DARcorporation

ACCANCED AIRCRAFT ANALYSIS

ADVANCED AIRCRAFT ANALYSIS (AAA) is the industry standard aircraft preliminary design and stability & control analysis software. With installations in over 45 countries, AAA is being used by major aeronautical engineering universities, aircraft manufacturers and military organizations worldwide.

AAA provides a powerful framework to support the iterative and non-unique process of aircraft preliminary design. The AAA program allows students and preliminary design engineers to take an aircraft configuration from early weight sizing through open loop and closed loop dynamic stability and sensitivity analysis, while working within regulatory and cost constraints.



AAA is used for preliminary design, Class II design and stability and control analysis of new and existing airplanes. Class II design incorporates detailed weight & balance, aerodynamics, stability & control calculations including trim analysis and flying qualities used in conjunction with the preliminary design sequence. Class II design accounts for power plant installation, landing gear disposition and component locations on the airplane. Class II uses more sophisticated methods than Class I and requires more detailed information of the airplane to be known. The accuracy of Class II methods is therefore greater than Class I methods.



AAA can be used for small airplanes all the way up to military and transport airplanes. The program is designed to assist in the design learning process while reserving for the user the individual creative judgment which is essential to the process of airplane design. AAA applies to most fixed wing configurations (civil and military aircraft) and allows design engineers to rapidly evolve an airplane configuration from weight sizing through detailed performance calculations and cost estimations. All applicable performance and flying quality regulations are available in the AAA program. This provides the designer with an instant appraisal of the status of the design relative to these regulations.

The design methodology used in Advanced Aircraft Analysis (AAA) is based on the texts Airplane Design, Airplane Flight Dynamics and Automatic Flight Controls, by Dr. Jan Roskam, and Airplane Aerodynamics and Performance, by Dr. C.T. Lan and Dr. Jan Roskam. AAA incorporates the methods, statistical databases, formulas and relevant illustrations and drawings from these references. Please visit our online store to purchase these and other high-quality aeronautics resources.

ADVANCED AIRCRAFT ANALYSIS (AAA) can be installed as a Floating or Node Locked License. We offer educational and multiple license discounts. We also offer a limited time and functioning version of AAA for trial use and evaluation.



ACVANCED AIRGRAFT ANALYSIS

SOFTWARE TRAINING:

AAA is a powerful engineering tool that is easy to learn, but new users will find our software training program beneficial to quickly acquaint themselves with the software features and individual modules.

The training is structured to both the new and experienced users of AAA, to learn software shortcuts and how to fully utilize the extensive Help system.



The AAA Software Training is offered at DARcorporation, at individual companies and online. Each class is personalized to the student's specific needs and allows direct interaction with the instructor while being taken through the program's layout, organization and advanced features. The theory behind the calculations are presented, and the help system is explained in detail. Please visit our website or contact DARcorporation for additional information.



Advanced Aircraft Analysis consists of 10 modules

Each module is designed to perform tasks which need to be completed to evaluate the characteristics of a given aircraft at each stage of the preliminary design.

Weight

Weight Sizing Class I Weight Class II Weight Component Center of Gravity

Performance

Performance Sizing Performance Analysis

Dynamics

Dynamics Control

Stability & Control

Stability & Control Derivatives Hingemoment Derivatives Stability & Control/Empennage Sizing Analysis

Loads V-n Diagram

Structural Loads

Geometry Propulsion Cost Analysis

70 MB Free Space

Aerodynamics

Aerodynamic Center

Dynamic Pressure Ratio

Lift

Drag

Moment

Structures

Materials

Class I Sizing

Power Effects Ground Effects



Hard Disk:

Screen Resolution: 1024 x 768

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