PICAXE MICRO-ROBOT SYSTEM

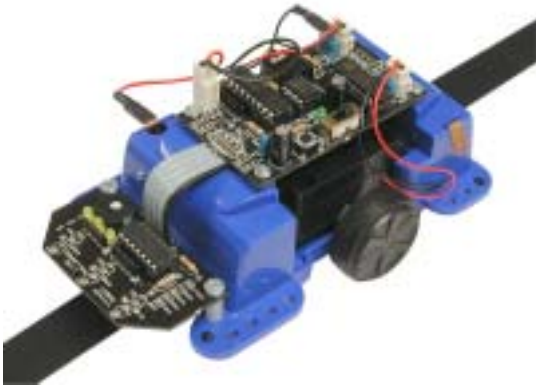
FANTASTIC NEW EDUCATIONAL MICRO-ROBOT SYSTEM!

The PICAXE micro-robot system provides an exciting, economical introduction to the world of robotics. The system can be fully customised by the end user, with the capacity to add 5 input sensors and 4 output devices (in addition to the default motor/gearbox outputs).

The micro-robot base unit consists of a plastic enclosure (120 x 80mm) which houses the 4 AA batteries (not supplied), the two central 0.46W motors and the 42:1 ratio gearboxes. This base unit is then fitted with the pre-soldered control board, which contains the PICAXE-18 microcontroller. The PICAXE-18 microcontroller can be programmed 'on-board' by simply connecting the AXE026 download cable into the socket provided. The user can then develop their own simple BASIC or flowchart control program using the free PICAXE 'Programming Editor' software.

A unique feature of the control board is it's custom 'PWM motor speed controller' chip. This controls the speed of the motors, which gives the user fully programmable speed control of the micro-robot. This allows the micro-robot to move in any direction at a range of user-selected speeds.

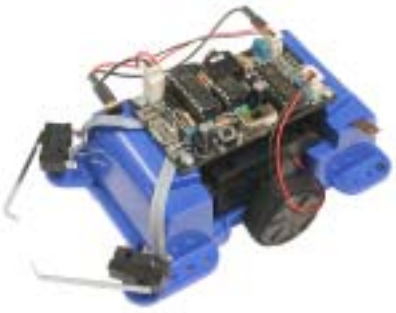
Various 'add-on' modules for the micro-robot are also separately available (modules can be used simultaneously if desired). These include line follower, infra-red control and ultrasonic range finding options. Naturally the user can also build their own sensors to produce their own custom robot!



Micro-robot fitted with line follower kit

PICAXE MICRO-ROBOT

The basic PICAXE micro-robot chassis/gearbox unit with pre-assembled controller board (fitted with a PICAXE-18 microcontroller and the dedicated motor speed controller chip).
Also available in a starter pack containing switches, download cable and PICAXE CDROM.

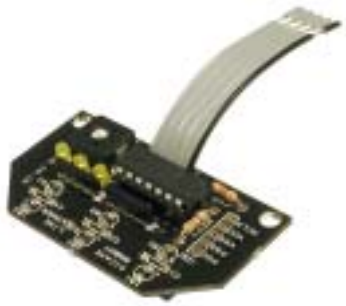


The starter pack **AXE120S** contains:

PICAXE Micro Robot:	**AXE120**
PICAXE Download Cable:	**AXE026**
PICAXE CDROM:	**BAS805**
Microswitch Bumper Kit:	**AXE122**

LINE FOLLOWER KIT

This self-assembly kit adds line following capabilities to the micro-robot. The module uses a pre-programmed microcontroller to give a highly accurate & stable reading from the three reflective infra-red sensors. Soldering required. Can also be used in your own robot application.



Line Follower Kit:	**AXE121**
Black Tape (to create lines):	**PCB050**

ULTRASONIC RANGE FINDER

This pre-assembled unit uses ultrasonic sound to detect obstacles from 3cm to 3m away. Accurate enough to detect a broom handle at 2m! Requires the CON041 connector to connect the range finder to the micro-robot.
Can also be used in your own robot application.

Ultrasonic Range Finder:	**SRF004**
5 pin Connector:	**CON041**

INFRA-RED CONTROL

The infra-red upgrade pack includes a TV style remote control handset and infra-red sensor to solder onto the micro-robot control board. The micro-robot can then be programmed to respond to commands from the handset. (NB: You need to upgrade to a PICAXE-18A or PICAXE-18X chip to use the infra-red upgrade).

Infra-red Upgrade pack:	**AXE040**
PICAXE-18A microcontroller:	**AXE015A**
PICAXE-18X microcontroller:	**AXE015X**

MAGNETIC PINS

These interesting magnetic connectors can be used as a versatile 'add-on' for your micro-robot. Use them to temporarily connect two robots together, or use them as the electrical contacts to make your own 'docking station'.

Magnetic Pins (pair): **GBX058**

MICRO-SWITCH KIT

A long arm micro-switch is ideal for making 'bumper switches' for the micro-robot. This pack includes two switches and mounting hardware.

Microswitch Bumper Kit: **AXE122**

BATTERIES & SPARE PARTS:

The micro-robot requires 4 AA batteries:
Alkaline AA battery (single): BAT002

A piezo sounder can be used to add beeps and sounds to your micro-robot.
Piezo sounder: **SPE002**

Ultrabright blue LEDs - give your micro-robot the latest cool blue look!
Ultrabright blue LED: **LED004**

Miniature LDR light sensors can be used to add 'light seeking' functionality to your micro-robot. Hunt down that bright light!
Miniature LDR: **SEN002**

Radio-control servos can be used to operate grippers and other devices on your micro-robot.
Radio Control Servo: **GBX010**

For more information please see
www.picaxe.co.uk