

High Tech Adaptive Driving



High tech driving

High tech driving uses adaptive equipment to control your vehicle, such as steering or applying the gas and brake. High tech systems range in different types of hand controls that work directly with your vehicle's control system. They can be placed in a variety of ways to give you the best access to the vehicle's controls.

Adapting your vehicle

Changes to your vehicle, called modifications, are based on what your specific needs are. We will cover the general types, but there are different options for each type.

Wheelchair Ramp

If you will be driving from a wheelchair, you will need a vehicle modified with an accessible wheelchair ramp. Wheelchair ramps may be from the back (rear-entry) or from the side (side-entry). They may fold up inside the vehicle, or fit under the vehicle's floor.

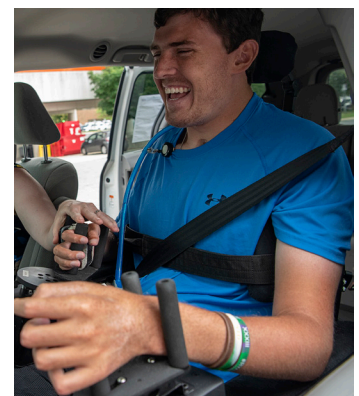


Wheelchair Docking Station

If you will be driving from a wheelchair, it must be secured to the vehicle while you are driving. Wheelchair docking systems can be installed onto your wheelchair and the vehicle. This lets you secure yourself in your driving position.

Occupant Restraint Systems

You may need to modify your restraint system, including your lap belt, shoulder belt and headrest. This helps secure you in your vehicle in the event of a crash.



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Adapting your driving controls

The adaptive equipment that controls the gas, brake and steering are added to your vehicle and linked into the vehicles control system. There are different options for this. Occupational therapists and rehabilitation engineers will help you choose a system that meets your needs.

Options to Control Steering

Micro Wheel

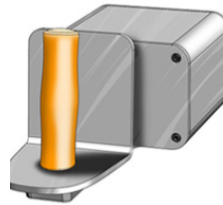
A very small wheel rotates like a standard steering wheel to steer the car. Handle extensions can be added for people with limited finger use. This is a brace-like handle that holds your hand in place, commonly known as a **Tri-pin**.



Micro Wheel

One Hand Joystick

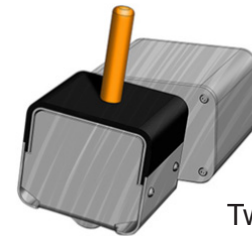
Steering is controlled by rotating your wrist while holding a joystick handle.



One Hand Joystick

Two Way Joystick

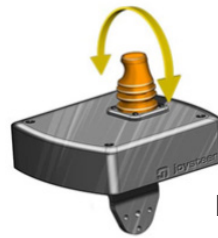
Steering is controlled by rotating a post. Handle extensions can be added to help with gripping the post.



Two Hand Joystick

Low Force Joystick, "Steer Only"

For people with very limited strength or range of motion, small joystick movements can be used to control steering.



Low Force Joystick

Options to Control Gas and Brake

Gas/Brake Tilter

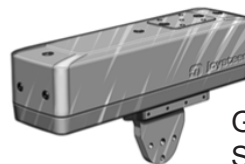
The gas and brake are controlled by tilting a handle forward or backward.



Gas/Brake Tilter

Gas/Brake Slider

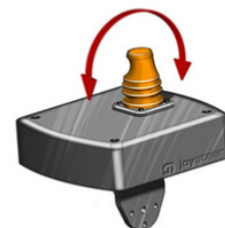
A slider moves forward and backward to control the gas in one direction and braking in the other direction. Different types of handle extensions can be added for people with limited finger use.



Gas/Brake Slider

Low Force Joystick, "Gas/Brake Only"

For people with very limited strength or range of motion, small joystick movements can be used to control the gas and brake.



Low Force Joystick

Options to Combine Gas, Brake and Steering into One

One Hand Joystick

Steering is controlled by rotating the wrist, while gas and brake are controlled with the fingers through a switch.



One Hand Joystick

4 Way Joystick

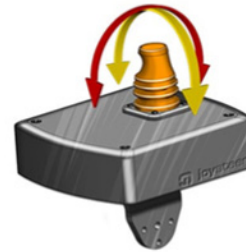
Steering is controlled by the post. The gas and brake are controlled by tilting the post forward and backward. Handle extensions may be added to help with gripping.



4 Way Joystick

Low Force Joystick

For people with very limited strength and range of motion, the gas, brake and steering can be combined into one joystick.



Low Force Joystick

Joysteer USA, Inc. hand control images used with permission.

Make sure you are getting the right vehicle

You may need a certain type of vehicle to be able to have the equipment you need. You may need to make sure your wheelchair or mobility equipment can fit. Before buying a vehicle, talk to a National Mobility Equipment Dealers Association (NMEDA) certified vehicle dealer to make sure you are getting what you need.

Support to help you reach independent driving

The Occupational Therapy Driver Rehabilitation Program at Ohio State Wexner Medical Center supports safe driving by adapting vehicles and developing skills. For more information about the program, visit wexnermedical.osu.edu/drive.

Talk to your doctor or health care team if you have any questions about your care.

For more health information, go to wexnermedical.osu.edu/patiented or contact the Library for Health Information at 614-293-3707 or health-info@osu.edu.