

Instruction Set

(How to Drive a Manual Vehicle)

In this article of Drivers Digest we plan to review and teach the concept of driving a Manual Transmission vehicle, commonly referred to as “Stick-Shift.” The manual automobile was originally one of the most popular forms of vehicles sold, however, since automatic transmission vehicles have improved in the past few decades, manual transmissions have become less and less common. Regardless, here at Driver’s Digest we believe that there is great value in learning the concept for a number of reasons. First, it will provide you with more control over your vehicles motor. Second, if driven correctly, a manual transmission vehicle will allow the user to have significant reduction in gasoline consumption. Third, your new skill will give you a better understanding of how the vehicle works and in result, make you a more knowledgeable driver. Lastly, driving stick shift may just prove to be a more fun driving experience. This article will provide you with the proper tools and instructions to properly learn how to drive manual transmission vehicles.

Important Safety Tips Before You Turn Your Vehicle on:

- First rule, for every manual transmission vehicle the **car will roll when in neutral**. This rule applies at all times (even when the car is off). This means that your **emergency brake** will become your best friend to prevent your car from rolling and potentially harming yourself or others! When parking your vehicle (at the point of a complete stop), **always** double check that your emergency brake is applied before letting off the brake.
- Second rule, before sitting in the driver seat make sure you are **legally permitted** to drive in your state. Every state has its own laws and documentation (**permit or license**) to make sure you are safe to drive on the road. If you **do not have documentation**, make a trip to your local DMV to obtain these forms.
- Third rule, gain an understanding of your manual transmission vehicle. You will notice that a **third pedal** is located **to the left** of the foot break and gas. This pedal is called the **clutch**, and is the key component in learning to drive a manual vehicle.
- Fourth rule, **practice** and **get confident** before entering a road where there are other cars or people. The best place is often an empty parking lot where there is no risk to yourself or others.
- Fifth rule, **when shifting** gears, make sure to **fully press in the clutch** to prevent the gears from grinding. This is an important concept as failure to do so may cause severe damage to your vehicle.
- Lastly, understand that driving a manual car can be a **frustrating concept that requires practice**, but make sure you are patient and keep trying, and you will get it.

Now that you have successfully read through and understood the safety rules involved with driving a manual vehicle you are ready to follow the steps below to begin your driving experience.

Step 1: Turning On Your Vehicle

- Enter the vehicle and take a seat as the driver. **Adjust the seat** using the knobs and handles located below or to the left of the seat.
- Move the seat **forward enough** to press the clutch (leftmost pedal) to the floor. The seat should be comfortable and **high enough** to properly view the road through the windshield.
- Turn on your vehicle by simultaneously **pressing in the clutch** with your left foot, **pressing in the break** with your right foot, and **turning the key** in the ignition. The car will successfully turn on.
- While your foot remains on the break, **remove the emergency break** with your hand.





Step 2: Putting Your Car In Gear

- Look at the position of your vehicle and properly find your best direction to begin moving.
- If **forward**, with your left foot still pressing down the clutch, move the shifter into **1st gear** by moving the stick all the way to the left and up (the gear locations are presented in the diagram at the top of the shifter).
- If **reverse**, with your left foot still pressing down the clutch, push the shifter directly down (into the car) and all the way to the left and up.
- An **important note** is that the reverse gear differs between **European** and **American** vehicles. American model vehicles often have the reverse gear all the way to the right and down. You can quickly solve this issue by looking at the diagram on top of the shifter for gear locations or by knowing the make of your vehicle.

You have now successfully put your car in gear and have a desired direction of travel. It is important to get used to the “feel” of placing the car into gear. Before letting go of the clutch practice this motion a few times.

Step 3: Beginning To Move

- Now that your car is in gear, to begin moving the motor will have to “catch” the gear. **Note: this is the trickiest part of driving a manual vehicle!**
- To “catch” the gear slowly take your right foot **off the brake pedal** and place it on the **gas pedal** (without pushing it).
- Slowly begin pressing the gas pedal while **simultaneously** easing off the clutch with your left foot. It is important to try and give the same amount of gas as the amount of clutch you are releasing.
- **Note:** At any point, if you feel the car beginning to stall, push the clutch all the way back in and step on the brake. You will avoid it.
- As you are giving the engine just a little gas and simultaneously easing off the clutch you will feel a **catch point**. This is the point when the **RPMs** (Revolutions Per Minute) will start to drop and the car will start to move forward a bit. **Push through** this point by giving the vehicle more gas (will keep the RPM's constant), while easing off the clutch even further. (**Note: the RPM gage can be read within the dashboard, behind the steering wheel, where it will be properly labeled**).
- The **key point** is to give the engine enough gas to keep the RPM's constant until the clutch pedal is all the way out. If the RPMs are dropping apply more gas.

