

Special Registers

The processor has several registers dedicated to a particular function. Some of those are here. In particular the Program Counter (PC), Stack Pointer (SP), the Helper (H), the memory address and the memory write data.

SP If the Stack Pointer changes the new value will come from ADD2.

Address The memory address may be accessing code or data, and so may be loaded from several places.

PC Usually the next PC is calculated by ADD2 but it may also load a vector or load a value from memory.

Write Data

This register is 8 bits wide. It holds the data to be written out from the processor if required. 16 bit data needs to be written in two cycles, the second multiplexer in this chain selects the high or low byte of 16 data (only the low byte of PS is ever written).

H Register

This chain looks after the Helper register. As well as providing storage for intermediary values it can act as a counter for pacing complex iterative operations such as multiplication. When doing so only the bottom 5 bits are used for that purpose.

