## The Roman Project

By Uncle Glenn and Roman

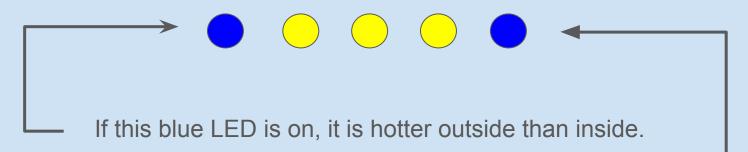
#### Features

#### The "Roman Light" displays:

- The time of day using a 24 hour clock
- Inside temperature in degrees Fahrenheit
- Outside temperature in degrees Fahrenheit
- Four reminder lights
- AND 64 red LEDs that spell "R O M A N"

#### Time and Temperature LEDs

There are five LEDs that display the time of day and the temperature.



If this blue LED is on, it is hotter inside than outside. -

If both blue LEDs are on, inside and outside are the same temperature.

#### **Temperature Display**

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The yellow LEDs flash to indicate temperature when one or both blue LEDs are on.

The first two yellow LEDs indicate inside temperature.

The last two yellow LEDs indicate outside temperature.

If it is 72 inside, the 1st yellow LED flashes 7 times and the 2nd yellow LED flashes 2 times.

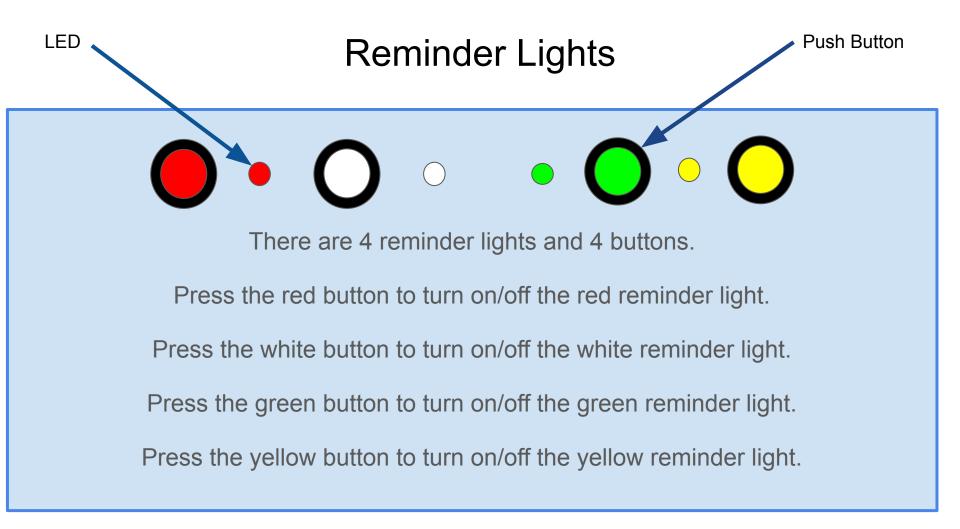
If it is 84 outside, the 3rd yellow LED flashes 8 times and the 2nd yellow LED flashes 4 times.

#### Time of Day Display



When the blue LEDs are off, the time is displayed.

If it is 10:38 in the morning, the 1st yellow LED flashes 10 times, then the 2nd yellow LED flashes 3 times and then the 3rd yellow LED flashes 8 times.



#### **Clock Functions**

To add a minute to the clock press the red and green buttons.

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To subtract a minute from the clock press the red and yellow buttons.

To add a second to the clock press the green and yellow buttons.

To subtract a second from the clock press the white and green buttons.

When pressing two buttons, press them simultaneously.

#### **Buzzer Function**

To turn the buzzer on/off press the white and yellow buttons.

If the buzzer is on, pressing these two buttons will turn the buzzer off and the buzzer will beep four times.

If the buzzer is off, pressing these two buttons will turn the buzzer on and the buzzer will beep twice.

When pressing two buttons, press them simultaneously.

#### The ROMAN Sequence

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To turn on the R O M A N sequence press the red and white buttons.

The letters in the R O M A N lights will flash sequentially.

When pressing two buttons, press them simultaneously.

#### The ROMAN Lights

The ROMAN lights consist of 64 red LEDs configured into the shape of five letters that spell ROMAN. On the hour, these letters flash sequentially spelling out the word "Roman". This occurs 5 times. Each time the sequence occurs at a faster rate. The lights then flash as a word. The "Roman" word flashes once for every hour on the clock. If it is 8 o'clock in the morning, the "Roman" word will flash 8 times.