# Typo for 3TR4 Chap4

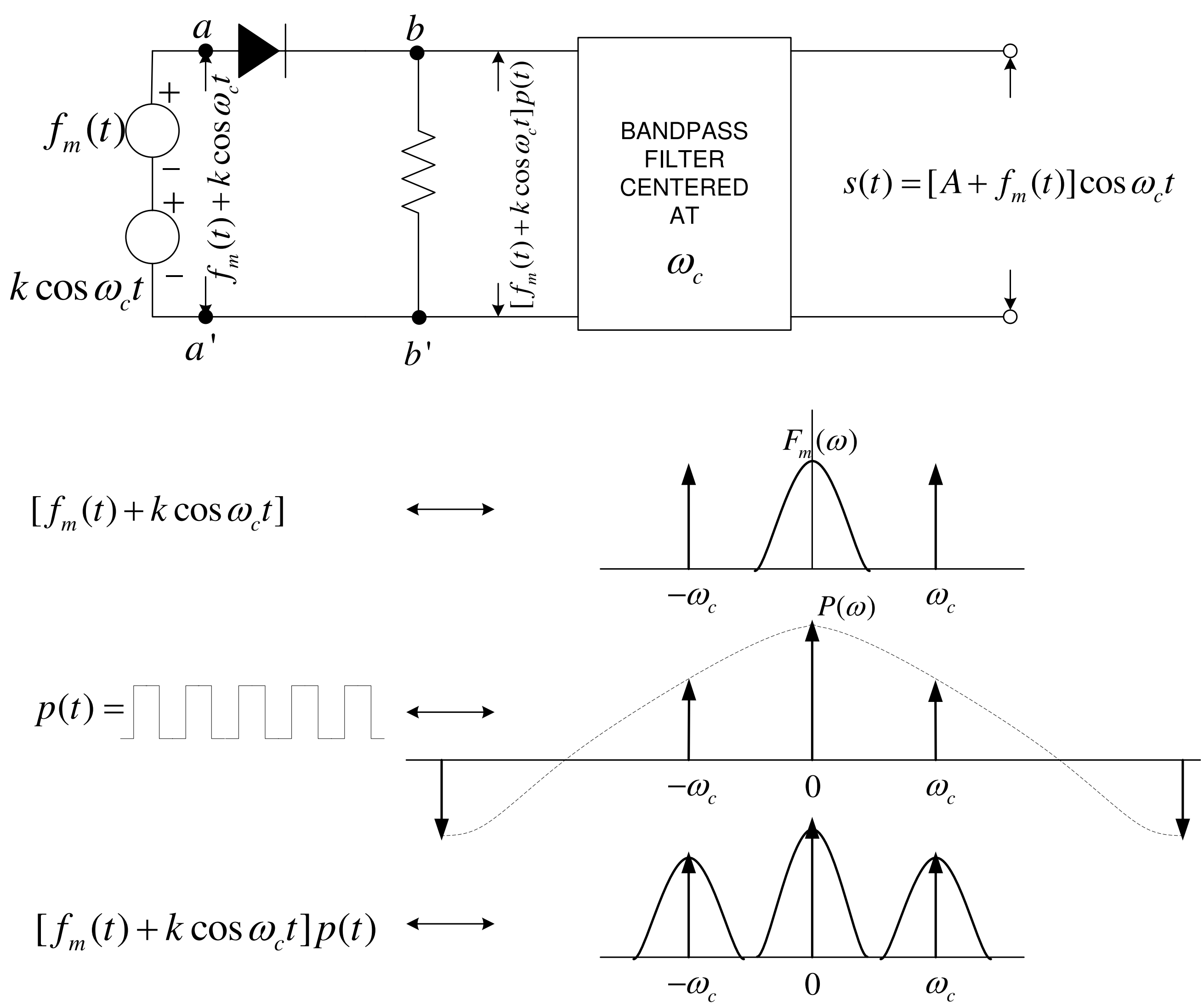
a) p66, line 4:

Suppose that the baseband signal which is to be used to modulate the carrier is given by the time function $f_m(t)$.

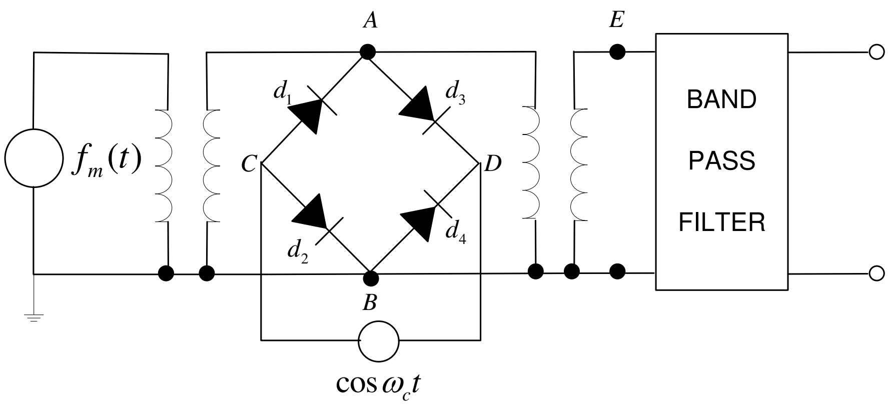
b) p70, line below the last equation:

