# APPENDIX

## APPENDIX A1

### REGISTER 11-1: T0CON: TIMER0 CONTROL REGISTER

<table>
<thead>
<tr>
<th>Bit 7</th>
<th>Bit 6</th>
<th>Bit 5</th>
<th>Bit 4</th>
<th>Bit 3</th>
<th>Bit 2-0</th>
</tr>
</thead>
<tbody>
<tr>
<td>RW-1</td>
<td>RW-1</td>
<td>RW-1</td>
<td>RW-1</td>
<td>RW-1</td>
<td>RW-1</td>
</tr>
<tr>
<td>TMR0ON</td>
<td>T08BIT</td>
<td>T0CS</td>
<td>T0SE</td>
<td>PSA</td>
<td>T0PS&lt;2:0&gt;</td>
</tr>
</tbody>
</table>

**Legend:**

- **R** = Readable bit
- **W** = Writable bit
- **U** = Unimplemented bit, read as ‘0’
- **n** = Value at POR
- ‘1’ = Bit is set
- ‘0’ = Bit is cleared
- *x* = Bit is unknown

- **bit 7** TMR0ON: Timer0 On/Off Control bit
  - 1 = Enables Timer0
  - 0 = Stops Timer0
- **bit 6** T08BIT: Timer0 8-Bit/16-Bit Control bit
  - 1 = Timer0 is configured as an 8-bit timer/counter
  - 0 = Timer0 is configured as a 16-bit timer/counter
- **bit 5** T0CS: Timer0 Clock Source Select bit
  - 1 = Transition on TOCKI pin
  - 0 = Internal instruction cycle clock (CLKO)
- **bit 4** T0SE: Timer0 Source Edge Select bit
  - 1 = Increment on high-to-low transition on TOCKI pin
  - 0 = Increment on low-to-high transition on TOCKI pin
- **bit 3** PSA: Timer0 Prescaler Assignment bit
  - 1 = Timer0 prescaler is not assigned. Timer0 clock input bypasses prescaler.
  - 0 = Timer0 prescaler is assigned. Timer0 clock input comes from prescaler output.
- **bit 2-0** T0PS<2:0>: Timer0 Prescaler Select bits
  - 111 = 1:256 Prescale value
  - 110 = 1:128 Prescale value
  - 101 = 1:64  Prescale value
  - 100 = 1:32  Prescale value
  - 011 = 1:16  Prescale value
  - 010 = 1:8   Prescale value
  - 001 = 1:4   Prescale value
  - 000 = 1:2   Prescale value
APPENDIX

APPENDIX A2

REGISTER 9-1: INTCON: INTERRUPT CONTROL REGISTER

<table>
<thead>
<tr>
<th>Bit 7</th>
<th>Bit 6</th>
<th>Bit 5</th>
<th>Bit 4</th>
<th>Bit 3</th>
<th>Bit 2</th>
<th>Bit 1</th>
<th>Bit 0</th>
</tr>
</thead>
<tbody>
<tr>
<td>GIE/GIEH</td>
<td>PEIE/GIEL</td>
<td>TMROIE</td>
<td>INT0IE</td>
<td>RBIE</td>
<td>TMROIF</td>
<td>INT0IF</td>
<td>RBIF0</td>
</tr>
</tbody>
</table>

Legend:
- R = Readable bit
- W = Variable bit
- U = Unimplemented bit, read as '0'
- '1' = Bit is set
- '0' = Bit is cleared
- x = Bit is unknown

**bit 7**
GIE/GIEH: Global Interrupt Enable bit
- When IFEN = 0:
  - 1 = Enables all unmasked interrupts
  - 0 = Disables all interrupts
- When IFEN = 1:
  - 1 = Enables all high priority interrupts
  - 0 = Disables all high priority interrupts

**bit 6**
PEIE/GIEL: Peripheral Interrupt Enable bit
- When IFEN = 0:
  - 1 = Enables all unmasked peripheral interrupts
  - 0 = Disables all peripheral interrupts
- When IFEN = 1:
  - 1 = Enables all low priority peripheral interrupts
  - 0 = Disables all low priority peripheral interrupts

**bit 5**
TMROIE: TMRO Overflow Interrupt Enable bit
- 1 = Enables the TMRO overflow interrupt
- 0 = Disables the TMRO overflow interrupt

**bit 4**
INT0IE: INTO External Interrupt Enable bit
- 1 = Enables the INTO external interrupt
- 0 = Disables the INTO external interrupt

**bit 3**
RBIE: RB Port Change Interrupt Enable bit
- 1 = Enables the RB port change interrupt
- 0 = Disables the RB port change interrupt

**bit 2**
TMROIF: TMRO Overflow Interrupt Flag bit
- 1 = TMRO register has overflowed (must be cleared in software)
- 0 = TMRO register did not overflow

**bit 1**
INT0IF: INTO External Interrupt Flag bit
- 1 = The INTO external interrupt occurred (must be cleared in software)
- 0 = The INTO external interrupt did not occur

**bit 0**
RBIF: RB Port Change Interrupt Flag bit
- 1 = At least one of the RB7:RB4 pins changed state (must be cleared in software)
- 0 = None of the RB7:RB4 pins have changed state