MORITZ WALDEMEYER

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CUSTOMIZES EVERYDAY OBJECTS BEYOND ALL RECOGNITION

London-based German designer Moritz Waldemeyer is known for his interactive technological sculptures such as his Corian games tables shown at MoMA's 'Design and the Elastic Mind' in New York last year; *Voyage*, his sinewy motion sensing crystal sculpture created with Yves Behar; *Lolita*, his futuristic Swarovski chandelier that displays text messages sent from mobile phones and his wizardry with LED lights and microchip robotics in dresses for Hussein Chalayan. But did you know he's also selling his Polo?

'I need to get rid of it,' he says of the faded blue 1988 Volkswagen Polo, which he had on eBay recently but surprisingly attracted no buyers. His girlfriend doesn't like it and he's parked it in Germany while he tries to unload it. It's his first car, bought when he was 18 years old, while working as an engineer for Phillips, but if you ever pull up at a traffic light and see it next to you, prepare for a big surprise. The Polo was his quest to design the 'ultimate urban stealth vehicle', the idea being to leave the outside untouched and add some 'carefully selected motor sport ingredients to the inside'. He says it now has a similar power-to-weight ratio as the Lotus Elise, which is apparently very good.

'I saw the engine sitting there and it looked about the right size,' he recalls. 'At the time I was into these forums where you see these maniacs doing things to their cars.' After finding the perfect engine, he spent years tinkering with the vehicle to enable it to cope with the massive increase in power, completely transforming it into a racer. According to his ebay listing, he added a 1.6L,16V engine from a Polo GTI with about 125 HP; a reprogrammable engine management system from Motec; a 5-speed gearbox; uprated driveshafts; suspension, brakes and a rear axle all from a Polo G40; a fully adjustable coil over suspension from KW; adjustable suspension bearings from Salzmann and a complete stainless steel exhaust from Jetec. Despite all the super high-end gear, security isn't really a problem, he admits. From the outside, 'it's not even a normal car, it's a shit car'.

