

Bare Conductive is a unique material, which allows for the customization of electronic circuitry on the surface of the skin. This innovative material allows users to interface directly with electronics through gesture, movement and touch, creating a novel form of interaction. Bare is an intuitive and non-invasive technology, which bridges the gap between electronics and the body. Application areas range from dance, music, and performance art, to computer interfaces, fashion, communication, and medical devices.

Bare Conductive was developed as a graduate project by four designers at the Royal College of Art. The project began as an investigation into parasitic technology, and evolved into an exploration of the human body as a direct interface for electronic devices. Extensive research was conducted into the body's functions, processes, and its internal and external environments, in order to examine our physical relationship to pervasive electronic technologies. This investigation was followed by a thorough study of body ornamentation and its role in communication, placing Bare in a lineage of self-expression focused on the skin, from body painting, to piercing, and tattooing. The skin's established role as a communication medium led to the idea of creating a material which could live directly on the body and change the way we interact with the electronic world surrounding us.

Initial experiments focused on developing an electrically conductive substance to be safely applied and used on the skin. Research involved material trials with existing conductive inks and metallic powders, as well as extensive research into pharmaceutical, food, and cosmetic products. Over 120 material samples were collected and catalogued before the final material formulation was achieved.

Bare Conductive works as a conduit for small electrical signals to run across the surface of the body, without impacting or affecting the skin below. The ink has been proven to send signals through up to six people allowing for complex interactions between groups of individuals. The ink can be removed and re-applied, serving as an adaptable interface, which can be altered to suit new peripheral technologies without becoming obsolete. Non-toxic, temporary, and recyclable, Bare is an intuitive and non-invasive technology. In its current form, Bare can be applied with a brush, stamp, or spray and has been used to send information between people and computers, and to power small devices. The ink is best suited to low power, information-lean applications such as switching and simple data transfer. It also has the potential to sensually replace and augment existing technologies where wires are cumbersome or undesirable.

Bare Conductive seamlessly connects traditional forms of body ornamentation with contemporary wearable electronics, humanizing wearable technologies, and providing an elegant alternative for the application of electronics to the body via customized circuitry.