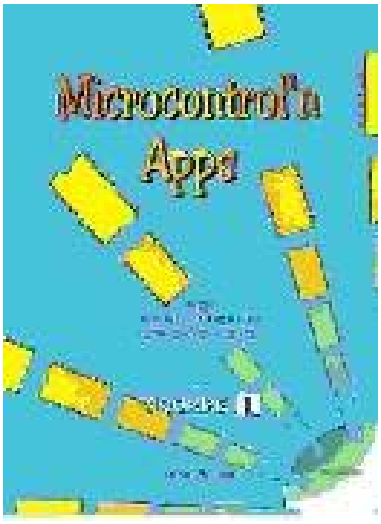
Microcontrol'n Apps
Using PIC ® Microcontrollers
by David Benson



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"Microcontrol'n Apps" © is an intermediate level applications guide covering Microchip Technology's PIC ® Microcontrollers. Serial communication as a means of transferring data between PIC microcontrollers and peripheral chips and also between two or more PIC microcontrollers is described. Use of the 93C46 serial EEPROM is detailed as an example. Since we live in an analog world, A/D and D/A are discussed with several methods illustrated for each. Conditioning signals from sensors with an analog voltage output is described. Interfacing PIC microcontroller-controlled systems with humans requires some math, binary to decimal conversion and vice versa, alphanumeric LCD interfacing and scanning keypads. Single wire serial communication with a PIC-controlled LCD module which can be built by the reader is included. A digital thermometer project brings these topics together as an example. The book also explains how to establish serial communication between a PIC microcontroller and a PC via a RS-232 conversion circuit and a terminal program. These techniques are used in a digital voltmeter/data logger experiment for uploading data to a PC for display plus graphing using a spreadsheet program. Moving up or down from the now familiar PIC16F84 to other devices is covered in detail so that you will easily be able to work with the new devices being introduced by Microchip. Finally, use of the Microchip in-circuit debugger (ICD) is described. "Microcontrol'n Apps" gives the reader the tools to design, build, and debug intermediate level microcontroller-based instrumentation and systems. By David Benson (8-1/2 x 11 format, 437 pages).

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