

How to Drive a Stick Shift in Ten Easy Steps

Only 6% of new cars sold stateside have a manual transmission but many high performance cars are stick-only, however, even in slower cars you'll be rewarded with better fuel economy, greater reliability, improved performance, and enhanced control over the vehicle. Like being able to swim, it's also one of those skills that you might not use very often, but when you get the chance to it could save your life or at least be a lot of fun. ☺

Step One: Know Your Way Around

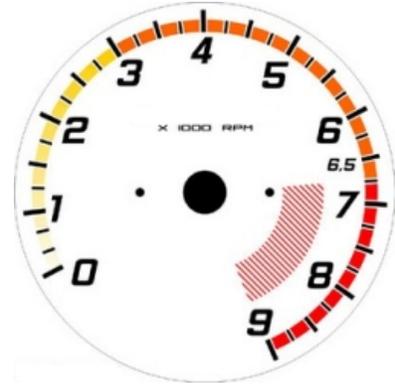
A manual transmission requires the driver to shift the gears themselves. Most cars have four, five or six forward speeds, as well as reverse. In order to master the process, you need to know the following:

- The clutch pedal is located at the far left and is used when moving up or down from one gear to another. The clutch is disengaged when the pedal is pushed to the floor.
- Neutral is not a gear; actually, it is the absence of gear. When the engine is running in neutral, you can rev up the engine, but you won't go anywhere. You'll also be able to wiggle the shifter back and forth - which you can't do when engaged in any gear.
- For most cars, second gear is the workhorse. It will get you up (and down) steep hills as well as through congested downtown.
- Reverse gear is somewhat different from the others; it's got more range than, say, first gear, but doesn't like going for too long or too fast. So, don't back up around the block to pass the time.
- The gas pedal (at far right) works with the gears to give the engine power at different levels. As mentioned before, if you press on the gas pedal while out of gear, you will only rev the car up: this is how young men impress women. But if you over-accelerate with the clutch partially engaged, you'll eventually wear it out.



Step Two: Learn the Gears

Learn the location of and feel of passing through the gears. First learn to shift the gears without the car running (pushing the clutch in each time). Then, from the passenger seat, try it with someone else driving the car and operating the clutch. Be sure to place the stick all the way into gear—until it won't go any more—but don't force it. If you stop halfway, you will hear an incredibly unpleasant grinding sound which means your car is not in gear.



Eventually, you will know when to shift by feel, but early on you'll have to act deliberately. Even if you've never been in a car before, you can tell when a car is in the appropriate gear: the car's not making a coughing and chugging sound (gear too high) but it's not making a high-revving sound either (gear too low). If you have a tachometer, shift around '3' (3000 RPM) on each gear or every 15 miles per hour (1st gear 1-15 MPH, 2nd 15-30, 3rd 30-45, etc.). This is only a general rule, of course, and higher-powered autos will deviate from this. Shift before you hear that loud revving sound.

Step Three: Starting the Car

Push the clutch in and put the car in neutral before starting, or you will jump and stall the car. This is bad. Keep in mind that most new cars will not start without the clutch pressed down. Leave the shifter into neutral while the car warms up for older cars. Alternately, start the car in gear with the clutch pedal pushed to the floor, then shift into neutral, release the clutch pedal, and let the car warm up.

Step Four: Using the Clutch



The clutch is the mechanism that allows the gears to transition back and forth smoothly. If you pull the car in or out of gear without using the clutch, or release the clutch only halfway into gear, you will hear an amazingly unpleasant sound. Avoid this. Yes, it is bad.

The clutch is the pedal on the left. The brake is in the middle and the gas on the right. Use your left foot on the clutch and your right foot on the brake and gas, just like with an automatic.

It's difficult to avoid some sort of wear and tear on the clutch when learning how to drive a stick shift. If you go slowly at first and pay close attention, you can feel (in your feet) where the clutch

engages and disengages. If you learn that well, you'll put less strain on your car. You'll also be able to drive any stick shift more smoothly from the get-go.