The Polo project is indicative of Waldemeyer's curious and multidisciplinary way of thinking. He has collaborated with architect Zaha Hadid, lighting designer Georg Baldele, Microsoft's entertainment brand Zune, and fashion designer Hussein Chalayan, to name a few. One of his latest works, for Microsoft, is *Twilight*, an interactive chandelier that allows users to share music files with the chandelier itself. 'Users in the room can send a song to the chandelier and watch as thousands of integrated lights react to the music, sending waves of light up and down the internal space in time to the beat,' says Waldemeyer. He likes to take normal things and embellish and customize them beyond all recognition,
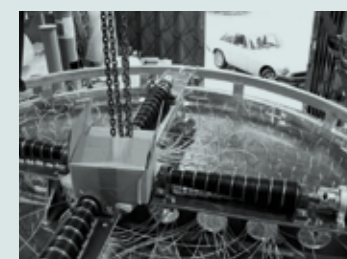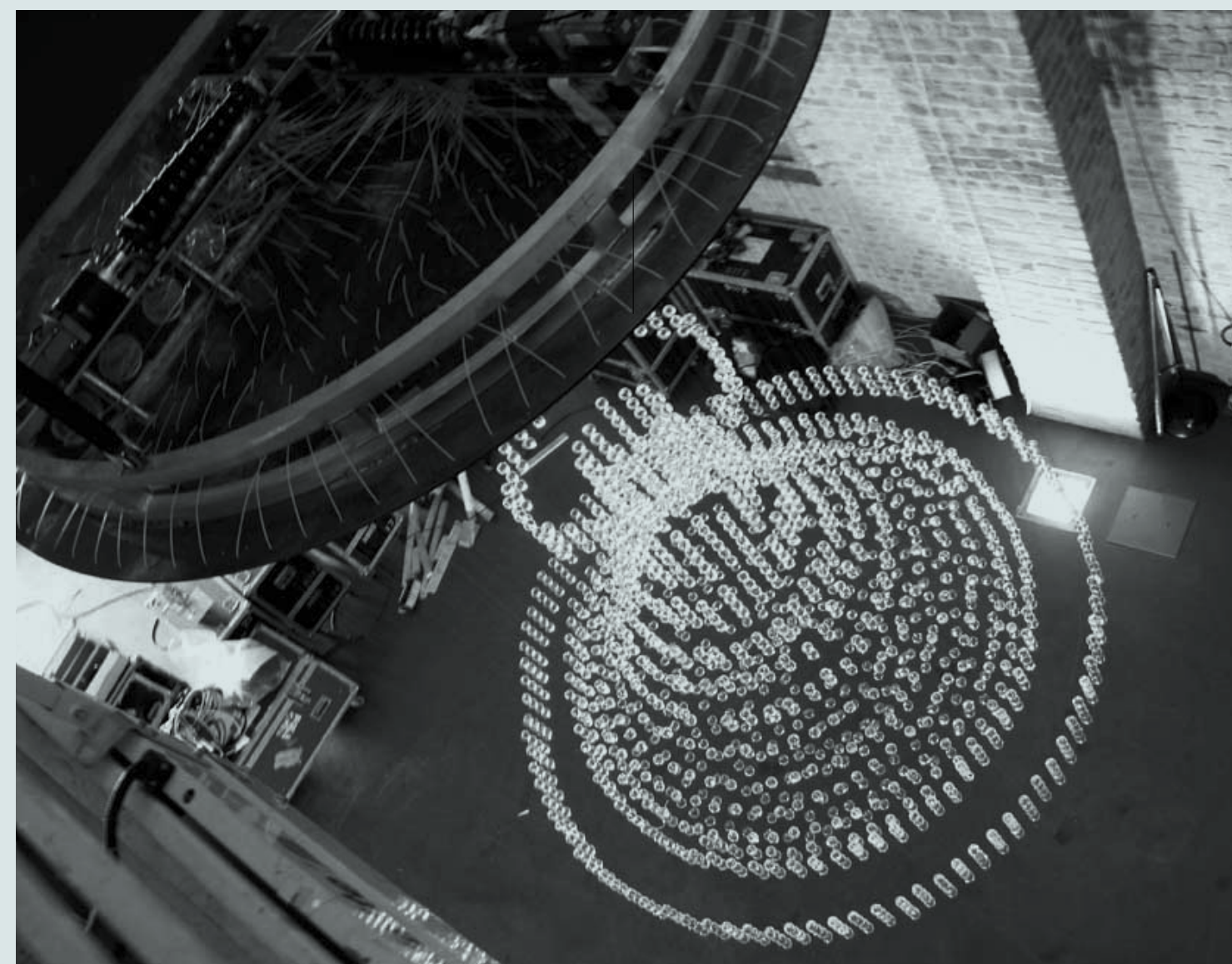
transforming them into imaginative interactive objects, using technology as the design medium.

'I know what's out there and what can be done,' he says of his technical education, first at a special mathematical school in East Germany and then at university in London where he trained as an engineer. From his small studio in Fulham, London, he collaborates with international designers and manufacturers and travels around Europe lecturing about design and technology. He recently helped out friends in Leeds at an exhibition where they needed technical assistance with their LED lights and he is just back from speaking at a lighting event in Stockholm where he shared the stage with Paul Cocksedge (one of his best friends) and design legend Ingo Maurer (one of his design heroes). London is his base but increasingly, the market for his technical design and collaborative problem solving is global. But how

does a designer train for this kind of interactive, technical, sculptural and intuitive design career? 'I think every designer should have a certain amount of engineering,' he says. 'It's a technical job in the end, manufacturing, and the technology of making stuff and it's about knowing technology's limitations'.

