Programming The PIC Microcontroller With MBASIC (Embedded Technology)
The Microchip PIC family of microcontrollers is the most popular series of microcontrollers in the world. However, no microcontroller is of any use without software to make it perform useful functions. This comprehensive reference focuses on designing with Microchip’s mid-range PIC line using MBASIC, a powerful but easy to learn programming language. It illustrates MBASIC’s abilities through a series of design examples, beginning with simple PIC-based projects and proceeding through more advanced designs. Unlike other references however, it also covers essential hardware and software design fundamentals of the PIC microcontroller series, including programming in assembly language when needed to supplement the capabilities of MBASIC. Details of hardware/software interfacing to the PIC are also provided.

BENEFIT TO THE READER:
This book provides one of the most thorough introductions available to the world’s most popular microcontroller, with numerous hardware and software working design examples which engineers, students and hobbyists can directly apply to their design work and studies. Using MBASIC, it is possible to develop working programs for the PIC in a much shorter time frame than when using assembly language. * Offers a complete introduction to programming the most popular microcontroller in the world, using the MBASIC compiler from a company that is committed to supporting the book both through purchases and promotion* Provides numerous real-world design examples, all carefully tested* Companion website contains the source code files and executables, and will include a demo version of the MBASIC compiler, allowing engineers to work out the design exercises in the book

Book Information
Series: Embedded Technology
Paperback: 800 pages
Publisher: Newnes; 1St Edition edition (June 28, 2005)
Language: English
ISBN-10: 0750679468
Product Dimensions: 7.5 x 1.8 x 9.2 inches
Shipping Weight: 3.1 pounds (View shipping rates and policies)
Average Customer Review: 4.9 out of 5 stars Â See all reviewsÂ (7 customer reviews)
Best Sellers Rank: #495,582 in Books (See Top 100 in Books)  #11 in Books > Computers & Technology > Hardware & DIY > Microprocessors & System Design > PIC Microcontroller  #398
This is much more than just a fantastic replacement for the MBasic manual (although it’s very good as that). I haven’t seen any MBasic tutorials with this much depth anywhere. It’s an AMAZING resource, easily one of the best-written textbooks on any subject that I’ve seen in a long time. It’s laid out in a tutorial format, with each chapter building on the ideas in the previous pages. The book is also easy to use to find specific techniques as you would with a reference book, either with the index, or with the thorough way Jack cross-references related chapters within each chapter. Jack introduces one or two major concepts in each chapter, such as working with digital outputs, I2C, stepper motors, or HSerial, and then shows how to design the electronics parts of the concept as well, and gives solid reasoning for how he’s making design choices along the way. He has a deep understanding of both computer theory and electronics design, but presents both of them in a friendly, non-jargon-y way that I think many experience levels could understand. It covers everything from the stock MBasic commands, to how to use in-line and standalone assembler where needed, to the undocumented (except in the forums) commands hidden in the language. You even get a CD with a FREE version of MBasic Pro 5.3.0.0 called MBasic876 (It is limited to the 16F876 / '876a parts only, which is not a huge limit). Jack also explains the differences between 5.2.1.1 (the current full release) and 5.3.0.0, AND gives working code for both versions! He even documents all of the mistakes he - and others - have found in the 5.2.1.1 manual, saving much frustration when learning the language.

I own MicroBasic Pro 5.2. Although the BasicMicro’s manual is large and informative, it left out too many facets and explanations for features. In fact, knowledgeable users were constantly alluding to ‘hidden’ features and undocumented commands and/or extensions in the forums. New and intermediate users were operating at a disadvantage for this reason. This book easily fixes all those shortcomings. The contents cover both the present version, 5.2, and the newest yet-to-be-released version, 5.3, represented in the demo version on the CD. Jack Smith has done a real service to everyone seeking a pathway to develop projects with one of the industry’s most popular and best supported processors - the Microchip PIC. He has documented all the compiler’s features, in a clear and concise fashion, that allows the user to realize all the power of this compiler. Every chapter
clearly explains the hardware and software relevant to the chapter's subject, and provides numerous useful code examples to get the user started. The chapter on using ISRASM, MB Pro’s interrupt handler, and the chapter that collects together and summarizes all the previously unexplained commands and features, easily makes this book a ‘must have’. The demo compiler supports only the PIC16F876 and its -A version. At present users report that this program doesn’t work with Win9x or ME machines, but is OK for Win2000 and XP. This is probably due to the 32 bit nature of the new software. This may change, so refer to their forums and home page for news about this. Basic Micro promises to upgrade from the present version to version 5.3, when released, for free. After two years of experimenting with different BASIC compilers, I find MB Pro easily the best of the bunch.

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