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## Errata

- **Wrong Clearing of XTRF in MCUSR**
- **Reset During EEPROM Write**
- **Verifying EEPROM in System**
- **Serial programming at voltages below 3.0 Volts**

### 4. **Wrong Clearing of XTRF in MCUSR**

The XTRF flag in MCUSR will be cleared when clearing the PORF-flag. The flag does not get cleared by writing a "0" to it.

#### **Problem Fix/Workaround**

Finish the test of both flags before clearing any of them. Clear both flags simultaneously by writing 0 to both PORF and XTRF in MCUCR.

### 3. **Reset During EEPROM Write**

If reset is activated during EEPROM write the result is not what should be expected. The EEPROM write cycle completes as normal, but the address registers are reset to 0. The result is that both the address written and address 0 in the EEPROM can be corrupted.

#### **Problem Fix/Workaround**

Avoid using address 0 for storage, unless you can guarantee that you will not get a reset during EEPROM write.

### 2. **Verifying EEPROM in System**

EEPROM verify in In-System Programming mode cannot operate with maximum clock frequency. This is independent of the SPI clock frequency.

#### **Problem Fix/Workaround**

Reduce the clock speed, or avoid using the EEPROM verify feature.

### 1. **Serial Programming at Voltage below 3.0 Volts**

At voltages below 3.0 Volts, serial programming might fail.

#### **Problem Fix/Workaround**

Keep VCC at 3.0 Volts or higher during In-System Programming.



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**8-Bit AVR<sup>®</sup>**  
**Microcontroller**  
**with 2K Bytes of**  
**In-System**  
**Reprogrammable**  
**Flash**

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**AT90S/LS2323**  
**Rev. F**  
**Errata Sheet**

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