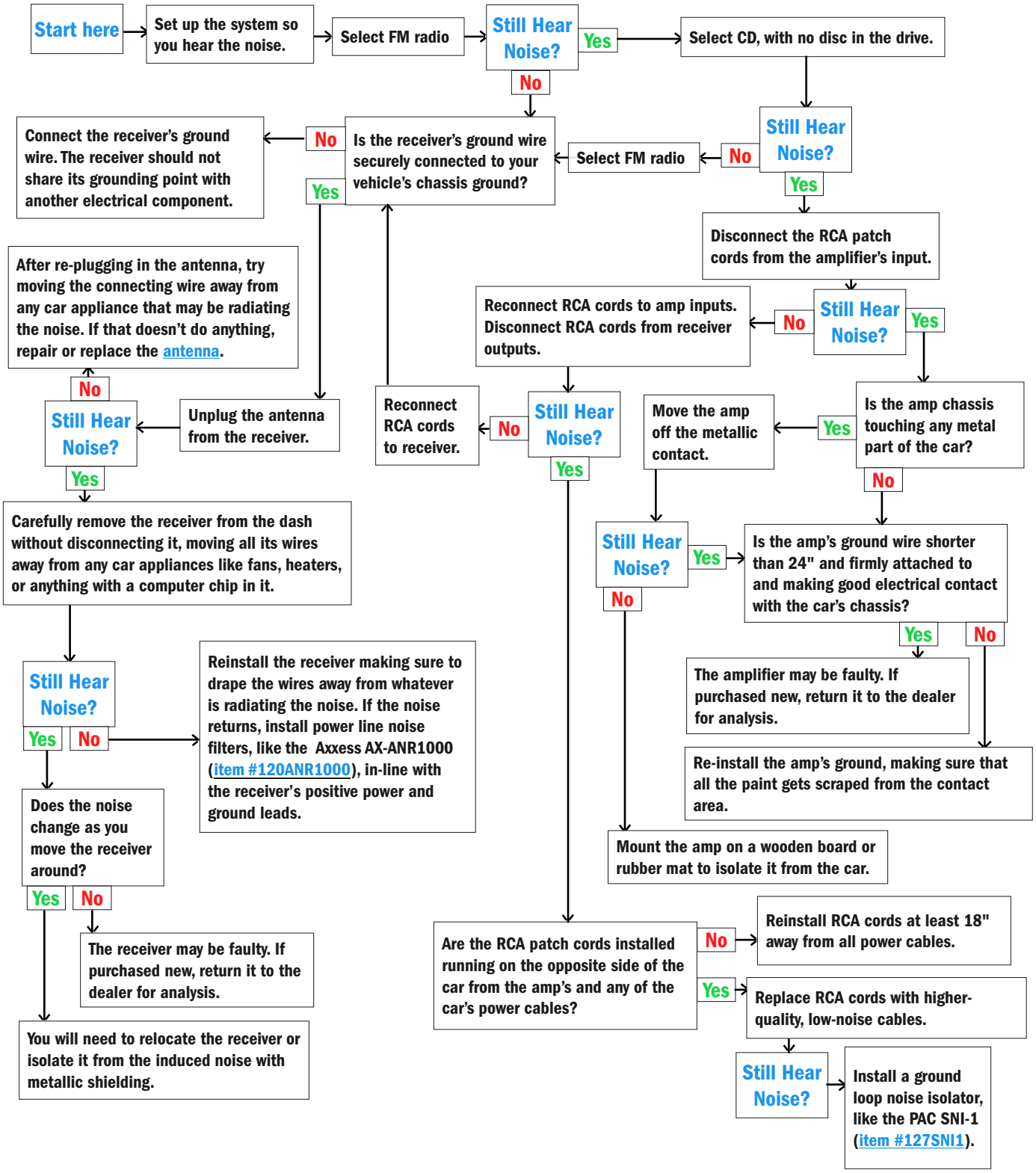How to Diagnose and Eliminate Noise