# Ogle connect winning formula for BT


## Case Study

Technology and communication govern modern society. There is a demand and requirement for continual innovation of the products and services that provide this infrastructure. When one of the UK's leading telecoms providers wanted to refresh their high-end cordless telephone range, Ogle was dialled in for the solution.

### BACKGROUND

BT is one of the world's leading communications services companies, serving the needs of customers in the UK and across 180 countries worldwide. To create the latest BT 8600 and BT Halo handsets – part of the BT DECT cordless telephone portfolio – BT employed Alloy.

Established in 1999, Alloy is one of the largest industrial design firms in the UK and one of the top five in the business. The firm work with companies to build profitable brands through three key services: product design, interaction design, and innovation strategy.

### THE CHALLENGE

Alloy approached Ogle requiring two aesthetic phones and base chargers. There were intricate never-before-seen detailing for the buttons and integrated lighting for the base charger.

BT state that "innovation has always been at the heart of BT's business and today it's vital to BT's strategy for growth." The refresh of the BT DECT cordless telephone portfolio – a premium telephone range – created new obstacles at the model making stage, to ensure that the appearance and touch reflected the distinct characteristics and premium nature of the products for potential buyers.

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## THE SOLUTION

**To ensure the production processes chosen would create two handsets that were unique with a premium feel to head-up the range of DECT phones, Ogle chose Stereolithography (SLA) for the majority of the parts, working with both ExtremeWhite and Clearvue resins.**

The advantage of the SLA process for this project was the precise accuracy of the parts which can meet ±0.1 mm per 100 mm. But most importantly for this premium product was the superior surface finish.

The base charging unit was machined using a three-axis CNC which delivered a part that looked more like production parts.

While the SLA parts were being hand finished and trial fitted, the model shop was machining the larger parts while testing the challenging finishes. Matt Harris, Industrial Designer at Alloy, said: "The fine-spun finish turned out to be quite difficult to replicate on the model, but the team at Ogle tried several approaches until they found the one that most accurately matched our reference sample. They even ordered additional tools for this part to achieve the best finish."

The requirement for a subtle radial cut over a number of the main function buttons was achieved using an aluminium tooling plate and a very fine cutter on the CNC machine.

The spun aluminium finish was completed by manually spinning the part by hand with a fine metal wool which delivered a brushed metal finish. As the handsets would be part of the high-end DECT range, there were several processes and material finishes required that had not previously been used on the phones. The models accurate representation of the brushed metal and spun electro-plated finishes were vital for Alloy to present BT with a true representation of the final product.

The base units for the phones had to incorporate a blue LED light to deliver a glow to the base of the phone.

To avoid spots of light, the model making team at Ogle created a reflective funnel to sit within the base unit to deliver an even distribution of light. The team then applied the battery pack, switch, and mock USB sockets.

## CONCLUSION

Ogle are extremely proud to have worked on such a prestigious project and was keen to obtain feedback. Industrial Designer at Alloy Matt Harris said: "After paying a visit to Ogle, we were impressed by the range of equipment, the breadth of materials and processes they were able to perform/replicate. It was a pleasure to work with Ogle. The determination of the team to deliver exactly what we wanted, and the openness to try new or different processes, is what sets them apart from others."

**FOR MORE INFORMATION PLEASE CONTACT:**

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