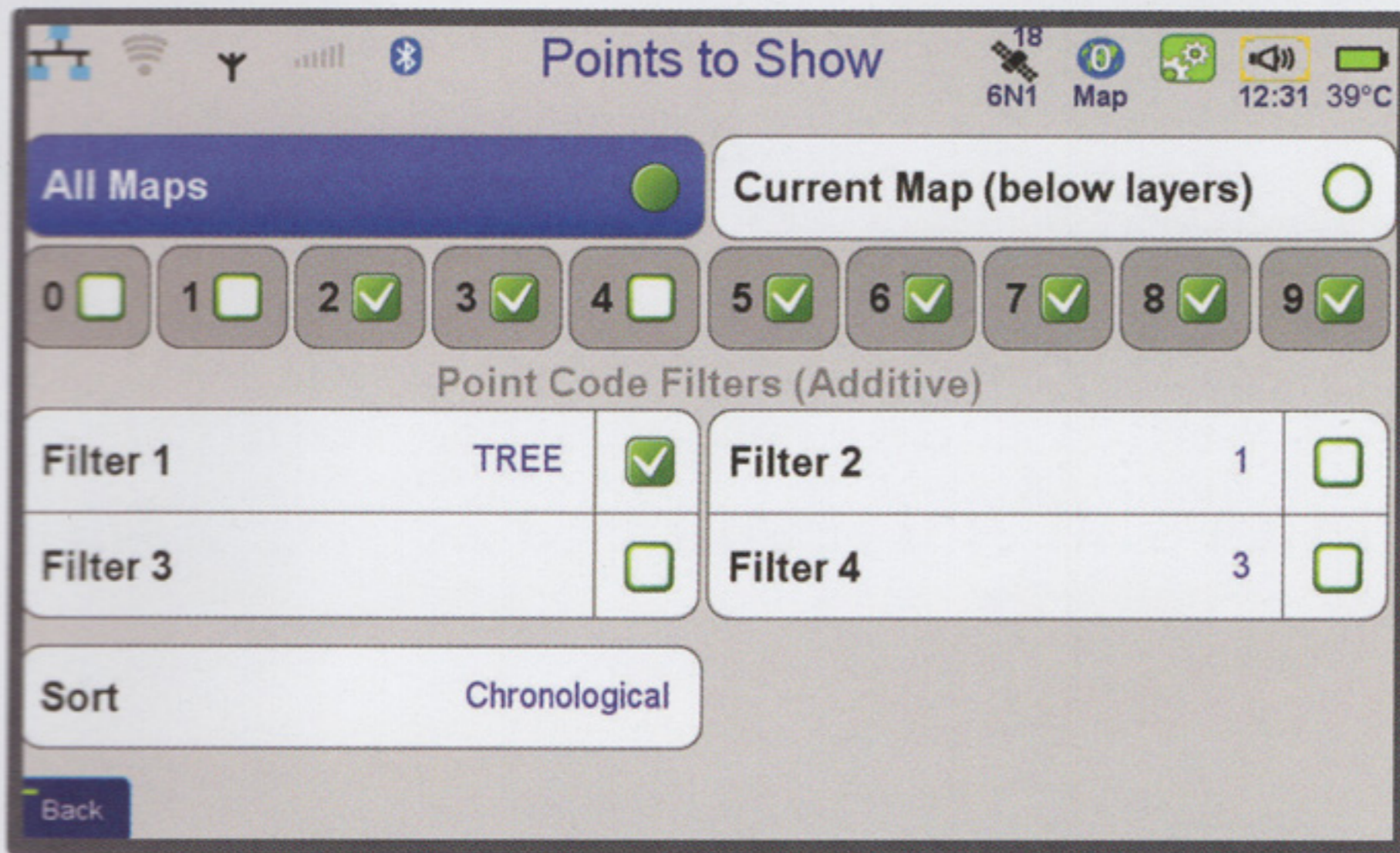
- Displayed information remains the same as for the top camera except for the flag. The 1.6-meter height flag is replaced with a **30-cm circle** for the bottom camera. The circle should look like a physically painted 30-cm circle around the target point. The circle color has the same meaning as the flag color to the top camera VSO.
- Note that the distance displayed is still a planar one. E.g. holding the device in a meter or two right over the point will result in a zero distance.



