

System Concepts

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Relaxed: (at equilibrium) (No I.C.)

A system is relaxed if the output is excited solely by input applied thereafter.

I/O:

$$y = H u$$

Linear "Relaxed" must satisfy

$$H(\alpha u_1 + u_2) = \alpha H u_1 + H u_2$$

A system is relaxed iff $\forall t \in [t_0, \infty)$ is solely and uniquely excited by $u[t_0, \infty) \Leftrightarrow y(t) = H u_{[t_0, t)} = 0$