The car is now successfully moving and you are ready to proceed to the next step where you will learn to upshift and gain speed.

Step 4: Upshifting

- Once you are **completely off of the clutch** and you are around **3,000 RPMs** you will want to shift into 2nd gear.
- To achieve this you will want to let off of the gas with your right foot, completely press in the clutch with your left foot, and move the shifter down and left (refer to your gear location diagram).
- This will move the car **out of 1st gear and into 2nd gear**.
- Once the shifter is in the correct location, begin pressing the gas pedal with your right foot, and **simultaneously** letting off the clutch with your left foot. You will feel a **similar catch** to the catch you felt in 1st gear, which means that your car is now properly in 2nd gear.
- **Note: This process will be slow in the start, but you will learn to do it quickly.**



Step 5: Continually Upshifting (3rd, 4th, 5th, and 6th gear)

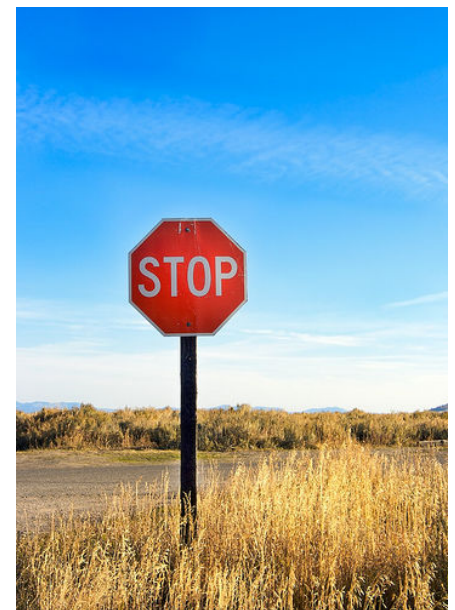
- Once you are in 2nd gear, your car will have a range of speed of around **15 mph – 30 mph** for most standard vehicles (high performance sports cars may have a higher mph range, while large trucks may have a slower mph range).
- To make the vehicle **go faster** you will, once again, **need to upshift** to a higher gear. The transitions of upshifting will follow a format of 1st to 2nd, 2nd to 3rd, 3rd to 4th, 4th to 5th, and 5th to 6th. **Note: depending on the model of vehicle you are using you may not have a 6th gear.**
- To properly upshift you will follow the **same process as that of Step 4**. Once you see the RPMs reach approximately **3,000** (in any gear), you will press in the clutch, move the shifter to the higher gear (can be referenced on the shifter diagram), then ease of the clutch, while lightly pressing in the gas.
- **Note: It may be helpful to try and remember the speeds at which each gear will smoothly travel.** This will allow you to be in the correct gear when traveling at a desired speed. (Example: If you want to go 50 mph, you will want to be in 4th gear).

Step 6: Downshifting

- Downshifting is the same exact concept as upshifting just from a **higher gear to a lower gear**. (Example: from 5th to 4th, or 3rd to 2nd).
- Downshifting is **used as a way to reduce your speed** primarily based on the gear-to-gear transition. Using this technique will **extend the life of your vehicles break pads**, since the gears are slowing the car instead of the brakes.
- To properly downshift, **first brake** a little using your right foot and **engage the clutch** with your left. Once the clutch is in, **place the shifter into the lower gear**. Before you let off the clutch, start easing onto the gas to **match the RPM** of the lower gear.
- **Note: You do not need to downshift if your only slowing down a little bit**, which is relative depending on the gear you are in, but if your are going slow in a gear that is **too high for the speed**, you **will not have the ability to accelerate as quickly**.

Step 7: Coming to Complete Stop

- An alternative and more commonly used method to downshifting (slowing down) is simply braking. **At any point, you are able to press in the clutch (take the car out of gear) and press on the break**. This will slow the car successfully without stalling.
- This **same concept** is used when forcing the car to a **complete stop**. Just press the clutch (places the car in neutral) and step on the break. **Note: You can tell when you are in neutral when you can move the shifter side to side without the clutch in.**
- Make sure to engage the clutch and put the car back into first gear if you are not parking in the car. This is what you want to do if you are going to be at a decently long stoplight or for any reason of being stopped for a long period of time.
- If it's a complete stop/park, engage the clutch, press on the break, and put the car in neutral.
- **Before you let your foot off the break, make sure to apply the emergency break so your car will not roll!**



You have now successfully learned the steps involved with driving a manual transmission vehicle. I hope that you are willing to take the time to practice this process and continually learn about the vehicles that are have proven so valuable to us. Remember to have fun and understand that driving stick shift can be frustrating at first, but you will get it!