

# I.F.F. (Identification Friend or Foe) System

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## Acronyms & Pre-Requisite Information

- MCU - Microcontroller Unit
- R.F. - Radio Frequency
- T.I. - Texas Instruments
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## 1 Introduction

This document is a "Mock Design Review" in preparation for the Design Review occurring during the week of February 29th, 2016. This will better prepare the team for documentation of the design and construction of the Infantry I.F.F. System.

## 2 Block Diagram

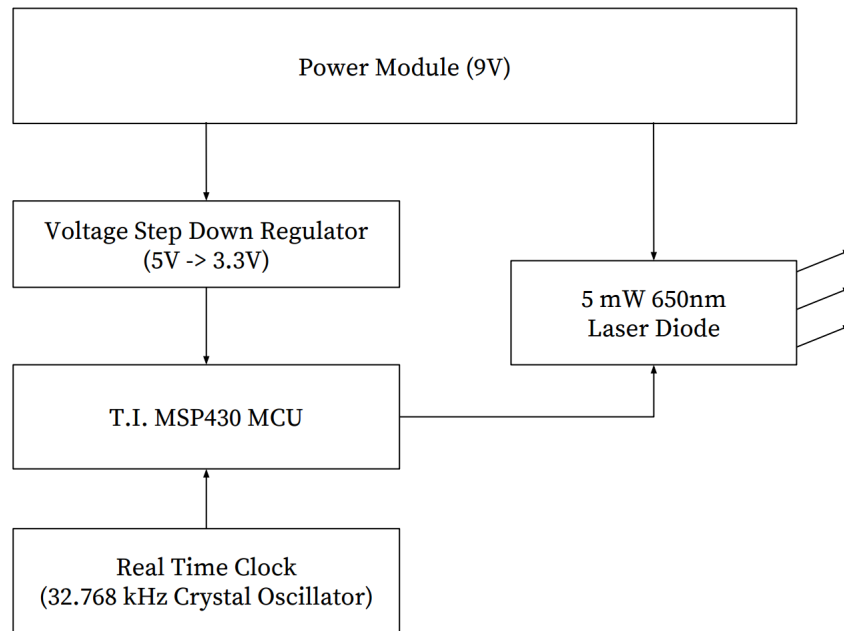


Figure 1: Block Diagram of Laser Transmitter

## 3 Block Description

The subsystem of the Laser Transmitter will be broken down into 5 primary modules:

1. Power Module
2. Voltage Step Down Regulator
3. Microcontroller
4. Real Time Clock
5. Laser Diode

### Power Module

The Power Module will consist of a standard 9V battery. The type of battery is at the discretion of the operator due to the availability on the market. However, at battery with least 250 mAh of use time must be

selected to supply the circuit with 9V over a period of 8 hours. The team will chose to use a 9V 300 mAh NiMH Rechargeable Battery for testing purposes.

The team decided to use a 9 V battery instead of four double-A batteries due to the need of maintaining a constant 3.3V over time as well as...

ADD MORE

## Voltage Step Down Regulator

The voltage step-down regulator will take the 9V supply input and step it down to 3.3V to supply the MSP430 MCU

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## Microcontroller

This design choice was by far the most difficult.

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## Real Time Clock

The Real Time Clock is not entirely neccessary for the operation of the Laser Transmitter Subsystem, however it will be neccessary for the operation of the R.F. Receiver and thus must be included in the MCU circuit.

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## Laser Diode

The laser diode...

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## 4 Circuit Schematic

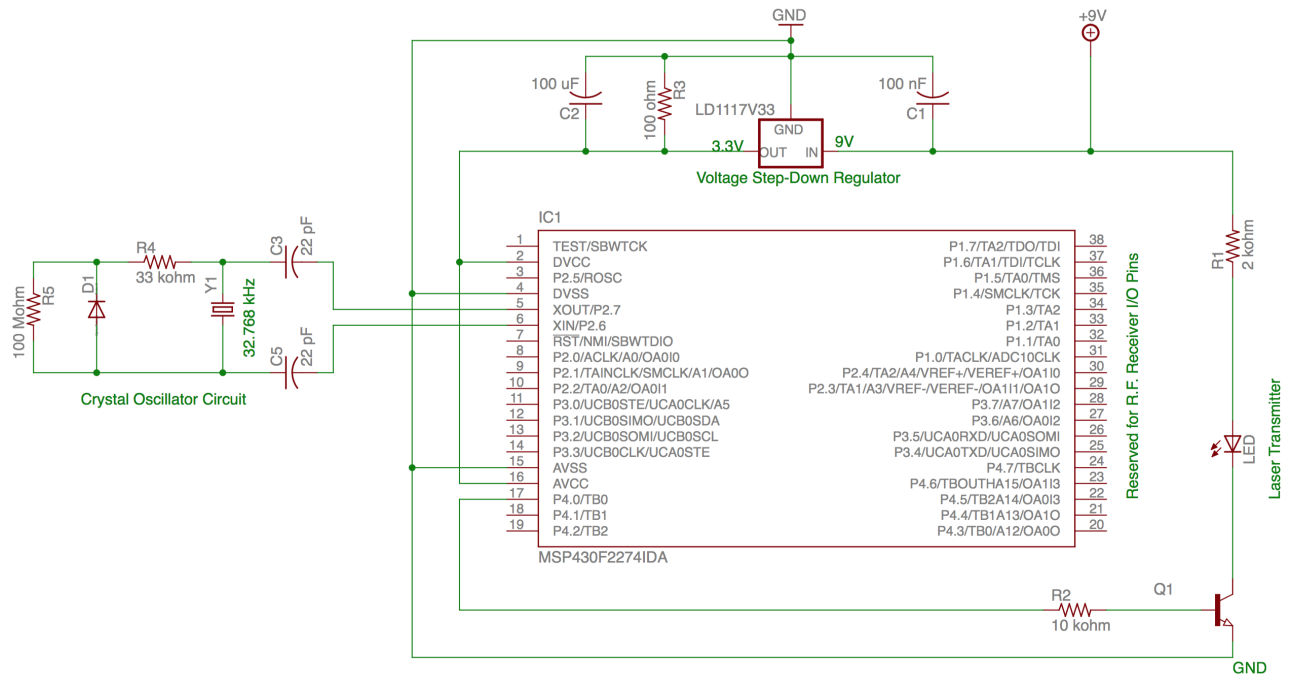


Figure 2: Circuit Schematic of Laser Transmitter

## 5 Plot

NOAH SECTION

## 6 Requirements and Verification

FILL OUT TOGETHER

## 7 Safety & Ethical Considerations

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