Take lock picking, Waldemeyer explains, a skill that many people devote a lot of time and energy to, and that requires a lot of practice. '*Wallpaper* magazine called me up and asked me to redesign a popular game called Operation,' he recalls. 'Except I didn't know the game at all. I think it is about poking things in holes? Anyway, it made me think of a keyhole surgery concept.' The result is *Keyhole Surgery*, a game he devised where a clear Perspex cube comprised of layers of complex shapes forms a three dimensional maze that acts as a lock. Players rotate a key through the box being careful not to touch the edges. Waldemeyer »

Pandora Chandelier

The 2007 *Pandora Chandelier* for FredriksonStallard and Swarovski has thousands of moving crystals on servo-controlled wires that create and then destroy the traditional form of a chandelier.
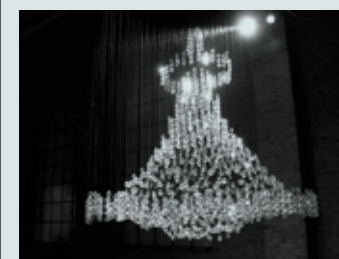
Joyrider

The 2008 *Joyrider* has two components that attach to the spokes of a bicycle wheel, emitting a fixed image of a smiley face using LED lights.

'Every designer should have a certain amount of engineering'

— Moritz Waldemeyer —

ROULETTE TABLE.

Corian Tables

The 2006 *Pong* table reinvents the classic ping-pong game, using 2500 LEDs and two track pads. The game is programmed into an inbuilt microchip that controls a matrix of LEDs beneath the Corian surface so that the ball may bounce all over it.

The flashing LED roulette table is something dreamt up from a futuristic Casino Royale. When switched on, the LEDs make up a classic roulette table. When turned off, the integrated technology disappears completely, leaving a simple, elegant and functional dining table.

The 2006 *Z Island Kitchen*, designed with Zaha Hadid for DuPont Corian, is an interactive design for a kitchen including user interface, lighting and multimedia installation.

PONG TABLE.

Z ISLAND KITCHEN.

designed in a way for geeks to cheat: you can study the maze as a 3D file on your laptop. Aside from a quirky toy, it's a beautiful object, very architectural and enigmatic. 'We get emails from people all the time who want to buy it.' He says: 'I have all these ideas and I'm not sure how to commercialize them, like the *Joyrider*, it's just crying out to be commercialized.'

Joyrider is a decorative and technical toy for trendy urban cycle enthusiasts that one could imagine adorning a customized single-speed fixed gear or similar collector cycle. Designed as a pair of one-off sterling silver and Swarovski-crystal-studded prototypes, it was auctioned at last year's fundraising gala at the Institute for Contemporary Art in London and £2000 was raised for the pair. *Joyrider* allows a bicycle to be transformed into a moving light show, using LED lights attached to the spokes of the wheels, guided by microchips to make

a smiley face. 'It is about a single LED that switches on and off at the right location,' Waldemeyer says. Although the LEDs are moving with the spokes, the microchips calculate the speed of the wheel in such a way that the smiley face graphic remains stationary while the wheel spins.

Tiny microchips and LED lights emitting patterns. Does the technology here relate to his famous robotic and laser dresses for Hussein Chalayan? 'Well, they're similar in a very wide sense,' he says politely, 'but then, you also find this technology in washing machines so only in the very broadest way.'

'Just sticking lasers on a dress isn't that hard,' Waldemeyer explains, 'But he wanted to have them moving as well.' Working with Hussein Chalayan was a major coup for Waldemeyer, Chalayan being one of the most experimental fashion designers in the world. The challenges posed here were making the

technology tiny, durable and lightweight. 'We didn't want to make it a bulky machine that these girls had to wear.' The series called *Readings* involves crystal embellished dresses with rotating red lasers controlled by tiny motors that move the lasers in sequence. The idea was to use light to make it seem like the dresses extend into infinity. The technology for the dresses was totally bespoke; Waldemeyer designed the bending and folding brass mechanisms that fold like hinges and attach to plastic strips beneath the dresses. 'It's very mechanical, architectural and hidden. Once the top cover goes on you can't see anything at all.'