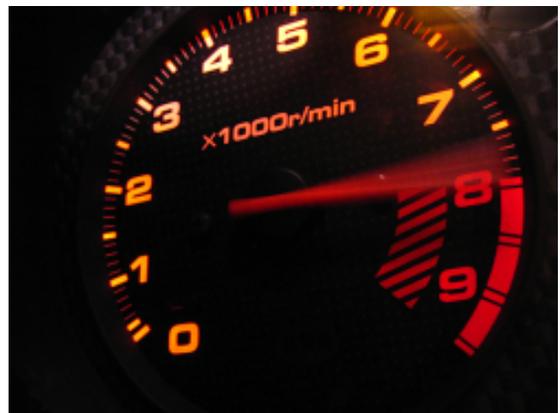
Avoid needless acceleration when the clutch is partially engaged. When at a stoplight, don't get in the habit of holding the clutch in for more than a few seconds or you will have other problems down the line. Instead, put the car in neutral while stopped for any period of time.

Popping the clutch:

Invariably, you will miss your gear (or release the clutch too quickly) and the car will lurch ahead or make horrible noises. Often at the outset, you will pop the clutch too quickly and stall the car. *Don't worry, it happens to everyone.* Just get those exercises out of the way before you find yourself in bumper-to-bumper traffic, or on a hill.

Step Five: Upshifting

Here we are at the most important junction of the stick shift world: the door to acceleration. Driving a stick shift is all about that magical place where the clutch comes up and the gas pedal goes down. It's that seamless place where the gears are shifted and the car accelerates. Let's take first to second on a flat road as an example: First gear going steady, clutch in as you come off the gas quickly, then off the clutch slowly while pressing in the gas.



That place in the middle where the clutch pedal is to the floor and you're off the gas is where you take the shifter from first to second. Get those feet and hands used to working together.

Here we go once more:

- Revving high (around 3000 RPM or at 15 mph).
- Clutch in and gas off.
- Move the shifter smoothly from first to second.
- Slowly off the clutch while pushing on the gas.
- Completely let your foot off the clutch and gas it up.
- Same thing for the next gear

Step Six: Downshifting

Downshifting is the act of moving appropriately to lower gears while slowing down. This is the essential difference between the operation of an automatic transmission and one of manual persuasion; downshifting not only helps you slow the car, but it also puts you in the right gear for the speed. Downshifting is your friend - especially in bad weather or on hills, where immediate braking can be dangerous.

Keep in mind that you may shift down only one gear or simply apply the brakes. Again, knowing your range in each gear will help determine what's needed.



While downshifting, move from clutch to brake while in gear. This will help you slow down without revving too high between gears.

If you are driving 45 mph in fourth gear and come upon a stop sign ahead:

- Push in the clutch and shift down to third while using the brake.
- Let the clutch out slowly to avoid high revs.
- Next, do it again into second before you stop.
- Don't downshift into first! (Oh, okay, try it once and see what happens...)

Step Seven: Reverse

Be very careful in backing up. The reverse gear is very quick and can jump out at you. To get into reverse, sometimes you need to lift a collar on the shift lever, or push it down. Only do this while at a complete stop.

The clutch is key while going in reverse. Since reverse is so quick, let out the clutch slowly and push it back in while using the brake if necessary; you will likely be able to back out of any spot with this simple measure. If you need to, only push the gas pedal in a little bit.



Step Eight: Starting on a Hill



Find a hill with little traffic. Use your emergency brake when coming to a stop. When the light turns green to go, shift into first, start to accelerate slowly as you release the clutch pedal, then release the emergency brake just as you feel the car engage the gear. This way you are using the brake to keep you from rolling back. If you stall, put on your brake and start again.

Step Nine: Parking

It is important to note that the emergency brake is very important when parking a stick shift car, because there is no "park" gear to keep the car from rolling. Some rely only on the pull-up emergency brake, usually sufficient in most situations. I prefer to leave the car in gear AND use the emergency brake for extra safety.



Step Ten: Practice!

All of this is going to seem overwhelming at first, but it all becomes natural with practice. Start off in a big empty parking lot, then progress to quiet roads when you feel comfortable doing so. Even if it's frustrating, keep at it and you'll be rewarded with far more control over your car, better performance, better fuel economy, a valuable life skill and the ability to drive any four-wheeled vehicle on the planet.