User Manual

Year: 2020   Semester: Fall   Team: 6   Project: Snow-weAR Goggles
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Assignment Evaluation:

Item	Score (0-5)	Weight	Points	Notes
Assignment-Specific Items				
Product Description		x1		
Product Illustration		x2		
Setup Instructions		x3		
Usage Instructions		x3		
Troubleshooting Instructions		x3		
Writing-Specific Items				
Spelling and Grammar		x2		
Formatting and Citations		x1		
Figures and Graphs		x2		
Technical Writing Style		x3		
Total Score				

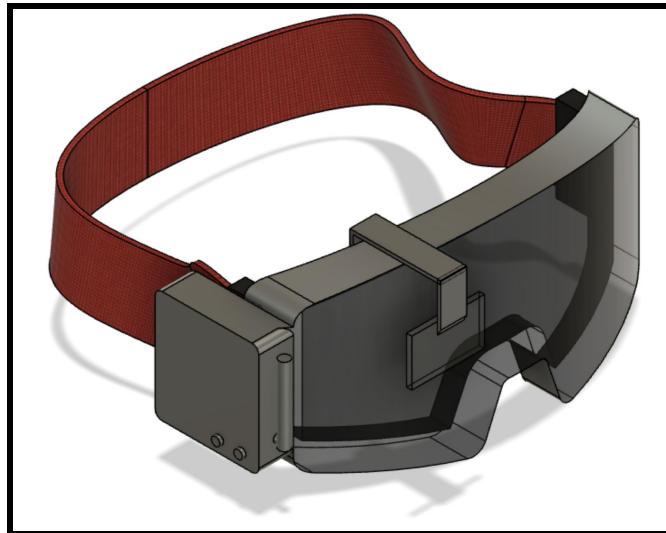**5: Excellent   4: Good   3: Acceptable   2: Poor   1: Very Poor   0: Not attempted**

Comments:
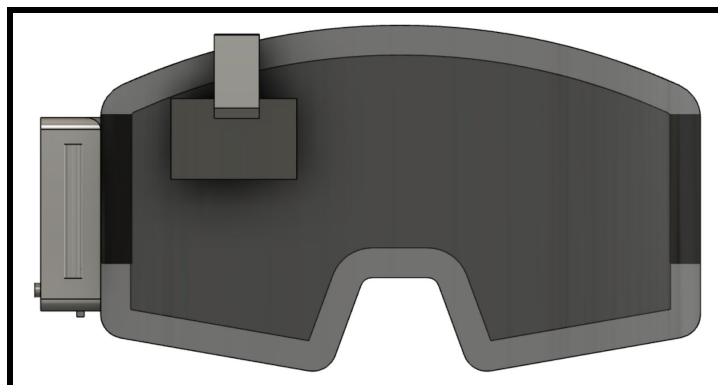*Comments from the grader will be inserted here.*

1.0 Product Description

    Whether a casual hobbyist or snow sport enthusiast, having a means for tracking improvement is important for bringing your skills to the next level; however, personal trainers are expensive and can have inflexible working hours while hand-held devices for measuring metrics such as speed are cumbersome to view during a run down the mountain. Snow-weAR (Augmented Reality) Goggles provide the user with hands-free metrics and buddy location using a transparent display for the user to view their progress easily. Speed, temperature, and distance traveled are just some of the information provided by the Snow-weAR Goggles. The Goggles also utilize long-range radio to share GPS information with your buddy on the slopes to know their relative location at the push of a button. Simply start a new session before heading down a slope and let the Snow-weAR Goggles do the work of tracking your run, so you can focus on the thrill of the moment!
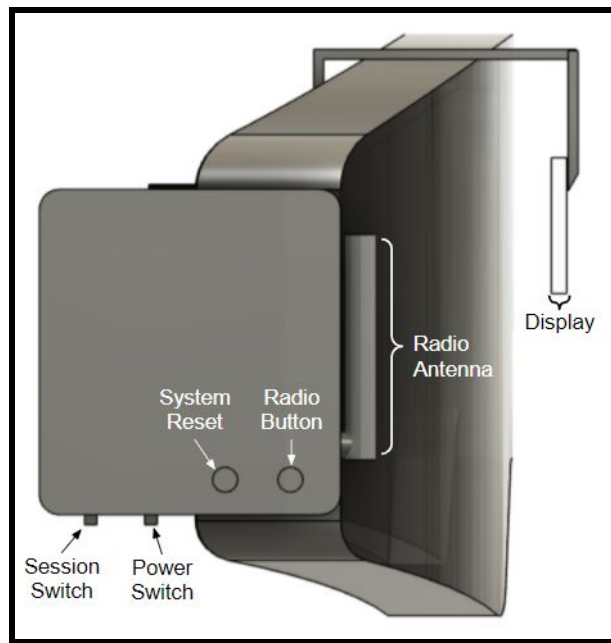
2.0 Product Illustrations