For now, he's developing ideas for Formula One, having spent the day recently at their Oxford headquarters looking at their 'super functional pieces of art', surely his highest accolade. 'I want to use the car to draw images with light, like a long exposure picture where you see the long tail lights of

a car,' he says, but he's still figuring out how this is going to work. The conversation seems to always return to cars. While Waldemeyer says he loves his new Mini Cooper, it's apparent he'll never lose the slightly obsessive mentality of a collector and the critical eye of a connoisseur. His design philosophy of creative customization extends to his appreciation of the tradition of art cars, such as the ones customized by Keith Haring or American text artist Jenny Holzer for BMW.

As an engineer-artist-maker, he's a sought after collaborator, working in multidisciplinary, international teams to produce hybrid design objects and installations. It is a marketable skill to make complex things look simple – like the nearly invisible layers of circuit boards and wires under Chalayan's dresses or the design of the *Z island kitchen* worktop with Zaha Hadid that allows users to cook some eggs while downloading music, browsing the

internet and getting aromatherapy all via a touch-sensitive, white Corian surface. On his mind at the moment are early designs for another high-profile installation, this time with pioneering lighting company Flos. 'It's two lamps designed by Starck, handmade vases by Baccarat and a display I am making with text by Jenny Holzer.'

But what sets Waldemeyer's work apart from his contemporaries is not his engineering abilities or even his well-chosen collaborators but that his designs go beyond mere technical problem solving into the realm of conceptual design. In fact, his geeky fascination with LEDs and circuit boards may well be the prototype for a new breed of cool young designers that want ultimate creative control over their designs. While many designers think learning exactly how new technologies like digital manufacturing and interactive technologies actually work is too technical, Waldemeyer is proof that the

more you know, the more possibilities you have when you design. His artist-engineer approach is precisely what makes him such a hot commodity. He knows it takes an artist's eye to be able to truly understand and then customize and adapt these technologies to allow extremely un-geeky things to be created – like his Vegas-inspired designs for Okay Go's LED-studded stage costumes. Waldemeyer's work offers a glimpse into the future of interactive gaming, new potentials for high-tech lighting and immersive environmental design. Mechatronics meets rock and roll; Waldemeyer is the new cool. «

