

PMB Electronics (Net-Tech Developments)

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PRODUCT NOTE

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CPU_1A1 DISTRIBUTION README

INTRODUCTION

This file outlines what's on the CPU_1A1 distribution disk.

The distribution CD is sent out with your first order of a CPU_1A1 module. Subsequent orders will not contain a CD unless specifically requested.

If you require additional or replacement CDs, please email paul@pmb.co.nz. One addition CD will generally be supplied free of charge.

Note that CPU_1B and CPU_1A1 are the same thing.

WHAT'S IN THE KIT

This will depend on which kit:

- When you purchase a CPU_1A1 module on its own, you get the module itself sealed in an anti-static bag and a CD.
- If you purchase a development board on its own, you get a development board.
- If you purchase a development board and a CPU_1A1 module, you get the CPU_1A1 module sealed in an anti-static bag, a development board sealed in another anti-static bag, and a CD

NOTE: The CD is only supplied with your first purchase of a CPU_1A1 module.

You will have to supply a power supply capable of delivering about 9V to 15V DC at 200mA. I don't include the power supply because it adds significantly to the shipping weight on small orders, and there are so many different requirements around the world. It is generally cheaper to source a plug-pack locally.

GETTING STARTED

There are many ways to go about using the CPU module and development board. What you are doing with it will determine the best setup. These are a few common configurations:

- **CPU_1A1 module used on its own.**
This is the cheapest way to get started, but also one of the more difficult. You will have to build your own 5V power supply and RS-232 interface.
- **CPU_1A1 module used with the development board.**

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This is probably the easiest way to get started. All you need is a PC (preferably running Windows 95/98) and a 9V to 15V DC power source. A plug-pack is ideal.

- **CPU_1A1 module built into your own application hardware.**

This is how the CPU_1A1 was originally intended to be used. Basically you design the hardware that provides input/output, power supply and interfacing functions. The CPU_1A1 is the controller that sits at the center.

Whatever you are doing, you will require an assembler and a way of communicating with the CPU_1A1.

This disk provides a selection of different freeware assemblers and a boot-loader for the HC11.

A monitor program called Buffalo is also provided that can be loaded into the CPU_1A1 Flash memory. See the other documentation for details.

I recommend using an IBM compatible PC running Windows 95/98. Other machines and operating systems can be used, but you may have to source other development tools.

The first step is to work your way through this CD, starting with the documentation in pdf format.

DISK CONTENTS

SUB-DIRECTORIES:

Code Examples

Code examples and code segments that can be built into your own applications.

Data

Data files for components of the CPU_1A1.

Documentation

Document files relating to the CPU_1A1 and development board.

Read through these files first.

Tools

Assembly tools for the PC and the CPU_1A1.

AS11_V103.ZIP

An assembler for the HC11 that runs under DOS. This is probably the most common free assembler for the HC11.

ASM11_84.ZIP

I have not used this assembler but from what I have seen it looks good. I recommend giving it a try.

HC11 MINIIDE V108.ZIP

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This is an IDE (intergrated development environment) that runs under Windows. It provides an editor an assembler and a terminal window.

This is a good combination for working with Buffalo installed in the CPU-1A1.

BUF_P1.ZIP

This is Buffalo 3.4 that has been modified to run on the CPU_1A1. It is very useful when just getting started because you see a response immediately.

Buffalo is most useful when developing code to run on the CPU_1A1. It allows code under development to be quickly loaded into RAM and tested. Modifications can then be made and the process repeated.

HC11B_V3.ZIP

This is a Win95/98 loader program. It allows you to quickly and easily erase and load the CPU_1A1 modules. Its main advantage is that it installs and runs easily. Operation is then just a matter of clicking buttons.

QBLOADER.ZIP

This is a basic language loader that runs under DOS and Qbasic. Qbasic is supplied on the Win95 and Win98 disks.

This loader is faster than the HC11boot loader, making more suitable when many boards have to be loaded.

This loader can be quite difficult to get going. It seems to be a machine specific problem. I often use it running full screen under Windows 98.

FINALLY

Having been using the HC11 for about 10 years now, I have lots of HC11 code and resources. If you have any questions or get stuck, please contact me. I am always keen to hear what's happening, and would like to help if possible.

Additional files and information are available at www.pmb.co.nz

For more information or assistance, contact paul@pmb.co.nz