



Issho: The denim jacket that cares about you

Design by Isabel Berentzen

Text by Pieter Desmet

He died tragically young, but remained immortal as the “Rebel Without a Cause” - James Dean, the prototype of the emotionally confused teenager. The film was also a turning point for his pants. By wearing blue jeans, he gave the banal Levi Strauss work trousers a big dose of sex appeal in one fell swoop. That’s how, in 1955, denim was launched as a fashion item and it has since grown into a worldwide phenomenon. In 2015, sixty years after the release of the film, Levi Strauss (together with Google) launched something new: a ‘smart denim jacket’. By using conductive fabric in the sleeve, you can control your smartphone with gestures. Examples include playing music and operating your navigation app; pretty useful considering the current ban on using your phone while cycling in the Netherlands.

Smart pyjamas and socks

Levi’s is not the only company experimenting with technology in clothing. Smart clothing is *hot*. Under Armor invented a pyjama for athletes that accelerates muscle recovery with infrared light. Samsung developed a smart skating suit for Olympic athletes and a business suit that exchanges digital business cards. For the afi-



Issho unisex denim jacket

cionado, there are even smart underwear and smart socks. Tommy Hilfiger, Ralph Lauren, and Nike are also experimenting with smart clothing. They use textile with woven-in circuits and integrated sensors. And in many applications, Bluetooth or Wi-Fi can be used to wirelessly connect to an app or a smartphone, to read data from sensors, or to control the technology.

Ordering pizza with your shoes

Designer Isabel Berentzen was fascinated by the integration of technology in clothing; the influence on our lives, behaviour, and social interaction. But she was also critical about the superficiality of current applications. Is the world really interested in shoes with which you can order pizza? Yes, these shoes exist; available at Pizza Hut. She asked her-

self how you can integrate technology into clothing in a meaningful way. This question resulted in Issho, her design of a smart denim jacket that encourages the wearer to be aware of the moment to create more spontaneity in our lives.

Sensitive touch

Denim is one of the most common forms of everyday clothing. Thanks to the durability and graceful ageing, the passage of time makes it more personal and intimate, just like a friendship. Issho reinforces that friendship by taking care of you a little. While we are always connected these days, there is also the risk that we will lose contact with ourselves. Through subtle haptic feedback, Issho occasionally reminds you to be aware of the here and now. The golden threads woven into the fabric create three touch-sensitive zones: one on each sleeve (at the shoulder) and one near the breast pocket. Three small vibrating motors are incorporated in the back.



The touch-sensitive zones detect your interactions. The sensor on the breast pocket detects the use of your smartphone, and the sensors on the sleeves signal intimate social or personal interactions, such as a hug. In exchange for these social interactions, the jacket provides you with the sensation of a caress over the back every now and then. This subtle haptic feedback reinforces the feeling of a personal friendship.



Front with integrated technology



Back with integrated technology

Awareness and spontaneity

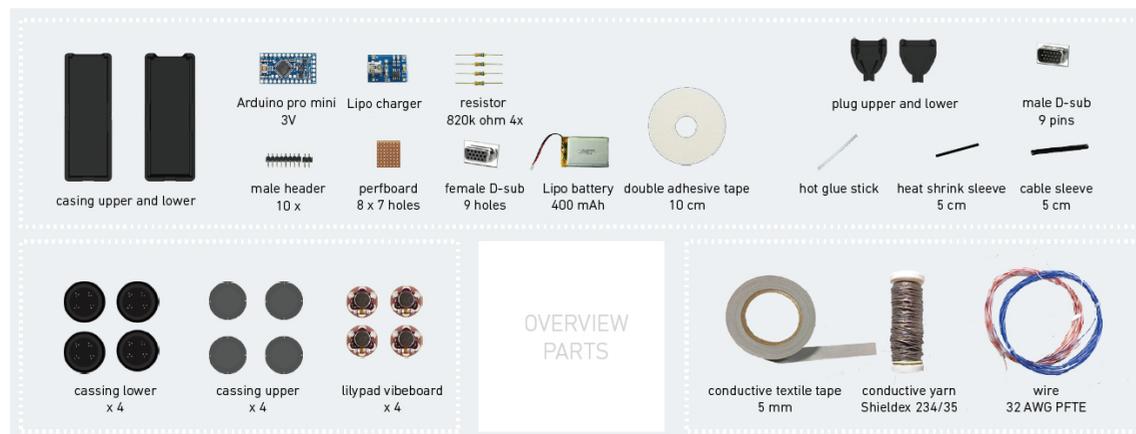
The core of Isabel's design vision was *spontaneity*. She observed that the extensive technologisation of society is bad for our spontaneity. Without exception, smart clothing focuses on increasing control, performance, and efficiency. Technology makes the uncontrollable controllable, but the increasing control comes at the expense of spontaneity. That's why Issho explicitly does not offer control. The jacket behaves autonomously, while responding to the behaviour of the wearer, but never unambiguously or explicitly. With spontaneous interactions, it stimulates the wearer to open up to the moment with curious attention. The light caress represents a natural and intimate social interaction and draws the wearer's attention to the here and now. The open attitude stimulates interest and acceptance; elements that are essential for the development of spontaneous experiences.

Designs for meaning

Isabel started the project with a sceptical attitude towards the far-reaching technologisation of our society. She herself experienced the excess of technology in her daily life as dulling. Are we not strengthening that effect with smart clothing? However, when started studying the subject in more detail, her sceptical attitude began to shift: 'Working at Pauline's studio opened my eyes to the inspiring continuous flow of conscious and unconscious communication between our body and our clothing. I started to realise that smart technology offers a range of new possibilities for designing new forms of meaning and value in the intimate relationship with our clothing. More than when designing regular products.' Over the past fifty years, denim has had an irreversible impact on the self-awareness of individuals and generations. Like the case of James Dean, as a means of self-expression. And now, with Issho, also as a means of attention – for ourselves, for the moment, and for our environment. And the best thing is: *no smartphone required!*



Issho: designs for curious attention



Technology in Issho



Isabel Berentzen developed ISSHO in 2016 as a graduation project at Studio Pauline van Dongen (Arnhem) for the Integrated Product Design master's degree at TU Delft. The project was initiated by Studio Pauline van Dongen in collaboration with Italdenim (an Italian denim manufacturer), with the aim of developing smart denim by working with conductive yarns. The project was supervised by Kaspar Jansen, Paul Hekkert (TU Delft), and Pauline van Dongen (Studio Pauline van Dongen).

Colophon

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