



This timer switch circuit is used to control electric equipment with timer circuit. It can be used for application such as lamp, fan and sporting events.

Technical Specifications

- Power supply : 12VDC
- Consumption : max. 90mA.
- Time setting range : 1 second - 99 hours.
- Adjustable pattern range : timer on, timer off, alternative on-off timer and automatic timer on-off.
- Loading : 1A. max.
- PCB dimensions : 3.57 x 2.40 in.

How to Work

The circuit diagram is shown in Figure 2. The most important part is the microcontroller IC2 which was programmed by factory. the circuit will start operation when setting the timer. This timer operate conformably with the relay working.

Circuit Assembling

Figure 3 presents the completed Digital Timer Switch circuit board assembling.

Figure 1 shows the installing method of each component into the circuit board. It is recommended to assemble the circuit starting with a less height components. Be careful while assembling and check for the matching of PCB poles and components before soldering.

Setting the TIMER ON and TIMER OFF

- 1.If you want to set TIMER ON, slide switch S4 to ON position. The display is showing "on:XX" (XX is second). But if you want to set TIMER OFF, slide switch S4 to OFF position. The display is showing "oF:XX" (XX is second).
- 2.Press switch S3 to set the second digit.
- 3.Press switch S1, the display is showing "YY:ZZ" with YY is hour and ZZ is minute. Switch S1 is used to adjust the hour digit and Switch S2 is used to adjust the minute digit.
- 4.When setting is completed, slide switch S4 to ST position (middle point). The circuit is ready to operate.

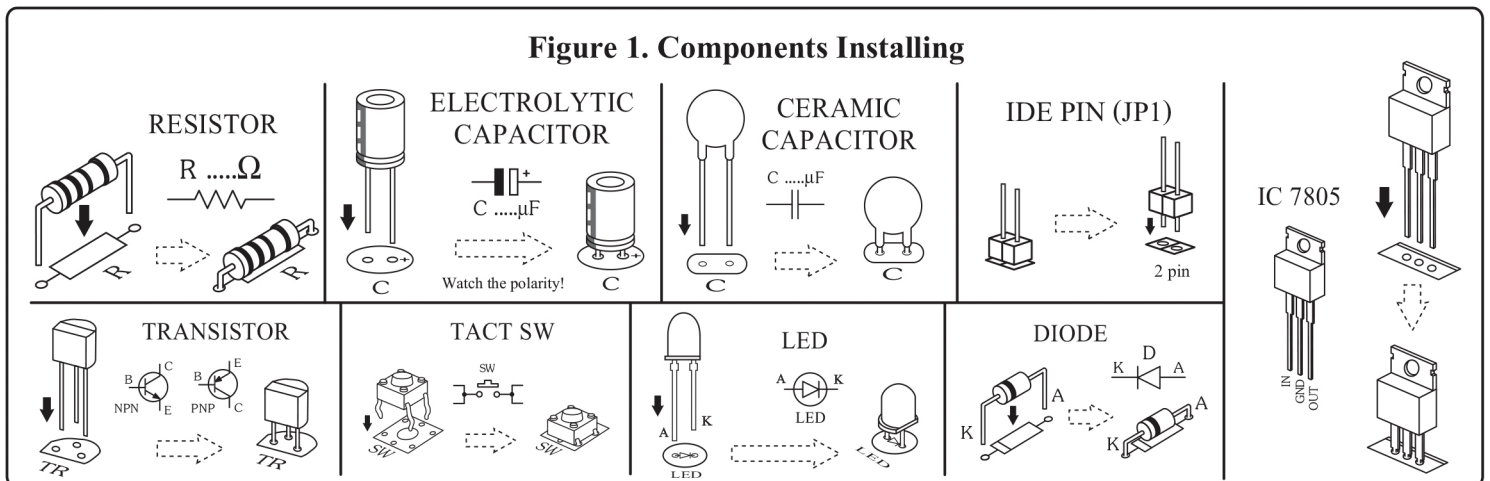
NOTE : If press and hold switch, the numeric setting will be changed faster.