www.waldemeyer.com
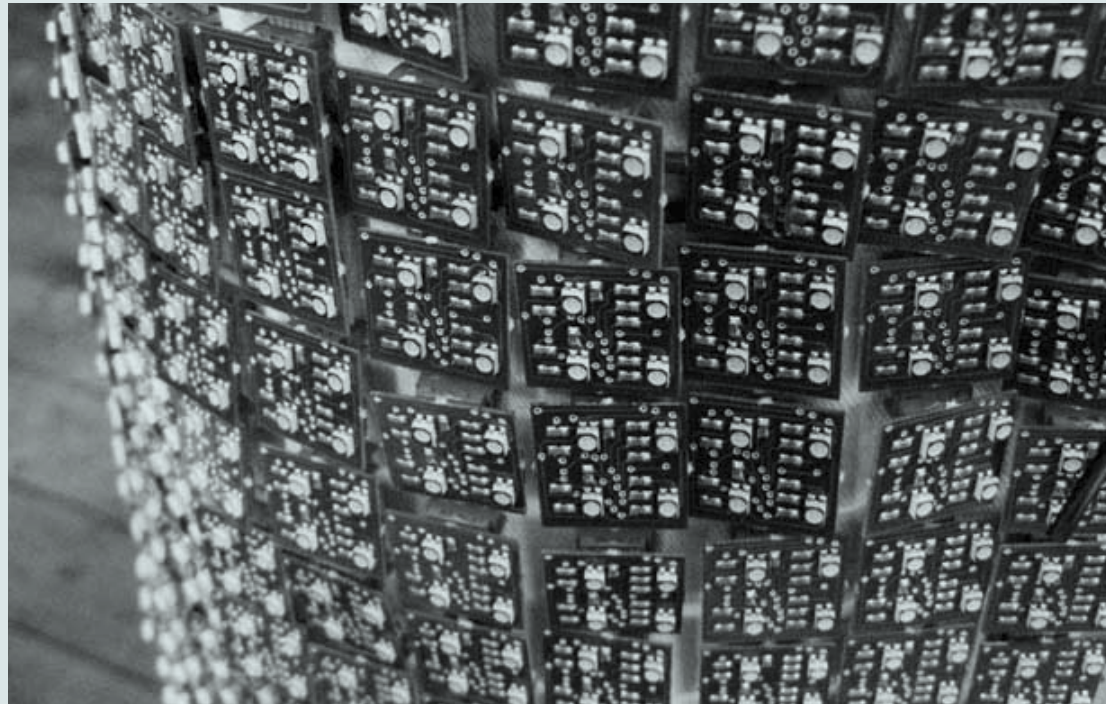
Airborne

In the *Airborne* collection, designed with Hussein Chalayan and Swarovski, futuristic dresses display video content across their surface. The dresses are created by 15,000 LEDs embedded beneath the fabric. One dress displays hazy silhouettes of sharks in the sea while the other shows a time-lapse sequence of a rose blooming then retracting.
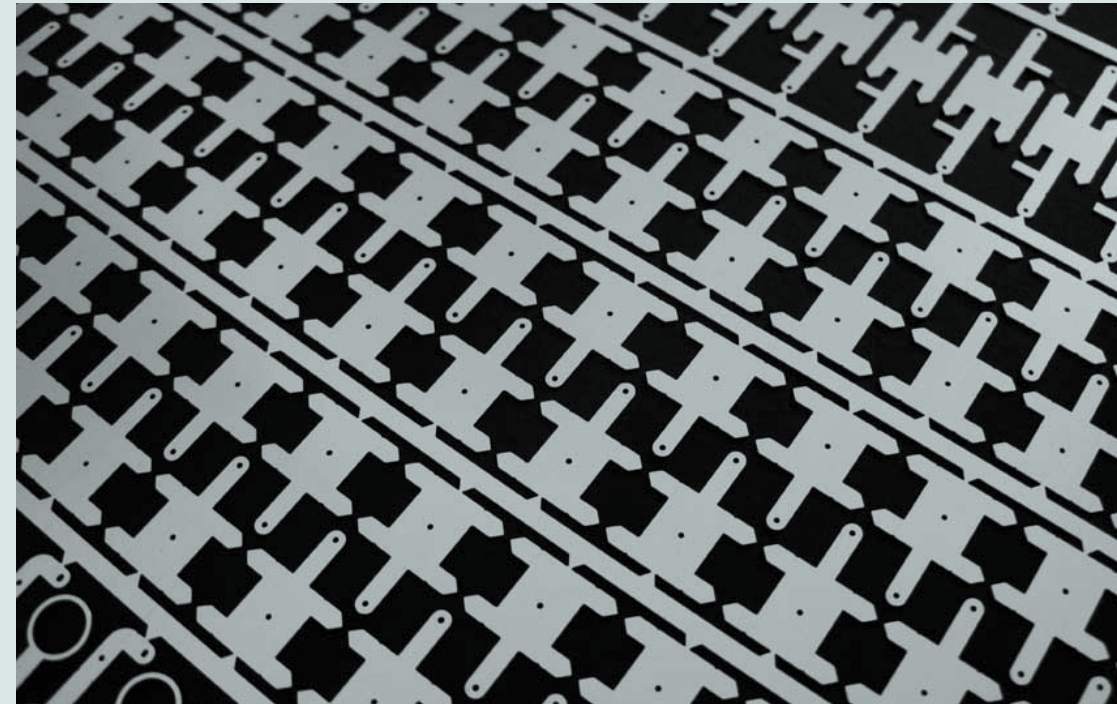
Readings

The spring 2008 collection *Readings*, designed with Hussein Chalayan and Swarovski, consists of crystal embellished dresses with inbuilt rotating lasers. Hundreds of lasers were integrated into each piece, attached by custom-designed, servo-driven brass hinges. This allows the lasers to move, transforming the dresses from static objects to living, ephemeral forms that constantly change, interacting with the space around them.

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