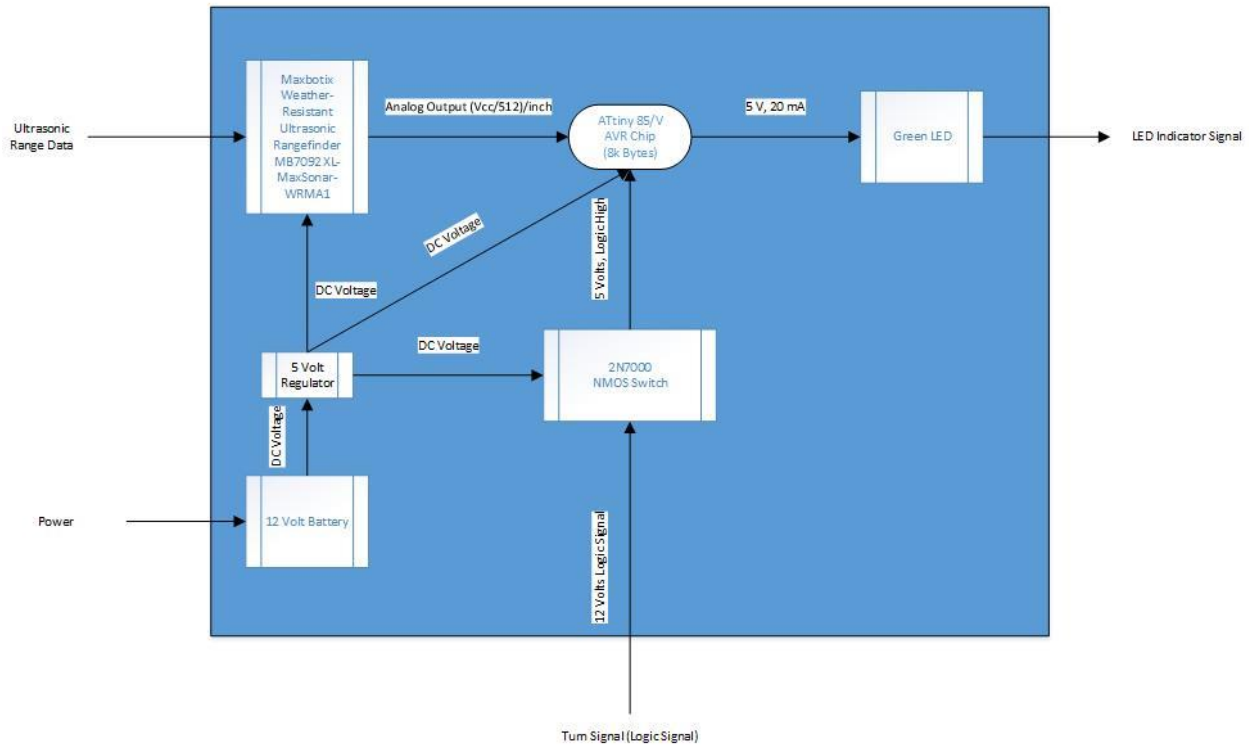
Level-1 Block Diagram



Module	Maxbotix Ultrasonic Sensor
Inputs	- 5V Power Supply (2-3 mA current draw) - Received ultrasonic signal
Outputs	- Analog voltage, convert to (Vcc/512)/inch
Functionality	Outdoor, weather-proofed sensor provides very short to long distance detection and ranging in a compact, robust PVC housing.

Module	2N7000 NMOS Switch
Inputs	- 12 Volt input from turn signal on gate - 5 Volts input from 5 V regulator on drain
Outputs	- 5 Volts DC Voltage from source
Functionality	NMOS transistor behaves like 5 volt logic switch.

Module	5 Volt Voltage Regulator
Inputs	- 12 Volts DC Voltage from car battery
Outputs	- 5 Volts DC Voltage

Functionality	Converts 12 Volts DC to 5 Volts DC

Module	ATtiny 85/V AVR Chip
Inputs	- Vcc is 5 Volts DC - Analog output from Maxbotix sensor - 5 Volt logic signal from NMOS switch
Outputs	- 5 Volts, 20 mA
Functionality	High performance, low power AVR 8-bit microcontroller. Processes analog output from Maxbotix sensor to determine an object within programmable range. Triggers LED indicator upon detection.

Module	Green LED Indicator
Inputs	- 5 Volts, 20 mA from AVR chip
Outputs	- Green Light (λ=520 nm)
Functionality	Alerts driver with bright green light when object is in detection range

Module	12 Volt Car Battery
Inputs	- Ignition Starter
Outputs	- 12 Volts DC
Functionality	Provides 12 Volts DC when car ignition is started