is reached, the counter is reset by the reset circuit; still incremented by the analog sound microcontroller, the counter resumes consultation of the sound memory unit from the beginning and starts a new loop, and this process continues. Immediately the user presses the start pushbutton **302** the motor speed is slaved to the sound loop, as already explained, and if appropriate the sounds transmitted by the radio frequency transmitter are slaved to the areas auscultated; as already mentioned, means are provided for managing any conflicts that may arise in this respect: if no sensor indicates auscultation the conflict management table, via the stethoscope presence selector, switches the silence generator to the analog sound microcontroller and no sound is heard in the stethoscope; on the other hand, if one or more areas are auscultated it acts to ensure that only one area is activated, associates this area through the area selector with the data of the data group associated with the stored pulmonary condition relative to this area and (by means of the stethoscope presence selector and the area selector) routes this data to the analog sound microcontroller. The analog sound microcontroller receives two signals coded on four bits via the data bus; it uses an internal algorithm to transpose each of these two signals onto ten bits and then converts the digital signal coded on ten bits into a "staircase" analog signal; the low-pass filter smooths this signal and cuts off frequencies above half the sampling frequency; the resulting analog sound data signal is applied to the transmitter and detecting in the stethoscope.

Note that the selection of a pulmonary condition is associated with the reading of five memory locations in a loop and the determination of the length of the loop and the speed of the motor, but that it is only operation of the start pushbutton which initiates slaving of the sounds of the areas auscultated on the manikin and slaving of the motor speed (determined by a motor timebase) to the timing of the "sound loops" (sound timebase).

Of course, the invention is not limited to the embodiment described above and shown in the drawings, which may be varied without departing from the scope of the invention.

There is claimed:

1. Apparatus for simulating pathological and other respiratory conditions comprising a manikin reproducing the external appearance of approximately the upper half of the body of a patient, a stethoscope simulator having at least one earpiece and a head connected to a device for receiving radiation conveying a signal, and at least one control device connected electrically to said manikin, in which said manikin has a flexible and elastic material envelope simulating the skin of the patient, at least one drive device for animating the manikin by moving at least one area of the flexible material envelope, and sensors disposed under said envelope to detect the proximity of said head, said head comprises at least one unit adapted to cooperate with said sensors so that at least said sensor nearest said head initiates transmission of a proximity signal to said control device, and said earpiece is an electroacoustic transducer connected electrically to said receiver device, said control device includes a control unit, at least one memory unit in which are stored groups of sound data each associated with a respiratory condition connected electrically to said control unit to supply to it, on the basis of instructions received, a corresponding group of sound data, and a transmitter of said signal-carrying radiation also connected electrically to said control unit to receive therefrom a sound data signal produced by it from the sound data group received by it, and said control unit is connected to said manikin to receive said proximity signal from it and, depending on its source, to generate the sound data signal sent to said transmitter and to deliver to said manikin a control signal for said drive device derived from said sound data.

2. Apparatus according to claim **1** wherein said transmitter and said receiver are a radio frequency transmitter and receiver.

3. Apparatus according to claim **1** wherein said head and said sensors constitute an electromagnetic sensing system.

4. Apparatus according to claim **1** wherein said sensors of said manikin are grouped in ten areas.

5. Apparatus according to claim **1** wherein said control device includes a connector receiving a sound data signal and adapted to be connected to an infra-red transmitter.

6. Apparatus according to claim **1** wherein said control device includes a connector receiving synchronization data and adapted to be connected to an audiovisual device.

7. Apparatus according to claim **1** comprising operating mode control means and manual pulmonary condition selector means.

8. Apparatus according to claim **1** further comprising operating mode control means and random pulmonary condition selector means.

9. Apparatus according to claim **1** comprising diagnosis display means.

10. Apparatus according to claim **1** wherein said control device includes, connected in cascade to the output of said memory unit, an area selector and a stethoscope presence selector controlled by an internal memory, the output of said stethoscope presence selector being connected to said transmitter by means of an analog sound microcontroller including a digital-/analog converter.

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