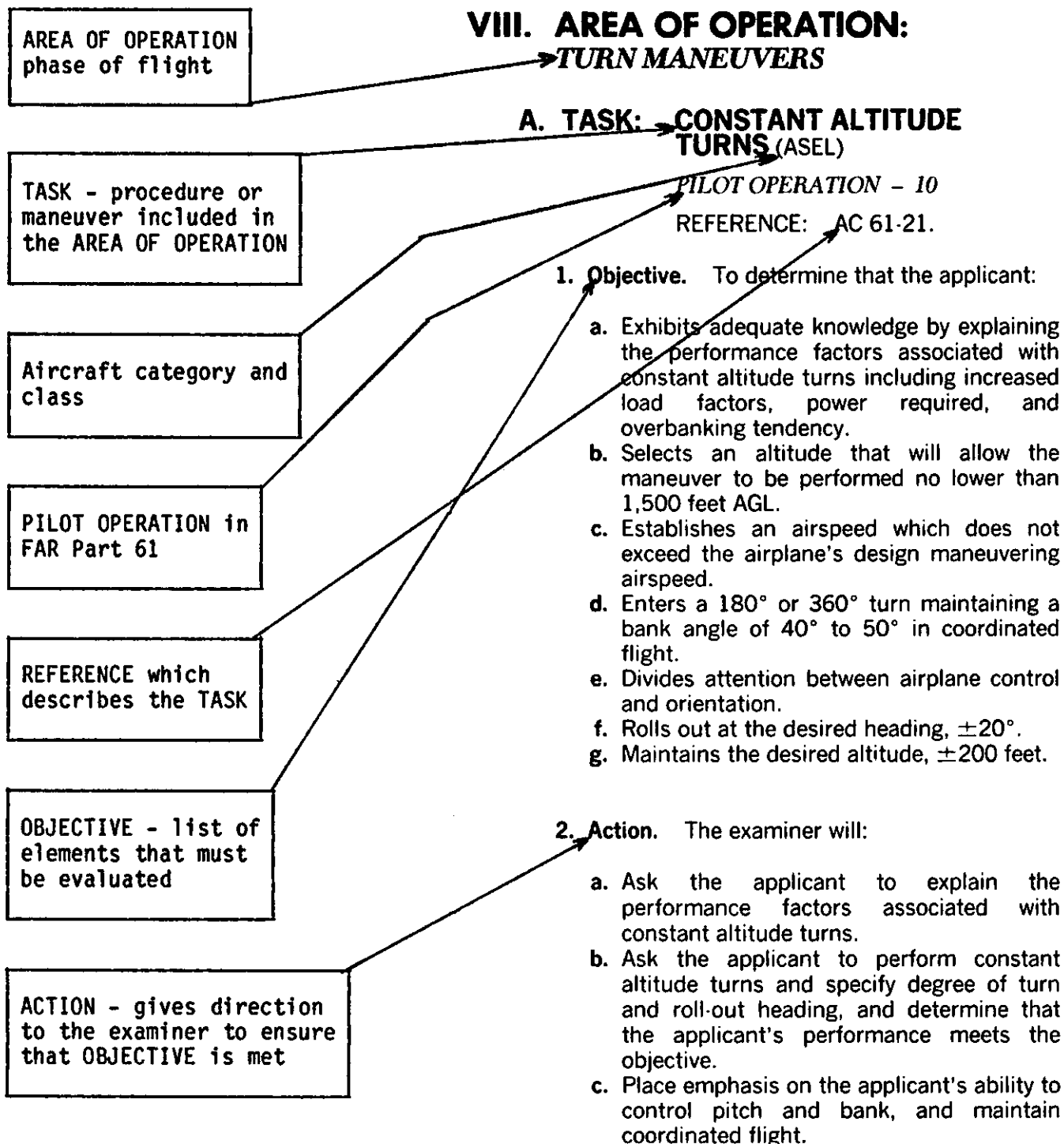


APPENDIX 1. EXAMPLE OF FORMAT



U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

# Advisory Circular

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WASHINGTON, DC 20591

**Subject:** REPLACING THE FLIGHT TEST  
GUIDES WITH PRACTICAL TEST  
STANDARDS

**Date:** 3-27-84  
**Initiated by:** AVN-130

**AC No:** AC 61-93  
**Change:**

1. PURPOSE. Informs the aviation industry and interested individuals of the forthcoming cancellation of the advisory circular flight test guide publications which will be replaced by a new system of practical test standards publications and to explain the concept and format of these standards.

