How Different Scenarios can affect the performance of the Fast Track 2+2 Drive-thru Timer

Question 1: What happens if a vehicle in line drives off with NO other vehicles in the line?

Answer 1: First off, ANY vehicle that triggers Menu Detection beginning a Line/Total time MUST also trigger Pick Up Window detection to cancel the Line/Total time for the timer to work correctly. If a vehicle triggers menu detection beginning a Line/Total time and then drives off, the timer will kick out that vehicle's Line/Total time when the Drive-Off time is met with no vehicle triggering window detection. Standard Drive-Off setting is 30-seconds. If a vehicle drives off, any window(s) in the drive-thru with detection, Cashier and/or Pick Up must be completely unoccupied for 30-seconds (or the programmed Drive-Off time) to kick out the vehicle that drove off. **SEE FIGURE: Q1**

Question 2: What happens if a vehicle in line drives off when there ARE other vehicles in the line?

Answer 2: If a vehicle drives off when there are other vehicles in line, the next vehicle in line will take over the Line/Total time for the vehicle that drove off. This will create a domino effect of the next vehicle in line taking over the Line/Total time of the vehicle ahead of it. The timer will now indicate that there is 1 more vehicle in line than there actually is. This will cause the timer to report HIGHER Line/Total times for these vehicles than they actually have. Then once the drive-thru empties, the timer will still be showing 1 more vehicle in Line due to the one that drove off. Now the employees at the restaurant will see the timer running with NO VEHICLE IN THE DRIVE-THRU. Now all windows have to be unoccupied for the length of the drive-off time to kick out this extra vehicle. Once that occurs, the timer will resynchronize it self and all should time correctly.

If another vehicle gets to the drive-thru and to one of the windows BEFORE the Drive-Off time is met, this new vehicle now takes over the time that was left running when the drive-thru emptied. This will report a higher time than it actually is for that vehicle. Timer will also indicate that there is 1 more vehicle in the drive-thru than there actually is and once again, all windows must be unoccupied for the full Drive-Off time for the timer to resynchronize.

*There is a Remove Car from Line/Lane feature on all models of full line timers that are manufactured. This feature requires an Access Code to be used. Many times the in-store manager is not given a code due to abuse of this feature in an effort to remove real vehicles trying to improve times by cheating. **SEE FIGURE: Q2**

Question 3: What happens when a vehicle that began a Line/Total time is served at the Cashier window and allowed to exit the drive-thru without stopping at the Pick Up Window?

Answer 3: If a vehicle drives off when there are other vehicles in line, the next vehicle in line will take over the Line/Total time for the vehicle that drove off. This will now create a domino effect of the next vehicle in line taking over the Line/Total time of the vehicle ahead of it. The timer will also now indicate that there is 1 more vehicle in line than there actually is. This will cause the timer to report HIGHER Line/Total times for these vehicles than they actually have. Then once the drive-thru empties, the timer will still be showing 1 more vehicle in Line due to the one that drove off. Now the employees at the restaurant will see the timer running with NO VEHICLE IN THE DRIVE-THRU. Now all windows have to be unoccupied for the length of the drive-off time to kick out this extra vehicle. Once that occurs, the timer will resynchronize it self and all should time correctly.

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Question 4: What happens when there is only one vehicle in drive-thru, it places order at menu and then stops in between menu and window loops for longer than the set Drive-Off time after placing order. Then its Line/Total time gets kicked out as a Drive-Off but the vehicle still completes the cycle? (**E.g.** Vehicle stops in between menu and window after placing order to gather money).

Answer 4: As long as this vehicle exits the drive-thru prior to another vehicle reaching the menu, the timer will resynchronize it self and perform correctly. If a new vehicle reaches the menu starting it's own Line/Total time while this original vehicle is still in the drive-thru, the original vehicle will assume or take over the Line/Total time of the new vehicle and cancel this time prematurely reporting a shorter Line/Total time than it should. This can also create a domino effect if vehicles continue to enter the drive-thru. In this case, the timer will resynchronize it self immediately after the drive-thru completely clears. **SEE FIGURE: Q4**

Question 5: How is timer affected when restaurant uses an Outside Order Taker?

