

[0072] According to another aspect, the feedback mechanism includes at least one lever for moving the switch in response to movement of the touch screen display resulting from the force applied to the touch-sensitive input surface.

[0073] According to another aspect, the feedback mechanism can include a pair of lever arms extending from proximal the switch toward opposing sides of the touch screen display for moving the switch in response to movement of the touch screen display.

[0074] According to yet another aspect, the feedback mechanism can include four lever arms, each lever arm extending from the switch toward a respective corner of the touch screen display for moving the switch in response to movement of the touch screen display.

[0075] According to embodiments, the lever arms can be pivotable about, for example, respective pivot pins in response to movement of the touch screen display towards the base, and can extend under an underside of the switch for moving the switch toward the touch screen display when absent an applied force on the touch-sensitive input surface. A biasing element can be disposed between each lever arm and the touch screen display. The feedback mechanism can include a platform on which the switch is disposed. The lever arms can be hinged together and can be unitary with the hinge formed of thin material. Each of the lever arms can include lifting fingers disposed between the base and the switch, the lifting fingers of one of the lever arms interposed between the lifting fingers of the other of the lever arms. The switch is generally centered with respect to the base and can be a dome type switch.

[0076] According to another aspect, there is provided a touch screen display that includes a base, a display device connected to the base and movable relative thereto, a touch-sensitive input surface overlying the display device, and a feedback mechanism. The feedback mechanism includes a switch moveable relative to the base for actuating in response to application of a force to the touch-sensitive input surface causing movement of the touch-sensitive input surface and the display device.

[0077] While the embodiments described herein are directed to particular implementations of the portable electronic device, it will be understood that modifications and variations to these embodiments are within the scope and sphere of the present application. For example, the size and shape of many of the features of the portable electronic device can differ while still providing the same function. Many other modifications and variations may occur to those skilled in the art. All such modifications and variations are believed to be within the sphere and scope of the present application.

What is claimed is:

1. An electronic device, comprising:

a base;

a touch screen display connected to the base and movable relative thereto, the touch screen display including a display device and a touch-sensitive input surface overlying the display device;

a feedback mechanism comprising a switch moveable relative to the base for actuating in response to application of a force to the touch-sensitive input surface causing movement of the touch screen display; and

operational components connected to the touch screen display for operation of the electronic device.

2. The electronic device according to claim 1, wherein the touch screen display comprises a display support for providing support to the display device and the touch-sensitive input surface, the display device and the touch-sensitive input surface disposed on the display support.

3. The electronic device according to claim 2, wherein the feedback mechanism comprises at least one lever for moving the switch in response to movement of the touch screen display resulting from the force applied to the touch-sensitive input surface of the touch screen display.

4. The electronic device according to claim 2, wherein the feedback mechanism comprises a pair of lever arms extending from proximal the switch toward opposing sides of the touch screen display for moving the switch in response to movement of the touch screen display.

5. The electronic device according to claim 4, wherein each lever arm is pivotable with respect to the base.

6. The electronic device according to claim 5, wherein each lever arm is pivotable about a pivot pin.

7. The electronic device according to claim 5, wherein each lever arm is spaced from the touch screen display when absent an applied force on the touch-sensitive input surface.

8. The electronic device according to claim 7, comprising a respective biasing element disposed between each lever arm and the touch screen display.

9. The electronic device according to claim 5, wherein each lever arm is pivotable in response to movement of the touch screen display towards the base.

10. The electronic device according to claim 9, wherein each lever arm extends under the switch, between the base and the switch, for moving the switch toward the touch screen display when pivoting.

11. The electronic device according to claim 10, wherein the switch is movable toward the touch screen display by each lever arm.

12. The electronic device according to claim 5 wherein said each lever arm comprises a support surface for supporting the switch when the switch is displaced.

13. The electronic device according to claim 12, wherein the lever arms are hinged together.

14. The electronic device according to claim 13, wherein said lever arms and said are unitary and are connected together by a thinned portion of material.

15. The electronic device according to claim 5 wherein the lever arms are hinged together under the switch.

16. The electronic device according to claim 5 wherein each of the lever arms includes lifting fingers disposed between the base and the switch, the lifting fingers of one of the lever arms interposed between the lifting fingers of the other of the lever arms.

17. The electronic device according to claim 2, wherein the feedback mechanism comprises four lever arms, each lever arm extending from the switch toward a respective corner of the touch screen display for moving the switch in response to movement of the touch screen display resulting from a force applied to the touch-sensitive input surface of the touch screen display.

18. The electronic device according to claim 1, wherein the switch is substantially centered in relation to the base.

19. The electronic device according to claim 18, wherein the switch is a dome-type switch.

20. The electronic device according to claim 1, comprising sidewalls and a frame framing the touch screen display and connected to the base by the sidewalls.