2. BACKGROUND.

a. The Federal Aviation Act of 1958 gives the Federal Aviation Administration (FAA) Administrator the responsibility to establish standards for the issuance of pilot certificates, as necessary, to ensure the safe operation of aircraft. In keeping with those responsibilities, the FAA in addition to developing regulations has revised the present flight test guides and will publish them as practical test standards under the system of standards. These new standards will be used to evaluate applicant knowledge and skill in all pilot certification areas.

b. During the past several years, the FAA has provided pilot examiners with training concerning the conduct of pilot certification flight tests. Pilot examiner comments and a review of accident data have revealed that the present flight test guides and testing procedures are in need of updating to reflect the increasing complexity of modern aircraft and its operating environment. In addition, there is a need to clarify the FAA's intent in publishing pilot certification standards.

c. In 1960, the Federal Aviation Agency's Bureau of Flight Standards began publishing flight test guides. These guides were designed to assist pilot applicants, pilot examiners, and FAA inspectors in preparing for and administering certification flight tests by explaining the procedures, maneuvers, and standards set forth in the Civil Aviation Regulations. These regulations evolved into the current Federal Aviation Regulations.

d. The FAA's advisory circular system was established in the mid-1960's to provide a method for publishing information of an advisory nature for the benefit of the aviation community and the public. The flight test guides were placed into the advisory circular system in 1965 to serve as an acceptable means of explaining the specific pilot certification test standards.

e. FAR Part 61, Certification: Pilots and Flight Instructors, which was revised in 1973, introduced the "total operational training concept." Under this concept, the regulation states pilot proficiency requirements in broad rather than specific terms. This is a departure from the previous wording of FAR Part 61

which listed specific flight procedures and maneuvers along with standards of performance. The present regulation states required pilot proficiency requirements in terms of pilot operations. Pilot operations are intentionally stated in broad terms so necessary changes can be made to test procedures and maneuvers. This provides for the continual upgrading of pilot certification standards to reflect the increasing complexity of the modern aircraft and its operating environment. Changes can also be made to place emphasis on certain maneuvers or procedures identified during accident or incident investigations. This also enables the FAA to change various test procedures and maneuvers found in advisory circulars such as AC 61-21, Flight Training Handbook; AC 61-27, Instrument Flying Handbook; and AC 61-13, Basic Helicopter Handbook. The procedures and maneuvers used in the practical tests are selected from such publications.

f. The general standards of performance are retained in the regulation and have been used as the basis for specific standards of pilot competency. Because of the ever changing process of evaluating airman performance, the specific test standards were placed in flight test guides under the advisory circular system. Over the years, this change resulted in certain misunderstandings and confusion in both the method and conduct of the actual flight test. Some users interpreted the flight test guides as mandatory testing requirements while others felt they were merely an example of how a practical test should be conducted. To emphasize its intent, the FAA provided instructions to pilot examiners and FAA inspectors stating that flight tests should be conducted in accordance with the flight test guides.

g. To fulfill its responsibilities under the Federal Aviation Act of 1958 and to clarify its intent, the FAA will publish pilot test standards in practical test standards books under a system of standards. A standard is an authoritative model or measure which is used to judge pilot competency or suitability to operate an aircraft and is recognized as necessary for the safety and consistency of pilot performance. This change will not only improve the certification process, but will align the practical test standards with the airmen written tests which historically have been published in the standards system. This change also reiterates the FAA's intentions that all pilot certification practical tests be given in accordance with the appropriate practical test standards. The new standards publication will fulfill the FAA's responsibility for providing specific guidance to pilot examiners and FAA inspectors.

