

Robot Building for Dummies

Reviewed by John Durrell, University of Greenwich

The book is one of the “Dummies” series and follows the now established format of the “for Dummies” guides. It has nineteen chapters, each of which inform the reader at the beginning what is in store within that chapter. These chapters are grouped into five sections:

1: Getting Started

In this section the author discusses a brief history of robotics and begins to introduce the reader to terms used in robotics, as well as getting the reader started in the building of a simple (simple as far as robots go any way) nonprogrammable robot.

2: Programmable Robot Preparation

This section takes the reader through a range of issues concerned with the preparation for building a programmable robot. Much of what is covered in this section is to be found in National Curriculum Design and Technology systems and control. But it is useful information and it must be kept in mind that this book is not Design and Technology specific but is designed for a wider audience e.g. anyone who wants to build a robot.

3: Building a Programmable Robot

Here the author gets involved in the detailed construction of a programmable robot. This includes details about both hardware and software and is designed to finish with the reader completing their first programmable robot.

4: Augmenting your Programmable Robot

This is really the final section of the book with the author taking the reader through the manufacture of further devices to augment the

basic robot in order to give it such features as speech, eyesight (with the use of an onboard camera) and remote control such as wireless radio control.

5: The Part of Tens

The title of this section is perhaps not self-evident but it details ten suppliers of components and a short critique of what and how they supply their goods.

The book is written in plain English and uses graphic symbols in the margins, the meanings of which are explained at the beginning of the book, these are used when warnings, tips, technical information or other such issues are being addressed. The author does suggest that it may not be the intention for the reader to read the whole book from cover to cover as readers’ skill levels may differ.

The book originates from the US and when addressing such issues as fixtures and fittings, inches are the standard used. For those older teachers this will present no problem, but may be more problematic for the pupils. It would perhaps have been useful if a metric version had also been produced.

The author initially takes the reader through the building of a proprietary kit robot, presumably

to build confidence. Then more complex machines are attempted accompanied by good resourcing being provided at each stage. Where necessary, the author discusses and explains both the hardware and the software issues involved in completing each project. Finally, a range of variations are suggested to allow the reader to custom build their own machines. All the suppliers mentioned in the text appear to be based in the States. Though I did not actually build any of the robots I did visit some of the suppliers web sites and it appeared that most would supply parts to the UK, but there may be a postage premium.

The book is not primarily intended exclusively for the Design and Technology market and in places is a step-by-step approach to building a robot. The teacher may need to modify the approach taken in the book to fully utilise the material for Design and Technology teaching, but it would serve as a very good resource for any schools wishing to become involved in the building of robots. It has a good deal of background information and explains current technical issues well. With a price tag of £15.50 it would appear to be a good investment for the Design and Technology library.

Robot Building for Dummies

Author: Roger Arrick

Publisher: Wiley Publishing

Price: £15.50

ISBN: 0764540696 paperback

Appropriate Content ✓✓✓✓

Pupil/Student Use ✓✓✓✓

Teacher Resource ✓✓✓✓

Visuals ✓✓✓

Overall Style ✓✓✓✓

Generic Use ✓

One of a series ✓

Photocopiable

Pupil/student activities ✓

Cross-curricular ✓