

### 62256 Memory IC Control Signals

A15 inverted becomes an appropriate input signal for the 62256 IC’s Chip Select (CS) pin, bringing the memory out of the not selected mode into one of its operational modes.

E is important because the first phase is addressing phase and we want to make sure that the memory chip is not driving voltage on the set of wires used for the lower byte of the memory address. You would have colliding waves and damage the chips.

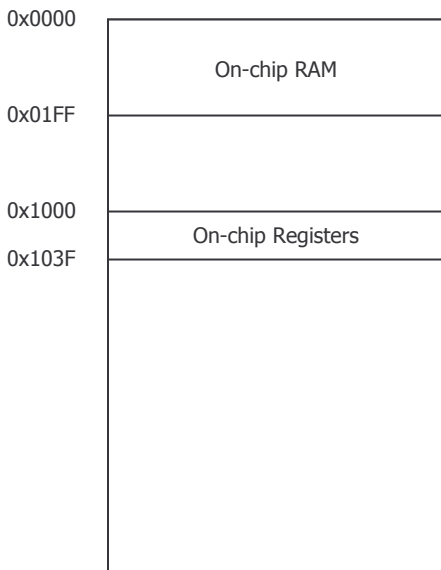
	CS	RW	E		OE	WE
Write	0	0	0	Addr. Phase	1	0
Write	0	0	1	Data Phase	1	0
Read	0	1	0	Addr. Phase	1	1
Read	0	1	1	Data Phase	0	1
	1	0	0		1	1
	1	0	1		1	1
	1	1	0		1	1
	1	1	1		1	1

### Karnaugh Maps

Make sure all isolated pairs are included.

### HC11’s Memory Map

Memory is 16 bits wide as addresses.



You cannot map a memory chip to the on-chip RAM or registers, even when running in expanded mode. These are always internal memory reads, and externally the chip does not drive voltages to read from the external memory address.

Keep it simple. If you're going to have a memory in expanded mode from 8000 to FFFF, don't turn on the ROM, which maps to BF00 to BFFF.

The HC11 does not reserve any other regions of its address space besides those shown in the diagram above.

### **Memory Mapping**

We want to keep our memories aligned on boundaries of the size of the chip. This guarantees that your map bits do not change.

“If you've never learned to read gates by their bubbles, welcome to my world. Let's bubble together.”