

Concept Question 6-17: Explain how multiple signals can be combined together into a single signal, which, after transmission, can be “un-combined” into the original individual signals? This is possible only if the multiple signals are each bandlimited. Modulating each signal by a different frequency separates the spectra of the signals; the modulated spectra do not overlap since they are all bandlimited. See Example 6-15 for a simple example, and Fig. 6-65 for a more general case.

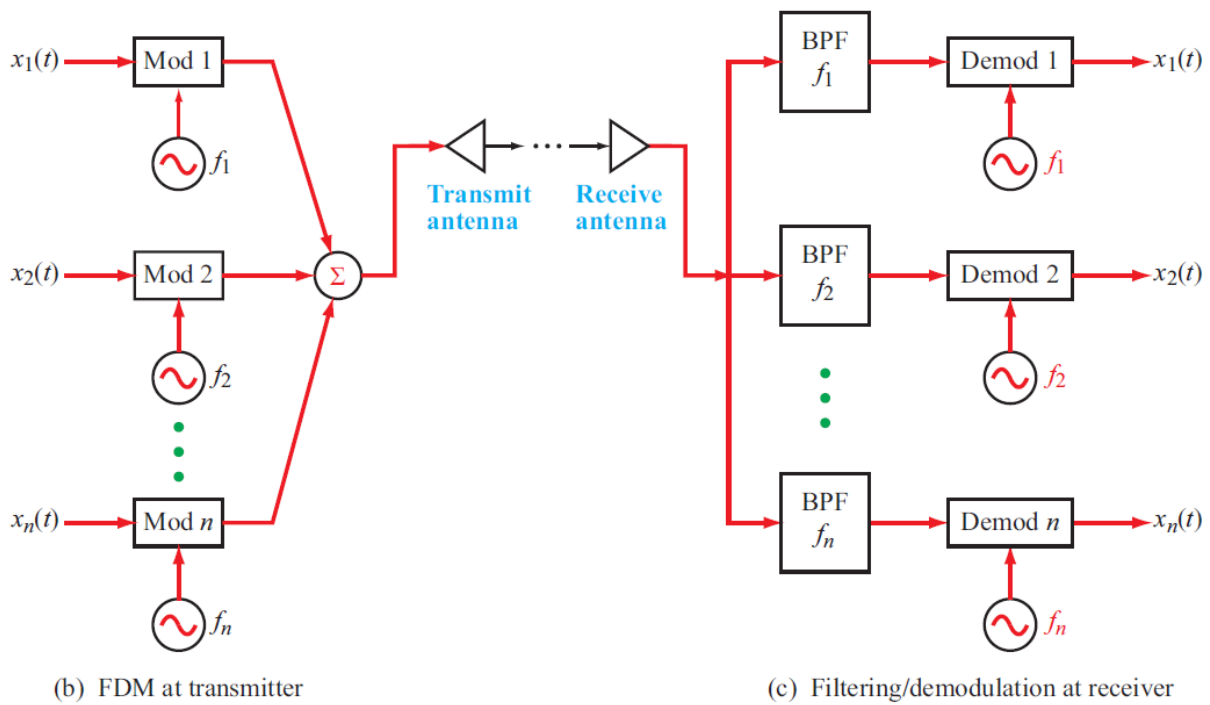
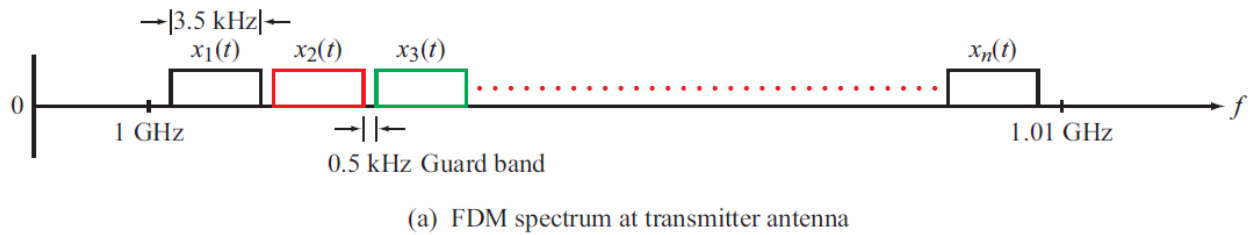


Figure 6-65: Frequency division multiplexing.