



# Preface

## **\_Preface**

This project is conducted on the 4th and final semester of the Master of Industrial Design at Architecture, Design and Planning, Aalborg University. The project period is from 1st of February to May 23rd.

The project is documented and in two reports; a process report communicating the process from first analysis to final product including research, strategy and concept leading to the final product proposal.

The final product proposal is communicated in the product report illustrating the final product.

## **\_Title**

FLX

## **\_Project theme**

Master thesis

## **\_By**



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## **\_Project duration**

1st of February to 23rd of May 2012

## **\_Supervisor**

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## **\_Number of reports**

4

## **\_Pages**

017

# Formalities

## **\_Synopsis**

Product optimization is the core theme for this master thesis. The project revolves around creating and redesigning a scanner for Martin Professional. The project uses different analysis methods for verifying statement from initial meeting at Martin Professional.

Based on these finding the research phase provides a set of optimization option that are compared with findings from the analysis. This leads to a concept phase where they are merged and a final concept is determined. The concept is detailed in throughout the detailing phase. The main focus in the project has been about adapting optical fibers to add a larger degree of flexibility and usability to a scanner.

## **\_Foreword**

This process report is written by Lasse Qvistgaard Nielsen at Industrial Design, Architecture & Design, Aalborg University as Master Thesis project 2012

The main theme for this report is product optimization in cooperation with Martin Professional, Aarhus.

I would like to thank all participants for their cooperation during the master thesis with regard to user interviews, knowledge sharing and for providing me with products for testing and use.

I would especially like to thank Henrik Sørensen from Martin Professional, Aarhus for being my contact person at Martin Professional.

# Table of content

- 002 – Preface
- 003 – Formalities
- 004 – Table of content

## Final design

- 008 – FLX
- 010 – Design
- 010 – FLX
- 012 – Design
- 012 – FLX satellite
- 014 – Features - RGB LED
- 015 – Features - Handle
- 016 – Features - Durability
- 018 – How it works



# Final design





The logo consists of the letters 'FLX' in a bold, black, sans-serif font, positioned on a solid red rectangular background.

## **\_FLX**

Flex is the newest scanner setup created for Martin Professional. It features an innovative change to have the scanner works and is used. By introducing optical fibers to the scanner a larger area of operation is obtained out matching existing once. Besides FLX features RGB LED system with the ability to blend any imaginable color for maximum effect rejecting the use of old fashion color wheels.





# Design

## Design

The design of FLX has some resemblance to other scanners but difference in some areas. One of the key differences is the size of FLX. By replacing some of the internal components with newer and better technologies the need for a large box is gone.

Compering FLX to existing products of today, on Martin MX-10 Extreme has a neat design matching that of FLX.



## FLX satellite

The FLX satellite has a design following the internal construction and mechanics. This gives the FLX satellite a quite unique look compared to other scanners on the market today.

