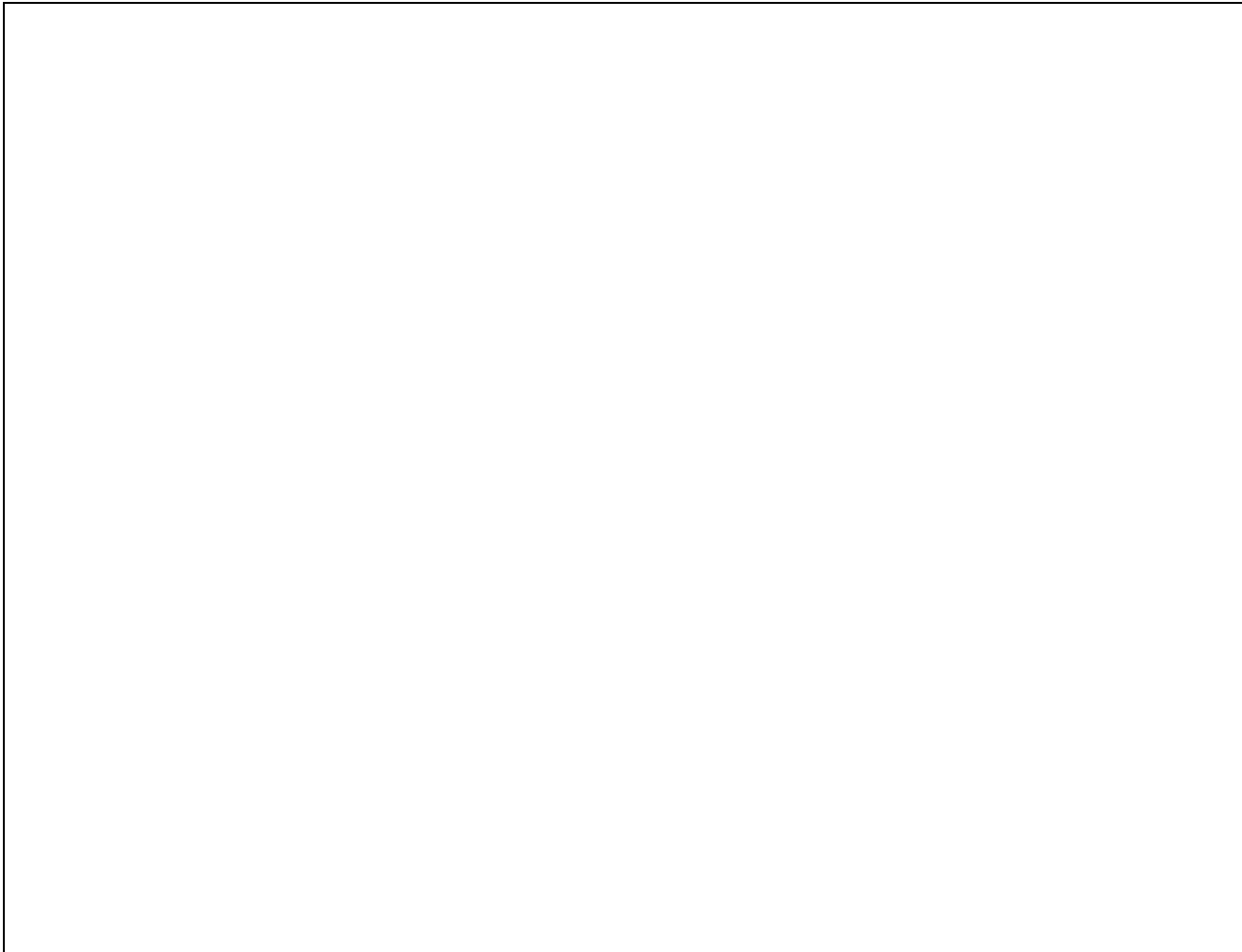


DATA ITEM DESCRIPTION	2. Identification	
	Agency	Number
1. Title COMPUTER PROGRAM TEST PROCEDURES	BIW/LYS (DDG)	T19
3. Description or Purpose 3.1 Test Procedures present detailed instructions for test execution and for evaluation of the results for each level of testing specified. They provide for the quantitative results of tests which are later extracted from the test themselves. The procedures are developed from the Test Specifications and relevant design documents. They present detailed instructions for test setup, execution, and evaluation of the test results.	4. Approval Date 8/17/01	
	5. Office of Primary Responsibility BIW D-87EE	
	6.	
7. Application or Interrelationships 7.1 The Test Procedures are intended for use by personnel responsible for verification of program content. 7.2 This data item description satisfies the requirements of Paragraph 5.8 of DOD-STD-1679A (NAVY) for a Computer Program Test Procedures.	8.	
	9. References (Mandatory as cited in Block 10) DOD-STD-1679A (NAVY)	
10. Preparation Instructions 10.1 <u>Content and Format Instructions</u> The computer Program Test Procedure shall be in accordance with the following content and format instructions. 10.1.1 <u>General Instructions</u> : The Test Procedures shall state, in general terms, the organization or structure of the procedure and any assumptions or constraints imposed on its usage. The Test Procedures shall present the detailed instructions for the setup and operation of each test. They shall describe the total equipment, manpower, digital processor programs, and supporting documentation required for operation. If various modes of operation are possible, the requirements for each mode shall be specified if they differ from the total requirements. Equipment required for operation shall be identified by official nomenclature. Any revisions or modifications to these equipments shall be specified as well as any pretest checkout of the hardware required to ensure a valid test environment. The following are typical elements of the format that must be considered within the Test Procedures Document: 10.1.1.1 <u>Materials</u> A list of all specifications, procedures, handbooks, manuals, magnetic or paper tapes, card decks, and program listings for performance of the test, including the number required by job classification or experience level, shall be included. 10.1.1.2 <u>Personnel</u> The specific personnel requirements necessary for execution of the test, including the number required by job classification or experience level, shall also be included. 10.1.1.3 <u>Setup</u> The Procedure shall indicate all switch settings and cabling necessary to connect the equipments and state their precise names and locations.		



