

## Components – Learn basic electronics

5V power supply  
Breadboard

22 AWG Solid Tinned-Copper Hook-Up Wire

Fuse 63mA

Transformer (220V/9.6V)

SWITCHES:

- 6 x SPST pushbutton switches

LED:

- 3mm red
- 5mm red, blue, green, yellow
- 4 x 5mm blue

7 SEGMENT DISPLAY

- Common cathode

RESISTORS:

- 4 x  $2.2\Omega$
- $150\Omega$
- 2 x  $220\Omega$
- 2 x  $1k\Omega$
- 6 x  $2.2k\Omega$
- 2 x  $4.7k\Omega$
- 7 x  $10k\Omega$
- 4 x  $100k\Omega$
- $1M\Omega$

POTENTIOMETERS:

- $1k\Omega$
- $10k\Omega$
- $1M\Omega$

CAPACITORS:

- $0.01\mu F$
- 2 x  $0.015\mu F$
- $1\mu F$
- 2 x  $10\mu F$
- electrolytic  $1000\mu F$

DIODES:

- 4 x IN4007
- 1N5338B Zener

TRANSISTORS:

- 2 x BC547 NPN

GATES:

- 7400 NAND
- 7402 NOR
- 7404 NOT
- 2 x 7408 AND
- 7410 3 input NAND
- 7432 OR
- 7486 XOR
- 4078 8 input OR/NOR

IC:

- 7448 BCD to 7-segment decoder
- 3 x 7474 D flip-flop
- 2 x 74107 JK flip-flops
- 555 timer