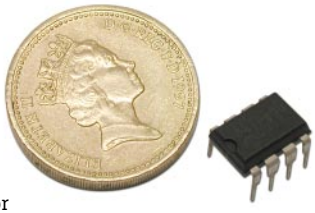
# PICAXE-08 SYSTEM



## NEW LOW-COST ADDITION TO THE PICAXE RANGE!

The PICAXE-08 system is based upon a re-programmable low-cost 8 pin microcontroller that provides 5 input/output pins. The user can configure these pins to select the ratio of inputs to outputs, and one of the pins also has analogue input capabilities for measuring analogue signals such as light or temperature. Students can construct their own circuits using the comprehensive information provided in the help files, or use the ready-made project boards as described below.


The PICAXE-08 starter pack contains one self-assembly proto board kit, PICAXE-08 chip, battery box, download cable, and CDROM containing the software and manuals.

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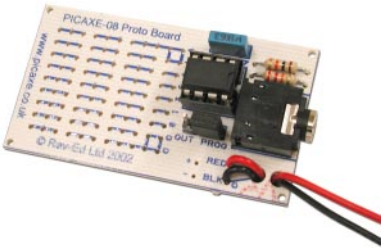
|---|---|
| **PICAXE-08 Starter Pack:** | **AXE-003** |
| **Single PICAXE-08 chip:** | **AXE-007** |
| **PICAXE-08 chip (5 pack):** | **AXE-008** |
| **PICAXE-08 chip (50 pack):** | **AXE-009** |

## PICAXE-08 PROTO BOARD KIT

The proto board kit consists of a small self-assembly board to allow rapid prototyping of PICAXE-08 circuits. The board provides the basic circuit and download connector, with a small prototyping area to allow connection of input and output interfacing circuits. Supplied as self-assembly kit of PCB and all parts (excluding the PICAXE-08 chip, see part AXE-007 above).




**PICAXE-08 Proto Board Kit:** **AXE-021**

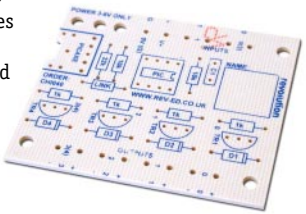
## PICAXE-08 MOTOR DRIVER BOARD

The motor driver board is a pre-assembled circuit that includes the PICAXE-08 chip and L293D output driver chip. The board can be used to drive 4 individual on/off outputs (e.g. buzzers), or the outputs can be used in pairs to allow forward-reverse-stop control of two motors. Connections are via screw terminal blocks.

**PICAXE-08 Motor Driver Board:** **AXE-023**

## PICAXE-08 PROJECT BOARD PCB

The project board PCB is a professional quality PCB that enables students to construct a project board that has 4 outputs and 1 input. The board provides space for the PICAXE-08 chip, download socket and 4 transistors for driving output devices such as motors and buzzers. The high quality PCB is provided with a solder resist lacquer layer over the tracks to assist those less experienced at soldering. Full datasheet available upon request.



**PICAXE-08 Project Board PCB:** **CHI-040**
**PICAXE-08 Project Board PCB (25 pack):** **CHI-041**

**For further information and the latest prices please see: *www.picaxe.co.uk***

# PICAXE PROJECTS

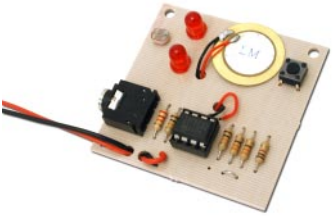
The project kits have been specifically designed as low-cost KS3 projects that students can assemble, program and take away with them at the end of the module. Each project introduces several electronic components, aswell as the microcontroller itself and it's programming techniques. Each project has great potential for students to customise and develop their own control program for the project, and the chip can be re-programmed over and over again to modify the operation of the project.

The PCBs are supplied as high quality production pre-drilled boards. The boards are all coated with a solder resist lacquer layer over the tracks which greatly assists the students to achieve successful soldering. Customised injection moulded cases are also available separately for two of the projects, to enable the students to produce a commercial quality product. The teacher packs provide full parts lists & order codes, and all discrete components used are common parts available from all electronic suppliers. Full packs of all components are also available upon request.

As the Programming Editor software is free, if the student also purchases the low-cost AXE026 download cable, they can carry on using the project at home after the coursework is complete. Full student worksheets and teacher notes, with a sample of each PCB, are available within the teachers pack. The teacher notes explain how the module can be expanded to include casing, packaging and production exercises.

## CYBERPET PROJECT

This low-cost project uses an 8 pin microcontroller to create an electronic pet with LED 'eyes' and a piezo sounder 'voice' that reacts to touch (via a push switch) and light (via a miniature LDR).



**Cyberpet Project PCB (set 25):** **AXE101**

## ALARM PROJECT

This low-cost project uses an 8-pin microcontroller to allow a customisable alarm to be created. The alarm responds to a number of user selectable inputs such as tilt switches or light sensors, and activates a bicolour LED and piezo siren.

**Alarm Project PCB (set 25):** **AXE102**


## SAFETY LIGHT PROJECT

The safety light uses three high intensity LEDs to create a pedestrian/cyclist safety light. The patterns displayed by the lights can be re-programmed, and the option of adding an LDR light sensor allow the patterns to change when, for instance, a car's headlight shines on the board. A high quality translucent triangular shaped red plastic case (with belt clip) is available separately.

**Safety Light PCB (set 25):** **AXE103**
**Safety Light Casing & Belt Clip:** **AXE103C**

## ELECTRONIC GAME PROJECT

The electronic game project is used with the 18 pin PICAXE-18 microcontroller. With the 18 pin microcontroller the project provides 5 LED indicators, a piezo sounder with switch and variable resistor inputs. The project can be configured as an electronic dice, a countdown timer or as an independent game by simply re-programming the microcontroller. A high quality case with switch is available separately.

**Electronic Game PCB (set 25):** **AXE104**
**Electronic Game Casing & Switch:** **AXE104C**

## TEACHERS PACK

The Teachers Pack consists of a sample of each of the 4 project PCBs described above, with a CDROM containing the student notes and teacher guides. The student notes may be printed out from a PC or Mac, and then duplicated for use within the purchasing institution.

**Teachers Pack & Sample PCBs:** **AXE100**