**Slave**

Microphones

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# History

Table : History

|  |  |
| --- | --- |
| **Date/period** | **Actions** |
| Nov 8, 2017 | Initial Version |

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# Introduction

This document describes the Microphones slave.

# Requirements

## Generic

TODO

## Hardware

TODO

## Software

TODO

# Inputs/Outputs

TODO

# Design

## Diagnostics LEDs

Table 25: Audio Diagnostics LEDs

|  |  |  |
| --- | --- | --- |
| **Function** | **LED Color** | **Description** |
| Power | Blue (generic) | Off: Power off  On: Power on |
| RF | Yellow (generic) | Off: empty message transmitting/receiving  Slow blinking: contact with controller  Double fast blinking per second: no contact with slave  Triple fast blinking per second: problem with RF  On: non empty message transmitting/receiving |

Note that if the GUI Device shows errors whenever possible.

## Breadboard Layout

TODO

## Proto Layout

TODO

## Component List

TODO

# Software

## Design

TODO

## Memory Usage

This device does not receive messages, since there are no outputs.

Microphone data will not result in much data. There will be a number of microphones (based on frequency / frequency range) and regions of volume or edge detection. Assuming there are 3 microphones, each microphone can send either a value change or edge detection up or down change command (3 types), resulting in 3 (microphones) \* 3 (types) \* 2 (address size) = 18 bytes (negligible).

## Timing Performance

Only the translation from signals to messages is needed, and sending them to the Controller:

TODO

# Testing

## Unit Tests

TODO

## Integration Tests

TODO