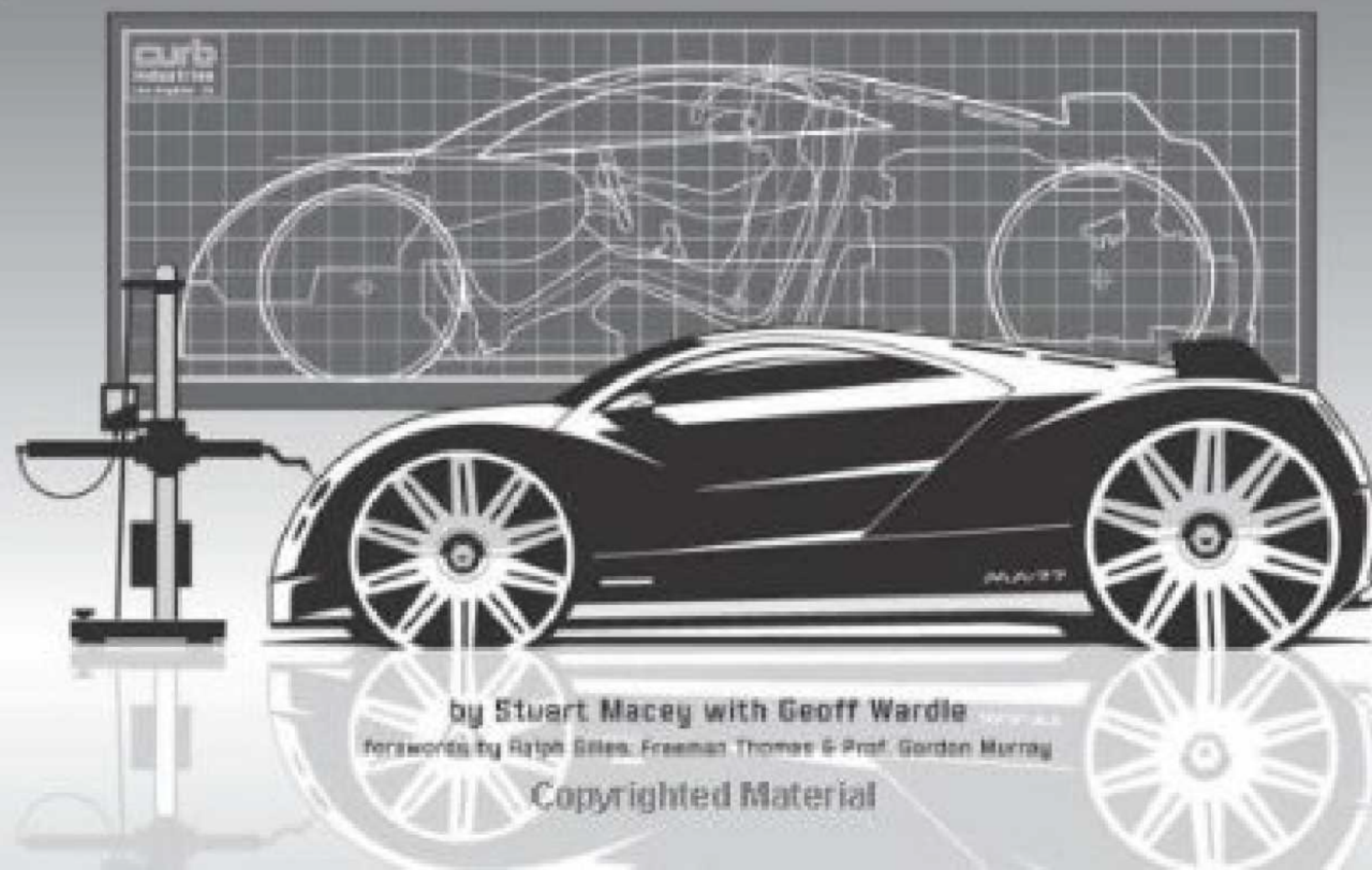


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H•POINT

THE FUNDAMENTALS OF CAR DESIGN & PACKAGING



by Stuart Macey with Geoff Wardle

forewords by Ralph Gilles, Freeman Thomas & Prof. Gordon Murray

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"Fashion dates, but logic is timeless"

SIR ALEC ISSIGONIS – Vehicle architect and designer of the BMC Mini

H-POINT

The Fundamentals of Car Design & Packaging

By Stuart Macey with Geoff Wardle

● Art Center College of Design

designstudio | PRESS 

DEDICATION

This book is dedicated to Alf & Steve Macey.



CONTACT INFO

Stuart Macey - stuart@curbindustries.com

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FOREWORD

The first time I met Stuart his legs were sticking out from under a prototype Minivan. He was literally underneath the van looking for a way to make the seats fold into the floor. Such is his curiosity and deep dedication to problem solving. Stu is the kind of packaging engineer that has an exceptional respect for design. Being an accomplished designer himself he has always recognized that the art of packaging is the great facilitator and ultimately, in the hands of the skilled designer, it is the great differentiator.

