Arduino Timer With On/Off Set Point

ABSTRACT

with this project you will be able to control the on and off of your devices between the time you want. They may be the lights at the night, water the garden, turn on a machine, etc. We will use the arduino, the LCD and the RTC 1307 to show and control the time. You can set the "ON" hour and the "OFF" hour, by 4 push buttons that let you increase or decrease the "SET POINT". Also, you will learn to make a clock with the arduino. I included fritzing schematics and a video, so you can make this project.

Working

System is programed to take input from user of set point compare it with real time and then generate the feedback signal accordingly
RTC is included in the system that will provide the system with real time clock information.
Whenever the controller is turned on it will get the time and date from RTC
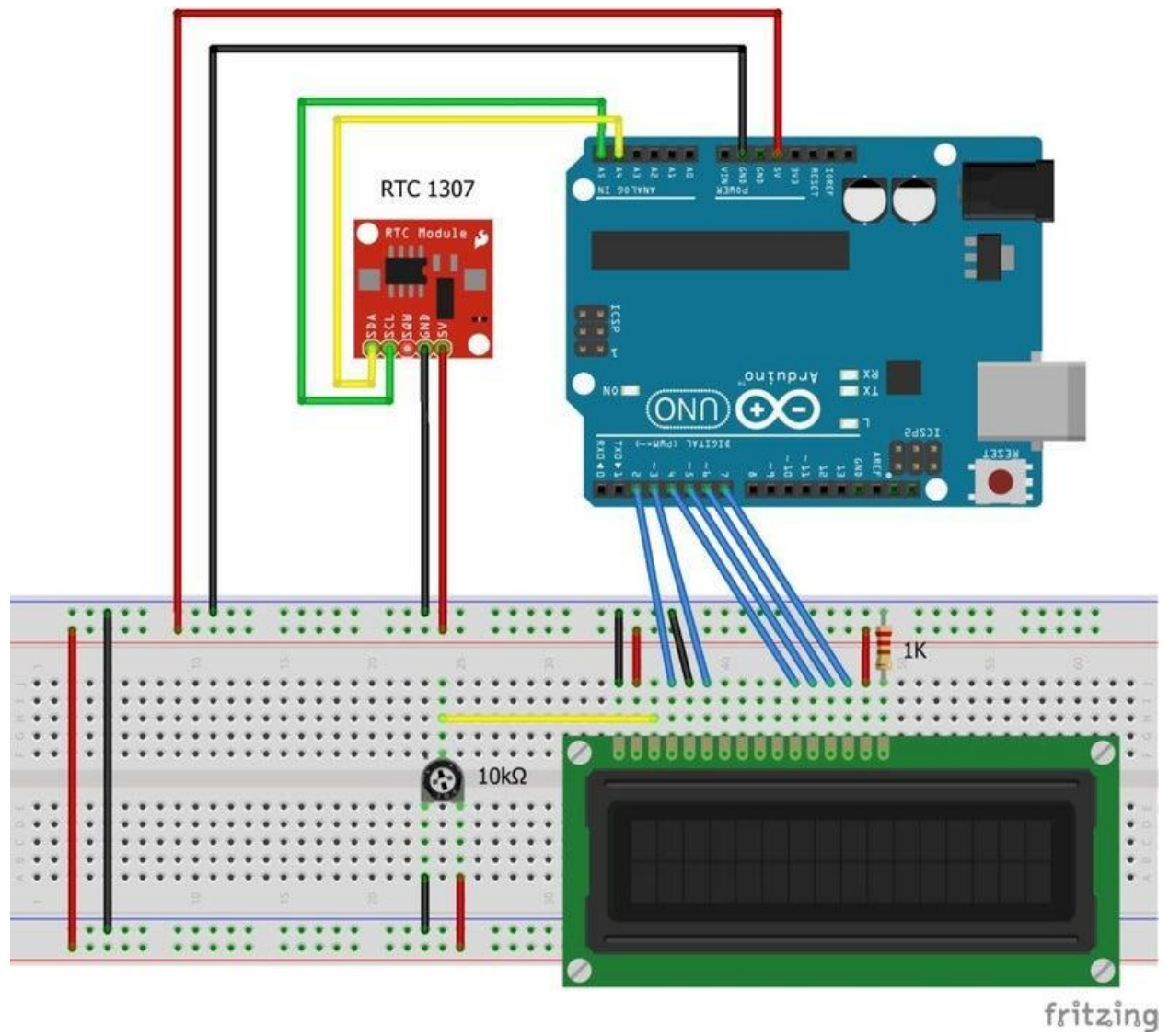RTC has its own Cmos battery to keep it on and maintain real time
There is LCD display and switches attached to system for user input and output

Components

- Arduino Uno
- RTC 1307 module
- LCD 16X2
- 5V relay module
- 10K trimpot
- 1K resistor

- 10K resistors x 4
- Push buttons x 4
- Breadboard, jumpers.

Diagram