Answer 5: This can have an affect on timing when the Order Taker stands either ahead or behind the menu causing some vehicles to fail to stop at the menu. This happens either because customer has to drive past the menu without stopping to get to the Order Taker, or because they had already stopped before the menu to place order and continue to drive past menu without stopping because there is no traffic ahead of them. If a vehicle does NOT stop at the menu, a Line/Total timer will not be started. Question/Answer #4 explains what will happen in this scenario. **SEE FIGURE: Q4**

Question 6: What happens if a vehicle has to make a sharp turn in drive-thru causing it to miss a loop/detection point?

Answer 6: This is completely dependent upon what loop the vehicle misses. Usually it is the menu loop the vehicles miss in this scenario. If this happens, now you have a vehicle in line that failed to begin a Line/Total time. Again, Question/Answer #4 explains what will happen in this scenario. **SEE FIGURE: Q4**

Question 7: What happens if a vehicle triggers menu detection with NO intention of going through the Drive-Thru?

Answer 7: Some Drive-Thrus have a menu board that is not enclosed and is located in an area where non drive-thru traffic may drive over the menu detector. This can began a Line/Total time for a vehicle that will never go through the drive-thru. Depending on what happens next will determine how the timer reacts. If another vehicle gets into the drive-thru before the timer has the ability to kick this vehicle out as a drive-off, it will be the same as problems discussed in Question #2. If the timer does have enough time to kick out this falsely started Line/Total time, the timer will resynchronize it self and the timer should work fine. **SEE FIGURE: Q2**

***** If it is known that menu detection can easily be triggered by non drive-thru traffic, a short delay can be placed on the Menu event to avoid beginning Line/Total times for non drive-thru vehicles. Please contact Phase Research Customer Service for assistance on setting this delay.

****** Dual Menu (Tandem) configured timers can have NO DELAY added.

Question 8: What affects can a Pre-Loop have on timing?

Answer 8: Some restaurants have a Pre-Loop connected to the timer, which is located in the drive-thru lane before the menu. When crossed, this starts a Line/Total time rather than waiting until the vehicle arrives at the menu. This is usually done at high volume restaurants where the line of customers extends past the menu on a regular basis and they want to measure length of time customers are waiting from this point. If the Pre-Loop is in a captured/closed lane, this usually works fine. If the Pre-Loop is in an open lane where non drive-thru traffic is able to drive over this loop, this creates issues described in Question/Answer 7. Since the Pre-Loop has to detect vehicles whether they drive over the loop without stopping or stop there completely, NO DELAY can be added. Pre-Loops are NOT recommended for Open Lane Drive-Thrus. **SEE FIGURE: Q2**

Question 9: Why doesn't Fast Track start a Line/Total time when the intercom/headset system doesn't beep for arrival of vehicle at menu?

Answer 9: The Fast Track timer interfaces to the same vehicle detector at the menu used by the intercom/headset system. This detector causes the intercom/headset system to beep when a vehicle arrives at the menu making employees aware of its presence. If the intercom/headset system is NOT beeping due to vehicle detector not working, the Fast Track will NOT start a Line/Total time for this vehicle as well. The dealer/service provider for the intercom/headset system should be contacted immediately to have this problem resolved. Once problem is resolved, Fast Track should start tracking a Line/Total time correctly.

Question 10: What happens if a vehicle cuts in line ahead of a vehicle at menu?

Answer 10: This vehicle will assume or take over the Line/Total time started by the vehicle behind it if it completes the drive-thru cycle. This will cancel this time prematurely reporting a shorter Line/Total time than it should. This can also create a domino effect if vehicles continue to enter the drive-thru. In this case, the timer will resynchronize it self immediately after the drive-thru completely clears. **SEE FIGURE: Q4**

Question 11: What happens when a customer is waiting too close behind the vehicle placing the order at the menu board and pulls up to the menu board as the first customer leaves.

