# Standard PICmicro® starter pack

#### What does it do?

Provides a selection of E-blocks<sup>™</sup> that can be used for a wide range of applications in microcontroller programming: both for learning and for projects.

#### **Benefits**

- Can be used with a wide range of students from technician to postgraduate
- Saves a great deal of time in project construction
- Can be combined with our courseware to provide a complete solution to learning

#### **Features**

- Includes utility software for downloading code
- Free introductory course in microcontroller programming
- Complete courses for C and Assembly programming are available
- Supplied in rugged storage trays with cables, backplane and accessories.



This starter pack contains a metal backplane for mounting E-blocks, a power supply, a collection of individual E-blocks and download utility software, rugged plastic storage trays and accessories like nuts and bolts, mounting pillars, cables and IDC connectors etc. The E-blocks boards and accessories can be used to form a wide number of electronic systems, for learning or for project work, and additional E-blocks boards and sensors can be added to these systems as you need them.

This starter pack is also supplied a free introductory course: 'An introduction to microcontroller programming' on CD ROM. Additional courses in C programming or assembly code programming are available as extras, and these include all the compiler/assembler software needed for a compete learning and development.

For 2007/8 the E-blocks mix for these products has changed slightly and prices have been reduced. Please see below full details on pack contents. Plastic covers for all E-blocks are available which can extend E-block board life and prevent chips and links from being removed.

The product is shipped in rugged plastic trays for storage and transport.

## Learning time

Not applicable: learning time is dictated by the course used with E-blocks. Flowcode, Assembly for PICmicros and C for PICmicros can each be used to give learning courses of 50 - 60 hours.

## **Prerequisites**

Depends on course undertaken

## Manual

An E-blocks user's guide is available electronically.

## System requirements

PC with CD ROM drive and Windows 98 or greater.

#### **Further information**

A separate datasheet is available for each of the E-blocks boards included in the pack. Please see our web site for details.

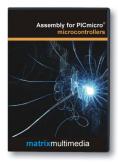
## Order code

The order code for this product is EB215.

#### Also consider

CD ROM courses in C and Assembly code programming.







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#### **Pack contents**

The table below gives a list of the pack contents. Datasheets on any individual item are available on request.

Qty Code  1 BP232  1 EB00200  1 EB00300  1 EB00400  1 EB00500  1 EB00600  1 EB00700  1 EB01300  1 EB01300  1 EB01700  1 EB01700	Description E-blocks backplane - tray compatible E-blocks screw terminal board E-blocks sensor interface E-Blocks LED board E-Blocks LCD board E-blocks USB Multiprogrammer E-Blocks Switch board E-Blocks Quad 7-segment display E-blocks D/A and memory board E-Blocks Prototype board E-blocks patch board
1 EB210 1 EB216 1 EB217 1 EB355 1 EB634	Pack of 25 M3 12mm nylon spacers Pack of 100 M3 anti-slip nuts Pack of 100 M3 12mm pozi head screws E Blocks User Guide E-blocks IDC cable
1 EBPUB 1 ELFCSSI3 1 ELSAM 1 HP2642 1 HP4039 1 HP5328 2 HP6219 1 HP9734 1 HPUSB	E-blocks publicity sheet An intro to microcontroller programming CD ROM ELSAM mini CD ROM Holed foam for E-blocks trays Lid for plastic trays International power supply with adaptors E-blocks plastic mounting pillar Cardboard box for trays USB lead



The CD ROM 'An introduction to microcontroller programming is included free of charge in this pack. The contents are as follows:

## Learning objectives

Study of the CD ROM—will achieve the following objectives:

- Gain a thorough understanding of the basic concepts of programming microcontrollers from basic techniques through to interrupts.
- Develop the skills and techniques required to write develop electronic systems based on microcontrollers

#### CD ROM contents

The CD ROM is divided into several sections:

## Labs contents

Lab 1: Outputs

Lab 2: Delays

Lab 3: Connection points

Lab 4: Calculations

Lab 5: Loops

Lab 6: Inputs

Lab 7: Decisions

Lab 8: LCD

Lab 9: Keypad

Lab 10: Analogue inputs and EEPROM

Lab II: Macros

Lab 12: External interrupts

Lab 13: Timer interrupts

## **About PICmicro MCU chips**

introduction
Digital vs Analogue
Inputs and outputs
Memory
Programming
16F877 architecture

#### Clocking your PICmicro device

#### E-blocks

#### Flowcode step-by-step

Digital outputs
Digital inputs
Basic loops
The LCD display
Binary numbers
Decisions
Connection points
7-segment displays

Software macros Strings and memory

A simple Hi-fi

PIC projects

Construction methods
Choosing a power supply
Adding inputs
Input conditioning
Adding outputs
Adding drivers

