Electronics

# Rainbow Clock

## User’s manual

*Document Revision. A*

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# Glossary

## 1. Microcontroller

An embedded computer integrating a whole range of peripherals in a small package for convenience.

## 2. Bluetooth

A wireless communication standard permitting short-range exchange of data between electronic devices.

## 3. Refresh rate

A measure of the number of times an image can be drawn completely over the period of a second; this value is expressed in Hertz. Synonymous to *"FPS"*.

# Product overview

## 1. Description

Rainbow Clock is an unusual timekeeping device characterized by an exotic look and designed with electronics in mind.

## 2. Capabilities

- Display the current time of the day
- Synchronize itself via a Bluetooth connection
- Alter its color scheme depending on events

## 3. Quick specs

- Microcontroller: PIC32
- LEDs: 60, RGB type
- Refresh rate: ~10Hz
- Power: xWatt

# Basic operation

## 1. Reading the time of day

*to-do ...*

## 2. Changing the color scheme

*to-do ...*

## 3. Updating the time on the clock

*to-do ...*

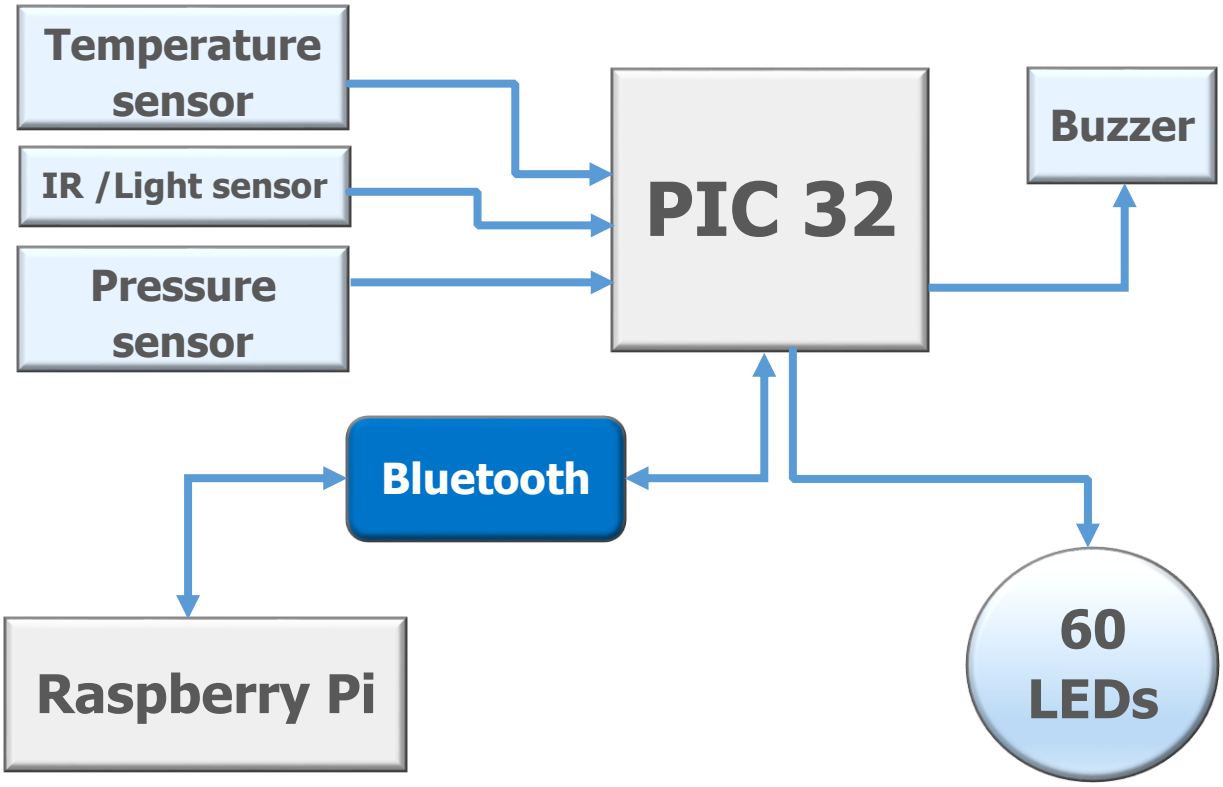
# Advanced operation

## 1. Synchronizing the clock using Bluetooth

*to-do ...*

# Technical details

## 1. Block diagram




## 2. Components required for the project

- 1 *(one)* PIC32xxxxxx microcontroller. Ref: xxxxxxx
- 1 *(one)* strip of 60 RGB LEDS. Ref: xxxxxxx
- 1 *(one)* sensitive button BLACK. Ref: xxxxxxx
- 1 *(one)* incremental rotary encoder Ref: 1191733
- 1 *(one)* 20x4 alphanumeric LCD screen Ref: 2063162
- x *(xxx)* resistors xΩ Ref: xxxxxxx

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# Planned features

- ***Display basic weather data and forecast using built-in sensors***

Data gathering could reveal itself being a nice addition to the project.

# Contributions

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# Endnotes