h. Users of the flight test guides have provided feedback to the FAA concerning content and usability. Those comments have often expressed the need for a major redesign of the guides to provide more specific guidance to applicants, flight instructors, pilot examiners, and FAA inspectors. It was also suggested that a system of revision be developed that would lend itself to maintaining current material in the guides and improving communications concerning certification standards between the FAA and the aviation public.

i. A review and analysis of aircraft accident and incident data has shown that added areas of emphasis should be included in the pilot testing process to diminish undesirable accident trends and improve safety. To emphasize those areas and to provide an effective means of providing this information to flight instructors, pilot examiners, and FAA inspectors, timely revisions of the practical test

standards books are essential. Among the factors dictating such revisions are changes in the aviation environment and equipment, and developments in the state-of-the-art.

j. During initial development of the new practical test standards, it became apparent that the contents of the present flight test guides should be greatly expanded to include problem areas highlighted by accident data and modernization of aircraft, aircraft equipment, and the airspace system. However, in an effort to minimize the time spent on practical tests and to lessen the financial burden on the public, only those procedures and maneuvers considered essential to safe flight are listed in the new practical test standards.

### 3. PROCESS OF DEVELOPMENT.

a. The FAA researched authoritative sources on testing objectives and evaluation of pilot skills in preparation for the development of the practical test standards. This research led to the outline format used which replaces the narrative format found in the flight test guides. This format can be used more readily by instructors, examiners, and FAA inspectors in teaching and evaluating pilot's knowledge and skill.

b. The FAA developed a questionnaire which was sent to selected groups and individuals in the field of aviation training. The questionnaire included pertinent questions regarding the content and use of the proposed practical test standards. The FAA also solicited comments concerning format and specific standards of performance. Responses to the questionnaire generally approved the proposed concept and, with few exceptions, approved the format and new approach to evaluating pilot's knowledge and skill.

c. Early in the development process, the FAA decided to incorporate the testing areas encompassed in the 13 advisory circular flight test guides into six looseleaf practical test standards books. Each book will be divided into sections which will apply to a particular aircraft category and class. For example, the Private Pilot Practical Test Standards book will include:

- Section 1 - Airplane Single-Engine Land
- Section 2 - Airplane Multiengine Land
- Section 3 - Airplane Single-Engine Sea
- Section 4 - Airplane Multiengine Sea
- Section 5 - Rotorcraft Helicopter
- Section 6 - Rotorcraft Gyroplane
- Section 7 - Glider
- Section 8 - Lighter-Than-Air, Airship
- Section 9 - Lighter-Than-Air, Free Balloon

The other five books are the Commercial Pilot, Airline Transport Pilot, Type Rating, Instrument Rating, and Flight Instructor. These books will be divided into sections similar to that described for the private pilot.

d. Draft copies of the various Private Pilot Practical Test Standards were reviewed by recognized aviation industry authorities who contributed valuable assistance in the development of the performance standards. To ensure that the

performance standards are appropriate for the private pilot's knowledge and skill level, evaluation flights were conducted by the FAA under controlled conditions using FAA inspectors and pilots. Several pilots used in this program had experience levels comparable to that of private pilot applicants. A similar program will be used in the development of performance standards in the other pilot certification areas.

#### 4. DESCRIPTION OF THE PRACTICAL TEST STANDARDS BOOKS.

a. The practical test standards books will be looseleaf, 5-1/2" x 8-1/2", and 7-hole punched for insertion into binders. This feature will enable the FAA to distribute revisions of pages to all subscribers as necessary. Revision will be made as a result of changes in regulations, pilot certification procedures, and areas upon which emphasis will be placed during training and evaluation. When available, the practical test standards books may be purchased on a subscription basis from:

Superintendent of Documents  
U.S. Government Printing Office  
Washington, D.C. 20402

or from U.S. Government Printing Office bookstores located in major cities throughout the United States. Ordering instructions, prices, and stock numbers will be given in AC 00-2, Advisory Circular Checklist. AC 00-2 is free and may be obtained from:

Department of Transportation  
Distribution Unit, M-494.3  
400 7th Street, S.W.  
Washington, D.C. 20590

b. The practical test standards are designed to require evaluation of the pilot's knowledge and skill. There is no formal division between the "oral" and "flight" portions of the practical test. It is intended that the examiner ask pertinent questions at any time during the test to determine that the applicant possesses adequate knowledge about the TASKS and related safety factors.