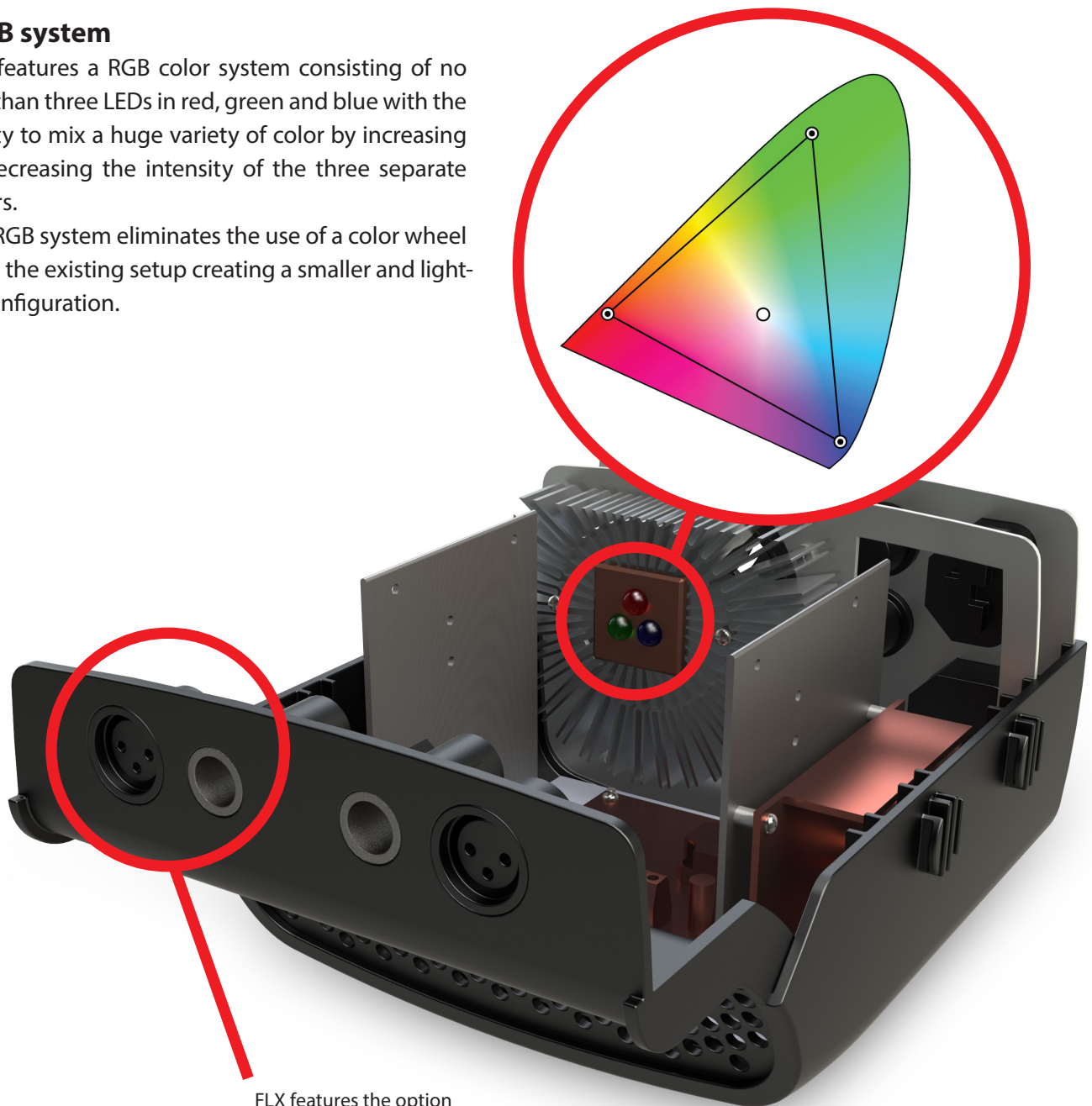


# Features - RGB LED

## **\_RGB system**

FLX features a RGB color system consisting of no less than three LEDs in red, green and blue with the ability to mix a huge variety of color by increasing or decreasing the intensity of the three separate colors.

The RGB system eliminates the use of a color wheel from the existing setup creating a smaller and lighter configuration.



FLX features the option for mounting two FLX satellite lamp to one FLX.

# Features - Handle

## Carrying

The FLX is easy to carry. With the integrated handle there is no longer a need for pulling or lifting in part not mentioned for handling. The reduced weight of approximately 2,5kg makes it easy to carry and install.




# Features - Durability

## **\_Durable plastic**

The shells are made from high durable PA6 plastic, having resistance to all scratches due to a tough surface. The surface also has resistance to almost all kinds of chemical so the product can be cleaned with powerful cleaning detergent without risking destroying the plastic shells