Answer 11: A vehicle stops at the menu starting a Line/Total time. Another vehicle is directly behind the car at the menu board waiting in line, leaving a small gap and enters the same detection field as the first vehicle and both are seen as the same car. A new Line/Total time is NOT started for the 2nd vehicle. The timer is now out of synchronization and will indicate one less car than in reality. If a 3rd vehicle arrives and stops at the menu and starts a Line/Total time before the 2nd vehicle exits the Pickup Window, this will report a shorter Line/Total Time for the 2nd vehicle. The 3rd vehicle will then be left with NO Line/Total time. This will continue until the drive-thru clears. The timer will then re-synchronize. **SEE FIGURE: Q5**

Question 12: What happens when a vehicle exits the Pickup Window with another vehicle moving forward at the same time, leaving no gap.

Answer 12: The 1st vehicle exits the Pickup Window with a 2nd vehicle directly behind leaving a small gap. The 2nd vehicle enters the same detection field as the first as it exits and both cars are seen as the same vehicle. The timer is now out of synchronization and will still indicate 2 cars in the lane. This will continue until all windows remain clear for the entire length of Drive-Off Time. The timer will then report the extra car as a Drive-Off and re-synchronize. **SEE FIGURE: Q6**

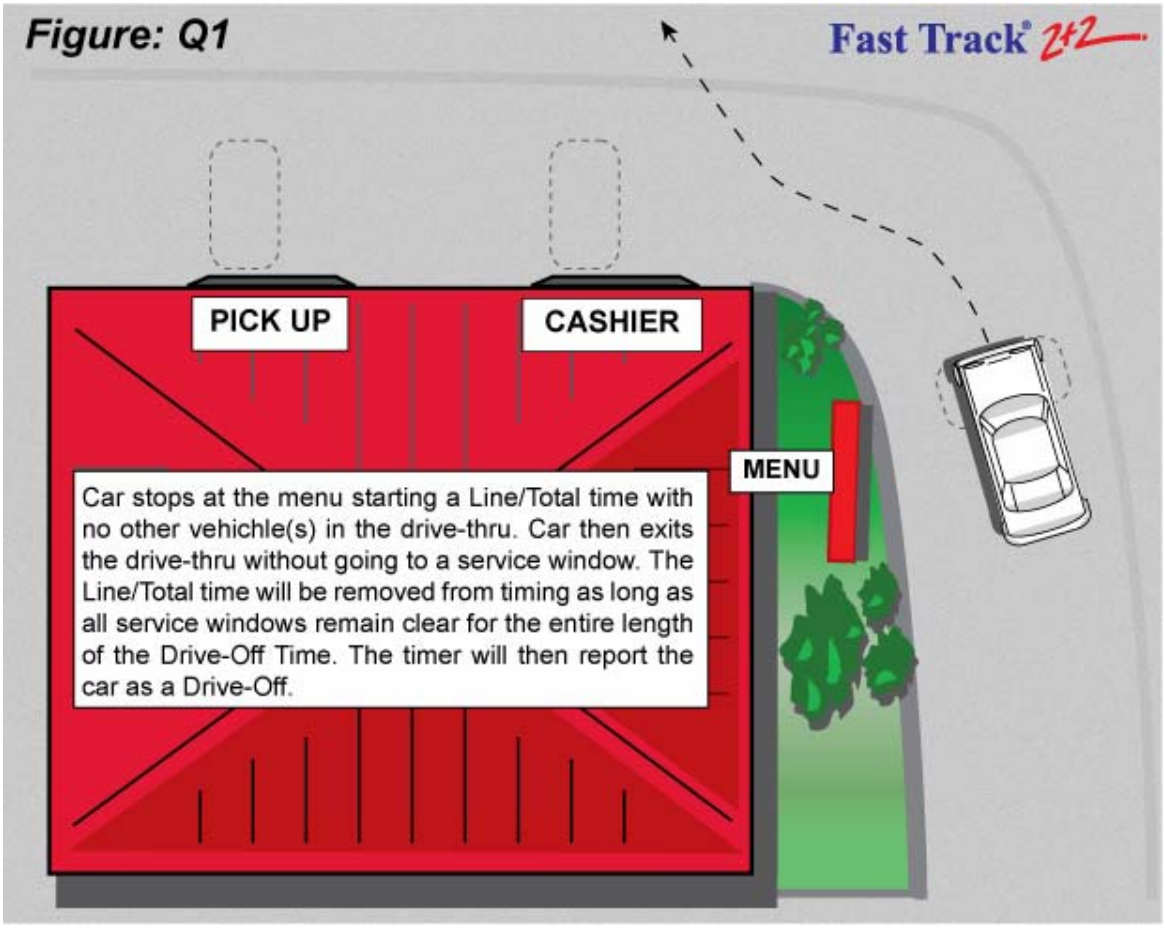
Figure: Q1
Fast Track 2+2
PICK UP
CASHIER
MENU
Car stops at the menu starting a Line/Total time with no other vehichle(s) in the drive-thru. Car then exits the drive-thru without going to a service window. The Line/Total time will be removed from timing as long as all service windows remain clear for the entire length of the Drive-Off Time. The timer will then report the car as a Drive-Off.