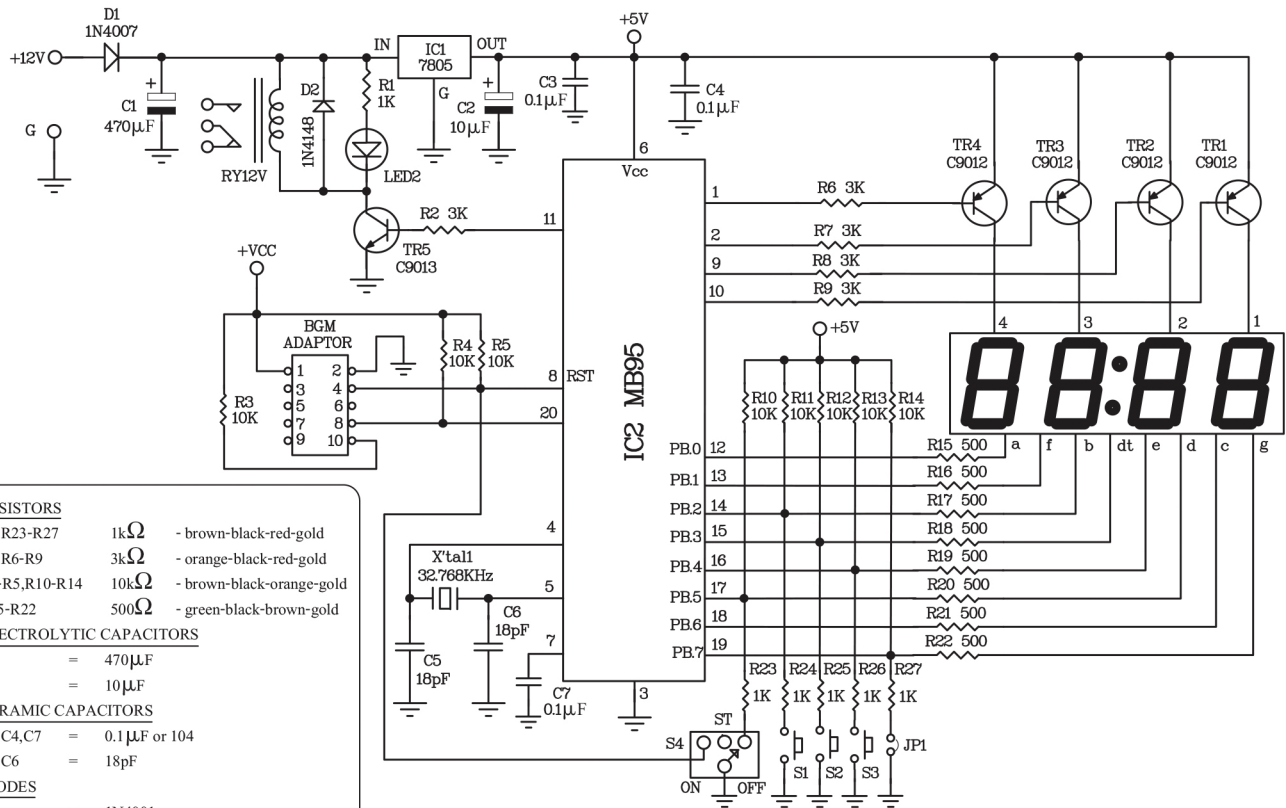
Select the Pattern of Operation

- 1.Alternative ON-OFF pattern : The numeric setting of both TIMER ON and TIMER OFF will not be 00.
- 2.TIMER OFF pattern : Setup the time of operation for TIMER ON only. For TIMER OFF mode, the time will be set to 00.
- 3.TIMER ON pattern : Setup the time of operation for TIMER OFF only. For TIMER ON mode, the time will be set to 00.
- 4.Automatic ON-OFF pattern : Setup the time of operation both TIMER ON and TIMER OFF. The circuit starts working at TIMER OFF mode, followed by TIMER ON mode.

NOTE : the operation patterns NO.1, 2 and 3 have to connect jumper JP1.

Figure 1. Components Installing





- RESISTORS**
- R1,R23-R27 1kΩ - brown-black-red-gold
 - R2,R6-R9 3kΩ - orange-black-red-gold
 - R3-R5,R10-R14 10kΩ - brown-black-orange-gold
 - R15-R22 500Ω - green-black-brown-gold
- ELECTROLYTIC CAPACITORS**
- C1 = 470μF
 - C2 = 10μF
- CERAMIC CAPACITORS**
- C3,C4,C7 = 0.1μF or 104
 - C5,C6 = 18pF
- DIODES**
- D1 = 1N4001
 - D2 = 1N4148
- TRANSISTORS**
- TR1-TR4 = C9012
 - TR5 = C9013
- ICs**
- IC1 = 7805
 - IC2 = MB95F264 or MB95F564

Figure 2.

**Digital Multifunction Timer Switch 1 Sec - 99 Hours
Circuit**

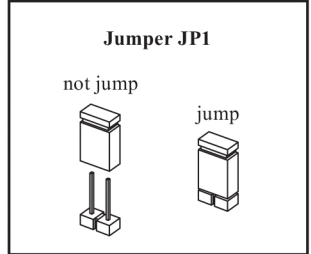


Figure 3. Circuit Assembling

