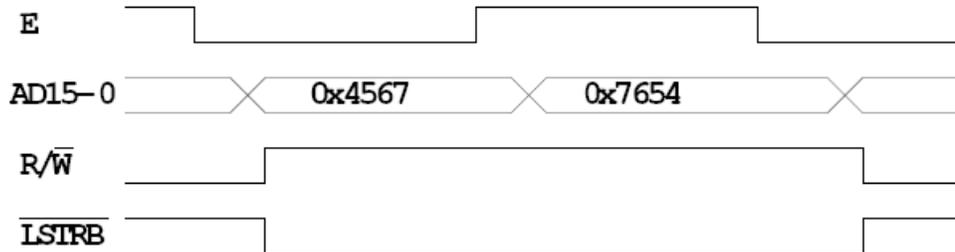
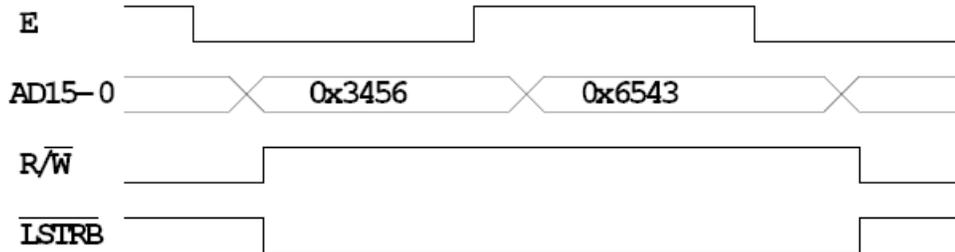
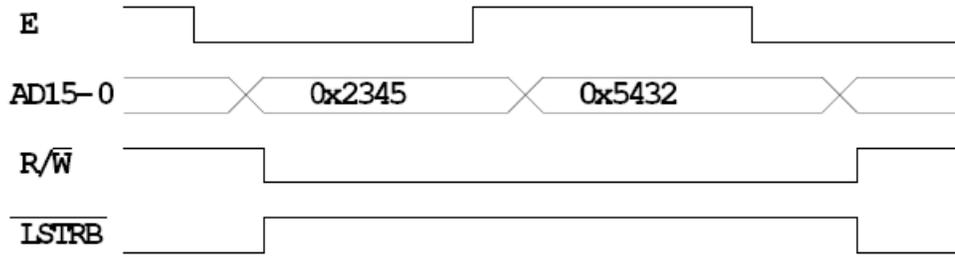


EE 308 – Homework 6
Due 4-16-07

1. The figures below show some things which might be on the HCS12 bus in normal expanded wide mode. For each figure, indicate if that combination of signals can occur. If so, explain what the memory cycle does — read or write, 8-bit or 16-bit access, what data is read from or written to, what memory address(es) are accessed. If the combination of signals cannot occur, explain why not.



2. The following table shows some values in the HC12 memory:

0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
4080	01 3F	C6 80	5B 86	C6 03	5B 8D	C6 FF	5B 02	4C 80							

Show what will be on the address/data bus and the control lines when the HC12 does the following:

(a) Writes a 0xAA to address 0x4080.

(b) Writes a 0x55AA to the two bytes at addresses 0x4082 and 0x4083.

(c) Reads a single byte from addresses 0x4089.

3. Immediately upon coming out of reset, an HCS12 is operating in Normal Expanded Wide mode. How did the HCS12 know it should run in this mode — i.e. what pins did it check, and what was the state of those pins?

4. Immediately upon coming out of reset, an HCS12 is operating in Normal Single Chip mode. How did the HCS12 know it should run in this mode — i.e. what pins did it check, and what was the state of those pins?

5. Immediately upon coming out of reset, an HCS12 is operating in Normal Single Chip mode. How can you switch the chip into Normal Expanded Wide mode? Write some code to do this.