



The Mobile Robot Company

Knowledge Center — Obstacle or Safety-Field Stops · 2026-08-04

<https://info.mobilerobot.com/support/troubleshooting/obstacle-or-safety-field-stops>

Obstacle or Safety-Field Stops

A J1600 that stops during [an autonomous task](https://info.mobilerobot.com/documentation/user-guides/autonomous-operation/) (<https://info.mobilerobot.com/documentation/user-guides/autonomous-operation/>) is usually doing its job. The vehicle carries a 360-degree protective field, monitored by two 2D safety LiDAR scanners and an independent safety controller, and it stops when a person or object enters that field. This page explains the behavior and how to get moving again.

How the safety field behaves

- The protective field surrounds the vehicle and supports both forward and reverse autonomous travel.
- The field is [speed-dependent](https://info.mobilerobot.com/safety-compliance/safety-functions/safety-field-adjustment/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/safety-field-adjustment/>): it expands as travel speed increases.
- Blue light strips project the current protected area onto the floor. White lights indicate manual mode.
- [Person detection](https://info.mobilerobot.com/safety-compliance/safety-functions/person-detection/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/person-detection/>) and [braking](https://info.mobilerobot.com/safety-compliance/safety-functions/braking/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/braking/>) are certified safety functions within the layered safety architecture. For the design, see [How J1600 safety works](https://info.mobilerobot.com/safety-compliance/safety-overview/how-j1600-safety-works/) (<https://info.mobilerobot.com/safety-compliance/safety-overview/how-j1600-safety-works/>).

Resuming after a stop

1. Clear the safety field — step out of the protected area and remove any obstruction.
2. Press the LED start/resume button to continue the task.

The robot also [avoids obstacles](https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/) (<https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/>) on its own: where a path exists, it routes around objects and people rather than stopping. A full stop typically means the field itself was breached or [no clear route remained](https://info.mobilerobot.com/support/troubleshooting/navigation-problems/) (<https://info.mobilerobot.com/support/troubleshooting/navigation-problems/>).

Frequent stops on a route

If a route triggers constant stops:

- Reduce congestion on the route, or define preferred travel zones so the robot favors calmer paths through production areas.
- For [genuinely crowded areas](https://info.mobilerobot.com/applications/scenarios/operation-in-crowded-environments/) (https://info.mobilerobot.com/applications/scenarios/operation-in-crowded-environments/), — an overflowing receiving zone at truck arrival, for example — take over with the tiller and drive the congested portion manually. Immediate manual takeover is a core part of [dual mode](https://info.mobilerobot.com/products/j1600/dual-mode/) (https://info.mobilerobot.com/products/j1600/dual-mode/).

Other stop controls

Stops can also come from deliberate controls rather than the safety field:

- [three emergency-stop buttons](https://info.mobilerobot.com/safety-compliance/safety-overview/emergency-stops-and-manual-takeover/) (https://info.mobilerobot.com/safety-compliance/safety-overview/emergency-stops-and-manual-takeover/);
- the belly button on the tiller, which stops the vehicle and reverses it away from the operator;
- grabbing or moving the tiller, which returns the robot to manual control;
- [tiller-position switches](https://info.mobilerobot.com/safety-compliance/safety-functions/tiller-detection/) (https://info.mobilerobot.com/safety-compliance/safety-functions/tiller-detection/), which act as emergency-stop and manual-control inputs.

Check whether one of these was activated before assuming a fault.

When it is not safety behavior

If the robot stops with a clear field, no engaged stop control, and a valid route, contact support — see [Submit a support request](https://info.mobilerobot.com/support/contact/submit-a-support-request/) (https://info.mobilerobot.com/support/contact/submit-a-support-request/).