

Circuit-Pop

6-Bit 24 Hour Alarm Clock Kit Instructions

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Description:

Clocks are everywhere. They're in your phone, your computer, and sometimes even on you! This clock kit is a great way to learn a bit more about how certain clocks work. The clock displays time down to the second and with this version you can set an alarm! Not only that, but this circuit is controlled entirely by a specialized microcomputer! In this kit you will get everything you need to build your own 24-hour alarm clock from the displays down to the resistors!

Parts List:

Parts	Quantity
2–Bit 7 Segment	3
3MM Red LED	4
9012 Transistor	6
470Ω Resistor	7
1kΩ Resistor	2
4.7kΩ Resistor	6
10kΩ Resistor	2
1N4148 Diode	3
10uF Capacitor	3
220uF Capacitor	1
104 Ceramic Capacitor	1
30 Ceramic Capacitor	2
78L05 Regulator	1
STC Microcontroller	1
3V Battery Holder	1
2p Terminal	1
Tact Switch 6x6mm	1
12 MHz Crystal	1
PCB	1

Instructions:

If you solder the components correctly, generally you can use it normally, the operating voltage is DC 7V - 12V (Typical applications is 9V), pay attention to the polarity when connecting to the power supply.

During operation, continuous short time (less than one second) press S3, you can make a continuous cycle option in the following six functions. Meanwhile for the long press (more than 2 seconds) S3, then return to the clock function model immediately.

1. Clock function: display 10:10:00 after connect to power
2. Correcting function: short press S3 once, namely with the flashing current time and the colon status, after that press S2 means hour plus one , press S1 means minutes plus 1, seconds are not adjustable .
3. Alarm function: Press short twice S3, namely display status is 22:10:00, colon is long-bright. Then press S2 means plus 1 hour, then press S1 means minutes plus 1, seconds are not adjustable . When hours are more than 23 the screen will be displayed - : - : - , this means closing the alarm function.
4. Countdown function : Press three times S3, show a status of 0 , colon as long off. Press the S2 then from low so high to display, press S1 means plus 1, when press S2 to the six times it will begin to countdown based on the time you set up, press S2 again will re-enter the adjustment function, and stop the countdown .
5. Stopwatch function : Press the S3 four times, with display status of 00:00:00 , colon as long bright . Stopwatch is started by pressing S2, S2 is pressed again to end the stopwatch, after you finish the stopwatch, after S1 is pressed the stopwatch is cleared.
6. Counter function : short press S3 five times, with the displays status of 00:00:00 , the colon is long off, the counter is incremented 1 by pressing S2 , press S1 again the counter is cleared .

For any questions regarding this kit or others, feel free to contact us at support@circuitpop.com!