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Aircraft Performance Program Part 2: Installing and running Programs APP02 and APP03

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AIRCRAFT PERFORMANCE PROGRAM

PART 2: INSTALLING AND RUNNING PROGRAMS APP02 AND APP03

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AIRCRAFT PERFORMANCE PROGRAM

PART 2: INSTALLING AND RUNNING PROGRAMS APP02 and APP03

1. INTRODUCTION

This Data Item provides instructions for installing and executing the suite of programs that comprise the ESDU Aircraft Performance Program referred to as the APP throughout this Item. There are, in all, two programs, which are written in ANSI FORTRAN and supplied as compiled executable binary files, *i.e.* those that have the extension EXE, which at present can operate on a PC running a 32-bit or 64-bit Microsoft® Windows operating system. They are defined as follows.

(1) Flight Performance Program, APP02

This program comprises a series of aircraft performance routines, which are executed as specified by the user in the input data file. An output file is created upon completion, which lists the results of relevant calculations in tabular formats.

The name of the Flight Performance Program is of the form APP02v##.exe[†].

(2) Interpolation Program, APP03

This program enables interpolation calculations to be performed on tables used by the Flight Performance Program.

The name of the Interpolation Program is of the form APP03v##.exe[†].

These programs are known as ESDUpacs. Definitions of terms relating to ESDU software appear in Reference 63.

[†] The symbols ## refer to an encoded version number of the program. For example, if the program version number is 2.1, then ## is a representation of 21. For the case of APP01 Version 2.1, APP01v##.exe refers to APP01v21.exe. These symbols are used throughout this documentation.

2. INSTALLING APP PROGRAMS

The suite of programs form part of the ESDUscope CD-ROM installation. Alternatively, it can be obtained by downloading a zip file from the ESDU website or an ESDU Standard Intranet.

2.1 Installation of APP by ESDUscope CD-ROM

When the ESDUscope CD-ROM has been installed on a PC, the suite of APP programs will be located in the appropriate section of the ESDUscope folder hierarchy defined during the installation process[†]. Version ## of the suite of programs, and its associated files, will be located in the folder C:\ESDU\ESDUpacs\APPv##, where C:\ESDU is the default root folder.

Further information relating to the ESDUscope package can be found in Reference 64.

2.2 Installation of APP from ESDU Web site or ESDU Standard Intranet

In order to install the suite of programs on a PC, web subscribers/Standard Intranet users need to download the compressed file APPv##.zip from the ESDU website/Standard Intranet, and subsequently unzip its contents into a folder that provides the user with read and write access[‡].

References 65 and 66 provide an overview of accessing the ESDU product via the ESDU website and Standard Intranet respectively.

The APPv##.zip file may be downloaded from the Performance Series page using the associated link to ESDU Data Item No. 00032, which is contained in Section 26 (Aircraft Performance Program). The ESDUpac titled APP should be selected. Subsequently the “download the zip file ep-appv##.zip” link should be selected.

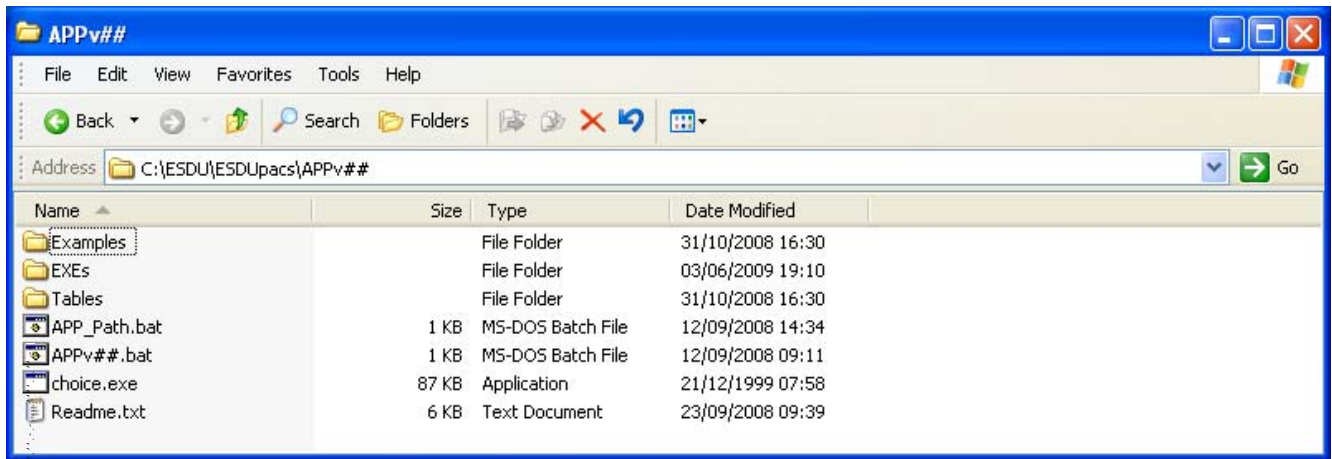
[†] To install the ESDUscope CD-ROM, or to update an existing installation, refer to the appropriate **ESDUscope CD Installation Notes**, which are contained within the Software Volume.

[‡] The path C:\ESDU\ESDUpacs\APPv## will be assumed throughout this document

3. APP AND ASSOCIATED FILES

Sketch 3.1 illustrates the contents of a folder in which the suite of programs that comprise the Aircraft Performance Program have been installed (in this instance, C:\ESDU\ESDUpacs\APPv##). Note that all files have been assigned read-only status. If modifications are to be performed to any file, its status must be changed.

The files are listed below.



Sketch 3.1 Contents of root folder of APP

3.1 Examples

A family of test case data files, which have been assigned read-only status, is provided in the EXAMPLES\APP02 sub-folder. These test cases, and their associated input files, which have an extension of IN, and output files (the extensions of which have been changed to REF) are,

Point Performance:

• Cruise at given power setting	SINGLE.IN	SINGLE.REF
• Ceiling and Specific Excess Power	SUBSONIC.IN	SUBSONIC.REF
• Sustained turn and maximum speed	COMBAT.IN	COMBAT.REF
• Cruise and loiter at given speed	TPORT.IN	TPORT.REF
• Take-off safety speed	FLAPS.IN	FLAPS.REF