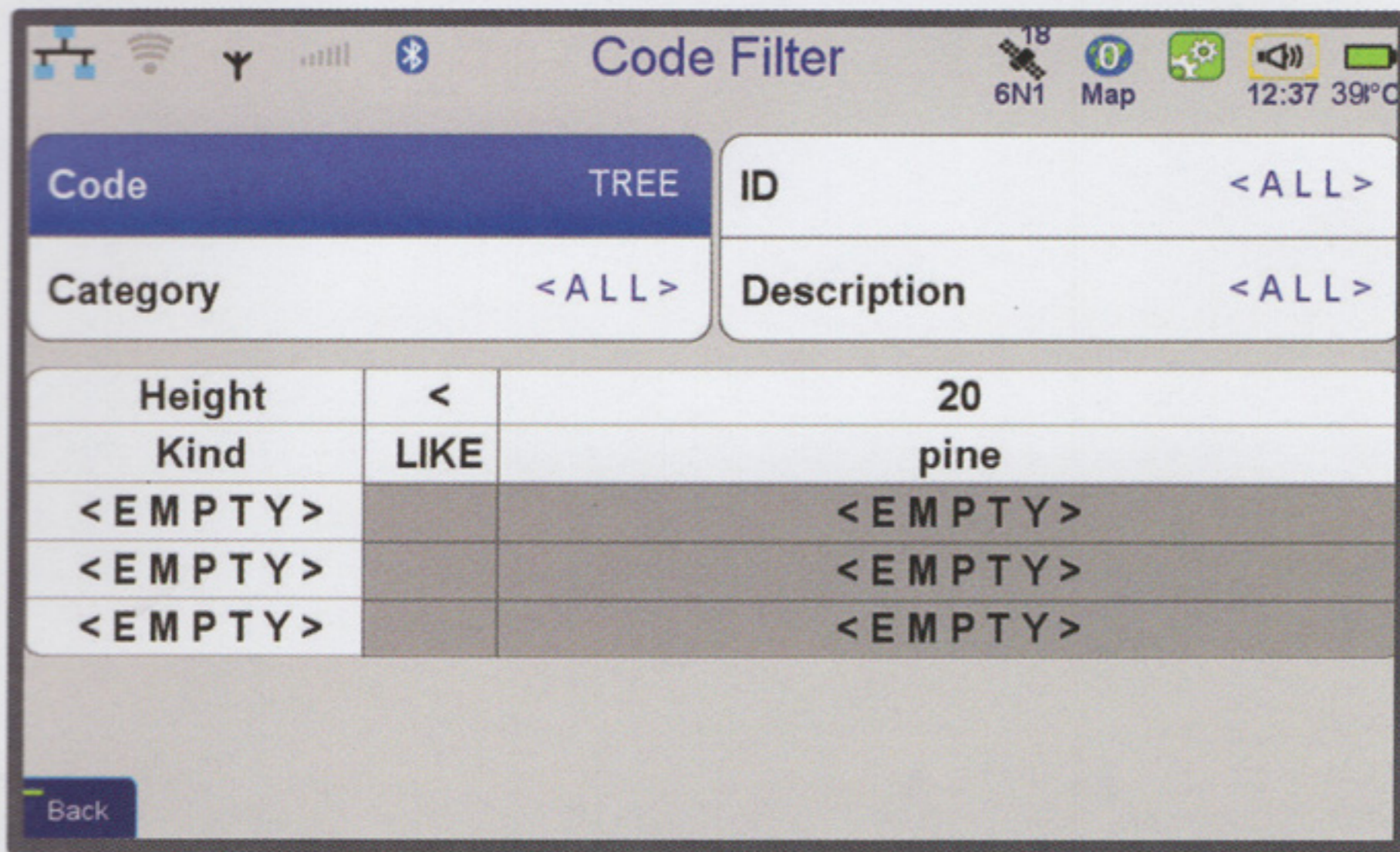
Notes

- 1** The VSO precision is better when you came closer to the target point and it's also better when the point is close to the crosshair. This means that the best way to get the most precise target point picture is to place the device so that the bottom camera's marking circle is right in the center of the screen and the virtual bubble level has its bubble right in the center. Still the regular stakeout precision is a bit better. So it's recommended to use VSO as an easy and convenient way to get close to the target point, and then switch to the regular stakeout mode to perform precise measurement.
- 2** The VSO precision is highly depends on the levels and compass measurements. Be sure these are always accurately calibrated.
- 3** VSO is designed to work with the target points at the ground, not in the air. The marking flag and circle would only be painted reasonably if the target point was previously measured with a correct "Measured height" parameter.

