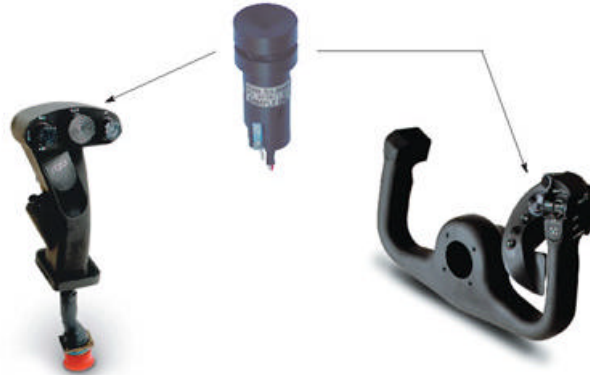




UAV Joystick Control Transducer



Challenge: Develop a new sensor to be used in the ground flight control system of remote pilotless aircraft. Current systems act like game controllers with cursor-like movement. System also must be compatible with current ground control systems.

Answer: Our customer approached us to develop a new force sensor that incorporated fire control buttons, select features and improved the flight dynamics of the aircraft. Previous generation control sticks acted as a cursor, with a set response slew rate as the aircraft and control tracked across the screen, thus limiting how fast the aircraft would respond to the operator.

Force Switch engineers designed a custom force switch that sense not only direction of stick movement, but how much pressure was applied. The more pressure applied, the faster the reaction and thus making the UAV more aircraft-like. The sensor assembly also provides additional signals for items such as missile controls, fire controls, switching of cameras and sensors, and on/off controls.

The Force Switch solution is a complete assembly that meets all environmental, shock, and life requirements specified by the prime contractor as well as the armed forces.