DL11 Users Guide

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Overview

The program dl11.exe is used to download files to the 68HC11. Common uses are downloading to popular microcontroller boards, such as the BotBoard or the Miniboard. This guide will help you understand how to run this basic but very useful little utility.

Requirements for running dl11.exe

This program runs only on 32-bit Windows based systems. It is known to work well on Windows/NT, Windows/95, and Windows/98. It is a simple program that uses common operating system API, so it should work on any system capable of running one of these operating systems. The dl11.exe program is a 32-bit command line application. That means that while it requires a 'Win32' system to operate, it will run in a text console window as opposed to a graphical user interface (GUI) window.

This program does NOT work on MSDOS or Windows 3.1. If you are running one of these systems, you should find and use PCBUG11.

Quick Start to running the program

1) Open a command line window or MS-DOS box on your system
2) Make sure that dl11.exe is in your path, or you know the exact path to the file. (The example assumes it is in your path)
3) Assume the .S19 file you are downloading is called testhc11.s19
4) Connect a serial cable to your target 68HC11 system.
5) Boot your target system in special bootstrap mode (often known as download mode)
6) From the command prompt, type the following command

```
D:\68hc11>dl11 -c 1 -i testhc11.s19
dl11: version Mar 16 2000 22:05:34
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Downloading talker file
0.1.2.3.4.5.6.7.8.
Downloading testhc11.s19
..................................................
..........................Success
```

The key arguments here are **-c 1** which specifies COM1 as the port to use, and **-I testhc11.s19** which specifies the input S19 filename.

The program will count from 0 to 8 as the bootstrap program loads. Then, as each record is programmed, a '.' is printed showing progress.

Options to the program

If you open a command line window (i.e. command prompt or MS-DOS box), you will be able to run dl11.exe

```
D:\68hc11> dl11
dl11: version Mar 16 2000 22:05:34
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No input file specified
dl11: [options][-i <filename>]
        where
        -c n    n specifies COM port (1 is default)
        -i <filename> is input file
        -T Enter terminal mode after download
        -E enable expanded memory bus
        -B Bulk erase EEPROM
        -h Help message
        -C <n> Config register value
        -e <start>-<stop> EEPROM address range (default f800-
ffff)

Normal operation on COM1 is as follows:
dl11 -c 1 -i myprog.s19
```

As you can see from the program output, there are not many options to dl11.exe. The version you are running may have a different date.

-c <n> specifies which COM port your 68HC11 is connected to

-i specifies the input file. Note that filenames with spaces can be enclosed in double quotes. For example, dl11 -i "Long File Name With Spaces.s19"

-T Terminal mode after download puts the program into a very simple serial terminal mode running at 9600 baud. This useful new feature allows you to download then drop into a simple terminal that allows you to communicate with the target board via the serial port. To exit terminal mode, press F2. If you press F3, the program will redownload the same .S19 file. The intended use for this option is for you to leave dl11 running while you are developing your code. You can compile in another window, then download and see the serial output in the dl11 window.

-E enables the expanded memory bus. You need to use this if you are attempting to download to external RAM, such as on a BotBoard 2

-B enables a bulk erase of the EEPROM. You can run with just the -B switch to erase whatever programming is in the EEPROM

-h prints this message

-C <n> sets the value of the config register. This allows you to move your EEPROM to another part of memory. This is optional, and only useful if you know what you are doing.

-e <start> - <stop> sets the range of EEPROM addresses. The default is F800-FFFF, such as is found on the 68HC811E2.