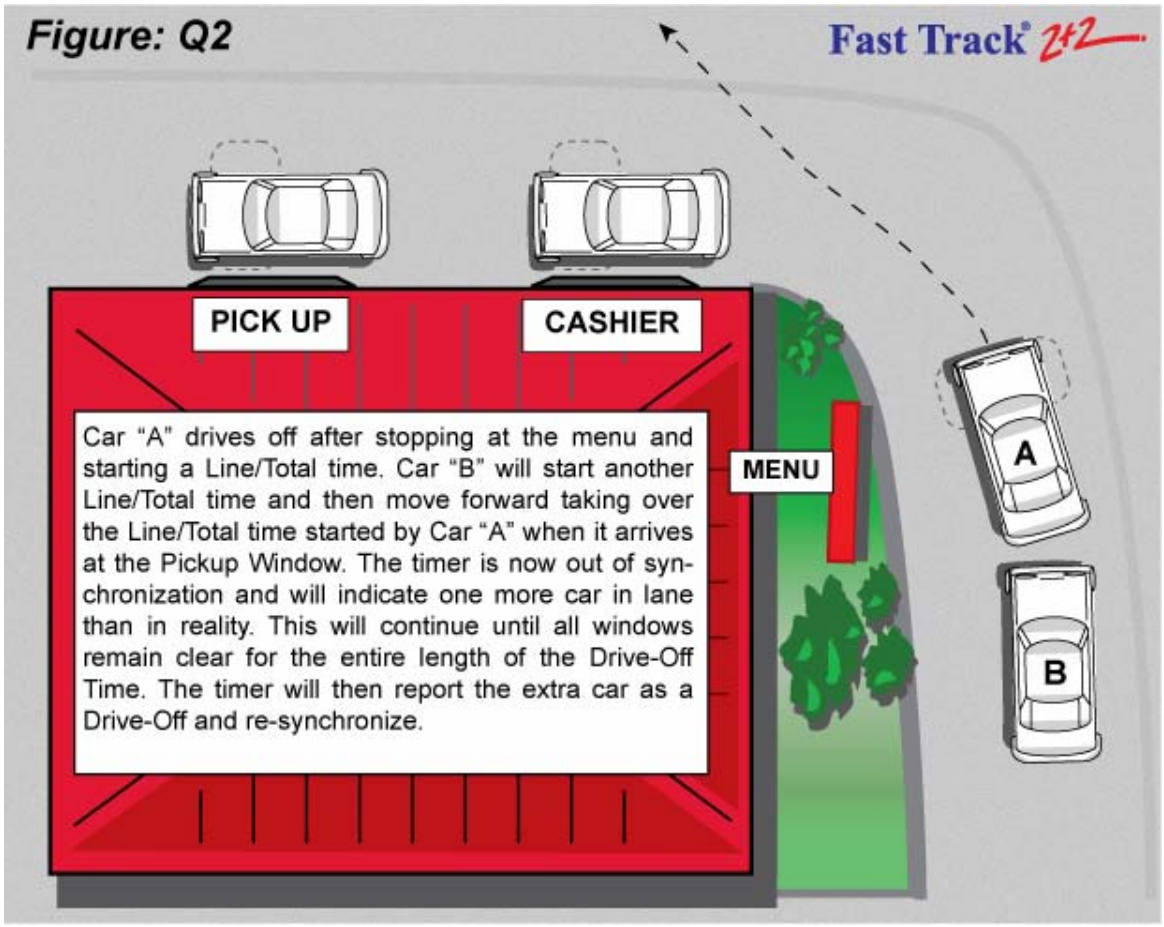
Figure: Q2
Fast Track 2+2
PICK UP
CASHIER
MENU
A
B
Car "A" drives off after stopping at the menu and starting a Line/Total time. Car "B" will start another Line/Total time and then move forward taking over the Line/Total time started by Car "A" when it arrives at the Pickup Window. The timer is now out of synchronization and will indicate one more car in lane than in reality. This will continue until all windows remain clear for the entire length of the Drive-Off Time. The timer will then report the extra car as a Drive-Off and re-synchronize.

