permits the activity monitor to record both positive and negative acceleration.

The waveform of FIG. **8** was redigitized and stored in binary format in a ROM playback chip **32**. When inserted into a comparator and the data contained therein is clocked out, the DAC **34** converts the RAM playback data to a continuous realtime voltage waveform that substantially replicates the original waveform which is used to drive power transistor **36** which in turn drives electromagnet **38**. When an activity monitor was placed in a comparator test fixture **17** and electromagnetically excited in accordance with the waveform of FIG. **8**, the amplitude vs. time plot of FIG. **9** was obtained. The excitation of the electromagnet causes the activity monitor proof mass **118** to move in nearly complete synchronization with it. Because the waveform frequencies used are less than 20 Hz virtually no magnetic indication occurs to distort the testing the waveforms of FIG. **8** and **9** are virtually identical, thereby confirming the reproducability of the comparator signal generating circuitry.

While the preferred embodiment of the invention have been shown and described, it will be understood by those skilled in the art that changes or modifications may be made thereto without departing from the true spirit and scope of the invention.

We claim:

1. An activity monitor interface apparatus for providing an interface for data communication between an activity monitor having an internal sensor which determines activity of a subject using said activity monitor and a computer, the apparatus being capable of testing operation of the internal sensor of said activity monitor, said apparatus comprising:

a test platform;

test receptacle means for receiving an activity monitor and holding it substantially motionless upon the test platform in a testing position;

memory means for storing at least one predetermined test pattern of activity;

conversion means for converting the activity test pattern, upon retrieval from the memory means, into an excitation signal representative of said predetermined activity test pattern;

activity monitor exciting means which receives the excitation signal and applies an excitation force to an activity monitor held in said receptacle means in order to excite the activity monitor internal sensor in a manner which substantially replicates said predetermined activity test pattern; and

data transmission means for transmitting data generated by said activity monitor held in said receptacle means in response to said excitation force for comparison with said predetermined activity test pattern.

2. The activity monitor interface apparatus as defined in claim **1**, wherein said memory means includes a read-only memory (ROM) and said conversion means includes a digital-to-analog connector (DAC).

3. The activity monitor interface apparatus as defined in claim **2**, wherein said activity monitor exciting means includes an electromagnet which generates a magnetic field upon application of said excitation signal, the magnetic field inducing a response in said activity monitor internal sensor.

4. The activity monitor interface apparatus as defined in claim **1**, wherein said data transmission means includes a transformer and opto-isolated RS-232 communication datalink.

5. The activity monitor interface apparatus as defined in claim **1**, wherein said test platform includes a housing, said test receptacle means being disposed on a surface of the housing, and said activity monitor exciting means includes an electromagnet disposed within said housing proximate to and opposing said test receptacle means.

6. The activity monitor interface apparatus as defined in claim **1**, wherein said test pattern of activity has a frequency of between 0.2 and 10 Hz.

7. The activity monitor interface apparatus as defined in claim **1**, further including an RS-232 data port for transmitting said data generated by said activity monitor.

8. An activity monitor interface apparatus for providing an interface for data communication between an activity monitor and a computer for testing the activity monitor, the activity monitor having a sensor which determines activity of a subject using said monitor and which generates an output indicative of the activity of said subject, the interface apparatus comprising:

test receptacle means for receiving an activity monitor and holding it substantially motionless upon the test platform in a testing position;

activity monitor exciting means which receives a predetermined excitation signal and applies an excitation force in response to receipt of said predetermined excitation signal, the activity monitor exciting means applying said excitation force to an activity monitor held in said receptacle means in order to excite the activity monitor; and

data transmission means for transmitting data generated by said activity monitor held in said receptacle means in response to said excitation force for comparison with said predetermined excitation signal.

9. The activity monitor interface apparatus as defined in claim **8**, further including memory means for storing in digital format at least one predetermined test pattern of activity and conversion means for converting the predetermined test pattern into said predetermined excitation signal.

10. The activity monitor interface apparatus as defined in claim **9**, wherein said conversion means includes a digital-to-analog convertor (DAC) which converts said predetermined test pattern into said predetermined excitation signal.

11. The activity monitor interface apparatus as defined in claim **10**, further including driving means for driving said activity monitor exciting means in response to said predetermined excitation signal, the driving means receiving said predetermined excitation signal from said conversion means in the form of a voltage output from said DAC.

12. The activity monitor interface apparatus as defined in claim **11**, wherein said driving means includes a transistor and said activity monitor exciting means includes an electromagnet driven by said transistor, said transistor receiving a voltage output from said conversion means as said predetermined excitation signal and said driving means outputting said predetermined excitation signal as a current to said electromagnet to thereby generate said excitation force in the form of a magnetic field which replicates said predetermined test pattern of activity.

13. The activity monitor interface apparatus as defined in claim **9**, wherein said memory means includes a ROM.

14. An apparatus for testing an activity monitor to determine at least one operational characteristic of the activity monitor, said activity monitor including an activity sensor which is responsive to an applied magnetic field, the apparatus comprising means for applying a magnetic field to said activity monitor sensor to test said activity monitor sensor and means for determining the responsiveness of said activity monitor sensor to the applied magnetic field, said magnetic field being variable in order to excite said activity