



ENSC 305W/440W CAPSTONE PROJECT

Group 11

Test Plan

MYOperator MK 1.0

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Test Plan

The following document is a test plan that ensures that the final MYOperator meets the key requirements of our functional and design specifications. The reliability of our product will be ensured through multiple tests which include operational tests and standard tests. The testing of our product is broken down into three stages: initialization testing, functionality testing and failure testing.

Initialization Testing

Test	Procedure	Verification	Pass/Fail	Comments
Hip Station and Calf Sleeve Power	1. Turn switches on Hip Station and Calf Sleeve to ON	- Green LED turns ON		
Base Station Power	1. Turn Base Station On	- Green LED turns ON		
Bluetooth Pairing	1. Turn Base Station On	- Blue LEDs on all components turn ON		

In order to move on to the second stage of testing, for functionality, it is a requirement that all of the Initialization tests have passed.

Functionality Testing

Test	Procedure	Verification	Pass/Fail	Comments
Calf Sleeve Placement	1. Put on Calf Sleeve according to indicator symbols 2. Walk around	- Sleeve stays on calf and indicator symbols are still aligned		



SURGICAL ELECTRONIC SOLUTIONS

Sensitivity Knob	<ol style="list-style-type: none"> 1. Turn knob to low and flex until tool turns ON 2. Turn knob to middle and flex until tool turns ON 3. Turn knob to high and flex until tool turns ON 	- Increasing the sensitivity knob level requires decreasing amounts of muscle flexion to turn the tool ON		
EMG data acquisition	<ol style="list-style-type: none"> 1. Flex calf muscle 	- Tool turns ON		

Once the initialization and functionality tests have all been passed the third stage of testing begins: failure testing.

Failure Testing

Test	Procedure	Verification	Pass/Fail	Comments
Switch Failure	<ol style="list-style-type: none"> 1. Turn Hip Station switch to OFF 2. Flex calf and hold flex 	<ul style="list-style-type: none"> - Data is no longer passed - The red LED is ON - Tool does not turn ON 		
Sensitivity Failure	<ol style="list-style-type: none"> 1. Turn Hip Station switch to ON 2. Turn sensitivity knob to middle level 3. Shift weight from toes to heels and back 	- Tool does not turn on		
False On Failure	<ol style="list-style-type: none"> 1. Turn Hip Station switch to OFF 2. Walk around 	- Tool does not turn on		