Figure: Q3

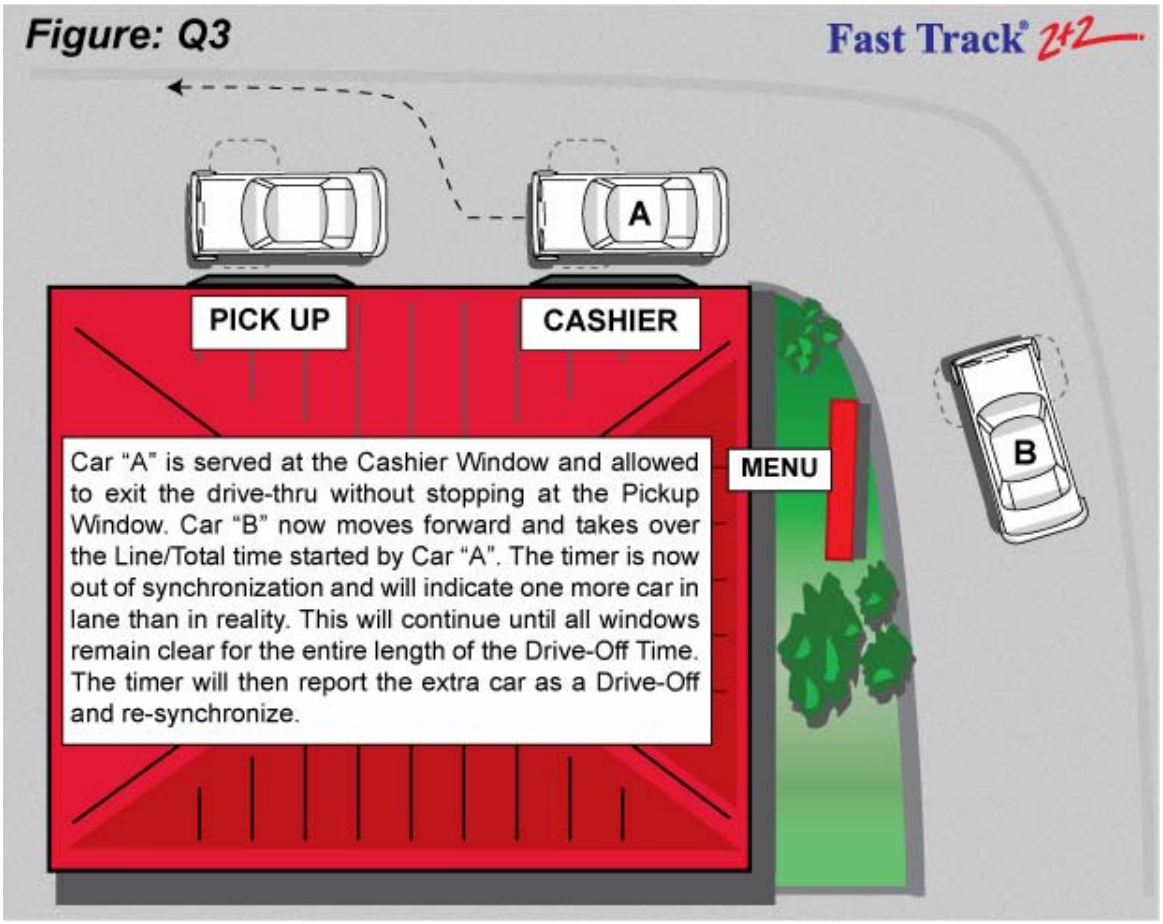