The term $f_m(t)\cos(2\omega_c+\Delta\omega)t$ represents the spectrum of $f_m(t)$ centered at $\pm(2\omega_c+\Delta\omega)$ and can be filtered out by a low-pass filter.

c) p72, Figure 4.7



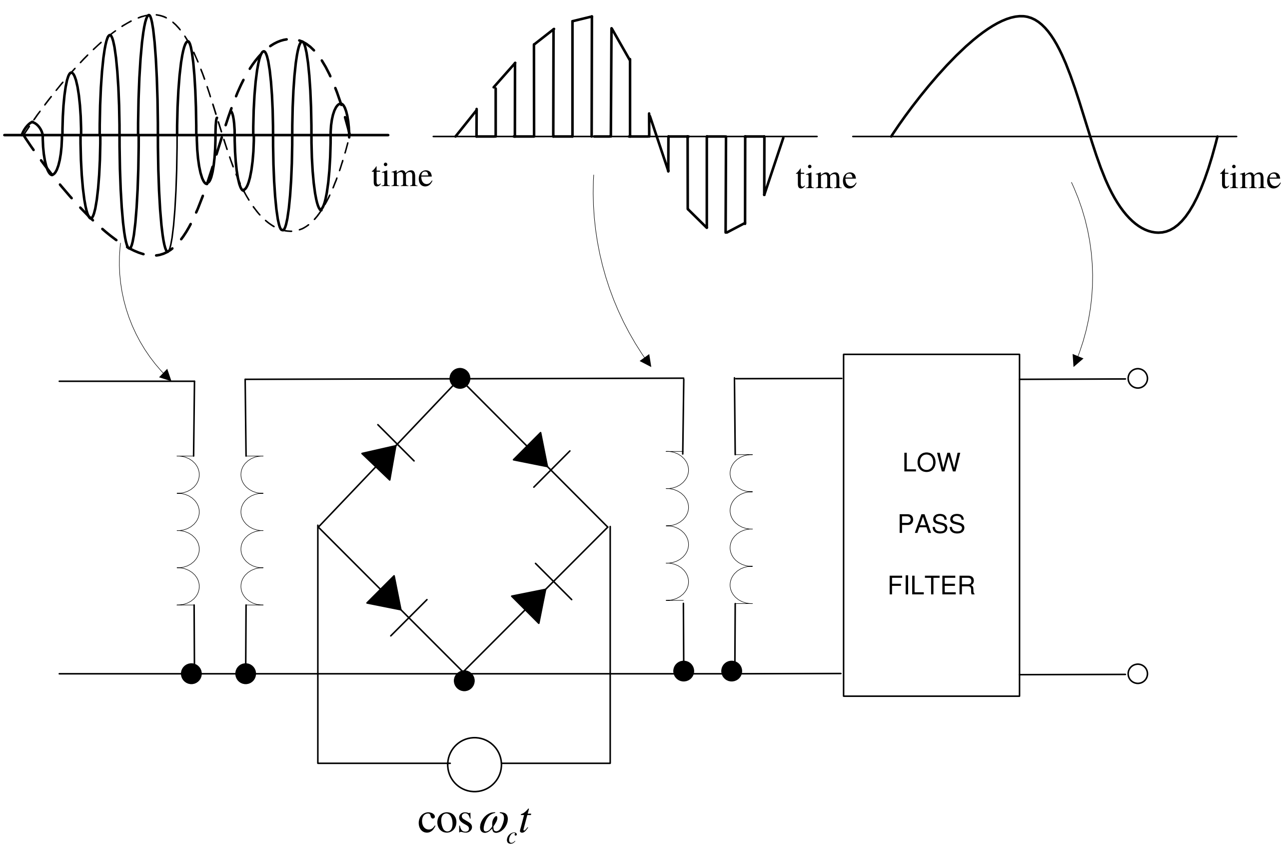

d) p79, Figure 4.13:




e) p80, Line 2:

for the time being, the balanced modulator is the only one we study.

f) p80, Figure 4.15:




g) p96, 2nd paragraph:

Let the received signal be $f(t)\cos\omega t$ and the local carrier be $\cos[(\omega_c + \Delta\omega)t + \phi]$.

h) p96, Eq. 4.36:

$$s_d(t) = f(t)\cos\omega t \cos[(\omega_c + \Delta\omega)t + \phi]$$
$$= \frac{1}{2} f(t)\left\{\cos[\Delta\omega t + \phi] + \cos[(2\omega_c + \Delta\omega)t + \phi]\right\} \quad (1)$$

i) p97, Eq. of $s_d(t)$:

$$s_d(t) = [f(t)\cos\omega_c t + \widehat{f}(t)\sin\omega_c t]\cos[(\omega_c + \Delta\omega)t + \phi]$$
$$= \frac{1}{2} f(t)\{\cos[\Delta\omega t + \phi] + \cos[(2\omega_c + \Delta\omega)t + \phi]\} - \frac{1}{2}\widehat{f}(t)\{\sin[\Delta\omega t + \phi] - \sin[(2\omega_c + \Delta\omega)t + \phi]\}$$

j) p101, Problem 1.

$$v(t) = A_c(1 + m f_m(t))\cos\omega_c t$$

k) p101, Problem 3, Figure 4.28