ECE-411 Homework #2 –Project Ideas

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**Project Ideas**

1. IR Power Station

The IR Power Station would be a system for both automatic and manually controlling power outlets from a distance. A processing base station would receive signals from both mounted door sensors and a manual remote control to decide which outlets to power based on pre-programed profiles. All transmissions will use IR.

1. Shift Light

The Shift Light would be a sensor controlled light that would illuminate when a certain RPM is reached in a standard shift vehicle. This would aid people with hearing disabilities in shifting at the proper time for different styles of driving. There would be a selection between power and economy modes, as well as selection inputs for characteristics of the engine.

1. Kid Leash

The Kid Leash would be a wireless unit that would alert parents when their child got beyond a certain proximity. The alert could be switched between audible and vibratory. It would consist of a base unit for the parent and a locator for the child. The locator unit would also have an audible signal that could be triggered from the parent for easy location.

1. Motorcycle Rear Proximity Sensor

This unit would be a range finding device that would give additional information about nearby vehicles to the operator. One or more sensors mounted on the rear of either a car or bike would provide the sensing, and the central unit would determine where objects were located. Location of objects will be relayed to the operator by way of a simple visual indicator.