

ABSTRACT OF THE DISCLOSURE**MULTI-FUNCTIONAL VIBRATION ACTUATOR**

A multi-functional vibration actuator comprises a magnetic circuit flexibly supported by a suspension fixed to the magnetic circuit, a coil arranged at a gap of the magnetic circuit, and a vibration transmitting portion. The coil includes at least two coils. One of the coils is a main coil. Another coil is an auxiliary coil. Even if the coil jumps out of the uniform magnetic flux distribution of a magnetic pole gap during movement, a uniform magnetic flux is always applied of the coil.

Figure 4