A system is tested for jamming resistance by supplying a simulated jamming signal. The simulated jamming signal is produced by calculating a propagation path loss in the terrain between the system under test and a location where the jammer would be, predicting a jamming level in accordance with the propagation path loss, and generating a simulated jamming signal. The simulated jamming signal is supplied to the antenna port of the system under test. The testing does not require the use of either a real jammer or a pilot signal generator at the location where the jammer would be.