



ADAPTABILITY:

Adapt and innovate with 3D printing



A brand of BASF - We create chemistry



OVERVIEW

Overline Systems has been developing wireless systems since 1981. Their wireless systems are many companies' first choice for halls, theatres, opera houses, parks, and other entertainment events with a high-performance standard, because of their simplicity and audio quality. When creating their headphones for their Broadband UHF intercom system, Overline Systems turned to 3D printing technology to create a frame for their headphones that could easily be changed to address market trends and customer needs. They also needed a fast turnaround time to get their headphones into the market, with economic iterations to final parts.

With 3D printing technology, it was possible to manufacture a high-quality structured frame that is economical and easily customizable. From prototype to final product Overline Systems was able to rely on Sculptheo's 3D printing technology and customer support to manufacture their headsets quickly and efficiently.

The Challenges:

1. Quickly producing headphones with 15 individual components in a single batch.
2. Taking their headphones from prototype to end-use consumer good.



Overline Systems is a French leader in the European wireless market. Founded in 1981, Overline Systems is dedicated to designing, developing, and manufacturing long-range wireless intercom and reporting equipment. Their devices provide robust and reliable tools for broadcasting and entertainment, where reliability and high audio performances are required.

Analogue or digital, wired or wireless, these characteristics make Overline Systems a major player in broadcast, live reporting, live entertainment and all other fields where a high level of reliability and audio performance is necessary.

Overline-Systems.com

"It's a pleasure to work with Sculpteo, the company is really reactive and follows the project as closely as possible to our requests. The final design of the products is very robust and really smart."

- Dorian Martial, Sales Director

Powder Bed Industrial 3D Printing

Overline System's headphones have been designed to be customizable and comprise 15 unique parts. Rather than relying on costly and time-consuming injection molding, Overline Systems turns to additive manufacturing for its flexibility with production, allowing individual pieces to be printed together in the same batch. By producing all parts in one batch, Overline Systems saves time and reduces the overall cost of manufacturing their headphones. With Sculpteo's powder bed industrial 3D printers, parts can be stacked in a 3D build volume, meaning more components can be manufactured simultaneously.

Overline Systems chose the Multi Jet Fusion (MJF) technology and PA12 material to produce their headphones with high-quality results quickly. With MJF technology, Overline Systems can create functional nylon prototypes and end-use production parts in a single day, offering consistent mechanical properties, quality surface finishes, and fine feature resolution.

High-Quality Surface Finish

Overline System's headphones are used at many types of events including ones outdoor, they needed a material that would be stable regardless of weather conditions. With MJF PA12 objects are water resistant and light stabilized making it possible to take an object from functional prototyping to production quickly and economically. The grey surface of MJF PA12 can vary from object to object, making it ideal for prototyping and mechanical tests. For their production needs Overline System's used Color Resist in black as a finishing for their headphones. Giving the headphones that finishing touch to take it from prototype to a final end-use consumer good.

With Color Resist, Overline System's headphones had a matted look that resists friction and scratching or rubbing. Moreover, it gave them a more stable and consistent color between production batches, allowing them to produce identical parts. The Color Resist finish will still give Overline System's headphones the UV-stability and water resistance they need to maintain their color for years to come. Overline System's took their headphones from prototype to a high-quality finished product rapidly and still keeping within their ideal budget.



Overline-Systems prototype part printed in Nylon PA12.



Overline-System's Headphone printed in Nylon PA12.

Finishing Spotlight: Color Resist

Color Resist is a dyeing finish achieved with the DyeMansion Technology. This finish gives your 3D printed parts a matte finish that resists friction. The surface shows a uniform color, with very good quality. Parts that are colored with DyeMansion technology are skin-safe.

In addition, the dye and additives allow for a high UV resistance. Color Resist is a great choice for parts that will often be exposed to UV light but would like the color to stay brilliant and stable over time.

[Learn more about Color Resist](#)
