

97. An electronic device as set forth in claim 96, wherein, in a case of detecting that a touch operation on said operation panel has been received, said generating means adjusts phases of drive signals for driving said plurality of vibration generators so that amplitudes of vibration caused at a touched position in said touch operation detected by said detecting means is amplified by mutual interference of oscillatory waves generated by each of said plurality of vibration generators.

98. An electronic device as set forth in claim 96, wherein, in a case of detecting that a touch operation on said operation panel has been received, said generating means generates drive signals for driving said plurality of vibration generators so that amplitudes of vibration caused at said position touched in said touch operation detected by said detecting means become greatest by mutual interference of oscillatory waves generated by each of said plurality of vibration generators.

99. An electronic device, comprising:

an operation panel over which a deformation layer deformable by vibration is laminated;

a plurality of vibration generators for transmitting vibration to said operation panel;

detecting means for detecting a touched position on said operation panel;

generating means for, in a case of detecting that a touch operation to said operation panel has been received, generating drive signals for driving said plurality of vibration generators so that a thickness of the deformation layer at said touched position of said touch operation detected by said detecting means becomes thinner or thicker than that of a time of non-touching as a result of mutual interference of oscillatory waves generated from said plurality of vibration generators; and

vibration control means for applying drive signals generated by said generating means to corresponding vibration generators and causing said vibration generators to generate vibration.

100. An electronic device as set forth in claim 99, wherein said deformation layer is formed using any one of a liquid, gel, or particulate substance.

101. An electronic device as set forth in any one of claims 95, 96, and 99, wherein said vibration generator comprises:

a weight;

a support member for supporting said weight so as to allow it to reciprocate, said support member being connected to said operating unit or to a base member of said vibration generator, and said base member being in contact with said operating unit; and

excitation generating means for generating excitation for supply to said weight, to cause said weight to reciprocate.

102. An electronic device as set forth in claim 101, wherein said vibration generator causes said weight to reciprocate under excitation generated by said excitation generating means and causes vibrational acceleration at said operation panel by a counter force of said reciprocation, or

transmits to said operation panel vibrational acceleration caused at said base member by a counter force of said reciprocation.

103. An electronic device as set forth in claim 101, wherein said support member is formed using an elastic body; and wherein one end of said support member is connected to said operation panel or said base member and another end is connected to said weight.

104. An electronic device as set forth in any one of claims 38, 41, 51, 66, 70, 74, 92, and 101, wherein said vibration generator further comprises a guide mechanism for said weight to cause said weight to linearly reciprocate.

105. An electronic device as set forth in any one of claims 38, 41, 51, 66, 70, 74, 92, and 101, wherein said excitation generating means generates magnetic force as said excitation.

106. An electronic device as set forth in any one of claims 38, 41, 51, 66, 70, 74, 92, and 101, wherein said excitation generating means generates electrostatic force as said excitation.

107. An electronic device as set forth in any one of claims 38, 41, 51, 66, 70, 74, 92, and 101, wherein said vibration generator causes said weight to linearly reciprocate and further comprises a resistance imparting member imparting contact resistance to said weight, said resistance imparting member being in constant contact with a side surface parallel to a direction of reciprocation of said weight performing reciprocation.

108. An electronic device as set forth in any one of claims 38, 41, 51, 66, 70, 74, 92, and 101, wherein said vibration generator further comprises brake means for, in a case that generation of excitation from said excitation generating means has stopped, contacting itself with said weight and causing said weight to stop reciprocating.

109. An electronic device as set forth in any one of claims 38, 41, 51, 66, 70, 74, 92, and 101, wherein

said vibration generator comprises, as said excitation generating means, a coil for generating magnetic force, and said electronic device further comprising a short-circuiting means for, in a case of stopping supply of current to said coil, causing said input end of said coil to short-circuit.

110. An electronic device as set forth in any one of claims 38, 41, 51, 66, 70, 74, 92, and 101, wherein

said excitation generating means generates magnetic force as said excitation; and

wherein said vibration generator houses said weight, said support member, and said excitation generating means in a space sealed by a case having an anti-magnetic effect.

111. An electronic device as set forth in any one of claims 38, 41, 51, 66, 70, 74, 92, and 101, wherein

said excitation generating means generates magnetic force as said excitation; and

wherein said weight is formed using a permanent magnet.

112. A vibration generator, comprising:

a weight;

support means for supporting said weight so as to allow it to linearly reciprocate, said support member being connected to a vibratory member to which vibration is imparted by said vibration generator or to a base