CLAIMS

1. A health-monitor patch (400) configured to be adhered to the skin of a subject, the health-monitor patch (400) comprising:

a cardiac sensor (354) comprising a first monitor electrode (260a), which is configured to receive a first signal from a first location on the skin of the subject, and a second monitor electrode (260b), which is configured to receive a second signal from a second location on the skin of the subject;

a third, noise electrode (270) configured to receive a third signal from the skin of the subject at a third location, separate from the first and second locations;

an electronic circuit comprising a processor (310) configured to process signals from the first and second monitor electrodes (260a, 260b);

a battery (305) configured to provide power to the processor (310);

a first conductive path between the first monitor electrode (260a) and the electronic circuit;

a second conductive path between the second monitor electrode (260b) and the electronic circuit; and

a conductive shield (455) that extends over at least a portion of the first and second conductive paths, wherein the conductive shield (455) is electrically connected to each of the third, noise electrode (270) and a terminal of the battery (305).

2. The health-monitor patch (400) of claim 1, wherein the third electrode (270) is configured to receive the third signal from the skin of the subject at a third location between the first and second locations.

3. The health-monitor patch (400) of claim 1 or claim 2, wherein the conductive shield extends over the electronic assembly.

4. The health-monitor patch (400) of any preceding claim, wherein the conductive shield and first and second conductive paths are arranged such that noise detected by the third electrode (270) couples from the conductive shield (455) to the first and second conductive paths.

5. The health-monitor patch (400) of any preceding claim, wherein the processor (310) is disposed on a printed circuit board (PCB) assembly (405) and the conductive shield comprises an electrostatic discharge (ESD) shield (455) that extends over the PCB assembly (405).

6. The health-monitor patch (400) of claim 5, wherein the ESD shield (455) is insulated from and located less than about two millimeters from the first and second conductive paths (460a, 460b).

7. The health-monitor patch (400) of claim 5 or 6, wherein the health-monitor patch (400) is formed as a flexible strip (105) and the ESD shield (455) comprises a conductive polymer film.

8. The health-monitor patch (400) of any preceding claim, further comprising a silicone casing (605) surrounding the processor (310), wherein the first and second monitor electrodes (260a, 260b) and the third electrode (270) comprise conductive silicone regions at a surface of the silicone casing (605) that are infused with a conductive material.

9. A method for detecting a cardiac waveform with a wearable health-monitor patch (400), the method comprising:

receiving a first electrical signal at a first monitor electrode (260a) of the health-monitor patch (400), the first monitor electrode (260a) contacting the skin of a subject at a first location;

receiving a second electrical signal at a second monitor electrode (260b) of the health-monitor patch (400), the second monitor electrode (260b) contacting the skin of the subject at a second location that is separated from the first location by a distance;

conducting the first electrical signal from the first monitor electrode (260a) over a first conductive path to a first signal input of an electronic circuit mounted within the health-monitor patch (400), the electronic circuit comprising a battery (305) and a processor (310) configured to process signals from the first and second monitor electrodes (260a, 260b);

conducting the second electrical signal from the second monitor electrode (260b) over a second conductive path to a second signal input of an electronic circuit mounted within the health-monitor patch (400);

receiving a third electrical signal from a third, noise electrode (270) of the health-monitor patch (400), the third electrode (270) contacting the skin of the subject at a third location that is separate from the first and second locations;

conducting the electrical signal from the third, noise electrode (270) to a conductive shield (455) which is electrically connected to each of the third, noise electrode and a terminal of the battery (305), wherein the conductive shield (455) extends over at least portions of the first and second conductive paths.

10. The method of claim 9, wherein the conductive shield extends over the electronic circuit.

11. The method of claim 9 or 10, wherein the third electrode (270) is contacts the skin of the subject at a location between the first and second monitor electrodes (260a, 260b).

12. The method of claim 9 or claim 10, further comprising coupling the third electrical signal from the conductive shield to the first and second conductive paths.

13. The method of any one of claims 9 to 12, wherein the processor (310) is disposed on a printed circuit board (PCB) assembly (405) and the conductive shield comprises an electrostatic (ESD) shield (455) that extends over the PCB assembly (405).

14. The method of claim 13, wherein the ESD shield (455) is less than two millimeters from the portions of the first and second conductive paths.

15. The method of clam 13 or 14, wherein the wearable health-monitor patch (400) is formed as a flexible strip (105) and the ESD shield (455) comprises a conductive polymer film.