



ClockIt

Kit Information & Instructions



ClockIt is a clock with an alarm - short and sweet. For a beginner, expect to spend 20-30 minutes assembling the kit.

Based on the ATmega168, the code that runs ClockIt is available online. You can even reprogram ClockIt to be a count-down timer (for those bomb diffusing movie moments), a lovely egg timer, or any other device that requires a display, buzzer, and buttons! (External programmer required)

Kit includes:

- 3/4" Female Standoff (*quantity: 2*)
- 22pF Cap (*quantity: 2*)
- 4 Digit Display
- ATmega168 28-Pin
- 5V Wall Wart
- Push Button (*quantity: 3*)
- 10 μ F Cap
- Resistor 10K Ohm
- Cap 0.1 μ F
- 1/4" Phillips Screw (*quantity: 2*)
- Mini Power Switch
- Buzzer
- Barrel Jack
- Crystal 16MHz

STEP BY STEP INSTRUCTIONS

The following instructions are meant to be followed in chronological order. There are some components that need to be soldered on your board before others. To avoid frustrating mistakes, please start with step #1 and work your way through to step #13.

- 1 ATmega168** (microcontroller): Make sure the notch on the chip aligns with the black notch on the board.
- 2 10 μ F Cap** (decoupling cap): The cap has a gold negative sign '-' on the side. This aligns with the black '-' on the board.
- 3 0.1 μ F Cap** (decoupling cap): **Marked "104."** Make sure you solder the one 0.1 μ F Cap. Do not confuse it with the 22pF caps!
- 4 22pF Caps** (crystal caps): **Marked "220."**
- 5 16MHz Crystal** (timing source)
- 6 10K Resistor** (reset pull-up)
- 7 Slide Switch** (alarm control): Keep iron tip away from top of switch! Plastic melts easily!
- 8 Button** (time input)
- 9 Buzzer** (alarm): Remove the sticker that might be covering the buzzer.
- 10 Display** (self explanatory!)
- 11 Barrel Jack** (power): **Solder this part to the bottom of the board.** The power jack might not rest flat against the board, so you might need to trim the legs on the microcontroller.
- 12 Standoff & Phillips Screw** (mechanical): Attach 2 corner standoffs with 2 screws. Hold the screw in place and twist standoff onto screw.
- 13 Power Supply** (power): Plug 5V wall adapter into wall and the opposite end into ClockIt. Enjoy!