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<p>10.1.1.4 <u>Energize</u> Block diagrams shall indicate the equipments and the interconnecting control and data paths. The steps necessary to apply power to each equipment in the system shall also be explained or references shall be made to the pertinent equipment manuals.</p> <p>10.1.1.5 <u>Load and Step</u> The Procedure shall identify the program by approved nomenclature, indicate its recorded medium (i.e., punched tape, magnetic tape, disk pack, or punched cards), and shall present step-by-step procedure for loading the program into the digital processor. The identification of and the instructions for program initialization and setting of pre-stored parameters shall also be provide. In general, each step of the procedure shall be precise and unambiguous and each step shall be listed as an individual item. Steps shall be listed in the order in which they must be performed and each step results in a definite response and the nature of the response shall be described in the same items. The criteria for evaluation of performance of each step shall be explicitly stated in the same step. The format and content of error status information and the method of presentation shall be fully explained. In the event of a program stop or indicated error, the procedure must state whether or not it is possible to continue and, if so, it shall indicate the requirements for taking dumps or recording register values and describe the method for restarting or other recover actions.</p> <p>10.1.1.6 <u>Record</u> In all cases, the Test Procedures must agree exactly with the documented designed program behavior. Results of tests that fail shall be recorded in individual trouble reports and all test results shall be recorded in a comprehensive test report.</p> <p>10.1.1.7 <u>Deviations</u> The Test Procedures must make specific note of any deviations from the Test Specification, including those necessary to complete the tests.</p> <p>10.1.2 <u>Specific Instructions</u> The supplier shall prepare the Test Procedures in accordance with the following:</p> <p><u>SECTION 1 - Introduction</u> This section shall present introductory material describing the purpose and use of the Test Procedures. It shall state in general terms the organization or structure of the procedures and any assumptions or constraints imposed on their usage.</p> <p><u>SECTION 2 - Applicable Documents</u> This section shall list those specifications, standards, and all other documents necessary for the development of the Test Procedures document. In addition, the document title, number, exact date of issue, etc., shall be presented for each document.</p> <p><u>SECTION 3 - Testing Requirements</u> This section shall contain the test procedures for the specific level of testing.</p> <p>3.1 <u>General</u> This paragraph shall list the specific level of testing that shall be required and shall identify the number of events, by name and order, that are to be performed for each test. If more than one event is required, they shall be listed in numerical order according to the below format.</p>	

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3.2 Title/Pre-operating Procedures This paragraph shall include the instructions for preparation and setup prior to operation.

