

one very particular example, a system **3000** can transmit data in MIDI format, with sound synthesizer being a MIDI compatible instrument.

[0186] A system according to another embodiment is shown in a block schematic diagram in FIG. **31**, and designated by the general reference character **3100**. A system **3100** can include the same general sections as that of FIG. **30**, thus like sections are referred to by the same reference character but with the first two digits being “31” instead of “30”. System **3100** can differ from that of FIG. **30** in that a sound synthesizer **3108** can be included within the system **3100**. Thus, a system **3100** can output an audio signal. As but one example, such an audio signal can be an analog audio signal.

[0187] A system according to yet another embodiment is shown in a block schematic diagram in FIG. **32**, and designated by the general reference character **3200**. A system **3200** can include the same general sections as that of FIG. **30**, thus like sections are referred to by the same reference character but with the first two digits being “32” instead of “30”. System **3200** can differ from that of FIG. **30** in that it can include a parallel-to-serial interface **3208**.

[0188] A parallel-to-serial interface **3208** can receive sound data values from a controller **3204**, and convert such values into a serial data stream for transmission on a wire, or in a wireless fashion.

[0189] Systems and system components according to the various embodiments described above can form part of a DC powered system that receives power from a conventional AC/DC converter. However, other embodiments can have different power supply arrangements. Two such embodiments are shown in FIGS. **33** and **34**.

[0190] FIG. **33** shows a system according to an embodiment that is designated by the general reference character **3300**. A system **3300** can include the same general sections as that of FIG. **32**, thus like sections are referred to by the same reference character but with the first two digits being “33” instead of “32”. System **3300** can differ from that of FIG. **32** in that it can include a connector **3310** suitable for attachment to a cable having both data and power wirings. Thus, a system **3300** can receive power on the cable to which it transmits data. Such an arrangement can enable a system **3300** to be connected according to various personal computer peripheral interfaces as well as gaming console interfaces. Of course, while FIG. **33** shows an arrangement in which data can be transmitted (and optionally received) in serial format, other embodiments can include parallel data transmission.

[0191] An arrangement like that of FIG. **33** may be particularly suitable as a controller device for a PC or gaming console. In such an arrangement, a parallel-to-serial interface **3408** can provide serial data in appropriate format/protocols

[0192] FIG. **34** shows a system according to a further embodiment designated by the general reference character **3400**. A system **3400** can include the same general sections as that of FIG. **32**, thus like sections are referred to by the same reference character but with the first two digits being “34” instead of “32”. System **3400** can differ from that of FIG. **32** in that it can include a battery connector **3412**. A battery connector **3412** can have inputs suitable for connecting to a battery. Optionally, a battery connector **3412** can also have additional inputs suitable for a DC/DC or AD/DC converter. In such an arrangement, a parallel-to-serial interface **3408** is preferably a wireless transmitter/receiver.

[0193] Embodiments of the present invention are well suited to performing various other steps or variations of the steps recited herein, and in a sequence other than that depicted and/or described herein.

[0194] For purposes of clarity, many of the details of the various embodiments and the methods of designing and manufacturing the same that are widely known and are not relevant to the present invention have been omitted from the following description.

[0195] It should be appreciated that reference throughout this specification to “one embodiment” or “an embodiment” means that a particular feature, structure or characteristic described in connection with the embodiment is included in at least one embodiment of the present invention. Therefore, it is emphasized and should be appreciated that two or more references to “an embodiment” or “one embodiment” or “an alternative embodiment” in various portions of this specification are not necessarily all referring to the same embodiment. Furthermore, the particular features, structures or characteristics may be combined as suitable in one or more embodiments of the invention.

[0196] Similarly, it should be appreciated that in the foregoing description of exemplary embodiments of the invention, various features of the invention are sometimes grouped together in a single embodiment, figure, or description thereof for the purpose of streamlining the disclosure aiding in the understanding of one or more of the various inventive aspects. This method of disclosure, however, is not to be interpreted as reflecting an intention that the claimed invention requires more features than are expressly recited in each claim. Rather, as the following claims reflect, inventive aspects lie in less than all features of a single foregoing disclosed embodiment. Thus, the claims following the detailed description are hereby expressly incorporated into this detailed description, with each claim standing on its own as a separate embodiment of this invention.

[0197] It is also understood that the embodiments of the invention may be practiced in the absence of an element and/or step not specifically disclosed. That is, an inventive feature of the invention can be elimination of an element.

[0198] Accordingly, while the various aspects of the particular embodiments set forth herein have been described in detail, the present invention could be subject to various changes, substitutions, and alterations without departing from the spirit and scope of the invention.

What is claimed is:

1. An electronic system for generating percussion related data based on capacitive sensed inputs, comprising:
  - at least one capacitance sensor input configured to connect to at least one capacitance sensor, the capacitance sensor being formed in at least a first surface configured to receive percussive inputs; and
  - a control section coupled to the at least one capacitance sensor input that generates at least one sense indication in response to changes in a sensed capacitance, the control section including
    - a sense node coupled to the at least one capacitance sensor input,
    - at least one comparator having a first input coupled to a sense node and a second input coupled to a threshold voltage source, and
    - a switch circuit having a controllable impedance path coupled between the sense node and a power supply