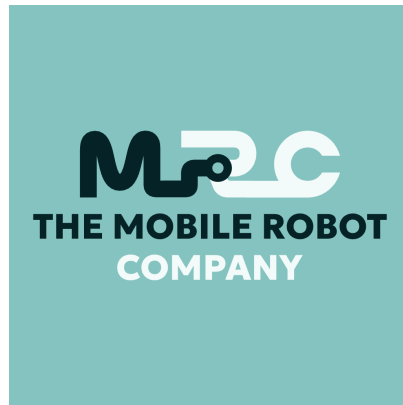




The Mobile Robot Company

Knowledge Center — Mixed Manual and Autonomous Work · 2026-08-04

<https://info.mobilerobot.com/applications/scenarios/mixed-manual-and-autonomous-work>

Mixed Manual and Autonomous Work

The J1600 is one vehicle for two kinds of work. In the same shift — often in the same minute — it is a familiar manual pallet jack and an autonomous transporter. Mixing the modes freely, rather than choosing one, is how the machine earns its keep: judgment stays manual, distance goes autonomous.

The two modes

- **Manual mode:** a person controls the tiller and lift functions like a conventional electric pallet jack — nuanced pickup, handling up to 1,600 mm, difficult approaches, [sensitive loads](https://info.mobilerobot.com/applications/use-cases/sensitive-or-unstable-loads/) (<https://info.mobilerobot.com/applications/use-cases/sensitive-or-unstable-loads/>), exceptions. White lights indicate manual mode.
- **Automatic mode:** after the operator selects a saved destination and confirms the [mode change](https://info.mobilerobot.com/documentation/getting-started/manual-and-autonomous-modes/) (<https://info.mobilerobot.com/documentation/getting-started/manual-and-autonomous-modes/>), the vehicle [drives itself](https://info.mobilerobot.com/documentation/user-guides/autonomous-operation/) (<https://info.mobilerobot.com/documentation/user-guides/autonomous-operation/>), drops at floor level, and follows its configured return, park, wait, or continue behavior. Blue light strips show the protected area.

This is [dual mode](https://info.mobilerobot.com/products/j1600/dual-mode/) (<https://info.mobilerobot.com/products/j1600/dual-mode/>), the product's defining distinction.

Switching between modes

Into automatic: create or select the task on the touchscreen, execute, confirm with the physical LED start/resume button when the robot asks, and step clear when instructed.

Back to manual: grab or move the tiller — takeover is immediate. Tiller-position switches handle emergency stop and manual control, and a three-position key switch selects power off, manual only, or automatic mode. Safety controls are always available — 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/>).

The full task workflow is in [Manual Pickup and Autonomous Delivery](https://info.mobilerobot.com/applications/scenarios/manual-pickup-and-autonomous-delivery/) (<https://info.mobilerobot.com/applications/scenarios/manual-pickup-and-autonomous-delivery/>).

A mixed shift in practice

A [receiving](https://info.mobilerobot.com/applications/use-cases/inbound-receiving/) operator's morning might look like this:

1. **Manual:** unload the trailer over the dock plate — [manual mode](https://info.mobilerobot.com/documentation/user-guides/manual-operation/) handles gradients up to 5% unloaded, 3% loaded; automatic mode is level-floor only.
2. **Autonomous:** send each pallet to storage with [deliver and return](https://info.mobilerobot.com/applications/scenarios/deliver-and-return/) while staying at the dock.
3. **Manual:** an awkward, part-damaged pallet gets hand-carried treatment — see [Handling Exceptions and Irregular Loads](https://info.mobilerobot.com/applications/scenarios/handling-exceptions-and-irregular-loads/).
4. **Autonomous:** the last pallet goes out with [deliver and park](https://info.mobilerobot.com/applications/scenarios/deliver-and-park/), leaving the vehicle at the charger.

One tool covers the whole sequence — no switching vehicles, no idle specialist machine. This one-tool utilization also suits [local work cells](https://info.mobilerobot.com/applications/use-cases/local-work-cell-automation/) and small teams where the same one to five operators do everything.

Why not full automation

Removing the manual half entirely would require [systems integration](https://info.mobilerobot.com/applications/results/lower-integration-complexity/), controlled processes, and expert configuration — and would still stall on the exceptions a person handles in seconds. Keeping the operator in the loop targets most of the [productivity gain](https://info.mobilerobot.com/applications/results/productivity-improvements/) at a fraction of the complexity; the reasoning is laid out in [human-in-the-loop automation](https://info.mobilerobot.com/documentation/concepts/human-in-the-loop-automation/). [Training](https://info.mobilerobot.com/documentation/getting-started/operator-training/) for the mixed role takes about 30 minutes for an existing pallet-jack operator.