PROJECT REPORT: SKG WIRELESS CHARGER / DIT INNOVATION VOUCHER IV0415156/ PM18005

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PROJECT OVERVIEW

The aim of this project was to design a smartphone charger suitable for use in the hospitality industry.

The requirements of the project were the following:

1. The device should be able to charge phones wirelessly by placing the phone in a holder/ on a surface
2. It should be suitable for use in the hospitality sector (bars, restaurants, hotels etc)
3. The device should be easy to use
4. It should be wall mountable
5. It should be cost effective to produce
6. It should have the ability to be branded with corporate/ sponsors/ advertisers logos

The following work was completed as part of the project:

01. Research and Brief Definition
The purpose of this phase was to establish the exact technical requirements of the project and would be undertaken in conjunction with the client. Work included:
- Research into the market, competing products and companies
- Research into Induction (wireless) charging circuits and components
- Sourcing of circuits and components for prototyping

02. Concept Generation Phase
The purpose of this phase was to generate potential product concepts. Work included:
- Concept generation, sketching, drawing, rendering visuals
- Presentation of concepts to the company through detailed drawings/ renderings, showing general product concepts and functionality

03. Concept Development Phase
The purpose of this phase was to further develop a chosen concept refine the product. Work included:
- Development single concept following phase 02
- Renderings of the “finished” product for presentation to clients etc
- Overview of agreed dimensions, components, functionality
- Initial drawings for discussion
- Testing of prototype parts (circuits), particularly for effectiveness of induction circuit through different materials and material thicknesses

04. Prototype Development Phase
The purpose of this phase was to finalise the initial design making it ready for production of a prototype suitable for initial testing. Work included:
- Refinement/ changes to the chosen design
- Finalisation of detailing
- Final technical drawings for production of prototype
- Production of a working “mock-up”, a video of which can be seen here: https://www.youtube.com/watch?v=UlUujqKhwlo
3mm PVC with printed graphics slides into frame
SKG Wireless Charging Module
VIDEO OF WORKING PROTOTYPE AVAILABLE HERE:
https://www.youtube.com/watch?v=UlUuJqKhwlo
SEE CAD FILE FOR FULL DIMENSIONS
FLAT PATTERNS - SEE CAD FILE FOR FULL DIMENSIONS