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| **INTERCOM** |
| T-6 PRODUCT DESIGN SPECIFICATION |
| **10/25/2016** |

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# INTRODUCTION:

## NEEDS INDENTIFICATION

* Cellphone’s signal is weak in some areas.
* People always want to contact together for their business.
* People want the device which is ready to talk when they are working.
* People need the device which can replace cellphone to help them connect in some security area

## OBJECTIVE

The objective of the project is to create a device that allows people to talk with each other when located in different rooms of the same building. The device should correctly connect to the module which people want to talk, and it have to be safe, easy to use.

# REQUIREMENT

This section describes the requirements of the device

## **OPERATION**

* The device should be portable and easy to use
* The operation of the device should not affect user’s activity

## FUNCTIONALITY

* Each intercom will have buttons which will enable the user to select which rooms they wish to speak to.
* LEDs in each intercom will turn on to show which the other intercom is contacting
* Control volume can be used to adjust the volume on each intercom.

## CONSTRAINTS

* Cost for manufacturing is around $200 including cost for materials.
* There are only 10 weeks available
* Intercom is better with wireless, but it is so challenging

## ENERGY

* The device should have outside power supply which is 120 VAC.

## USABILITY

* The device should not need any special tool or program for installation

## SAFETY

* The device must not have any sharp edges
* The device will not cause any possibility of shock

## LEGAL

* The device must comply US pattern and copyright regulation

## ENVIRONMENT

* The disposable batteries should not be allowed to use in the system
* No special procedure is required for recycle or disposal of the system

## DOCUMENTATION

* User’s operation and maintenance manual will be provided.

# DEVICE’S FEATURE AND FUNCTION

* The intercom must instantaneously contact with the others right after the button is pressed
* The device must be self-operated, e.g. no additional computer will be required for its operation.
* No additional software is required for its start-up, boost or operation
* Each intercom module will be active when the button is pressed or it receives data from the other intercom.
* The device should work continuously until the power supply is shut down.

# PRODUCT DESIGN SPECIFICATION APPROVAL

The undersigned acknowledge they have reviewed **the Intercom Product Design Specification** document and agree with the approach it presents. Any changes to this Requirements Definition will be coordinated with and approved by the undersigned or their designated representatives.

Signature: Date:

Print Name:

Title:

Role:

Signature: Date:

Print Name:

Title:

Role:

Signature: Date:

Print Name:

Title:

Role:

# APPENDIX: KEY TERMS

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| --- | --- |
| **Term** | **Definition** |
| device | The product will be designed |
| user | People use this product |