

ERRORS IN *ELECTRONICS AND COMMUNICATIONS FOR SCIENTISTS AND  
ENGINEERS* BY MARTIN PLONUS  
FOUND BY GORDON J. MURPHY AND M. PLONUS

1. P. 2, line 13. "By a current of 1 A" should be "by a current of 1A in 1 second".
2. P. 3, line 6. Replace "look at " by "view".
3. P. 3, insert a dot between E and dl in Eq.(1.2).
4. P. 3, last equation. Omit the minus signs, meaningless, since there is no coordinate system.
5. P. 4, line 4. "Time interval of the count" should be "time interval between counts".
6. P. 9, following (1.15). replace "Most" by "Many".
7. P. 9, 10<sup>th</sup> line from the bottom. "0.001" should be "0.001 uF".
8. P. 10, Fig. 1.5a. The symbol for a battery should be the symbol for a capacitor.
9. P. 19, last two lines before Ex. 1.3. "Puts a too low of a resistance" should be "puts too low a resistance".
10. P. 20, line 4. "= 0.15Ω" should be "≅ 0.15Ω".
11. P. 25, line 3. "Equqation" should be "Equation".
12. P. 28, line 8. "0.5" should be "2". This change causes:
  - on line 8 and line 9, "0.1A" should be "1.6A"
  - on line 13, "0.5" should be "2", and "2.05W" should be "20.8W"
  - on line 14, "0.1" should be "1.6", and "0.5W" should be "12.8W"
13. P. 34, Eq. (1.45). On the left-hand side, the "R<sub>1</sub>" should be a subscript on the "i".
14. P. 36, first matrix equation. "R<sub>1</sub>+R<sub>2</sub>+R<sub>3</sub>" should be "R<sub>1</sub>+R<sub>2</sub>+R<sub>5</sub>".
15. P. 39, second line below Eq. (1.52). The "2" should be a superscript on "i", not a subscript.
16. P. 47, in Problem 42, the "R<sub>1</sub>" should be a subscript on the "i".
17. P. 49, line 2 and line 5. "Widely occurring" should be "occur widely".

18. P. 51, 8<sup>th</sup> line below the caption for the figure. “Which” should be “with”.
19. P. 52, Fig. 2.2. The subscript “p” on “V” is missing in Figs. 2.2b and c, and in the caption.
20. P. 54, third last line. Insert “if  $\omega L - 1/\omega C$  is positive and capacitive if  $\omega L - 1/\omega C$  is negative” after “inductive”.
21. P. 55, first line. “negative” should be “lagging”.
22. P. 55, third line. “becomes positive” should be “changes sign”.
23. P. 55, last line before Section 2.2.2. Change “clockwise” to “counter-clockwise”.
24. P. 56, second-last line. “v” should be “V”, and “i” should be “I” in two places.
25. P. 59, second line of footnote 7. Insert “to” after “referred”.
26. P. 59, high and low pass curves in Figs. 2.6b and 2.7b should be similar (mirror images), with Fig. 2.7b more appropriate.
27. P. 60, the last expression in Eq. (2.15) is missing a square root in the denominator.
28. P. 65, in the first figure of Fig.2.12c, vector  $I_R$  and vector  $I_C$  (also  $I_L$  and  $I_{L+C}$ ) must be at right angles.
29. P. 67, third equation. A division bar is missing, together with parentheses around the denominator. That is,  $C = L / (R^2 + \omega_0^2 L^2)$ .
30. P. 68, seventh line in Section 2.4.3. “O” should be “Q”.
31. P. 69, Eq. (2.29). “W/Ws” should be “Ws/W”.
32. P. 72, first line above Eq. (2.35), add to sentence “(note that for  $\theta$  positive/negative, i leads/lags v)”
33. P. 76, second line below Eq. (2.43), replace first  $Y_L$  with  $Y_L = 1/Z_L = 1/(R + jX) = |Y_L|e^{j\theta}$
34. P. 76, second line below Eq. (2.43), delete statement inside parenthesis and parenthesis.
35. P. 76, third line below Eq. (2.43). Delete “when”.

36. P. 77, third, fourth, and fifth equation. "51" should be "41".
37. P. 78, line 7. "Example 5" should be "Example 2.5".
38. P. 78, line 16. delete ")" after "3.82 A".
39. P. 79, 5<sup>th</sup> line in Section 2.6.1. "Windings" should be "winding".
40. P. 82, line 16. The statement after "In other words", should be " $V_1$  is the product of  $V_s$  and the ratio of  $Z'_L$  and  $R_s + Z'_L$ ".
41. P. 83, 9<sup>th</sup> line below Eq. (2.49). "0.43" should be "0.42".
42. P. 92, paragraph (c). Change the statement inside the parenthesis to read "the scales in Fig. 3.1b for forward and reverse current are different".
43. P. 98, line 5. The statement "The applicable formula for ripple voltage is therefore (3.6)." should read "The formula for ripple voltage (3.6) should be applicable".
44. P. 101, in Fig. 3.8b,  $v_0$  should be clamped at  $V$ , not at zero.
45. P. 102, In Fig. 3.9c, the battery should be reversed. Also the input waveform, shown in Figs. 3.9a and b, should also be shown in Fig. 3.9c.
46. P. 109, Problem 4 should read: "Repeat Problem 2 using...". Also, in Problem 9, change the given answer 41.7 mF to 166.7  $\mu$ F.
47. P. 115, 7<sup>th</sup> line from bottom. " $(1.5 \cdot 10^{16})^2$ " should be " $(1.5 \cdot 10^{16})^2$ ". Also, 1<sup>st</sup> line in the footnote. "Election" should be "electron".
48. P. 120, last line. "J/K" should be "J/deg K".
49. P. 133, 3<sup>rd</sup> line above Section 4.5.3. "Build" should be "built".
50. P. 135, last line in footnote. "Seperate" should be "separate".
51. P. 136, first line after Eq. (4.17). Change "given" to "assumed".
52. P. 138, line 21. "0.8.1" should be "0.8 times 1".

