




Since I already did see install I started with "Hello world Example"

## Problem 2:

doc refers to a list of flags in parts.h or other files similarly named, I did a search and I cannot find them in my install path,

found it and other .h files  
@ <http://gel.sourceforge.net/examples/files.php>

Clicked on "download" link and downloaded

 gel-hc1x-1.6.1.zip

Unzipped file using /usr as the unzip directory.

Problem #3: above put files in /usr/gel-hc1x-1.6.1

move all files from up one directory. You will get a msg saying directory exists but it is ok.

This also saves you typing in "Hello world" because the zip file has included that sample file.

problem: The instructions to compile hello.c do not work

```
m6811-elf-gcc -g -Os -mshort -Wl,-m,m68hc11elfb -o hello.elf hello.c
```

NOT Recognized as an internal program.

Could not find m6811-elf-gcc in path specified on page 1

Fix page 1

changed path to:

set path=C:\usr\bin; %PATH%

got a ... warning: memory region eeprom not declared

but hello.elf was generated

next command worked to generate the .S19 file (removed \ and CR/LF to make it one line)

```
m6811-elf-objcopy --only-section=.text --only-section=.rodata \
--only-section=vectors --only-section=.data \
--output-target=srec hello.elf hello.s19
```

Looked @ .S19 generated and  
it looked as if program would  
load @ wrong address.

Found memory.x file  
needs to be modified for  
the Axiom CMEL1E9-EUBU  
Board.

changed from:

```
MEMORY
{
  page0 (rwx) : ORIGIN = 0x0f0, LENGTH = 15
  text (rx)   : ORIGIN = 0x0, LENGTH = 0x0f0
  data        : ORIGIN = 0x0, LENGTH = 0
```

To

```
MEMORY
{
  page0 (rwx) : ORIGIN = 0x0f0, LENGTH = 15
  text (rx)   : ORIGIN = 0x2000, LENGTH = 0x6000
  data        : ORIGIN = 0x6000, LENGTH = 0x1000
```

also changed hello.c  
Line 114 from

```
#define M6811_DEF_BAUD 13  
M6811_Baud_DIV_13
```

To

```
#define M6811_DEF_BAUD 13  
0x30
```

(obtained 0x30 from buffalo  
default)

it compiled and ran this way  
(under Buffalo)

■ Installed Embedded GNU  
From

[http://www.ericengler.com/Embedded  
GNU.aspx](http://www.ericengler.com/EmbeddedGNU.aspx)

as per instructions.

found a very useful tutorial  
@

[http://puppawz.com/Documents/  
hello-world12-GNU.pdf](http://puppawz.com/Documents/hello-world12-GNU.pdf)

Followed that for first attempt  
@ a program for minidragon+  
board (HCS12)

found the above perfect until  
"7. Load and run".

in my ver (1.10) you do  
NOT have to type "load"  
into the terminal window,  
just go to Build | download  
and select the file  
(it automatically does the  
load, sends the file and  
takes a \$ 2000 for you)



Note: you must make sure you are at a '>' prompt on the terminal window before hitting Download

Tried to add code for LED display to the hello.c (this code was written in ICC 12)

had a heck of a time with the ports (names).

found iodg256.h in

C:\usr\include\asm-m68hc12\  
arch-Ipac\

which had the S12 def's

removed #defines for ports from hello.c, program would not run. (I did include the .h file)

not sure why, but when I removed the



\*(volatile unsigned \_\_ \*)

From each line it worked.

found exit.h @

C:\usr\include\asm-m68hc12\  
arch-Ipac\

would exit back to  
prompt @ end of program

ie.

replace return (0);  
with -exit (0);

---

Found

C:\Embedded GNU\Examples\  
miniDragon12-GNU-Test

it has a better port  
definition file hcs12.h  
and also a vectors12.h  
file (for interrupts under  
monitor)

Example has a lot of  
Great examples (ints, LCD,  
Sound, A/D)

🚩 Note: Compilers just find  
with make command,  
but when you go to download  
it creates TestMini12.S19

but download looks for  
"miniTest\_DEBUG12.S19"

Just rename the file  
before trying to download

? Due to the TestMini12.mak  
file ?

🚩 no, it is due to the  
-prj (project file).

renamed that file from:

miniTest\_DEBUG12.prj

TO:

Testmini12.prj

and it compiles to the  
right .S19 file name.





## Location of Interesting Stuff

C:\usr\m68hc11-cme11  
axiom Board defaults  
memory.x  
make.defs

C:\usr\include\asm-68HC11\  
arch-cme11\arch  
include files for axiom  
Board

especially interesting  
GDM.h  
for LCD

C:\usr\include\asm-m68HC12  
\arch-axcmd12  
for HC12 from axiom  
(did not find Dragon  
board)

C:\usr\src\libbot  
robot library w/docs  
(docs @ C:\usr\doc)

→  
written for predecessor  
of the Handyboard

## HC12 Dragonboard

See

<http://opentech.durhamcollege.ca/bertrand/hc12/resources/embs6100cprograms.zip>



includes How to pdf  
memory.x  
rcy9s12.h

(this is for the Dragon 12 board not the mini-Dragon)