

TEXT ERRATA

Printing 1² - Version 4.3 (Last updated 9/21/06)

General

The following references in the text to the color “blue” should be to the color “green.”(Added 9/1/04; page & line numbers added 2/8/05)

Location by Page/Line Numbers (B indicates lines counted from bottom of the page)

8/7	15/3B	15/6B	16/14	119/11	206/11	210/24	267/13	275/11	280/8	333/2B	370/10B	382/18
405/1B	431/9	442/5	442/7	443/3B	458/1	463/3B	529/13	532/2B	536/2B	548/1	548/10	549/9

Chapter 1

Chapter 2

p. 67, line 17 In the equation for H, replace “ACE + ACF” with “ABE + ABF” (Added 10/27/04)

p. 68, line 18 In the equation for H, replace “A” with “AF”(Added 10/27/04)

p. 86, Problem 2-34: Replace “2-32” with “2-33”

p. 86, Problem 2-35(a): Replace “2-33” with “2-34”

Chapter 3

p. 93, line 18: Replace “VDHL” with “VHDL” (Added 10/27/04)

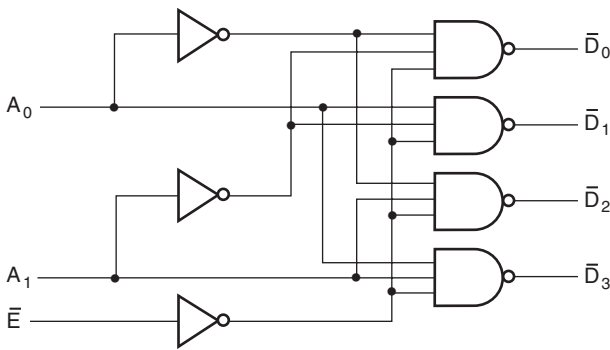
p.133, Problem 3-1: Change “F” in the second equation to “G”

p. 138, Problem 3-24: Replace equations with “ $F = \overline{W}$ ” and “ $G = \overline{W} \overline{Y} + WZ$ ”

Use the circuit in the figure at the top of the next page for 2-to-4 Decoder diagram/table. The two 2-to-4 Decoder symbols including the “bubbles” in Figure 3-34 represent this circuit.(Updated 9/21/06)

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²Many of the errors listed may have been corrected in subsequent printings.



(a) Logic diagram

\bar{E}	A_1	A_0	\bar{D}_0	\bar{D}_1	\bar{D}_2	\bar{D}_3
0	0	0	0	1	1	1
0	0	1	1	0	1	1
0	1	0	1	1	0	1
0	1	1	1	1	1	0
1	X	X	1	1	1	1

(b) Truth table

$$\bar{D}_0 = \bar{E} \bar{A}_1 \bar{A}_0$$

$$\bar{D}_1 = \bar{E} \bar{A}_1 A_0$$

$$\bar{D}_2 = \bar{E} A_1 \bar{A}_0$$

$$\bar{D}_3 = \bar{E} A_1 A_0$$

(c) Logic Equations

p. 139, Problem 3-25: Hint: Compare your equation results to those in the figure above to assist you in describing the function. **(Updated 9/21/06)**

Chapter 4

p. 165, Figure 4-21, Input $I_{1,0}$: Replace Z with \bar{Z} . Input $I_{2,0}$: Replace Z with \bar{Z} . (Added 10/27/04)

p. 193, Problem 4-7: Replace “four” with “two” and “48” with “32”

p. 193, Problem 4-11: Replace “BCD” with “decimal”

p. 193, Problem 4-14: Replace “decoder” with “multiplexer” (Added 1/16/04)

p. 193, Problem 4-15: Remove “-” between “eight” and “3”

p. 195, Problem 4-27: OR gates or 3-state outputs on ROMs are also needed. (Added 2/26/04)

Chapter 5

Chapter 6

p. 246, line 9 from bottom and line 8 from bottom: Change S to \bar{S} **(Added 9/21/06)**

p. 246, line 7 from bottom: Change R to \bar{R} **(Added 9/21/06)**

p. 247, Figure 6-6: Change S to \bar{S} and R to \bar{R} in both the figure and the table (four changes total) **(Added 9/21/06)**

p. 254, Figure 6-14(b): Remove center input from 3rd flip-flop; remove center input from 4th flip-flop and add “bubble” to bottom input (Added 2/26/04)

p. 272, Table 6-3 heading: Replace “6-21” with “6-24” (Added 9/1/04, page no. corrected 2/8/05)

p. 276, Equation for $B(t+1)$: Replace “C” with “X” (Added 9/1/04)

p. 288, Figure 6-32, line 23 (including blank lines): Delete “end if” (Added 2/26/04)

p. 300, Figure 6-37: Add \lceil to the left of the SR flip-flop outputs (to designate the flip-flop as master-slave).

p. 300, Figure 6-37: For flip-flop 1, the setup time, t_s , is equal to the length of time the clock is high, t_{ch} **(Added 9/21/06)**

p. 301, Problem 6-9: Add “*” after “6-9.” **(Added 9/21/06)**

- p. 302, Table 6-10: Change “Problem 6-9” to “Problems 6-9, 6-29 and 6-30”
Change “Input s” to “Inputs” (two places).
- p. 303, Problem 6-12, line 2: Replace “input Y” with “output Y” **(Added 9/21/06)**
- p. 304, Problem 6-19(b): Change last two bits of NRZI Message from “01” to “10”
- p. 306, Problem 6-25: Change “Table 6-5” to “state diagram in Figure 6-25(d)”
- p. 307, Problem 6-28: Change “6-25” to “6-23” and “Table 6-6” to “Figure 6-40”
Change “Z” to “Y”