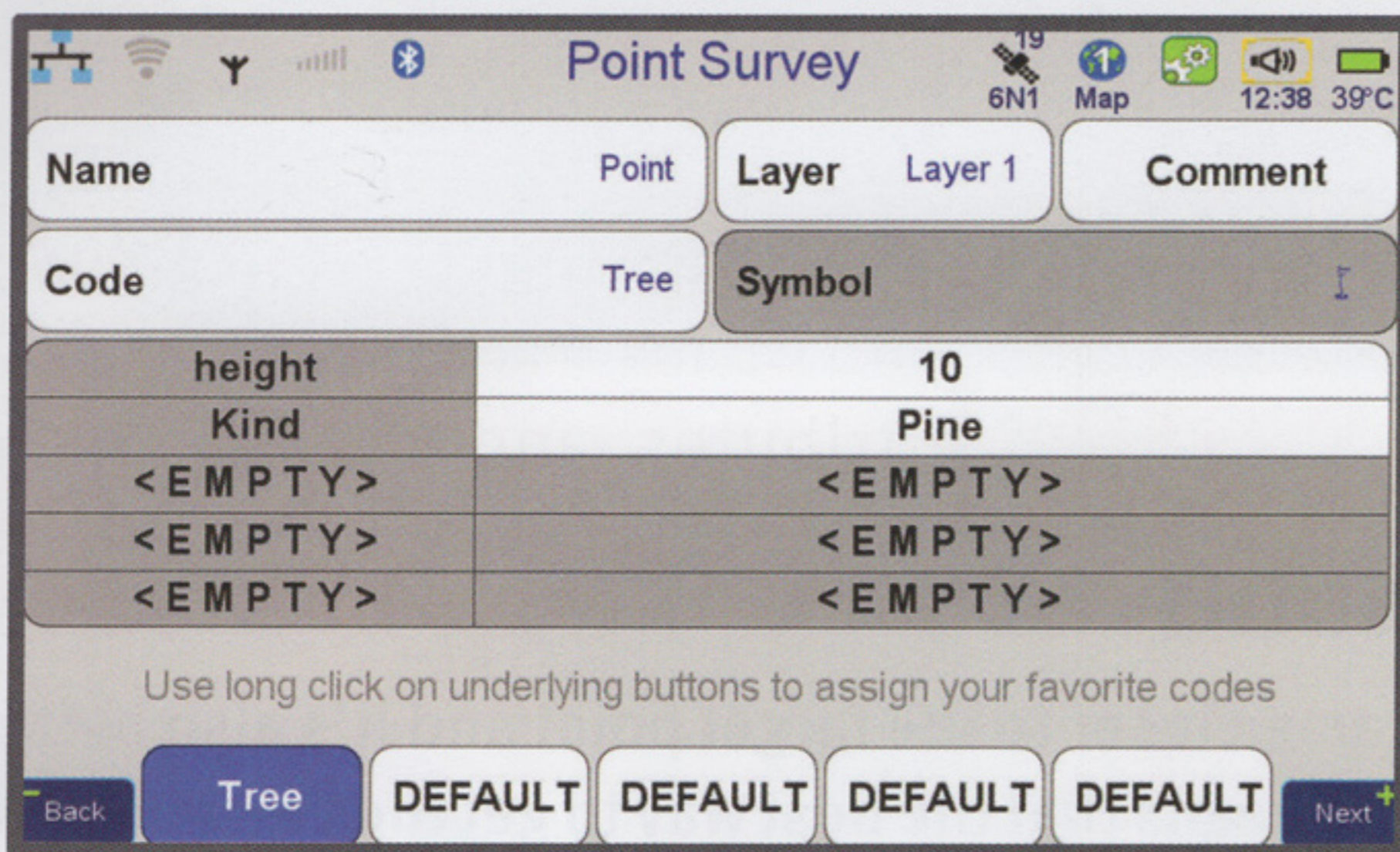
Here are some examples



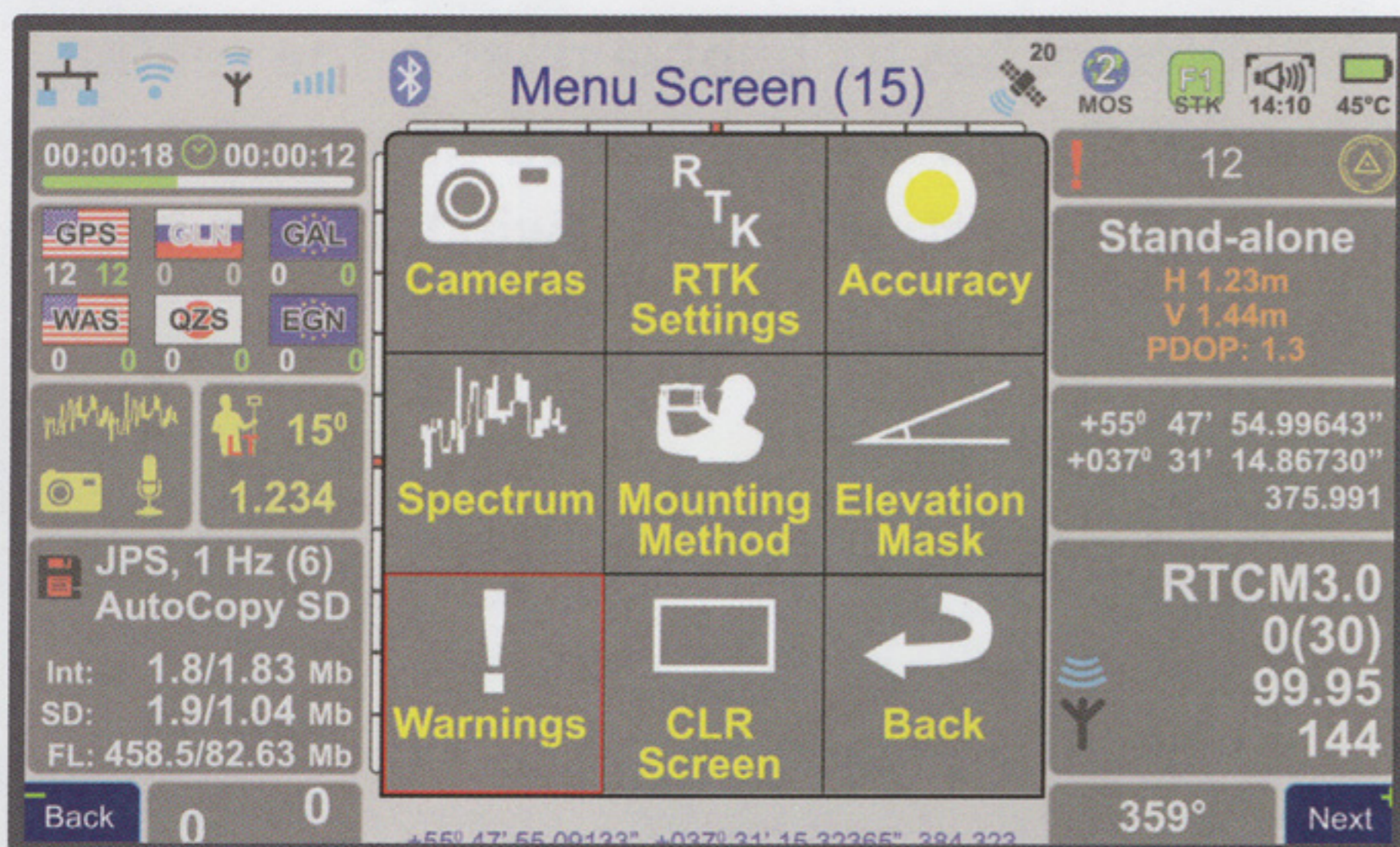
- Code Filter allows you to shorten the points list and identify points that you want to see.



- This is how Code Filters are selected. You can filter on Code, ID, Category, Description and variable attributes.



- A single click from the Action Screen brings you to this screen that allows you to easily assign attributes of points.



- Action Screen shows the status of all functions. Each action can be activated by a single click.

TRIUMPH-1



TRIUMPH-1 accommodates all GNSS and Modem electronics, antennas, and up to 20 hours of rechargeable batteries. GNSS, UHF, GSM, Bluetooth, and WiFi antennas are conveniently hidden and protected.

- GPS L1, L2, L5
- GLONASS L1, L2, L3
- QZSS L1, L2, L5
- Galileo L1, E5A, E5B, altBoc
- Compass B1, B2

Victor-VS is the new generation of rugged and modern field controllers. It automatically connects to JAVAD GNSS receivers via its internal Bluetooth and guides you through field operations.



VICTOR-VS