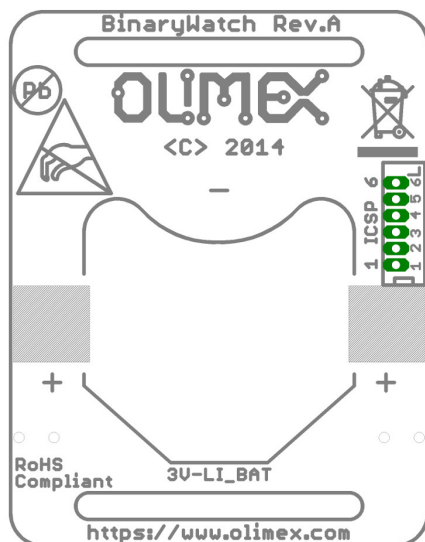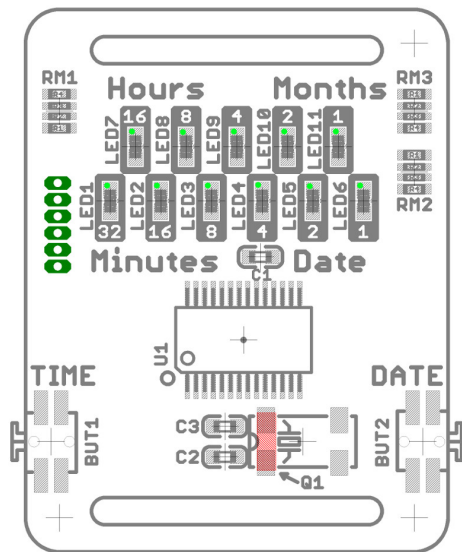# BINARY-WATCH assembly cheatsheet





Binary-Watch design is made with small SMT components in mind.

There are several ways how to assemble the SMT components, the harder one requires no extra tools but experience with soldering iron, good eyesight. You hold the components with tweezers then solder the legs one by one.

Easier assembly process for SMT components requires some tools and preparation and follows these steps:
(1) Apply solder paste, (2) place the components, (3) reflow.

Refer to "Assembly_SMT.pdf" for more information about the process.
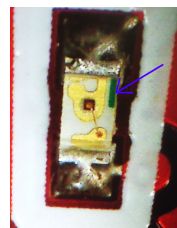
## Capacitors:

| Name | Size | Value |
|---|---|---|
| C1 | 0603 | 100nF, 50VDC, 10% |
| C2, C3 | 0603 | 10pF, 50VDC, 10% |

## Resistor matrices:

| Name | Size | Value |
|---|---|---|
| RM1, RM2, RM3 | 4×0603 | 4.7K, 5% |

## LEDs:

LEDs must be placed with the green stripe/dot facing top of the pad. Make sure the lighting part is facing towards you.



| Name | Size | Value |
|---|---|---|
| LED1..LED6 | 0603 | GREEN 100mCd |
| LED7..LED11 | 0603 | RED 100 mCd |

## Buttons:

| Name | Value |
|---|---|
| BUT1, BUT2 | WTCM-TR |

## MCU:

Warning first pin is marked with DOT!

| Name | Size | Value |
|---|---|---|
| U1 | SSOP28 | PIC16F722A-I/SS |

## Quartz:

| Name | Size | Value |
|---|---|---|
| Q1 | 1206 | CM7V-T1A 32.768kHz 12.5pF 20ppm |

## BAT holder:

| Name | Value |
|---|---|
| 3V-LI_BAT | BC2001 |