Product Design Specifications

T-11: Suspicious package training aid

# Team Members

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# Marketing Requirements

## Must:

1. Be able to detect when a two-way radio is transmitting.
2. Be able to notify of when a two-way radio is transmitting within a limited range.
3. Be able to sense agitation -> i.e. being moved.
4. Be able to notify of motion.
5. Be portable.
6. Last the duration of a training period

## Should:

1. Notify the user of what caused a training fault

## May:

1. Wireless training fault activation for device
2. Allow users to modify sensitivity of RF detection

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| Marketing requirements | Engineering Requirements | Justification |
| 1,2 | 1. The devise should detect RF signals between 403-512MHz | The two way radios in use by the Oregon zoo have an operating rang of 403 – 512MHz. |
| 2,4 | 1. The device should play a sound on the event of a training fault | An audible queue is an easy, cost effective, and low power way to notify users of a training fault. |
| 3,4 | 1. The device should contain a vibration sensor |  |
| 5,6 | 1. The device should be ran from a 9v battery | The device can be ran from a single nine volt. The nine volt saves on packaging space. |
| 5,6 | 1. The average currant draw should be ≤86mA | Based on average mAH of batteries, the worst case event shows a nine volt battery with an average of only 120 mAH. The training at the Oregon zoo is projected to be in 1 hour durations.  A current draw of 86mA on a 120mAH battery is expected to last 1 hour |
| 5 | 1. The device detentions should not exceed 6” x 6” x 6” | All components can fit in this package size. This also allows the user to carry the simulator in a satchel. |
| 7 | 1. The device should visually inform the user of what caused a simulation fault | Visual notifications are intuitive for users. This would allow them to quickly identify the cause. |