Chapter 7

- p. 315, lines 12-13 from bottom: Delete “, in the same manner as for bytes in Chapter 1” (Added 2/26/04, clarified 3/4/04)
- p. 330, Table 7-7: In table heading, change 7-7 to 7-11. **(Added 9/21/06)**
- p. 336, Figure 7-14: Between each XOR gate and OR gate, add a 2-input AND gate with $\overline{\text{Load}}$ as the second input (Added 2/26/04). Replace the AND gate with $\overline{\text{Load}}$ and Count as inputs with a wire connected only to Count. **(Added 9/21/06)**
- p. 343, Table 7-12: Delete the 3rd column “0/0” and “0/1” in rows 0 and 1, respectively **(Added 9/21/06)**
- p. 348, line 2 from bottom: Replace “7-2” with “7-21(a)” (Added 10/27/04)
- p. 350, Figure 7-22: On the top register, replace “Register B” with “Register A” (Added 3/4/04)
- p. 358, Problem 7-14: Replace “Figure 7-13” with “Figure 7-14” (Added 10/27/04)
- p. 359, Problem 7-22, line 2: Replace “fourth” with “fifth” (Added 9/1/04)
- p. 359, Problem 7-22, lines 14-15: Replace “outputs that are” with “three outputs: the two select variables for the multiplexer and the load signal for register R4.” (Added 9/1/04)
- p. 360, Problem 7-27: Replace “7-2” with “7-22” (Added 2/26/04)
- p. 360, Problem 7-30: Replace “bus system” with “circuit” (Added 2/26/04)

Chapter 8

- p. 383, Figure 8-12. Interchange the wire connections to D0 and D1 on the bottom DEMUX with Z as its input **(Added 9/21/06)**
- p. 389, Figure 8-16, line 16: Add < before = A (Added 2/8/05)

Chapter 9

Chapter 10

- p. 438, Figure 10-7: Disconnect the S_0 input of block “One Stage of Logic Circuit” from C_i and attach it to a new input, C_{in} . (Added 2/26/04)
- p. 439, line 2: Replace “ C_i with C_{in} ” (Added 9/1/04)
- p. 439, Section 10-4, 7th line: Replace “Bus A” with “Bus B” (Added 2/26/04)
- p. 441, line 12: Replace “12-2” with “12-3” (Added 9/1/04)
- p. 447, Table 10-6 In the line “ $R7 \leftarrow R7 + 1$ ”, column MB, replace Register with — **(Added 9/21/06)**

p. 447, Table 10-7 In the line “ $R7 \leftarrow R7 + 1$ ”, column MB, replace 0 with \times **(Added 9/21/06)**

p. 454, Table 10-8, Status Bits column: The status bits N and Z are also valid for the following operations: Add Immediate (ADI), Branch on Zero (BRZ), and Branch on Negative (BRN). **(Added 9/21/06)**

p. 478, Problem 10-12: Delete parts **(b)** and **(c)** (changed 3/4/04)

p. 480, Problem 10-20: Delete “the opcode is 0010001”

Chapter 11

p. 489, line 19: Replace “addition” with “arithmetic evaluation” (Added 10/27/04)

p. 507, line 1, after “left.” Add: “In most architectures, the Logical Shift, Arithmetic Shift, and Rotate place the outgoing bit into the carry bit.” **(Added 9/21/06)**

p. 507, line 12. Add: “For shifts of greater than one bit position, a reasonable decision needs to be made on how to fill the positions vacated, and what if anything to load into the carry bit.” **(Added 9/21/06)**

p. 515, Table 11-9: Change “Branch if lower” to “Branch if below” and “BL” to “BB” Change “Branch if lower or equal” to “Branch if below or equal” and “BLE” to “BBE” **(Added 9/21/06)**

p. 522, Problem 11-1: Change “Section 11-1” to “11-2” For SUB, the operand order is: difference \leftarrow minuend $-$ subtrahend. For DIV, the operand order is: quotient \leftarrow dividend/divisor. **(Added 9/21/06)**

p. 522, Problem 11-4: Add “ $Y =$ ” to beginning of expression. **(Added 9/21/06)**

Chapter 12

p. 545, Table 12-2, 3rd line, 2nd column: Add code “01”

p. 565, Table 12-5, 4th line, last column: Change “ \overline{PS} ” to “PS”

p. 576, Problem 12-3: Replace “below Figure 12-5” with “on page 536”

p. 577, Problem 12-19: Replace “12-4” with “12-5”

Chapter 13

p. 584, line 23: Replace “ms” with “ μ s” (Added 10/27/04, page no. corrected 2/8/05)

Chapter 14

Index

p. 655: Delete “v” in “tpdv” (Added 2/26/04)

Please e-mail errors to: crkime@writphotec.com. Thanks to those of you providing error information. A special thanks to Professor De Boer of Dordt College for use of his Textbook Errata in identifying errors resulting in many of the 9/16/06 additions here and in the Problem Solutions.