Important changes to Embedded Microcomputer Systems by Jonathan W. Valvano

Page xi, Change **dem-onstration** to **demonstration**

Page 3, Change **ordinance** to **ordnance**

Page 56, Figure 1.58, Delete extra **cc** near Q1

Page 126, Section 2.11.3.6. Change

In this situation, if we suspect the error occurs when the pointer nears the end of the buffer, we could add a filter that saves in the array only when the pointer is above a certain value.

to

In this situation, if we suspect the error occurs when certain conditions are true, we could add a filter that saves in the array only when those conditions are met.

Page 180, Problem 3.1, Change **ldab #V** to **ldab #'V**

Page 195, Figure 4.8, Move “software writes new data” over on top of “asks device to output it”

Page 208, program 4.16 change

```plaintext
tpa        restore CCR to previous value
i    
```
to

```plaintext
tap        restore CCR to previous value
i    
```

Page 209, program 4.17 change

```plaintext
cpx PutPt Empty if initially the same
```
to

```plaintext
cpy PutPt Empty if initially the same
```

Page 209, program 4.17 change

```plaintext
tpa        restore CCR to previous value
i    
```
to

```plaintext
tap        restore CCR to previous value
i    
```

Page 211, program 4.20 change

```plaintext
tpa        restore CCR to previous value
i    
```
to

```plaintext
tap        restore CCR to previous value
i    
```

Page 212, program 4.21 change

```plaintext
tpa        restore CCR to previous value
i    
```
to

```plaintext
tap        restore CCR to previous value
i    
```

Page 214, program 4.24 change

```plaintext
tpa        restore CCR to previous value
i    
```
to

```plaintext
tap        restore CCR to previous value
i    
```

Page 215, program 4.25 change

```plaintext
tpa        restore CCR to previous value
i    
```
to

```plaintext
tap        restore CCR to previous value
i    
```

Page 215, program 4.25 change

```plaintext
incb
```
to

```plaintext
dec  Size one less element in FIFO
```
Page 258, Program 4.48, Delete these words from the comment "example 4.14.2"

Page 264, Figure 4.46, wrong figure. Should be

Page 279, change the sequence of Program 5.13 so it reads as follows

* To block a thread on semaphore S, execute SWI
  SWIhan ldx RunPt running process “to be blocked”
  sts SP,x save Stack Pointer in its TCB
* Unlink “to be blocked” thread from RunPt list
  ldy Next,x find previous thread
  sty RunPt next one to run
  look cpx Next,y search to find previous
  beq found
  ldy Next,y
  bra look
found ldd RunPt one after blocked
  std Next,y link previous to next to run
* Put “to be blocked” thread on block list
  ldy BlockPt
  sty Next,x link “to be blocked”
  stx BlockPt
* Launch next thread
  ldx RunPt
  lds SP,x set SP for this new thread
  ldd TCNT Next thread gets a full 10ms time slice
  addd #20000 interrupt after 10 ms
  std TOC5
  ldaa #$08 ($20 on the 6812)
  staa TFLG1 clear OC5F
  rti

Page 307, Program 6.10, 6811 C code, change ")" to "}"

First = TIC1; Count=0; Mode=1;
if(((TIC1&0x8000)==0)
  &!(TFLG2&0x80)) Count--;

Page 327, Program 6.24 6812 version, Change TFLG1|=0x08; to TFLG1=0x08;

Page 362, Section 7.3.1. change
  More details about common mode will be presented later in Chapters 11 and 12.
to
  More details about common mode will be presented later in Sections 11.2.3 and 11.2.6.

Page 362, Change 100Ω to ≈100Ω

Page 363, Change
  To transmit the computer enables the driver by making DE active, then sends the serial frame from the TxD output of the SCI port. If RE is also active during transmission, the transmitted frame is echoed into the serial receiver of the SCI RxD line. To receive a frame the computer simply accepts a serial frame on the RxD line in the usual manner.
to
  To transmit the computer enables its receiver (by making RE active) and
Normally, we make both DE and RE active on all devices. To transmit the computer sends the serial frame from the TxD output of the SCI port. The transmitted frame is echoed into the serial receiver of the SCI RxD line. To receive a frame the computer accepts a serial frame on the RxD line in the usual manner.

