How to Drive a Manual Vehicle

Instruction Set

Jake Summerill
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**Introduction**

Cars and trucks with a manual transmission, also known as stick shifts, have been around since the early 1900s and offer many benefits over the automatic transmission. Not only is a manual transmission more fuel efficient than most automatics, it can also help to preserve brakes by using the engine to slow the car. Knowing how to drive a stick shift is a useful skill that should be known by everybody and can be very useful in specific situations. Although this may seem like a challenging task at first, it only takes about an hour to be able to learn well enough that you will be able to drive.

Driving a manual can be broken down into three major parts that differ from an automatic: starting, stopping, and shifting gears. Other than these three times the car will drive the same as an automatic. When first attempting to drive it is recommended to practice in an empty flat lot with a passenger who knows how to drive the vehicle. It will be easy for an experienced manual driver to feel any mistakes made and they can provide you with specific corrections to help improve your driving.

First, and one of the most obvious, is the third foot pedal furthest to the left next to the brake. This pedal controls the clutch and will essentially put the car into neutral when fully depressed. When the clutch pedal is midway between depressed and released this will allow the clutch to slip and puts the car in a semi-neutral state where not all of the power is being transferred to the wheels. If the pedal is fully released all of the power will be transferred to the wheels and the vehicle will be in a driving state. The image below has each of the pedals labeled to help identify which one is the clutch.
Second, you will notice a knob connected to a shaft between the driver and passenger seats of the vehicle. This shaft is called the gear selector and is used to control which gear the transmission is in. The positions for each gear may be different depending on the car, but the picture below shows the most common configurations for 5 speed and 6 speed vehicles. A diagram depicting these positions is usually imprinted on the top of the shift knob and is important to reference before attempting to drive the vehicle.

![Gear Selector Diagram](image)

**Shifting Gears**

In a stick shift vehicle it is the driver’s responsibility to select which gear the car is in by changing the location of the gear selector. Lower gears will provide more torque and power while higher gears will allow the car to travel at a faster speed. Following the steps below will allow for a smooth transition between gears.

1. Start by fully depressing the clutch pedal with your left foot while simultaneously lifting your right foot off of the accelerator
2. Once the clutch is fully engaged, move the gear shift knob from the current gear to either the next higher or lower gear
3. Slowly release the clutch pedal and continue driving as normal once fully released

*Note: Releasing the clutch will match the motor RPMs with the wheel speed and can cause for a jerking ride. Using the accelerator to control the RPMs while shifting can help to smooth the ride which will improve with more practice*
**Stopping**

When driving a manual vehicle there is a little more involved with stopping than compared to an automatic. Following these procedures will ensure a smooth ride and prevent the car from stalling.

1. While slowing down to come to a stop, downshift sequentially through the gears using the motor to help restrict the vehicle along with the brakes.

2. Just before coming to a complete stop, fully depress the clutch pedal and apply the brakes to stop the vehicle.

   *Warning:* Any time the vehicle is in a gear the clutch must be fully engaged while the vehicle is stopped or else the motor installs. This includes while starting the vehicle.

**Starting**

The most difficult part of driving a manual is pulling out from a complete stop. It may take hundreds of attempts before being able to pull out smoothly. While driving a manual for the first time be sure not to panic if the car stalls. It will ultimately take lots of practice but the following procedure will give a good starting point.

1. While stopped, lightly press the accelerator to bring the engine up to about 2000-2500 RPMs.

2. Slowly release the clutch pedal allowing for the clutch to slip and smoothly transition the vehicle from a stop to rolling.

3. Continue pressing the throttle to keep the engine RPMs up and drive the car as normal once the clutch pedal is fully released.