As a designer I am a firm believer that proportions are "everything." They are also deeply rooted in nature and our psyche. Much like how a child responds to a cute stuffed animal we respond to well sorted designs. Appealing designs are the direct bi-product of great proportions. Great proportions are the results of judicious packaging work. However, there is no such thing as the perfect car as every car is a compromise in some way. Great package work aims to minimize that compromise and allows the visionary designer and engineers as much freedom of design as possible. Each vehicle design has its mission, whether to maximize interior volume for occupants or to achieve exceptional on track performance or perhaps even to cheat the wind to achieve the best fuel economy possible. Artful packaging is the calculated rationing of these distinctive compromises. Great designers can manipulate this balance of compromises in their favor to create designs that provoke and titillate the senses, often creating an iconic product that punctuates the epoch in the process.

What enables these iconic designs is indeed the true mastery of packaging. As most vehicles are commercial products that must be relevant to the masses, great packaging can give a vehicle a much deeper well of greatness. A vehicle with thoughtful and practical solutions will always have greater staying power. It is up to the astute leadership of the firm and the design visionary to tune this balance of art, business and the forces of the practical consumer. Design can be a victim of flawed packaging as easily as it can be glorified by it. Needless to say, the art of automotive design has momentarily matured. Most packages are being regurgitated over multiple decades and the realities of physics and the wind tunnels are pushing design into a collective corner. The savior comes within our times. We are on the brink of a brave new world of design where once again the components beneath the skin are changing in dramatic ways. With the fundamental change in system components comes the promise of new proportions enabled by creative packaging. New propulsion systems components will allow us newfound design freedom that will certainly have a profound effect on the style of

automobiles yet to be penned. We are an ever evolving species, yet our core needs and instincts remain somewhat constant in the end. As far as the business end of design is concerned, humans will always respond to provocative yet sensibly executed designs. This balance of the sensible and the provocative is what the art of packaging enables.

This book is a lifelong dream of Stu's and the direct byproduct of his passion for the automobile and the fascinating process of its creation. He manages to demystify the design process in a way that will allow aspiring designers to benefit immediately from what amounts to a career's worth of knowledge. Not only is the book artfully done, it is truly substantive and gives the student designer unprecedented access to the inner sanctum of vehicle design. This book is full of extremely helpful insights that help the aspiring designer grasp the fundamentals of good design.

This exceptional amount of information comes together to become an essential tool in the toolbox of an aspiring designer. In other words, it is the decisive bible of automobile packaging.

RALPH GILLES - Vice President of Design, Chrysler Motors

Vehicle design is not pragmatic, it is an art, a rebellious act that must also work and function. Stuart and Geoff have created "the guide" to help every designer and engineer find "the magic" that makes each vehicle design and architecture unique, and come alive in the studio. Certain vehicles have a stance, a look and proportions that tell an aspiring story that creates desirability and an identity. It's the "mojo" that no one seems to be able to explain! Read every word and every page of *H-POINT, The Fundamentals of Car Design & Packaging* and I guarantee it will give you the secrets to finding "the magic!"

FREEMAN THOMAS - Design Director, Ford Advanced Design

INTRODUCTION

In 2002, the Transportation Design Department at Art Center College of Design in Pasadena, California set out to re-focus their vehicle architecture education program. The goal was to help the undergraduate transportation-design students prepare for an automotive industry that was putting greater demands on their design studio teams in a global landscape that was becoming more competitive and complex.

The challenge to the faculty was to develop a syllabus which reflected the real world advanced concept development process and support the class with material that would be palatable to the students who were already in a very challenging educational program. After several years of development, these notes have been assembled to create *H-POINT*.

We have tried to pull together just the right amount of information and present it in a form that can be digested by even the most sleep deprived design student. Fortunately, much of a vehicle's exterior design can be established around a few of the major systems, so at the advanced stages of a project many components can be left out of the package to reduce its complexity. This has enabled us to boil the subject down, not having to describe every component in great detail, but rather to focus on only the key elements that influence the exterior and interior advanced design.

Car design can be a chicken-and-egg process, with the concept being driven by either design (emotion) or the package (logic). Ideally both are developed harmoniously to result in a pure and rational product. The processes used to develop concepts continually evolve as new tools emerge and the products become more and more complex, so the information contained in the following chapters is very generic and can be applied in any design studio environment.

Packaging, or setting up the vehicle architecture, has always been a fundamental element in the creation of a successful product, which is why the main objective here is to empower designers to be part of the package-development process from day one. History is full of examples of vehicles with groundbreaking designs which were driven by an innovative package. Cars like the Chrysler Airflow, VW Beetle, Jeep Wrangler, BMC Mini and the McLaren F1, for example, all pushed automotive design forward in their own way and still influence car design today.

Hopefully, this book will help you create the next historic icon.