Figure: Q4

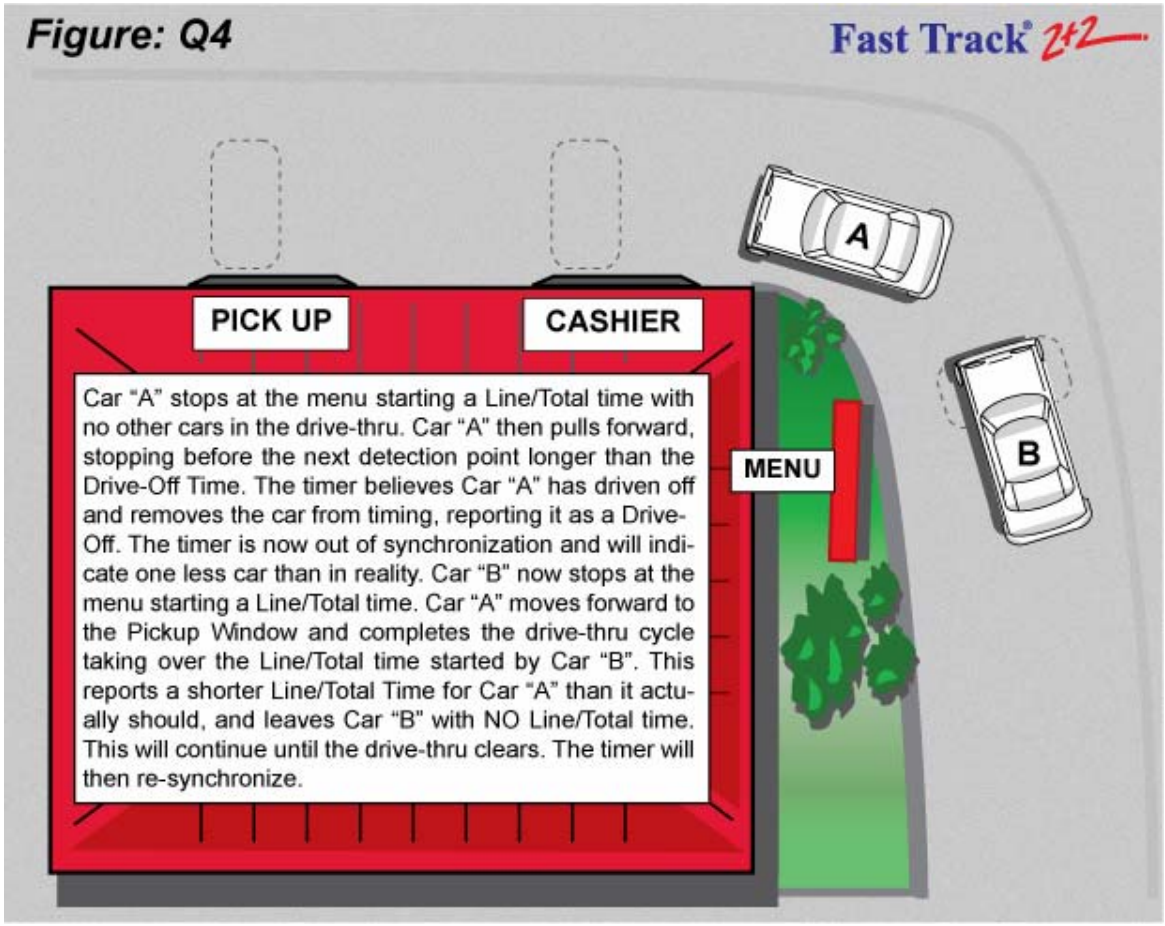

Figure: Q5

