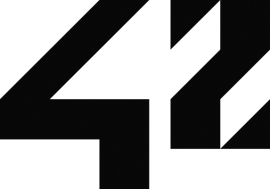
Rainbow Clock

Electronics

User’s manual

*Document Revision. A*

# Table of contents

Table of contents 1

Glossary 2

Product overview 3

1. Description 3

2. Capabilities 3

3. Quick specs 3

Basic operation 4

1. Reading the time of day 4

2. Changing the color scheme 4

3. Updating the time on the clock 4

Advanced operation 5

1. Synchronizing the clock using Bluetooth 5

Technical details 6

Planned features 7

Contributions 8

Endnotes 9

# Glossary

1. Microcontroller

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

1. Bluetooth

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

1. Refresh rate

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

# Product overview

## Description

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

## Capabilities

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

## Quick specs

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

# Basic operation

## Reading the time of day

*to-do …*

## Changing the color scheme

*to-do …*

## Updating the time on the clock

*to-do ...*

# Advanced operation

## Synchronizing the clock using Bluetooth

*to-do ...*

# Technical details

1. Block diagram

*to-do ...*

1. 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

…

# 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

In alphabetical order:

* **ltesson** ltesson@student.42.fr
* **nahmed-h** nahmed-h@student.42.fr
* **schiad** schiad@student.42.fr
* **vchesnea** vchesnea@student.42.fr

*Page layout by:* vchesnea

# Endnotes