## 

## **Example 9-18: Integrator is Unstable**

Now consider the integrator system. Its impulse response is h(t) = u(t), so applying (9.66) leads to

$$\int_{-\infty}^{\infty} |h(\tau)| d\tau = \int_{-\infty}^{\infty} d\tau \to \infty$$

Therefore the integrator is an unstable system.

McClellan, Schafer and Yoder, Signal Processing First, ISBN 0-13-065562-7.

Prentice Hall, Upper Saddle River, NJ 07458. © 2003 Pearson Education, Inc.