c. Each practical test standard is divided into AREAS OF OPERATION which are phases of flight arranged in a logical sequence beginning with the flight's preparation and ending with the flight's conclusion. However, the practical test may be conducted in any sequence that results in a complete and efficient test.

d. An AREA OF OPERATION includes a number of TASKS which are procedures and maneuvers appropriate to that AREA OF OPERATION. The aircraft categories and classes appropriate to the TASKS are abbreviated in capital letters enclosed in parentheses immediately following each TASK title. The PILOT OPERATION that appears below the TASK relates it to the FAR Part 61 requirement. Reference sources that provide descriptions of the TASKS (procedures and maneuvers) are listed below the PILOT OPERATION. Publications other than those listed may be used for references if their contents convey substantially the same meaning as those referenced. It should be noted that the TASKS are presented in brief outline format indicating WHAT should be accomplished. The description of HOW to perform the TASK may be found in the references.

e. Each TASK contains an OBJECTIVE and an ACTION. The OBJECTIVE lists, in sequence, the important elements that must be satisfactorily performed by the applicant to demonstrate competency in the TASK. The OBJECTIVE includes:

- (1) specifically what the applicant should be able to do,
- (2) the conditions, if applicable, under which the TASK is to be performed, and
- (3) the minimum acceptable standards of performance.

f. The ACTION directs the examiner to the essential knowledge and skill elements that should be satisfactorily demonstrated by the applicant to ensure that the TASK OBJECTIVE is met. Also, the ACTION alerts the examiner to areas upon which emphasis will be placed. (See appendix 1 for example format.)

#### 5. USE OF THE PRACTICAL TEST STANDARDS.

a. The FAA requires its examiners and inspectors to conduct each practical test in compliance with the appropriate practical test standards for the issuance of a pilot certificate. When using the practical test standards, the applicant's knowledge and skill will be evaluated in sufficient depth to determine that the standards of performance listed for all TASKS are met.

b. When the examiner determines, during the performance of one TASK, that the knowledge and skill objective of a similar TASK is met, it may not be necessary to require the performance of the similar TASK.

c. When the demonstration of a TASK is not practicable, e.g., night flying; operation over a congested area or unsuitable terrain; a demonstration that does not conform to the manufacturer's recommendations; or for other valid reasons; competency may be evaluated by oral testing.

d. Of utmost importance is the examiner's ability to recognize the applicant's weaknesses as well as satisfactory performance. The examiner will place special emphasis on areas of aircraft operation which are most critical to flight safety, such as:

- (1) correct aircraft control usage,
- (2) sound aeronautical judgment in decisionmaking,
- (3) stall/spin awareness,
- (4) spatial disorientation,
- (5) collision avoidance,
- (6) wake turbulence avoidance,
- (7) knowledge of low level wind shear, and
- (8) use of the appropriate checklist.

e. Numerous studies indicate that many accidents have occurred when the pilot's attention has been distracted during various phases of flight. A significant number of these accidents may have been avoided if the pilot had used correct control technique and proper division of attention. To strengthen this area of pilot training and evaluation, the examiner will use realistic distractions throughout the practical test to evaluate the applicant's ability to divide attention while maintaining safe flight.

f. The practical test standards will include only those TASKS that contain the knowledge and skill elements essential to safe aircraft operation. The applicant's success or failure on a practical test depends upon the satisfactory performance of the various TASKS. The improper performance of a TASK may clearly indicate failure, while marginal performance in other TASKS may not necessarily constitute failure of the test. The examiner must closely observe the applicant's performance and use judgment to decide, without doubt, whether the applicant meets the required performance standards. If, in the judgment of the examiner, the applicant fails any TASK, the associated PILOT OPERATION is failed and therefore, the practical test is failed. After failure, the applicant is entitled to credit for only those PILOT OPERATIONS satisfactorily performed. However, during the retest and at the discretion of the examiner, any TASK may be re-evaluated including those previously passed.



Kenneth S. Hunt  
Director of Flight Operations