

SIXTY FOUR PIXELS

Minimal game console based on Arduino

For full build instructions with photos, game information and project files, please check out six4pix.com/game

Your kit includes:

- **Printed circuit board**
- **IC1, IC2** - TPIC6B595N power logic shift register
- **IC3** - ATMEGA328P-PU microcontroller
- **R1-R8** - 220R resistor (red-red-black code). *These are soldered to the underside of the board.*
- **R9** - 1K resistor (brown-black-red code)
- **C1, C2** - 33pF ceramic capacitor (33 code)
- **C3, C4, C5, C6** - 100nF cap (104 code)
- **C7** - 4.7uF Electrolytic capacitor
- **X1** - 16MHz crystal
- **PWR** - Miniature slide switch
- **LED1** - 3MM standard LED. *The longer leg is the anode (+ terminal)*
- **SPK1** - 5V piezo transducer. *The anode (+ terminal) is identified on the label. Remove the label after fitting.*
- **A,B,C,D,RESET** - 6mm tactile switch
- **SERIAL** - 6 pin male header 0.1" pitch. *This is intended to fit a standard FTDI USB-to-TTL serial programming cable (not supplied)*
- **DISP1** - 8x8 red/green LED matrix. *Pin 1 is indicated with a coloured label. The label goes to the top left, at the position marked on the board with a white triangle. Please ensure correct fitting to the board – it is very difficult to remove if soldered incorrectly! Also ensure resistors R1-R8 are soldered first!*
- **IC sockets** (20 and 28 pin). *Line up the notch on the end with the image on the board*
- **Battery box** with flying leads. *Trim leads to required length. Please see web site for advice. 3xAAA batteries (not supplied) are required to operate the game.*
- **Double sided foam pads** to fix battery box to reverse of PCB.
- **Tinted acrylic screen filter** can be fixed to the front of the LED matrix, with the supplied double-sided tape, to improve display contrast (optional)
- **Neoprene Tape** can be stuck to underside of board to make it more comfortable to hold (optional)

There are several games pre-loaded on the console... To start a new game, press the RESET button. To change the game, press RESET then hold A and C buttons together for 3 seconds

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