

Concept Question 8-4: What specific property of the reverberation problem permits its solution using an inverse system?

Its transfer function $\mathbf{H}(\mathbf{z})$ is minimum phase, meaning that all of its poles and zeros lie inside the unit circle.

Hence, the transfer function $\mathbf{G}(\mathbf{z}) = 1/\mathbf{H}(\mathbf{z})$ of the inverse system is also minimum phase, so it is stable.