

AEROSPACE RECOMMENDED PRACTICE

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A

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Guide for Preparing an ECS Computer Program User's Manual

1. PURPOSE:

- 1.1 The purpose of this recommended practice is to provide aircraft industry with guidelines as to the pertinent information which should be contained in a user's manual for an environmental control system (ECS) computer program.
- 1.2 This recommended practice is intended to facilitate the preparation of a user's manual without unduly restricting its format or content.

2. SCOPE:

- 2.1 These recommendations apply to the user's manual for any computer program pertaining to aircraft ECS. This includes computer programs for:
 - a. Cabin air conditioning and pressurization performance.
 - b. Avionics equipment cooling system performance.
 - c. Engine bleed air system performance.
 - d. Compartment and equipment thermal analysis.
 - e. Environmental protection system performance.

These recommendations apply to user's manuals for generalized computer programs as well as those for a specific component or system.

- 2.2 The user's manual is a document which defines all procedures necessary for a user to initiate and utilize the program and obtain output data. The user's manual does not normally contain procedures or information required solely for modifying the program. Such procedures or information are contained in a programming or operator's manual; however, they may be contained in supplemental documentation to the user's manual.
- 2.3 These recommendations apply to computer programs which will be voluntarily released to users or are required to be released by contract. It is the intent of this recommended practice that proprietary data not be included in the user's manual.

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3. GENERAL REQUIREMENTS:

- 3.1 A user's manual should be prepared in conjunction with each ECS computer program. Both the computer program and user's manual should be validated prior to submittal to any user.
- 3.2 The manual should include sufficient information to provide personnel unfamiliar with the program the necessary instructions to readily use the program.
- 3.3 The computer user's manual should describe in detail all procedures necessary for the user to initiate and utilize the program. User's manuals which pertain to a particular ECS should include a complete description of the system modeled on the computer program. This should include a discussion of the method of system operation and the associated controls.

4. FORMAT AND CONTENT:

- 4.1 The user's manual format and content should be specifically designed to meet the needs of the intended users. Each manual should be organized to explain the program in terms of application, operation, and limitations.
- 4.2 The user's manual should be as self-contained as possible. Reference to other documents should be minimal. It should contain an index for cross referencing all volumes of the user's manual if it consists of more than one volume.
- 4.3 The user's manual need not include developments for equations and techniques used in the program. These should be included as a reference.
- 4.4 The level of comprehension for each manual should be appropriate for the intended users of the manual. The manual should identify the level of experience expected of the user. Usually, the user will be an ECS engineer who uses the program to do analyses.