

# C-2 TACTOR

The C-2 Tactor<sup>†</sup> is a miniature vibrotactile transducer that has been optimized to create a strong, localized sensation on the body. Using a body-referenced arrangement of Tactors activated individually, sequentially or in groups, C-2 Tactors can provide intuitive “tactile” instruction to a user. EAI’s C-2 Tactor represents a state-of-the-art, wearable vibrotactile transducer, suitable for a wide variety of military, biomedical and commercial applications.

C-2 Tactor,  
actual size



<sup>†</sup>patent  
pending

## DETAILS OF OPERATION

The C-2 Tactor is a linear actuator that has been optimized for use against the skin. The C-2 Tactor incorporates a moving “contactor” that is lightly preloaded against the skin. When an electrical signal is applied, the “contactor” oscillates perpendicular to the skin, while the surrounding skin area is “shielded” with a passive housing. Thus, unlike most vibrational transducers (such as common eccentric mass motors that simply shake the entire device), the C-2 provides a strong, point-like sensation that is easily felt and localized.



For optimum vibrotactile efficiency, the C-2 is designed with a primary resonance in the 200-300 Hz range that coincides with peak sensitivity of the Pacinian corpuscle, the skin’s mechanoreceptors that sense vibration. The C-2’s high force and displacement level allow the vibration to be easily felt at all locations on the body, even through layers of clothing.

EAI’s offers Tactors in various configurations for different applications – please contact us for details. EAI also offers multi-channel controller/interface boards and complete turnkey vibrotactile systems.

## SPECIFICATIONS: C-2 TACTOR

<i>Physical Description:</i>	1.2" diameter by 0.31" high
<i>Weight:</i>	17 grams
<i>Exposed Material:</i>	anodized aluminum, polyurethane
<i>Electrical Wiring:</i>	Flexible, insulated, #24 AWG.
<i>Skin Contactor:</i>	0.3" diameter, pre-loaded on skin.
<i>Electrical Characteristics:</i>	7.0 ohms nominal.
<i>Insulation Resistance:</i>	50 megohm minimum at 25 Vdc, leads to housing.
<i>Response Time:</i>	33 ms max
<i>Transducer Linearity:</i>	+/- 1 dB from sensory threshold to 0.04" peak displacement.
<i>Recommended Drive:</i>	Sine wave tone bursts 250Hz at 0.25A rms nominal, 0.5 A rms max for short durations.
<i>Recommended Driver:</i>	Bipolar, linear or switching amplifier, 1 W max, 0.5 W typical.

## *INFORMATION through the sense of TOUCH*



*From left: C-2 Tactor with Silicone Gel “snap-in” mounting pad; C-2 Tactor with integral polyurethane flange for sewing into a garment; ruggedized C2-A Tactor with internal moisture/sand seal and highly flexible “tinsel” wire with Kevlar strength member.*



406 Live Oak Blvd, Casselberry, FL 32707  
email: [sales@eaiinfo.com](mailto:sales@eaiinfo.com); [www.eaiinfo.com](http://www.eaiinfo.com)  
phone: 407 645-5444; fax: 407 645-4910