What is Claimed:

1. An apparatus comprising:

a plurality of stretchable leads, each of the plurality of stretchable leads connected to an associated electrode which is to receive electrical signals generated in response to a subject's heart and to pass the received electrical signals from the associated electrode along a respective one of plurality of stretchable leads; and

a patch including a stretchable substrate integrated with the plurality of stretchable leads and including a circuitry area for circuitry to reside for collecting the electrical signals passed along each of the plurality of stretchable leads, wherein the associated electrode is to be on a subject side of the patch and is stretchable.

2. The apparatus of claim 1, further including the circuitry, and wherein the circuitry is to be secured at the circuitry area of the patch and to be coupled the plurality of stretchable leads.

3. The apparatus of claim 1, wherein the stretchable substrate has an at least one aperture formed therein and further has a conductor overlapping said at least one aperture, wherein the conductor overlapping said at least one aperture is to pass the received electrical signals from the plurality of stretchable leads along a path leading to the circuitry area.

4. The apparatus of claim 1, further including the circuitry secured at the circuitry area, and wherein the circuitry is to amplify the electrical signals.

5. The apparatus of claim 1, further including the circuitry secured at the circuitry area, and wherein the circuitry includes a controller having configurable or programmable logic circuitry and further includes: a plurality of multi-channel amplifiers, each of which is to selectively amplify one of the electrical signals in response to selectivity control provided by the controller, and/or each of the amplifiers having a pair of inputs to each being used as an ECG lead.

6. The apparatus of claim 1, further including a temperature sensor to sense a temperature of the circuitry secured at the circuitry area.

7. The apparatus of claim 1, further including: adhesive material for securing the patch to the subject; and wherein the circuitry includes a temperature sensor to sense a temperature of the subject while the patch is secured to the subject.

8. The apparatus of claim 1, wherein the plurality of electrodes includes 4-9 individual electrodes for placement against the subject via the patch, and wherein the patch is to occupy less than seven square inches (e.g., form factor of 1.5” by 3.0”, or 2.0” by 3.5”) of skin area of the subject while worn on the subject.

9. The apparatus of claim 1, wherein the circuitry is to condition and amplify the electrical signals for an ECG.

10. The apparatus of claim 1, wherein the circuitry is to condition and amplify the electrical signals to sense one or more of: a shift in electrical axis, broad QRS complexes, and a cardiac arrhythmia.

11. The apparatus of claim 1, wherein the patch includes a first material layer having the stretchable substrate, a second material layer on one side of the first material layer and having the plurality of stretchable leads, and at least one aperture formed through the first material layer with a conductor overlapping said at least one aperture, wherein an interconnect is to be located on another opposing side of the first material layer and to be secured to the circuitry at the circuitry area.

12. The apparatus of claim 11, wherein said at least one aperture is to act as a dielectric and a pathway for the conductor to carry the electrical signals from the one side to the other side of the first material layer.

13. The apparatus of claim 11, wherein the substrate is formed via drop-cast as a solid film, the plurality of electrodes and the plurality of stretchable leads are screen-printed conductive ink, and the circuitry includes screen printed conductive ink as traces for the circuitry on the other opposing side of the first material layer.

14. The apparatus of claim 1, further including:

the circuitry, and wherein the circuitry is to be secured at the circuitry area of the patch and to be coupled the plurality of stretchable leads; and

a data collection and signal processing circuit, including a receiver circuit to receive conditioned signals derived from the electrical signals and including a memory circuit for storing the conditioned signals.

15. The apparatus of claim 14, wherein the data collection and signal processing circuit includes or is part of computer circuit implemented with a user interface and configured to provide information associated with an ECG.

16. The apparatus of claim 1, further including the circuitry at the circuitry area, the circuitry including a controller to selectively process or condition the electrical signals relative to each of the electrodes, and further including a logic circuit remote from the patch.

17. The apparatus of claim 11, wherein the plurality of stretchable leads are formed of screen-printed conductive ink, and the circuitry includes screen printed conductive ink as traces for the circuitry on the other opposing side of the first material layer.

18. The apparatus of claim 1, where conductive adhesives are attached to the electrodes, while insulating adhesives are attached to areas orthogonal to the electrodes on the substrate.

19. A method comprising:

receiving electrical signals generated in response to a subject’s heart by using electrodes respectively associated with a plurality of stretchable leads as part of a patch having a stretchable substrate, and wherein the received electrical signals are passed from an associated one of the electrodes along a respective one of plurality of stretchable leads, wherein the associated one of the electrodes faces a subject side of the patch and is stretchable, and wherein the patch includes a stretchable substrate integrated with the plurality of stretchable leads and including a circuitry area for circuitry to reside; and

using the circuitry to collect the electrical signals passed along each of the plurality of stretchable leads.

20. The method of claim 19, further including using the circuitry to amplify different ones of the electrical signals in response to a configurable and/or programmable user setting.