

Prototyping

- 1 x Breadboard (in 2 Parts)
- 1 x Set of Connection Wire (75 wires)
- 2 x IC Sockets (16 pin)
- 3 x IC Sockets (14 pin)
- 1 x 3-Way terminal block
- 1 x 3V DC Motor
- 1 x 3.7g Mini Servo Motor

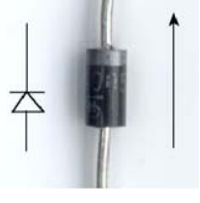
Remember Multimeter (outside case)

Resistors

- 10 x 47 Ω
- 10 x 100 Ω
- 10 x 150 Ω
- 20 x 220 Ω
- 10 x 240 Ω
- 10 x 470 Ω
- 10 x 1 K Ω
- 10 x 1.5 K Ω
- 10 x 4.7 K Ω
- 10 x 10 K Ω
- 10 x 1 M Ω

Diodes

- 15 x 1N4001



Prototyping Electronics Kit

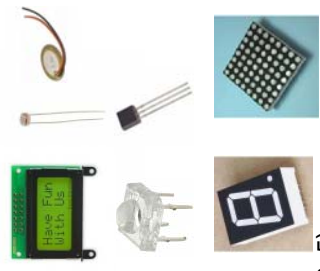
(EE223 - Digital and Analogue Electronics)

To get your full deposit back, please take care of this kit and return it as you have received it. If a component breaks, please replace it (for free) with a new one from the component bins that will be provided.

Videos and documentation at: www.eeng.dcu.ie/~molloyd/EE223/

Displays, RGB LEDs and Sensors

- 1 x 8x2 or 16x2 Character LCD Module
- 2 x Piranha RGB LED (square)
- 2 x 7 Seg Displays (common cathode)
- 2 x 7 Seg Displays (common anode)
- 1 x Mini Light Dependent Resistor
- 1 x Temperature Sensor (Varies with kits)
- 1 x 8x8 Red/Green Dot Matrix Display
- 1 x Piezo Sounder (flat)
- 2 x Kingbright dot matrix (TC07-11EWA)(8x5)



Integrated Circuits - Gates

- 3 x AND Gates (74HC08N)
- 3 x OR Gates (74HC32N)
- 3 x NOT Gates (74HC04N)
- 3 x XOR Gates (74HC86N or HCF4070)
- 2 x 3-INPUT NOR Gates (74HC27N)
- 6 x NAND Gates (74HC03)
- 6 x NOR Gates (74HC02)

Integrated Circuits - Counters

- 2 x Decade Counter (74HC390N)
- 2 x 4-Stage Binary Counter (74HC4060E)
- 3 x BCD Up/Down Counter (40192BE)
- 2 x 4-bit Full Adder (74HC283E)
- 2 x Dual 4-IN Mux (74HC253E)
- 2 x Demux/Decoder (14555BCPG)

Integrated Circuits - Flip-Flops

- 4 x JK Flip-Flop (+ve) (74HC109N)
- 4 x JK Flip-Flop (-ve) (74HC112)
- 4 x D-Type Flip-Flop (74VHC74N)
- 3 x Shift Register (S->P) (74HC164N)
- 3 x Shift Register (P->S) (74HC166N)

LEDs

- 10 x 5mm Green (30mA 2.8V)
- 10 x 5mm Red (30mA 2.6V)
- 10 x 5mm Clear Blue (20mA 3.5V)



Please Keep in Bags

Integrated Circuits

- 2 x 3-8 Decoder (74HC238)
- 3 x 8-3 encoder (74HC148N)
- 2 x BCD->7-Seg Decod. (74LS47N)



Integrated Circuits

- 4 x 555 Timer (NA555P)
- 2 x OP AMP (UA741CP)
- 2 x Shift Registers in IC Sockets (74HC595)



Transistors & Voltage Regulators

- 1 x TIP-120 Transistor
- 3 x LDO Regulator 5V (KA7805A)
- 6 x NPN Transistor (BC547)
- 6 x NPN Transistor (PZ2222A)
- 6 x 557 PNP



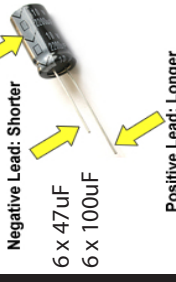
Potentiometers and Switches

- 1 x Pot (4k7 large)
- 2 x 6 way DIP switch
- 2 x Slide Switch
- 5 x Buttons
- 1 x 100 Ω Pot
- 1 x 1K Ω Pot
- 1 x 10K Ω Pot
- 1 x 100K Ω Pot



Electrolytic Capacitors and Fuses

- 6 x 2.2 μ F
- 6 x 10 μ F
- 6 x 22 μ F
- 6 x 10nF (1032)
- 6 x 100nF (tiny 104)
- 6 x 47nF (4732)
- 2 x PTC Fuse 0.17A (RX17F)
- 2 x PTC Fuse 0.5A (9RX50F)



Negative Lead: Shorter
Positive Lead: Longer

Arduino

- 1 x Arduino (AT Mega 328)
- 1 x USB Cable (A-B)
- 1 x Battery Holder (4xAAA)
- 1 x Cap (fits 9v battery and battery holder)
- 1 x 9V Battery (please replace when empty)
- 1 x Trim Tool

Resistor Colour Code

