What is claimed is:

1. A mass spectrometer comprising:

a first radio frequency component; and

a second radio frequency component adjacent to said first radio frequency component, said second radio frequency component having an electrode extension that overlaps with a portion of said first radio frequency component to reduce external perturbations on said first radio frequency component.

2. The mass spectrometer of claim 1, wherein said first radio frequency component is a quadrupole.

3. The mass spectrometer of claim 2, wherein said first radio frequency component is a mass filter.

4. The mass spectrometer of claim 2, wherein said second radio frequency component is a quadrupole.

5. The mass spectrometer of claim 4, wherein said second radio frequency component is an ion guide.

6. The mass spectrometer of claim 5, wherein said ion guide has a curvature.

7. The mass spectrometer of claim 1, wherein said electrode extension is affixed to said second radio frequency component.

8. The mass spectrometer of claim 1, wherein the first radio frequency component is the radio frequency component of any one of claims 1 to 7.

9. A method for reducing cross talk between adjacent radio frequency components in a mass spectrometer, said method comprising:

positioning a first radio frequency component having one or more electrode extensions proximate to a second radio frequency component such that coupling between said first radio frequency component and said second radio frequency component creates perturbations on said second frequency component corresponding to signals applied to said first radio frequency component; and

configuring said one or more electrode extensions of said first radio frequency component to overlap at least a portion of said second radio frequency component such that said perturbations on said second radio frequency component are reduced.

10. The method of claim 9, wherein said first radio frequency component is a quadrupole.

11. The method of claim 10, wherein said first radio frequency component is an ion guide.

12. The method of claim 10, wherein said first radio frequency component is a mass filter.

13. The method of claim 10, wherein said second radio frequency component is a hexapole.

14. The method of claim 9, wherein the first radio frequency component is a radio frequency component according to any one of claims 1 to 8 or the mass spectrometer is a mass spectrometer according to any one of claims 1 to 8.