April 3, 2008 Errata for Phase-Lock Basics, 2nd Ed.

Spaces are not included in line counts below. Additions in green, subtractions in red.

p. 9, Eq. (1.8), remove extraneous material: $= \dfrac{d(\cos\Delta\varphi)}{b \to B \; d\Delta\varphi} = \quad \Rightarrow \quad = \dfrac{d(\cos\Delta\varphi)}{d\Delta\varphi} =$

p. 13, third line in Section 1.9, insert slash: $s = j\omega$ rad + σ/neper $\quad \Rightarrow \quad s = j\omega$ /rad + σ/neper

p. 16, Eq. (2.1), change subscript: $\omega_{\text{out}} = \omega_c + A\sin(\omega_m t + \theta_0) \quad \Rightarrow \quad \omega_{\text{out}} = \omega_c + A\sin(\omega_m t + \theta_{\text{out}})$

p. 17, line 1, change subscript: $\theta_0 \quad \Rightarrow \quad \theta_{\text{out}}$

p. 20, Eq. (2.20), change symbols: $\equiv \varphi_{\text{out}}(\omega_m) - \varphi_{\text{in}}(\omega_m) \quad \Rightarrow \quad \equiv \theta_{\text{out}}(\omega_m) - \theta_{\text{in}}(\omega_m)$

p. 32, third line is first full paragraph, change two symbols: "when A lags, but, when A leads" $\Rightarrow$ "when B lags, but, when B leads"

p. 50, below line 5 in Example 3.1(a): $C > 1.1$ µF $\Rightarrow C > 0.1$ µF

p. 68, Table 4.1: Footnote *b* should also be applied to $F(s)$ (row 2) in column (c).

p. 80, 2 lines above Section 5.3.5: "frequency singularity" $\Rightarrow$ "critical frequency"

p. 166, second to last sentence: These can be seen to be independent of α, which is not present in the denominator (characteristic equation) of the transfer functions. $\Rightarrow$ These can be seen to depend on α, unlike the linear case that is discussed in Section 6.10.2.

p. 167, Eq. (8.V.1): $\dfrac{\omega_z}{\omega_z} \Rightarrow \dfrac{\omega_z}{\omega_n}$

p. 173:

Eq. (9.2), move misplaced absolute-value sign:

$|v_{bC}| \approx 0.5\,|G(\Delta\omega)|\,K'_{pd}\cos[\angle G(\Delta\omega)] \le 0.5 G(\Delta\omega)|\,K'_{pd}$

$\Rightarrow |v_{bC}| \approx 0.5\,|G(\Delta\omega)\,K'_{pd}\cos[\angle G(\Delta\omega)]| \le 0.5\,|G(\Delta\omega)|\,K'_{pd}$

4 lines above Section 9.1.2, add close bracket: (9.2).[4] $\Rightarrow$(9.2).[4]]

p. 416, third line in Section 21.2, and p. 426, 7th and 8th references, spelling change: Rhode $\Rightarrow$ Rohde

Problem 6.1, Fig. 3.23(c) $\Rightarrow$ Figs. 3.23(c) and 3.25

Problem 8.1: the value of the capacitor in the filter is 1 µF.

Answers to Problems:

8.3 (a) 4.12×10^6 sec^{-1}; (b) 2.91×10^6 sec^{-1} $\Rightarrow$ True K: (a) 4.78×10^6; (b) 3.38×10^6. Design values (not accounting for IF filter loss) are 3 dB higher.