Page 380 unnumbered figure, switch PE to ILT (PE is bit 1, ILT is bit 2)
Page 382, Change SCSR to SCxSR1
Page 382, Change SCDR to SCxDRL
Page 382, Change SCxDR to SCxDRL (three places)
Page 383, Add to paragraph discussing PF

Cleared by reading SC1SR1 with PF set, then reading SCxDRL.

Page 384 third line from the top, Change Section 2.4.2 to Section 2.7.2
Page 389, Change Cleared by SPSR to Cleared by reading SPSR
Page 409, Program 7.22, change the 6805 and 6808 code from

```
data+SPDR;    // lsb of A/D
to

data+=SPDR;   // lsb of ADC
```

Page 435, Program 8.10, MC68HC11A8 version, Change

```
TFLG1=0.08; } // ack OC5F
to
TFLG1=0x08; } // ack OC5F
```

Page 435, Program 8.10, MC68HC812A4 version, Change

```
TC5=TC5+period;   // ack OC5F
```

Page 436, Figure 8.26, Delete 68HC705 PortA 68HC708 PortA 68HC11 PortC
Page 437, Program 8.11, MC68HC812A4 version, Change

Ritual: clr DDRJ ;PJ3-PJ0 inputs
        rts ;PJ7-PJ0 oc outputs

to

```
Ritual: clr DDRJ ;PJ3-PJ0 inputs
        movb #OF,PUPSJ
        movb #OF,PULEJ
        rts ;PJ7-PJ0 oc outputs
```

Page 439, Program 8.12, MC68HC812A4 version, Change

```
DDRJ =0x00; }  // PJ7-PJ4 are oc outputs
```

Page 446, Change "the resistor is calculated as (Figure 8.35)" to
"the resistor is calculated as (Figure 8.33)"

Page 455, Change NOR to EOR two places
Page 476 third line from the bottom, Change peripheral to peripherals
Page 485 Table 8.14, Change (/s*2) to (/s*)
Page 485 Table 8.14, Change (/s*3) to (/s*)
Page 485 Table 8.15, Change (/s**2) to (/s*)
Page 485 Table 8.15, Change (/s**3) to (/s*)
Page 506, Table 9.5, change

```
PF4  CSD 0xxxxxxxxxxxxxxx $0000  $7FFF  32K (CSDFH=0)
to
PF4  CSD 0xxxxxxxxxxxxxxx $0000  $7FFF  32K (CSDFH=1)
```

Page 521, Change SMOD and MDA bits in the HIPRO to SMODN, MODB, MODA bits in the MODE
Page 525, Change SMOD and MDA bits in the HIPRO to SMODN, MODB, MODA bits in the MODE
Page 551, Figure 9.64, Delay from rise of E to fall of DBE should be 37 rather than 49 ns
Page 569, Figure 9.82, wrong figure. Should be
Page 569, Change
"The write timing when controlled by C1 is shown on the left in Figure 9.82; the write timing when controlled by C2 is shown on the right in Figure 9.82."

to
"The write function occurs on either the fall of C1 or the rise of C2, whichever occurs first. Let the setup time be \( t_{su} \) and assume the hold time is zero."

Page 620, Figure 11.49. change 10k\( \Omega \)/500k\( \Omega \) to 10k\( \Omega \)/510k\( \Omega \)
Page 620, Figure 11.50. change 10k\( \Omega \)/500k\( \Omega \) to 10k\( \Omega \)/510k\( \Omega \)
Page 621, Figure 11.51. change \( R_1/R_2 \) to \( R_1/(R_1+R_2) \)
Page 709, Section 12.4.2
change
uncertainty of counting events is \( \Delta n \)
to
uncertainty of counting events is \( \sqrt{n} \)

Page 759, Program 13.19
change
dc.b 128,244,5,8 ; EPS
to
dc.b 128,224,5,8 ; EPS

Page 759, Program 13.20
change
a_tab: dc.b 244,255,16,0 ; DPL
to
a_tab: dc.b 224,255,16,0 ; DPL

Page 809, Program 15.2 (two places)
change
for(i=5;i>0;i++)
to
for(i=5;i>0;i--)

Page 818 Equation 51, change \(-13\) to \(+13\), yielding
\[
y_2(n) = x(n) + x(n-2) + \frac{-14x(n-1) + 13y_2(n-1) - 231y_2(n-2)}{256} \tag{51}
\]

Page 828, Figure 15.17, change \( k=16 \) to \( k=32 \)
Back cover, change 74505 to 74S05