

portable device such as a PDA, notebook computer, tablet computer, cellular phone, or a display monitor device, etc. Generally, then electronic device **130** includes a housing **138**, the display system **132** having the touch panel **11**, device controller **134**, user interface **136**, etc. The grounding conductor (i.e., grounding loop **G1**) is coupled to the chassis ground of the electronic device **130**.

[0033] Further, the touch panel in accordance with the present invention may be deployed in electronic devices as an user input device, not as an integral part of a display systems. For example, the inventive touch panel may be deployed in electronic devices, as standalone input devices, such as writing or drawing pads, tablets, boards or other types of input devices requiring a user touch or stylus input, or peripheral devices which may be a part of a larger electronic device or which may be operatively coupled to another electronic device, such as a computing device or a machine.

[0034] While the inventive touch panel is described above in connection with an LCD display system, the present invention may be deployed in other types of display systems, such as systems deploying a plasma display element, or a cathode ray tube display element.

[0035] While the invention has been described by way of example and in terms of the preferred embodiments, it is to be understood that the invention is not limited to the disclosed embodiments. To the contrary, it is intended to cover various modifications and similar arrangements (as would be apparent to those skilled in the art). For example, the grounding conductor need not be configured in a closed loop as shown in **FIG. 4**. The grounding conductor may be configured in separate sections that are grounded, or a continuous section that is less than a complete closed loop, such as an open or partial loop, such as an U-shaped or C-shaped loop. Therefore, the scope of the appended claims should be accorded the broadest interpretation so as to encompass all such modifications and similar arrangements.

What is claimed is:

1. A touch panel input device, comprising:
 - a contact sensitive panel; and
 - a grounding conductor conductively coupled to the contact sensitive panel and configured to be conductively coupled to external ground.
2. The touch panel as claimed in claim 1, wherein the contact sensitive panel comprises a first substrate exposed to contact by a user, and wherein the grounding conductor is conductively coupled to the first substrate.
3. The touch panel as claimed in claim 2, wherein the first substrate comprises a surface exposed to contact by the user, and a first conductive surface, wherein the grounding conductor is conductively insulated from the first conductive surface.
4. The touch panel as claimed in claim 2, wherein the contact sensitive panel further comprises a second substrate electrically insulated from the first substrate, and wherein the grounding conductor is conductively coupled to the second substrate.
5. The touch panel as claimed in claim 4, wherein the second substrate comprises a second conductive surface, and wherein the grounding conductor is conductively insulated from the second conductive surface.

6. The touch panel as claimed in claim 3, wherein the contact sensitive panel further comprises a second substrate conductively insulated from the first substrate, wherein the second substrate comprises a second conductive surface facing the first conductive surface, and wherein the grounding conductor is conductively coupled to the second substrate and conductively insulated from the second conductive surface.

7. The touch panel as claimed in claim 6, wherein the grounding conductor comprises a first conductive layer on the first substrate on the same side as the first conductive surface, a second conductive layer on the second substrate on the same side as the second conductive surface, wherein the first and second conductive layers are conductively coupled.

8. The touch panel as claimed in claim 7, wherein the first and second conductive layers are formed on the first and second substrates along with the first and second conductive surfaces on the first and second substrates.

9. The touch panel as claimed in claim 7, wherein the grounding conductor comprises a generally loop shaped structure.

10. The touch panel as claimed in claim 9, wherein the loop extends along the periphery of the contact sensitive panel.

11. The touch panel as claimed in claim 1, wherein the grounding conductor comprises a generally loop shaped structure.

12. The touch panel as claimed in claim 11, wherein the generally loop shaped structure is a complete closed loop.

13. The touch panel as claimed in claim 11, wherein the loop extends along the periphery of the contact sensitive panel.

14. The touch panel as claimed in claim 1, wherein the contact sensitive panel comprises sensing lines that facilitate sensing relative changes in electrical properties arising from user contact within an active area of the contact sensitive panel covered by the sensing lines, wherein the grounding conductor is conductively coupled to the touch panel outside the active area covered by the sensing lines.

15. The touch panel as claimed in claim 1, wherein the grounding conductor comprises a first section attached to the contact sensitive panel, and a second section extending from the first section to the external ground.

16. A display system, comprising a touch panel as claimed in claim 1, and a display element operatively coupled to the touch panel, wherein locations on an active area of the contact sensitive panel correspond to locations on a display area of the display element.

17. The display system as in claim 16, wherein the display element is at least one of liquid crystal display element, plasma display element and cathode ray tube element.

18. An electronic device, comprising:

- a display system as in claim 16; and

- a device controller coupled to the display system and configured to process data corresponding to an image to be rendered by the display system.

19. The electronic device as claimed in claim 18, comprising at least one of a portable device, a display monitor and a user input device.