medical device module **200** uses batteries (not shown) to provide power to the medical device module **200**. For example, a plurality of silver oxide batteries, such as two or three, may be used. However, it is understood that different battery chemistries may be used, such as lithium, alkaline or the like, and different numbers of batteries can be used. In preferred embodiments, the batteries have a life in the range of 1 month to 1 year, and provide a low battery warning alarm. Alternative embodiments may provide longer or shorter battery lifetimes, or include a power port to permit recharging of rechargeable batteries in the medical device module **200**. Further alternative embodiments may use the power supply (not shown) that is already included in the PDA **10** or recharge its own batteries through the power supplied by the cradle **22**.

[0101] The ROM **204** of the medical device module **200** also stores additional programs to operate and control the characteristic meter **300**. Moreover, the RAM **206** of the medical device module **200** can stores results obtained from the characteristic meter **300**. As shown in **FIG. 5, a** test strip **350** for holding an analyte sample is inserted into the test interface **302**. This activates the characteristic test meter **304** and the microprocessor **216**. The characteristic test meter **304** analyzes the characteristics and sends the analysis results to the microprocessor **216**, which displays the results on the display **102** and stores the results in the RAM **206** for later review.

[0102] The programs for controlling the sensor monitor **212** of the characteristic monitor **200**' are also stored in the ROM **204**, and sensor data signal values received by the sensor interface **214** from the sensor set **150** are processed by the sensor monitor **212** and the microprocessor **216**, and then the results are stored in the RAM **206**. The sensor monitor **212** and the sensor interface **214** can be activated by a wired connection to a sensor set **150** that draws power from the characteristic monitor, by receipt of a signal from the telemetered characteristic monitor transmitter **100**, or by the keys **106** and **108** and/or display **102** through the keypad interface **202**. Preferred embodiments use a characteristic monitor **200**' (in which the system includes a Potentiostat such as sensor monitor **212**) to receive the sensor signals from a telemetered characteristic monitor transmitter **100**, as shown in U.S. patent application Ser. No. 091377,472 entitled "Telemetered Characteristic Monitor System and Method of Using the Same", which is herein incorporated by reference. In alternative embodiments, the sensor signals may be received on a more infrequent (or periodic) basis from a Holter-type monitor system, as shown in U.S. patent application Ser. No. 09/246,661 entitled "An Analyte Sensor and Holter-type Monitor System and Method of Using the Same", which is herein incorporated by reference.

[0103] Preferred embodiments store the raw received sensor signals values from the sensor monitor **212** and the test results from the characteristic test meter **304** of the characteristic meter in the RAM **206**. However, alternative embodiments may also store calibrated and adjusted results in the RAM **206** for downloading, later analysis and review. Further embodiments may only store adjusted results.

[0104] Once activated, the sensor interface **214** continuously, intermittently or near continuously receives signals from the sensor set **150** that are representative of an analyte level being monitored in a user. In preferred embodiments, the sensor monitor **212** is used in conjunction with the microprocessor **216** to store, smooth the data and determine a corresponding analyte level from the signals received from the sensor interface **214**. The corresponding value may be shown on the display **208**. The characteristic monitor **200**' of the medical device module **200** may also perform calibration of the sensor signal values using values provided by the characteristic meter **300**. The calibration may be performed on a real-time basis and/or backwards recalibrated (e.g., retrospectively). In further embodiments, the microprocessor **216** monitors the sensor signals from the sensor monitor **212** to determine when the characteristic meter **300** should be used to perform tests to be used for calibration of the sensor data signals. For instance, the microprocessor **216** could indicate that the calibration test should be delayed if the sensor data signals from the sensor monitor **212** are changing too rapidly and suggest a calibration reading when the sensor data readings are relatively stable. Also, the characteristic monitor **200**' of the medical device module **200** may prompt the user to perform calibration at periodic preset intervals. Alternatively, the characteristic monitor **200**' of the medical device module **200** may prompt the user to perform the calibration based upon event-triggered intervals, that are either user input, such as meals, exercise, or the like, or that are trend input, such as large excursions in glucose levels, faulty or interrupted data readings, or the like.

[0105] As shown in FIGS. **1-4**, the PDA **10** includes a display **102** that is used to display the results of the measurement received from the sensor in the sensor set **150** via a cable and connector **180** attached to the telemetered characteristic monitor transmitter **100**, or the like. The results and information displayed includes, but is not limited to, trending information of the characteristic (e.g., rate of change of glucose), graphs of historical data, average characteristic levels (e.g., glucose), or the like. Alternative embodiments include the ability to scroll through the data. The display **102** may also be used with the key **106** and **108** on the PDA **10** to program or update data in the medical device module **200**. In addition, the calibrated data using results from the characteristic meter **300** can be displayed to provide a user with updated trend and glucose level data. This may also be used to update and show differences between the newly calibrated (or additional calibration) data and the data as it was prior to the new calibration (or additional calibration).

[0106] In other embodiments, if multiple characteristic sensors are used, the individual data for each characteristic sensor may be stored and displayed to show a comparison and an average between the two characteristic sensors.

[0107] It is noted that a typical user can have somewhat diminished visual and tactile abilities due to complications from diabetes or other conditions. Thus, the display **102** and/or keys **106** and **108** are preferably configured and adapted to the needs of a user with diminished visual and tactile abilities. In alternative embodiments, the data, analyte level value, confirmation of information, or the like can be conveyed to the user by audio signals, such as beeps, speech or the like, or vibrations. Further alternatives may include a microphone (not shown) and related circuitry to allow voice activated control of the infusion device.

[0108] Additional embodiments of the present invention may include a vibrator alarm (or optional indicator such as