3.2.1 Equipment Preparation This subparagraph shall explain all the steps necessary to prepare the equipment for operation. It shall specify all switch settings and cabling necessary to connect the equipment and, when possible, shall state their precise names and locations. If this can not be done, the data that must be supplied from one equipment to another shall be explained. In either case, block diagrams shall be provide as necessary to show the equipment and the interconnecting control and data paths. The steps necessary to apply power to each equipment in the system shall also be explained. Where these steps are lengthy or involved, the appropriate manufacturer's handbooks may be referenced. Sufficient detail shall be given so that all equipment is ready for operation when the specified procedures have been accomplished.

3.2.2 Digital Processor Preparation This subparagraph shall identify the program/subprogram/module by approved nomenclature and indicate its recorded medium (e.g., paper tape, magnetic tape, or punch cards). It shall present a step-by-step procedure for loading the program into the computer, referencing any applicable procedures contained in other documents. The identification of and the instructions for program initialization and setting of pre-stored parameters shall also be provided.

3.2.3 Testing Procedure This subparagraph shall consist of a detailed procedure covering all aspects of operation. The scope of coverage and extent of detail required varies with the complexity of the particular operation. As applicable, the rules below shall be followed for each test:

- a. If the procedure covers several main parts or modes of operation, each shall be clearly delineated and treated separately.
- b. The material shall be presented in a step-by-step manner.
- c. Each step of the procedure shall be precise and unambiguous.
- d. Each step shall be listed as an individual item.
- e. Steps shall be listed in order in which they must be performed.
- f. When a step results in a definite response, the nature of the response shall be described in the same item.
- g. When an evaluation of performance is involved in any step, the criteria shall be explicitly stated in the same step.
- h. The format and content of error status information and the method of presentation shall be fully explained.
- i. In the event of a program stop or indicated error, the procedure shall state whether or not it is possible to continue. If so, it shall indicate the method for restarting or other recover action.
- j. The procedure must agree exactly with the program behavior.

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<p><u>SECTION 4 - Test Management Requirements</u> This section shall define the individual, detailed responsibilities for conducting and coordinating the given test. (Refer to appropriate section within the Test Plan and Test Specification for guidelines.)</p> <p><u>SECTION 5 - Personnel Requirements</u> This section shall specify the personnel requirements necessary to operation. A statement may be included to indicate the job classification or experience required. (Refer to appropriate section within the Test Plan and Test Specification for guidelines.)</p> <p><u>SECTION 6 - Hardware Requirement</u> This section shall identify by correct nomenclature all equipment required for operation. Any revisions or modifications to the equipment shall be specified, as well as any pretest checkout of the hardware required to ensure a valid test environment. (Refer to appropriate section within the System Test Plan and Test Specification for guidelines.)</p> <p><u>SECTION 7 - Supporting Software Requirements</u> This section shall identify the required magnetic or paper tapes, card decks, and program listings. (Refer to appropriate section within the System Test Plan and Test Specification for guidelines.)</p> <p><u>SECTION 8 - Schedule</u> Refer to appropriate section in the System Test Plan and Test Specification. List any deviation or addition herewith.</p> <p><u>SECTION 9 - Quality Assurance</u> Refer to appropriate section in the System Test Plan and Test Specification. List any additional requirements herewith.</p> <p><u>APPENDIXES</u> The following appendix may be included:</p> <p><u>Appendix A Glossary</u> Contains a list of abbreviations and/or terms with definitions used in the procedures.</p>	