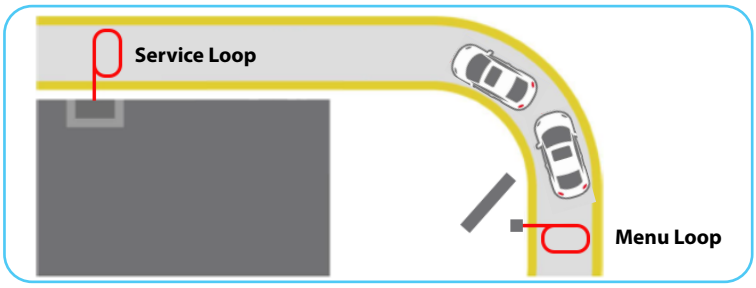
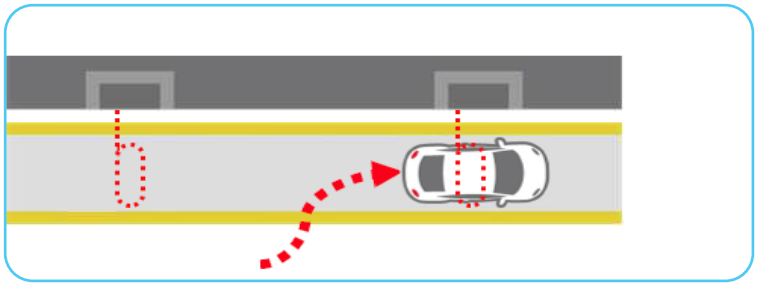
Understanding Pull-ins, Pull-outs, and Ghost Cars on Your ZOOM Nitro® Timer

Pull-ins, Pull-outs and Ghost Cars are normal events that occur in your drive-thru. The ZOOM Nitro Timer temporarily displays these cars and automatically adjusts to determine where to focus your efforts and increase your team's efficiency.



Pull-ins:

A "Pull-in" occurs when a car enters the drive-thru in the middle of a lane. This happens in open lanes, when cars can enter the lane in an area past the Menu detector:

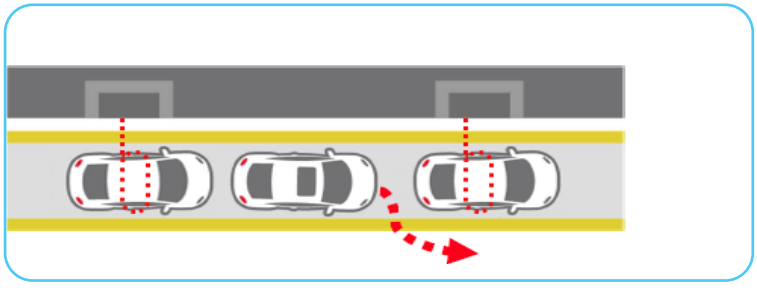


When a car enters in the middle of the lane, it is not detected by the first detection point, which prevents ZOOM Nitro Timer from tracking the total lane time for that car. By default, when a pull-in occurs, ZOOM Nitro Timer recognizes it and excludes the data for the car so that it does not skew calculated averages.

Note: If you'd like to include these Pull-in times, adjustments can be made by accessing Settings in ZOOM Nitro Timer.

