Claims

1. A wireless stethoscope comprising at least one wireless sensor for monitoring at least one bodily sound and a receiver unit, wherein said wireless sensor comprises:

at least one microphone that detects bodily sounds;

a preamplifier that amplifies bodily sounds within a specific wavelength range, wherein the specific wavelength range corresponds to the wavelengths of sounds typical of pulmonary, cardiac or digestive sounds;

a filter circuit that removes or reduces bodily noises that are outside a specific wavelength range, wherein the filter is interfaced with a power amplifier that amplifies bodily sounds that are within the specific wavelength range;

an analog to digital converter interfaced to a microcontroller that digitizes bodily sounds, and a transmitter that transmits said digitized bodily sounds wirelessly to said receiver unit,

wherein said receiver unit receives and processes said sound signals and transmits said sound signals to a separate user-end listening and displaying device.

2. The wireless stethoscope of Claim 1, wherein said wireless sensor is enclosed in or attaches to a disposable pad.

3. The wireless stethoscope of Claim 1, wherein said wireless stethoscope comprises more than one wireless sensor programmed to said receiver unit.

4. The wireless stethoscope of Claim 1, wherein said wireless sensor comprises a rechargeable battery.

5. The wireless stethoscope of Claim 1, wherein said bodily sound is selected from the group consisting of a pulmonary sound, a cardiac sound, and a digestive sound.

6. The wireless stethoscope of Claim 1, wherein said user-end listening and displaying device is a separate electronic device selected from the group consisting of a cell phone, smart phone, PDA and tablet computer.

7. The wireless stethoscope of Claim 6, wherein said electronic device comprises an application for monitoring said at least one bodily sound.

8. The wireless stethoscope of Claim 1, wherein said specific wavelength range corresponds to the wavelength of sounds typical of pulmonary sounds.

9. The wireless stethoscope of Claim 1, wherein said specific wavelength range corresponds to the wavelength of sounds typical of cardiac sounds.

10. The wireless stethoscope of Claim 1, wherein said filter circuit further removes or reduces background noises selected from the group consisting of ambient noises, voices and metallic sounds.

11. The wireless stethoscope of Claim 1, wherein said wireless transmission by said transmitter is selected from the group consisting of radio frequency communication signals, infrared communication signals, short-wavelength radio transmissions and IEEE 802.15.1 signals.

12. A wireless stethoscope system, comprising:

at least one wireless sensor for monitoring at least one bodily sound;

a receiver unit; and

a central transmitting unit,

wherein said wireless sensor comprises:

at least one microphone that detects bodily sounds;

a preamplifier that amplifies bodily sounds within a specific wavelength range, wherein the specific wavelength range corresponds to the wavelengths of sounds typical of pulmonary, cardiac or digestive sounds;

a filter circuit that removes or reduces bodily noises that are outside a specific wavelength range, wherein the filter is interfaced with a power amplifier that amplifies bodily sounds that are within the specific wavelength range;

an analog to digital converter interfaced to a microcontroller that digitizes bodily sounds; and

a transmitter that transmits said digitized bodily sounds wirelessly to said receiver unit, and

wherein said receiver unit is interfaced with said central transmitting unit and further transmits said at least one bodily sound to said central transmitting unit.

13. The wireless stethoscope system of Claim 12, wherein the interface between said receiver unit and said central transmitting unit is wired or wireless.

14. The wireless stethoscope system of Claim 12, wherein said central transmitting unit is interfaced with more than one receiver unit.

15. The wireless stethoscope system of Claim 12, wherein said central transmitting unit is further interfaced with at least one storage device.

16. The wireless stethoscope system of Claim 15, wherein said at least one bodily sound is recorded on said at least one storage device.

17. The wireless stethoscope system of Claim 12, wherein said central transmitting unit is further interfaced with at least one listening and displaying device.

18. The wireless stethoscope system of Claim 17, wherein said at least one listening and displaying device is an electronic device selected from the group consisting of a cell phone, smart phone, PDA, tablet computer and combinations thereof.

19. The wireless stethoscope system of Claim 17, wherein said central transmitting unit or said at least one listening and displaying device comprises an application that allows a practitioner to monitor at least one bodily sound from more than one patient.

20. The wireless stethoscope system of Claim 19, wherein said application analyzes said at least one bodily sound and provides or suggests a preliminary diagnosis based upon said at least one bodily sound.

21. A method for monitoring at least one bodily sound of a patient, comprising:

contacting a wireless sensor enclosed in a disposable pad with the body of the patient, wherein the wireless sensor detects and wirelessly transmits a bodily sound;

receiving said bodily sound with a receiver unit in the vicinity of said patient,

wherein said receiver unit is an electronic device selected from the group consisting of cell phones, smart phones, PDAs and tablet computers;

wherein said wireless sensor comprises:

at least one microphone that detects bodily sounds;

a preamplifier that amplifies bodily sounds within a specific wavelength range, wherein the specific wavelength range corresponds to the wavelengths of sounds typical of pulmonary, cardiac or digestive sounds;

a filter circuit that removes or reduces bodily noises that are outside a specific wavelength range, wherein the filter is interfaced with a power amplifier that amplifies bodily sounds that are within the specific wavelength range;

an analog to digital converter interfaced to a microcontroller that digitizes bodily sounds; and

a transmitter that transmits said digitized bodily sounds wirelessly to said receiver unit.

22. A method for monitoring at least one bodily sound of a patient, comprising:

contacting a wireless sensor with the body of said patient, wherein said wireless sensor detects and wirelessly transmits a bodily sound;

receiving said bodily sounds with a receiver unit in the vicinity of said patient; wherein said receiver unit transmits said bodily sound to a listening and displaying device, wherein said listening and displaying device selected from the group consisting of cell phones, smart phones, PDAs and tablet computers;

wherein said wireless sensor comprises:

at least one microphone that detects bodily sounds;

a preamplifier that amplifies bodily sounds within a specific wavelength range, wherein the specific wavelength range corresponds to the wavelengths of sounds typical of pulmonary, cardiac or digestive sounds;

a filter circuit that removes or reduces bodily noises that are outside a specific wavelength range, wherein the filter is interfaced with a power amplifier that amplifies bodily sounds that are within said specific wavelength range;

an analog to digital converter interfaced to a microcontroller that digitizes bodily sounds, and

a transmitter that transmits said digitized bodily sounds wirelessly to said receiver unit.

23. The method of Claim 22, wherein said receiver unit transmits said bodily sound to an additional listening and displaying device.

24. The method of Claim 23, wherein said additional listening and displaying device is selected from the group consisting of cell phones, smart phones, PDAs and tablet computers.

25. The method of Claim 22, wherein said wireless sensor amplifies detected bodily sound and filters amplified sound to reduce background noise.

26. The method of Claim 22, wherein said receiver unit filters received bodily sound to reduce back ground noise prior to transmission.