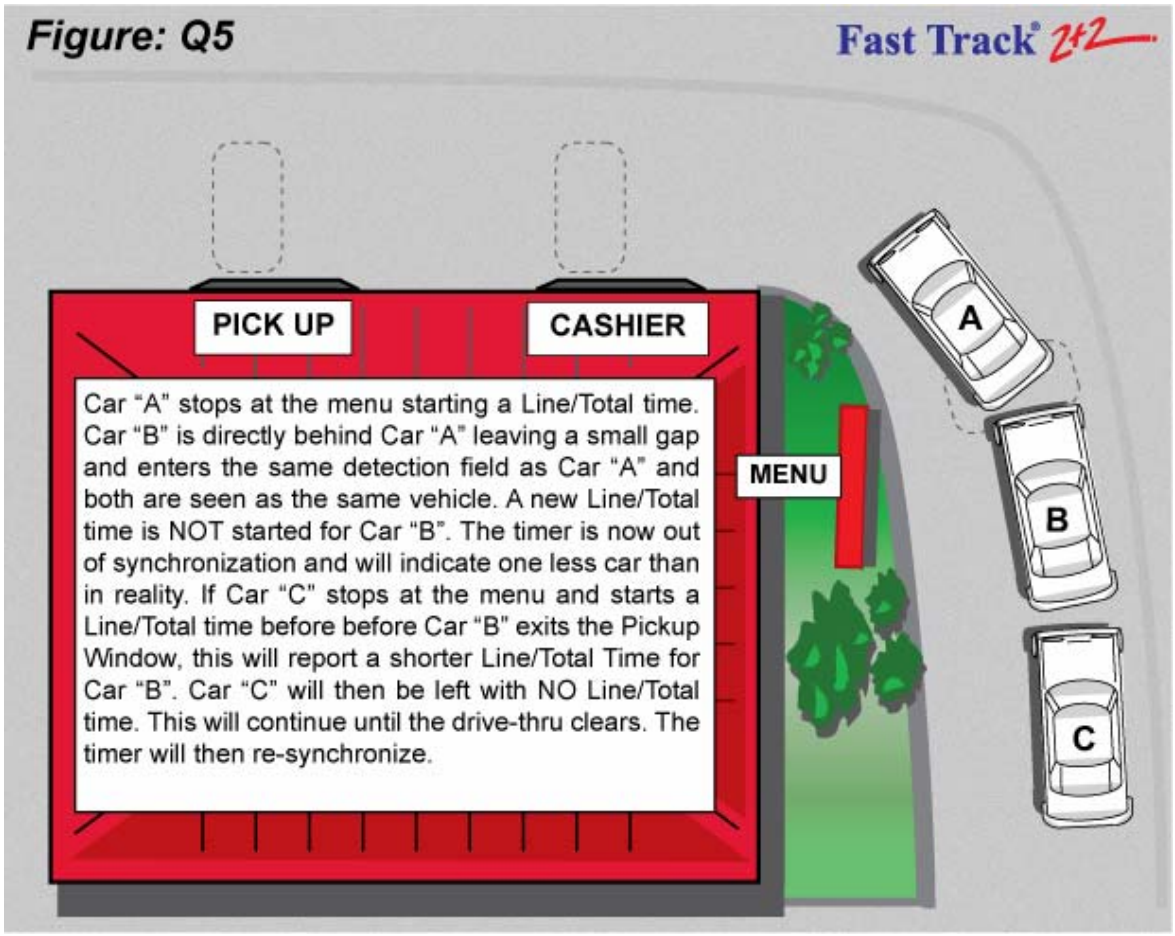

Figure: Q6