

DATA ITEM DESCRIPTION			Form Approved OMB No. 0704-0188	
Public reporting burden for this collection of information is estimated to average 110 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.				
1. TITLE		2. IDENTIFICATION NUMBER		
Human Engineering Test Plan		DI-HFAC-80743A		
3. DESCRIPTION/PURPOSE				
3.1 The Human Engineering Test Plan details the proposed testing to demonstrate that the personnel-equipment/software combination can accomplish the intended operation and maintenance functions in accordance with system specifications.				
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4. APPROVAL DATE (YYMMDD)	5. OFFICE OF PRIMARY RESPONSIBILITY (OPR)	6a. DTIC APPLICABLE	6b. GIDEP APPLICABLE	
940526	MI			
7. APPLICATION/INTERRELATIONSHIP				
7.1 This Data Item Description (DID) contains the format and content preparation instructions for the Human Engineering Test Plan resulting from the work task delineated in 5.3 of MIL-STD-46855.				
7.2 Not for use by the Army.				
7.3 This DID is related to DI-HFAC-80740A, "Human Engineering Program Plan" and DI-HFAC-80744A, "Human Engineering Test Report" (Continued on Page 2)				
8. APPROVAL LIMITATION		9a. APPLICABLE FORMS	9b. AMSC NUMBER	
			A7022	
10. PREPARATION INSTRUCTIONS				
10.1 <u>Reference documents</u> . The applicable issue of the documents cited herein, including their approval dates and dates of any applicable amendments, notices, and revisions shall be as specified in the contract.				
10.2 <u>General</u> . The Human Engineering Test Plan shall detail the contractor's plan for gathering and analyzing data to show that the system, when fielded, will satisfy four criteria:				
a. All human performance requirements for operations and maintenance can be performed to an acceptable level or standard under conditions of expected use.				
b. The human performance requirements for operations and maintenance can be performed reliably by personnel reasonably representative of the military personnel who will ultimately perform them.				
c. Both the cost (in terms of all resources required) and some measure (based on human performance time and error data) of prospective effectiveness of the contractor's training program for operations and maintenance are known.				
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11. DISTRIBUTION STATEMENT				
DISTRIBUTION STATEMENT A: Approved for public release; distribution is unlimited.				

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Block 3, DESCRIPTION/PURPOSE (Continued)

3.2 This plan serves as the principal means of planning for validating human performance requirements, accuracy of personnel selection criteria, adequacy of training, and acceptability of design of the personnel-equipment/software interface.

Block 7, APPLICATION/INTERRELATIONSHIP (Continued)

7.4 This DID supersedes DI-HFAC-80743.

Block 10, PREPARATION INSTRUCTIONS (Continued)

d. The design of system hardware and software facilitates efficient, safe, and accurate human performance.

10.3 Format. The Human Engineering Test Plan format shall be contractor selected. Unless effective presentation would be degraded, the initially used format arrangement shall be used for all subsequent submissions.

10.4 Content. The Human Engineering Test Plan shall contain the following:

10.4.1 Introductory information. Introductory information shall include the following:

- a. Title descriptive of each test to be conducted.
- b. Identification of equipment (or concept) being tested.
- c. Statement of the task groups (or portions thereof) being reported. (A list, in sequential order, of all the discrete performance tasks--with critical tasks identified--which will be required of each person in the system.)
- d. Purpose of tests.
- e. Objective(s) of tests (if different from 10.4.1.d.)

10.4.2 Test design. Identification of test conditions, performance measures, sample sizes, and sequence of test events.

10.4.3 Test methods and controls. Description of procedures to be followed in conducting each test. Explanation of how environmental variables and other factors which could affect the performance measures will be controlled or described, including where relevant:

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Block 10, PREPARATION INSTRUCTIONS (Continued)

- a. Noise.
- b. Illumination level.
- c. Shock and vibration.
- d. Air temperature and humidity.
- e. Ventilation.
- f. Exposure to toxic or hazardous substances.

10.4.4 Test participants. General description of the personnel population from which test participants will be selected. Identification and justification of test participant selection criteria. Identification of methods by which data describing actual test participants will be gathered, including where relevant:

- a. Age.
- b. Weight.
- c. Sex.
- d. Body dimensions relevant to performance tasks (3.2 and 5.6 of MIL-STD-1472).
- e. Visual acuity.
- f. Hearing level.
- g. Existence of physical disabilities.
- h. Educational and work experience.
- i. Prior experience relevant to performance tasks.

10.4.5 Training of test participants.

- a. Type and amount (in hours) of system-specific pre-test training planned for test participants.
- b. Any end-of-training comprehension test administered to test participants before test data-gathering begins.

10.4.6 Equipment involved.

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Block 10, PREPARATION INSTRUCTIONS (Continued)

10.4.6.1 Description of mockup or equipment on which tests will be conducted (including material to be used and type of fabrication, dimensions, and cross-reference to drawings or sketches).

10.4.6.2 Identification of other, non-system equipment involved in tests (including all equipment to be worn, carried or otherwise borne on the body of test participants such as weapon, communications equipment, headgear, survival equipment, protective mask and night vision equipment).

10.4.7 Data collection. Detailed description of the instrumentation or other means which will be used to obtain raw data on each of the performance measures. Identification of forms, if any, that will be used for recording data. Description of the frequency and means by which data on environmental variables and other extraneous factors will be collected.

10.4.8 Data reduction. Detailed descriptions of techniques to be used for transformation and combination of raw data, statistical techniques to be employed and assumptions pertaining to the use of each (e.g., normally distributed), and confidence levels selected.

10.4.9 Data analysis. Explanation of how the data collected will be used in:

a. Human performance error analysis (e.g., "calculating operator error rate for mission-critical tasks").

b. Identifying incompatibilities among human performance and equipment.

c. System safety analysis.

d. Logistics and maintainability assessment(s).

e. Calculating system reliability, availability, and effectiveness.

10.4.10 Test reporting. Identification of tests for which a "Human Engineering Test Report", DI-HFAC-80744A, shall be prepared and tentative date(s) of initial submission.