

# Arduino 24-hours Digital Clock



## Specifications

- Arduino Nano based
- RTC DS3231M to keep time running even when the device is turned off
- MAX7219 LED Matrix Display
- Adjustable time, brightness and display font via Button A and Button B

## Setup Guide

### RESET

- Press button B when device normal mode / displaying time

### SETUP TIME, BRIGHTNESS, FONTS

- On normal mode, press button A to enter setup mode
- When the device displaying only the HOUR number (i.e **05 : H**), pressing button B will do circular addition to the hour value (00 → 23 → 00)
- Pressing button A at “Hour Mode” will change the device to “Minute Mode” to edit the Minute. Screen will display only the MINUTE part (i.e. **M : 45**)
- Pressing button B will do circular addition to the Minute value (00 → 59 → 00)
- Pressing button A at “Minute Mode” will change the device to “Brightness Mode” to adjust the brightness. Screen will display something like **B : 04**
- Pressing button B will do circular addition to the Brightness value (00 → 15 → 00)
- Pressing button A at “Brightness Mode” will change the device to “Font Mode” to adjust the displayed Font. Screen will display something like **F : 02**
- Pressing button B will change the displayed Font of the device. There are 7 fonts available (01 → 07 → 01)
- Pressing button A at “Font Mode” will change the device to “Confirmation Mode”, screen will display **OK** word.
- Press button A to store time, brightness and font settings, or press button B to abort settings and reset the device

# Schematics