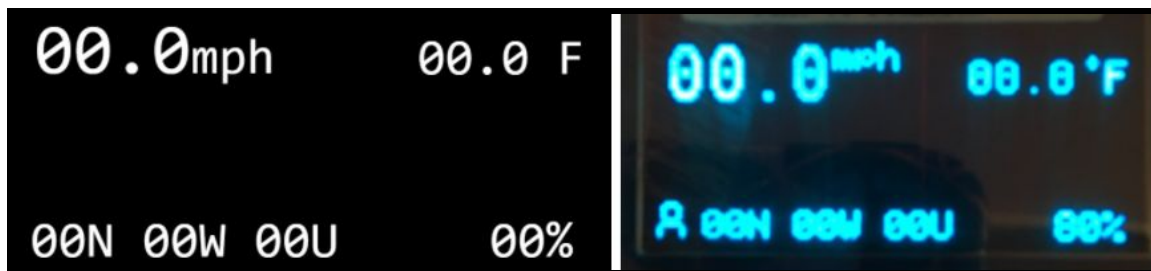**Figure 1:** *Snow-weAR Goggles Overview (Rendering)*

Figure 2: *Snow-weAR Goggles front view (Rendering)*

Figure 3: *Snow-weAR Goggles side view with user controls*

Figure 4: *Home Screen Design (left) and Implementation (right)*

Figure 5: *Zero Stat Design (left) and Implementation (right)*

3.0 Setup Instructions

Charging:
1. Plug the **Lithium Ion battery pack** into the Snow-weAR Goggles
2. Plug the **Micro B connector** side of the charging cable into the Snow-weAR Goggles
3. Plug the **USB-A connector** side of the charging cable into any available USB power source
4. Allow device to fully charge
5. Repeat as necessary

4.0 Usage Instructions

Power On:
1. Plug the **Lithium Ion battery pack** into the Snow-weAR Goggles if not already connected
2. Slide the **Power Switch** to the left, the Home Screen should boot on the display

Start a Session:
1. Once the Snow-weAR Goggles are on, wait for the **Home Screen** animation to finish
2. Slide the **Session Switch** to the right
   a. The **Display** should show "Session Start" followed by zeroed stats

End a Session:
1. When in a Session, slide the **Session Switch** to the right to end the Session
   a. The **Display** will show summary statistics of the run

Request Buddy Location:
1. Once the Snow-weAR Goggles are on, wait for the **Home Screen** animation to finish
2. Press the **Radio Button** to request a buddy's GPS location
3. Once the goggles have received the GPS locations, the **Display** will show the distance of your buddy relative to you in meters (North/South, East/West, Up/Down)
   a. NOTE: the GPS capability of the Snow-weAR Goggles is NOT intended for navigational use or emergency situations

5.0 Troubleshooting Instructions

Problem	Possible Cause	Solution
The Snow-weAR Goggles will not turn on	Battery is not plugged in	Plug Lithium Ion Battery pack into the Snow-weAR Goggles.
	Battery is not charged	Charge the Lithium Ion Battery pack. See Set-up Instructions for details.
	Power Switch is in the wrong position	Be sure the power switch is in the right most position when looking at the goggles from the view in Figure 3.
The Session will not start	Snow-weAR Goggles are not powered on	See Usage Instructions: Power On.
	Other	Press the **Reset Button** or power off the device, wait a few seconds, then re-power the device.
The Snow-weAR Goggles display is frozen	Software requires reset	Press the **Reset Button** or power off the device, wait a few seconds, then re-power the device.
The Snow-weAR Goggles will not get my buddy's GPS information	Buddy is Out-of-Range	The Goggle's radio will not be able to send and receive information if the pair of goggles are too far away or if they experience too much interference from obstacles between them. Try moving closer to your buddy or removing obstacles between the goggles.
The displayed metrics are incorrect	Sensors require recalibration	Press the **Reset Button** or power off the device, wait a few seconds, then re-power the device.
	Battery is at low charge	Sensor accuracy may decrease at low charge. Try charging the Lithium Ion Battery pack. See Set-up Instructions for details.

The Lithium Ion Battery Pack exploded		***Seek medical attention immediately*** if you have suffered any physical or mental harm. The Lithium Ion Battery Pack may be replaced. Snow-weAR is not liable for any harm inflicted by battery defects.

Questions, comments, concerns, and Snow-weAR inspired poetry may be directed to our Customer Support:
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