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انتشارات موجک

AUTOMATIC FLIGHT CONTROL SYSTEM

PRINCIPLES & OPERATIONS

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به نام خدا

AUTOMATIC FLIGHT CONTROL SYSTEM

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کلیه حقوق مادی و معنوی این اثر برای انتشارات موجک محفوظ است. هیچ شخص حقیقی و حقوقی حق چاپ و تکثیر این اثر را به هر شکل و صورت اعم از فتوکپی، چاپ کتاب و ... را ندارد. متخلفین به موجب بند ۵ ماده قانون حمایت از ناشرین تحت پیگرد قانونی قرار می‌گیرند.

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Preface

This book covers major phases of automatic flight system (A.F.S), from inner loop, outer loop and its interfaces. Each chapter beings by covering the main contents of auto flight system, its basic concept and also contains colored picture to improve training quality. Some A.F.S examples are also available at the end. This book is based on many famous books which were written about automatic flight control system and also updated by recently system improvements. Automatic flight control system varies from aircraft to aircraft but we try to focus on basic concept of each system and also provide many examples about these systems. A multimedia DVD also provided that includes many video clips about automatic flight control system using computer based training soft wares and Microsoft flight simulator 2004. We try to simulate all phases of flight such as cruise flight, approach and landing phase under control of A.F.S. Each phase is simulated and described completely with subtitles, arrows and figures. For more information about this DVD please refer to DVD help section. Finally we hope our efforts to providing this book will be useful for all students and instructor that using this book as a reference.

Foreword

Preparing any text book is a time consuming and often hectic process. The job always goes easier if an author has help. The authors would like to thank the following persons and organizations for permission to reproduce photographs and data in this book:

My great instructor Avionic engineer Mr. ABBAS SARKHEL for all helps and supports, I wish him bests,

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Foreword

Aviation industry is a famous and growing industry.

Among them, airplanes has the most usage by the people because of its universality.

Maybe always, there is always two major question among people about how to ride a plane and how autopilot do it.

In this book, we have tried to answer the mentioned questions general and simple, and not so details and in the case of a specific type of plane.

We hope that this book could answer so many questions of explorer and questioner minds of the young one that like this field, and help workers of aviation industry due to the new methods of it.

I’d like to thank all of my colleagues and professors specially Mr. Zamani, and would like that the readers help us to improve the next editions of this book by sending the writing, printing and content mistakes to my e-mail.(autopilotbook@gmail.com)

H.NOORI OCT 2014

THIS BOOK FORMS AN INTRODUCTION TO PRINCIPLES & OPERATIONS OF BASIC & TODAYS MODERN AUTO PILOTS LIKE AIRBUS & BOEING AIRCRAFTS & THEIR EXAMPLES. THIS BOOK IS A COMPLETELY UPDATED EDITION OF AUTOMATIC FLIGHT CONTROL (E.H.J PALLETT) WHICH INCORPORATES RECENTLY DEVELOPMENTS SUCH AS ELECTRONIC FLIGHT INSTRUMENTS & AFS INTERFACE, FLY BY WIRE, DIGITAL DATA TRANSFER ON MODERN AFS & AFS INTERFAC, FULLY COLORED PICTURES, DIAGRAMS & FIGURES. THIS BOOK ALSO INCLUDES A MULTI MEDIA DVD WHICH CONTAINS SEVERAL CLIPS ABOUT AUTOMATIC FLIGHT CONTROL SYSTEM & ITS INTERFACE WITH OTHER SYSTEM SUCH AS VOR, ILS, FMS & ... .

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