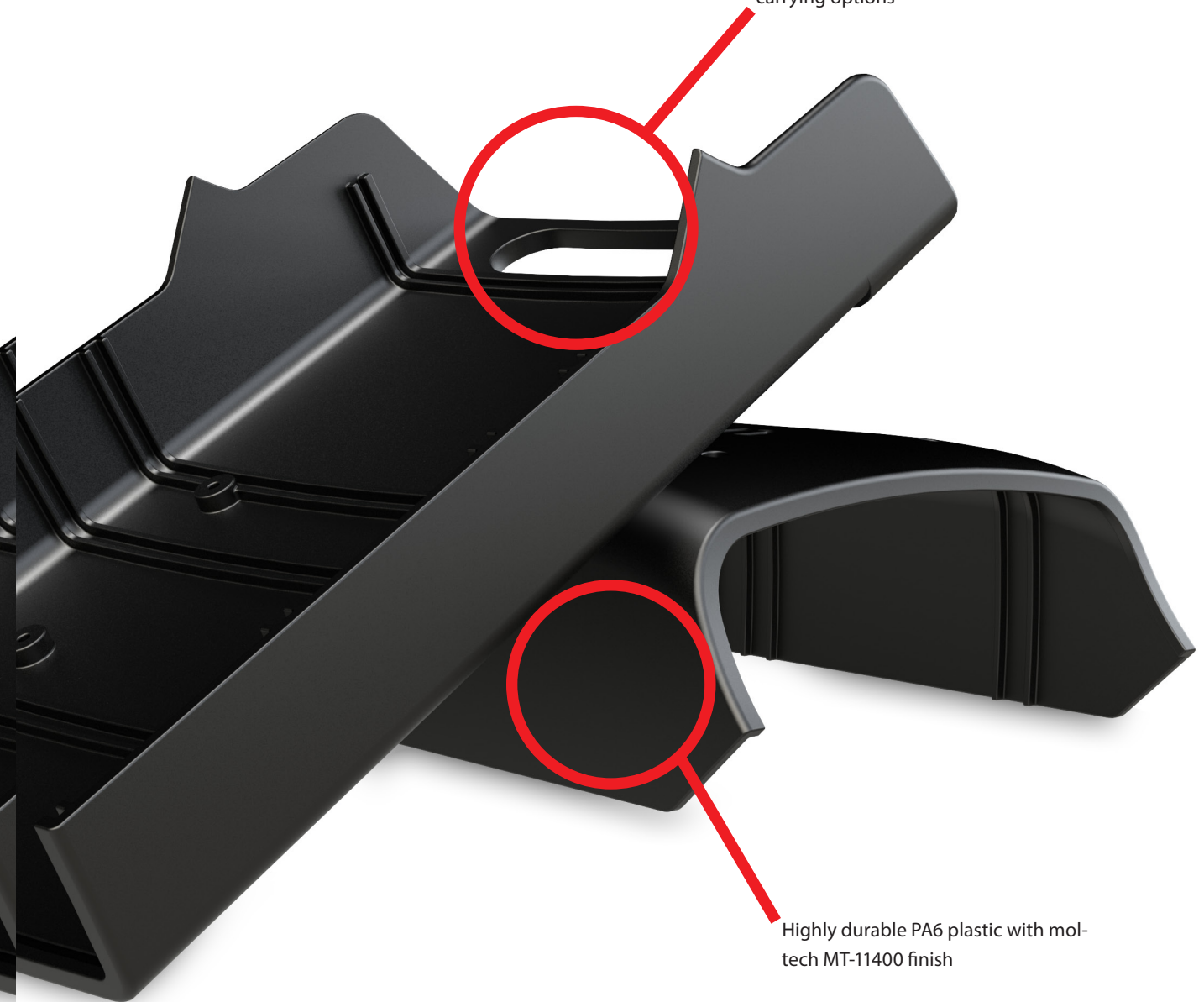
## **\_Finnish**

The finish for the shells are Moltech MT-11040.



Ribs are added to the shells to provide stability to the product and the ability to slide part of the product into place, for a fast, toolless assembling.

A handle is added to the product for better carrying options



Highly durable PA6 plastic with mol-tech MT-11400 finish

# How it works

## **\_How it works**

Colored light coming from the RGB led through the optical fibers enters the FLX satellite lamp. Here movement is obtained through movements similar to that of a spine. Effects is added to the colored light through the gobo at the end of the flexing spine.



