## 9.2 Interrupt Vectors in ATmega88P

**Table 9-2.** Reset and Interrupt Vectors in ATmega88P

| Vector No. | Program<br>Address <sup>(2)</sup> | Source       | Interrupt Definition  |
|------------|-----------------------------------|--------------|---|
| 1          | 0x000 <sup>(1)</sup>              | RESET        | External Pin, Power-on Reset, Brown-out Reset and Watchdog System Reset |
| 2          | 0x001                             | INT0         | External Interrupt Request 0  |
| 3          | 0x002                             | INT1         | External Interrupt Request 1  |
| 4          | 0x003                             | PCINT0       | Pin Change Interrupt Request 0  |
| 5          | 0x004                             | PCINT1       | Pin Change Interrupt Request 1  |
| 6          | 0x005                             | PCINT2       | Pin Change Interrupt Request 2  |
| 7          | 0x006                             | WDT          | Watchdog Time-out Interrupt   |
| 8          | 0x007                             | TIMER2 COMPA | Timer/Counter2 Compare Match A  |
| 9          | 0x008                             | TIMER2 COMPB | Timer/Counter2 Compare Match B  |
| 10         | 0x009                             | TIMER2 OVF   | Timer/Counter2 Overflow   |
| 11         | 0x00A                             | TIMER1 CAPT  | Timer/Counter1 Capture Event  |
| 12         | 0x00B                             | TIMER1 COMPA | Timer/Counter1 Compare Match A  |
| 13         | 0x00C                             | TIMER1 COMPB | Timer/Coutner1 Compare Match B  |
| 14         | 0x00D                             | TIMER1 OVF   | Timer/Counter1 Overflow   |
| 15         | 0x00E                             | TIMER0 COMPA | Timer/Counter0 Compare Match A  |
| 16         | 0x00F                             | TIMER0 COMPB | Timer/Counter0 Compare Match B  |
| 17         | 0x010                             | TIMER0 OVF   | Timer/Counter0 Overflow   |
| 18         | 0x011                             | SPI, STC     | SPI Serial Transfer Complete  |
| 19         | 0x012                             | USART, RX    | USART Rx Complete   |
| 20         | 0x013                             | USART, UDRE  | USART, Data Register Empty  |
| 21         | 0x014                             | USART, TX    | USART, Tx Complete  |
| 22         | 0x015                             | ADC          | ADC Conversion Complete   |
| 23         | 0x016                             | EE READY     | EEPROM Ready  |
| 24         | 0x017                             | ANALOG COMP  | Analog Comparator   |
| 25         | 0x018                             | TWI          | 2-wire Serial Interface   |
| 26         | 0x019                             | SPM READY    | Store Program Memory Ready  |

Notes: 1. When the BOOTRST Fuse is programmed, the device will jump to the Boot Loader address at reset, see "Boot Loader Support – Read-While-Write Self-Programming, ATmega88P, ATmega168P and ATmega328P" on page 277.

Table 9-3 on page 60 shows reset and Interrupt Vectors placement for the various combinations of BOOTRST and IVSEL settings. If the program never enables an interrupt source, the Interrupt Vectors are not used, and regular program code can be placed at these locations. This is also the case if the Reset Vector is in the Application section while the Interrupt Vectors are in the Boot section or vice versa.



<sup>2.</sup> When the IVSEL bit in MCUCR is set, Interrupt Vectors will be moved to the start of the Boot Flash Section. The address of each Interrupt Vector will then be the address in this table added to the start address of the Boot Flash Section.