Brigham Young University

AUVSI Capstone Team (Team 45)

Unmanned Ground Vehicle Drive Test Procedures and Results

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GV-004	0.1	10-26-2018	Initial creation procedures listed	Jacob Willis	¡¡Needs Review¿¿

1 Introduction

This document describes the procedures used to test each of the Unmanned Ground Vehicle (UGV) drive system.

2 Test Procedures and Results

2.1 Total Drive Mass

The total mass of all components that land on the ground and the vehicle must be capable of moving. Results are found in Table **??**.

Table 1: Total mass for the UGV ground component.

Concept	Result
RC Car Chassis	
Water bottle	
Control Board	
GPS	
Radio	
Parachute and Shrouds	

2.2 Maximum Drive Speed

The UGV will be driven 25 feet three times. The time it takes to drive that distance is averaged and used to calculate the maximum drive speed. To ensure that maximum speed is reached, the UGV will drive 25 feet prior to driving the timed distance.

$$\frac{25}{\frac{2.16+2.00+1.97}{3}} = 12.23\frac{\text{ft}}{\text{s}} = 8.33\text{mph}$$

2.3 Conclusion

The preceding test results validate the current UGV system design.