

Generate vibrations

	Cost	Frequency Range	Weight	Durability
THD hydraulic vibrator	500-100	5300vpm @100psi	25lbs	Built from high-strength aluminum for maximum durability
Industrial shaker	Upwards of \$1000	Most models operated over 10kHz	Most systems are in the 8-15lb range, and generate from 2 lb to 20 lb of force with a peak to peak oscillation of 4mm to 1 inch.	High durability and precision, designed for extended vibration testing
Eccentric Mass electric Vibrators	upwards of \$150 each due to industrial grade manufacturing	most are locked at a certain frequency, commonly 60Hz	around 4-10 lbs depending on system. Produces vibration in 2 directions	High durability and precision,

Display

	Cost	Power consumption	Weight	Durability	Benefit
RGB lighting https://www.ledworldlighting.com/product/led-strip-light/rgb-led-strip/rgb-led-strip-24v/	\$37.50 – \$90.00	60mA per Segment Max	1-5 lbs	Medium	Aesthetically pleasing
Raspberry Pi and Tablet	Cost \$35/\$60	5.1Watt	1.5oz	High	More portable/Lighter

Measure vibration

	cost	frequency	Power	weight	durability
Rotary encoder (DENSO)	\$100-\$200	100 kHz(Max response frequency)	160mA max	100g	High
Accelerometer(PCB)	\$1070	2-10kHz	-	0.5-1 lbs	High
Ultrasonic sensor https://www.maxbotix.com/Ultrasonic_Sensors/MB7460.htm	\$200	7.5Hz read rate 42kHz ultrasonic sensor measures distance to objects	<40mA average current requirement	Small, lightweight module	High