53. P. 144, 2nd line above Eq. (4.23). “out of phase” should be “in phase”.
54. P. 146, 3<sup>rd</sup> line in footnote. “are tied to” should be “are tied”.
55. P. 149, 4<sup>th</sup> paragraph, first line. “also provides” should be “can also provide”.
56. P. 168, 5<sup>th</sup> line above “AC DESIGN”.  $1.26/0.5 = 2.52$ .
57. P. 168, 3<sup>rd</sup> line above “AC DESIGN”. “21.44 should be 21.48”.
58. P. 175, footnote. “(5.26)” should be “(5.25)”.
59. P. 176, 7<sup>th</sup> line. “10 log” should be “20 log”.

60. P. 216, footnote. Delete the minus sign.
61. P. 227, 4<sup>th</sup> line. Change “is known” to “are known”.
62. P. 238, footnote. “Loose” should be “lose”.
63. P. 243, 3<sup>rd</sup> line below 7.3.4.”a” should be “an” before “OR”.
64. P. 250, Fig. 7.13a. The second OR gate should be an AND gate.
65. P. 254, footnote. “Types” should be “times”.
66. P. 254, footnote. Insert “one” before “hundred”.
67. P. 255, 2<sup>nd</sup> line above Fig. 7.19. Insert “on” before “which”.
68. P. 266, Fig. 7.28a. 5-volt connections to the T inputs are missing on two FFs.
69. P. 266, Fig. 7.29. The clearing circuit is shown as not connected to the input flip-flop. It should be, similar to the remaining two flip-flops.
70. P. 270, Fig. 7.32. The “select” line is broken.
71. P. 271, 1<sup>st</sup> line. “a mxn” should be “an mxn”.
72. P. 273, 12<sup>th</sup> line under 7.7. “a OR” should be “an OR”.
73. P. 305, 1<sup>st</sup> line below 8.5. “FORTRON” should be “FORTRAN”.
74. P. 305, last line. Delete the dash.
75. P. 308, footnote 18. “16x216 decoder” should be “16x2<sup>16</sup>”.
76. P. 314, 2<sup>nd</sup> line. Insert “the” before “processor”.
77. P. 319, 1<sup>st</sup> line after “Windows”. Change “Window 3.1” to “Windows 3.1”.
78. P. 335, Fig. 9-3c. “Switch rotating Nyquist rate” should be “Switch rotating at Nyquist rate”.
- Note: strictly speaking, the switch is shown incorrectly. The presence of the switch is meant to illustrate the conversion of a continuous signal to a discrete one.
79. P. 337, 13<sup>th</sup> line from bottom. Delete the space between “sin” and “c<sup>2</sup>”.

80. P. 339, 2<sup>nd</sup> last line. “a RC” should be “an RC”.
81. PP. 339, 340, Ex. 9.1. Fig. 9.7c, which shows no spectral content above 3 kHz, is correct for a 3 kHz filter with sharp cutoff characteristics. A low-pass 3 kHz RC filter, on the other hand, attenuates frequencies gradually implying that a gradual roll-off at 3 kHz should be shown in Fig. 9.7c.
82. P.342, 11<sup>th</sup> line from bottom. “the sampling rate is about 41 kHz” should be “assume the sampling rate is 40 KHz”.
83. P. 347, lines 8-17. Change “WGN” to “WMVP” (also in 5<sup>th</sup> and 6<sup>th</sup> lines above 9.5.3.)
84. P. 350, 6<sup>th</sup> line in Ex. 9.9. “2.5” is not correct; move the dot up to where it should be for a multiplication sign.
85. P. 354, 6<sup>th</sup> line in Solution.  $Z_0 = (10,000)^{1/2} = 100$ , not 31.6. (Also in 8<sup>th</sup> line in Solution.)
86. P. 358, 4<sup>th</sup> last line. “cross section” should be “width”.
87. P. 361, Eqs. (9.28) and (9.29). “ $v_s$ ” and “ $v_n$ ” should be “ $V_s$ ” and “ $V_n$ ”, respectively.
88. P. 361, 1<sup>st</sup> line after Eq. (9.28), 13<sup>th</sup> line from bottom, and last line: “ $v_s$ ” and “ $v_n$ ” should be “ $V_s$ ” and  $V_n$ ”, respectively.
89. P. 361, 1<sup>st</sup> line in Ex. 9.15. “a rms” should be “an rms”. (Also in the second line.)
90. P. 364, 5<sup>th</sup> line after 9.5.7. Insert “number” after “binary”.
- 91.P. 364, curve in Fig. 9.17 at ”011” is 3.5 volts. It should be 3.2 volts.
92. P. 367, 3<sup>rd</sup> line in footnote. Delete “a”.
93. P. 378, 3<sup>rd</sup> last line. Change “sources” to “signals”.