

tor screen on an automobile, an automated teller machine ("ATM") display screen), a remote for controlling electronics equipment (e.g., audio/video, garage door, home security, etc.) and a gaming controller (e.g., joystick, mouse, gamepad specialized controller, etc.). The operation of such input and/or output devices is well known to those skilled in the art.

What is claimed is:

1. A haptic device comprising:
 - a housing;
 - an input interface coupled to said housing through a suspension; and
 - an actuator coupled to said input interface;
 wherein said suspension is adapted so that when said actuator generates first vibrations at a first frequency, said first vibrations are substantially isolated from said housing, and when said actuator generates second vibrations at a second frequency, said second vibrations are substantially passed through to said housing.
2. The device of claim 1, wherein said first frequency is greater than said second frequency.
3. The device of claim 1, wherein said first frequency is approximately >200 Hz.
4. The device of claim 1, wherein said second frequency is approximately 100 Hz-200 Hz.
5. The device of claim 1, wherein said actuator is a Linear Resonant Actuator.
6. The device of claim 1, wherein said suspension comprises a foam material.
7. The device of claim 6, wherein said foam material comprises PORON®.
8. The device of claim 1, wherein said first vibrations are substantially applied on said input interface in response to contact on said input interface.
9. The device of claim 8, wherein said first vibrations simulate a mechanical button.
10. The device of claim 1, wherein said second vibrations provide an alert.
11. The device of claim 1, wherein said input interface is a touchscreen.
12. A method of operating a device comprising a housing and an input interface, said method comprising:
 - generating a first vibration at a first frequency by an actuator, wherein said first vibration is substantially isolated from said housing by a suspension coupled to said input interface; and
 - generating a second vibration at a second frequency by the actuator, wherein said second vibration is substantially passed through to said housing.
13. The method of claim 12, wherein the first frequency is approximately >200 Hz.
14. The method of claim 12, wherein the second frequency is approximately 100 Hz-200 Hz.
15. The method of claim 12, wherein generating the first vibration is in response to the detection of contact on the input interface.
16. The method of claim 15, wherein said first vibration simulates a mechanical button.
17. The method of claim 12, wherein generating the second vibration is in response to a need to provide an alert.
18. The method of claim 12, wherein said input interface is a touchscreen.
19. The method of claim 12, wherein said first vibration is greater than said second vibration.
20. A handheld device comprising:
 - a housing;
 - an input interface coupled to said housing;
 - a suspension coupled to said housing;
 - an actuator coupled to said input interface; and
 - a controller coupled to said actuator adapted to generate a first vibration at a first frequency and a second vibration at second frequency;
 wherein said suspension is adapted to substantially isolate the first vibration from said housing, and substantially apply the second vibration on said housing.
21. The device of claim 20, wherein said first frequency is approximately >200 Hz.
22. The device of claim 20, wherein said second frequency is approximately 100 Hz-200 Hz.
23. The device of claim 20, wherein said actuator is a Linear Resonant Actuator.
24. The device of claim 20, wherein said suspension comprises a foam material.
25. The device of claim 24, wherein said foam material comprises PORON®.
26. The device of claim 20, wherein said first vibration is substantially applied on said input interface in response to contact on said input interface.
27. The device of claim 26, wherein said first vibration simulates a mechanical button.
28. The device of claim 27, wherein said second vibration provides an alert.
29. The device of claim 20, wherein said input interface is a touchscreen.
30. The device of claim 20, wherein said first vibration is greater than said second vibration.
31. A handheld device comprising:
 - a housing;
 - an input interface coupled to said housing;
 - a suspension coupled to said housing;
 - an actuator coupled to said input interface; and
 - means for generating a first vibration at a first frequency by said actuator, wherein said first vibration is substantially isolated from said housing; and
 - means for generating a second vibration at a second frequency by said actuator, wherein said second vibration is substantially passed through to said housing.

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