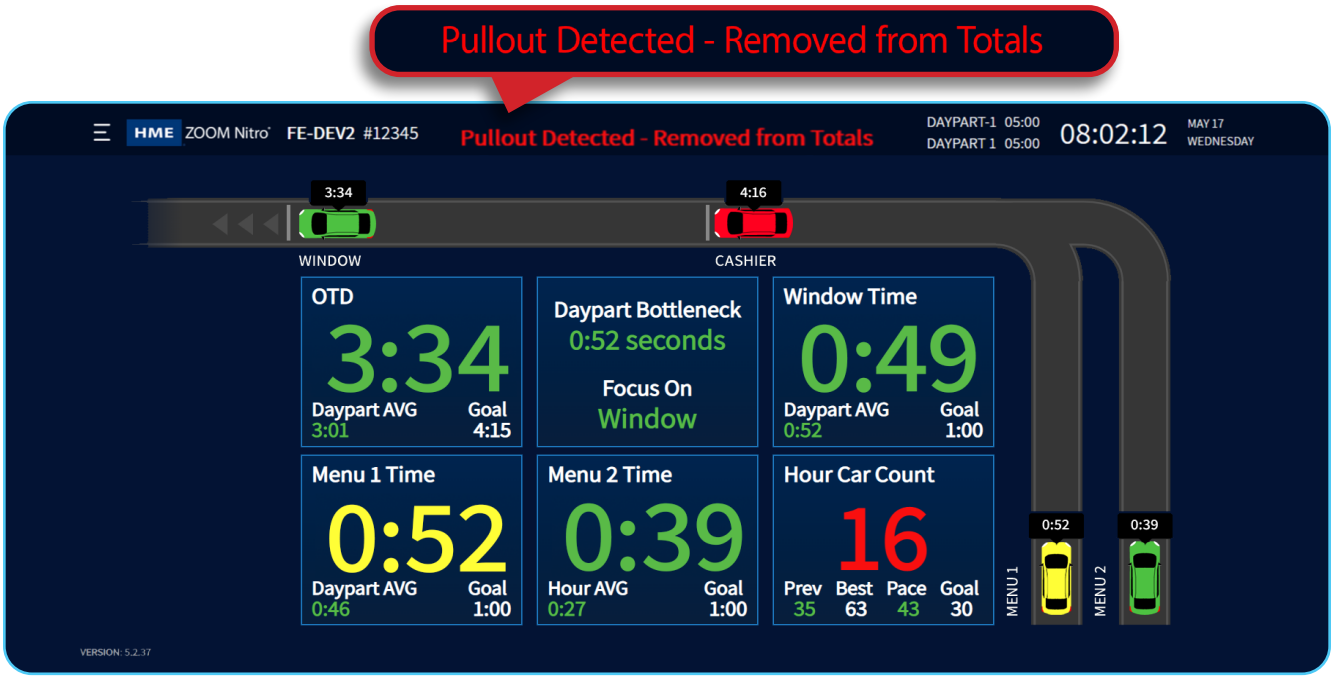
Pull-outs:

When a car exits in the middle of the lane, it is detected by the menu detector but is not detected by the last detection point, preventing the ZOOM Nitro Timer from tracking that car's total lane time. As with a Pull-in, when a Pull-out occurs, ZOOM Nitro Timer recognizes it and eliminates the data for the car to avoid skewed calculated averages.



Ghost Cars:

The term "Ghost Car" is used to describe when a car appears on the ZOOM Nitro Timer dashboard but the car is not in the drive-thru. The ZOOM Nitro Timer removes Ghost Cars from the calculated data averages and total car counts and notifies you of the removals in red at the top of the dashboard.



There are four circumstances that can generate Ghost Cars:

- Two cars enter the lane and are detected by the first detection point but one of the cars departs in the middle of the lane.
- Two cars are detected as one single car at the last detection point due to their unusual close proximity to each other. ZOOM Drive-Thru Timer shows the single detected car depart but an undetected car remains in the lane.
- A single car is detected twice at the beginning of the lane instead of once.
- A single car enters the lane and is detected by the first detection point but leaves the lane before making it to the last detection point (a Pull-out).

There are several reasons why a single car may be inadvertently detected twice at the beginning of the lane.

For example:

- A car pulls away from a detector and then backs onto it again. This can happen if a menu is configured too far forward from the speaker post or if a car drives too far over the loop.
- There is metal of some type around the loop, in the ground, or around the magnetic field above the loop, such as a bicycle, that may affect its normal operation.
- The loop is not functioning properly. This could be caused by exposure, power washing the lane, or damage to the wire. The loop can be tested by a technician to confirm.
- The loop detects two vehicles because it misinterpreted an unusually shaped vehicle like a lifted truck.

  Note: If the loop is not accurately detecting oddly shaped vehicles, adjustments can be made to the detector and timer to correct this issue. Contact HME Technical Support for help make these adjustments.

Again, the ZOOM Nitro Timer identifies and removes the Ghost Cars in these scenarios.

When there is an extra car in the lane, the Timer waits for a set amount of time to determine that it is not legitimate and then removes the Ghost Car from the data calculations. The removal of the Ghost Car is indicated on the ZOOM Nitro dashboard, as you see above.

Ghost Cars do not affect the averages or totals on either your ZOOM Nitro Timer or your ZOOM Nitro Leaderboard and HME CLOUD.