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| **DATA ITEM DESCRIPTION** | | | |  |
| **1. TITLE** | | | **2. IDENTIFICATION NUMBER** | |
| **Technical Instruction Books** | | | **FAA-ILS-013** | |
| **3. DESCRIPTION/PURPOSE** | | | | |
| **3.1** This book shall provide a complete set of installation, operation, and maintenance instructions for the \_\_\_\_\_. These instructions shall provide sufficient detail to enable a technician with little or no formal training on the equipment to perform operator or maintenance functions, as appropriate.  A separate book shall be delivered for the Test Tool and any peculiar support/test equipment. | | | | |
| **4. APPROVAL DATE (YYMMDD)** | **5. OFFICE OF PRIMARY RESPONSIBILITY (OPR)** | | **6a. DTC APPLICABLE** | **6b. GIDEP APPLICABLE** |
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| **7. APPLICATION/INTERRELATIONSHIP** | | | | |
| **7.1** Commercial manuals submitted to satisfy this requirement shall comply with this Data Item Description and Appendix I, FAA-D-2494/b. | | | | |
| **8. APPROVAL LIMITATION** | | **9a. REFERENCES** | | **9b. AMSC NUMBER** |
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| **10. PREPARATION INSTRUCTIONS** | | | | |
| **10.1 General Information.** The technical instruction book shall be prepared in accordance with the requirements defined in FAA-D-2494/b. Commercial manuals for off-the-shelf equipment may be accepted without modifications provided they meet the requirements specified by Appendix I, FAA-D-2494/b, and are approved by the Government.  **10.2 Maintenance Instructions.** The maintenance instructions shall contain a complete description of the following:  a. All maintenance procedures and adjustments performed periodically to calibrate and prevent failure of any part of the system (preventive maintenance). The procedures shall include the time allocated to each operation during each scheduled maintenance visit.  b. All maintenance procedures and actions performed by a maintenance technician to diagnose and locate any fault in any part of the system, and to repair, adjust, and calibrate the equipment to meet the standards in the specification (corrective maintenance).  c. All test equipment required to inspect, test, calibrate, service, repair, overhaul an end item shall be identified. This information shall include the identification of test cables, connectors, extender kits, and adapters needed.  Maintenance instructions shall include a description of the operation of mechanical and electrical/electronic system of the ATCBI, Test Tool and any ATCBI peculiar support/test equipment, in sufficient detail to enable a Government or contractor maintenance technician  (Continued on page 2) | | | | |
| **11. DISTRIBUTION STATEMENT** | | | | |
| DISTRIBUTION STATEMENT A: Approved for public release; distribution is unlimited. | | | | |

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**10. PREPARATION INSTRUCTIONS** (continued)

with no formal training to accomplish all on-equipment on-site maintenance actions. Each subsystem (e.g., display panels, central switch, channel bank, printer, operator position, special test equipment, etc.) shall be covered in the appropriate sections of the instruction book (e.g., operations, controls and indicator, standards and tolerances, maintenance procedures, etc.,).

**10.3 Operational Instructions.** The operational instructions shall contain a complete, step-by-step description of all operating procedures. These procedures shall be in sufficient detail to provide an operator who has no formal training on the system with the expertise necessary to perform each operational function.

**10.4 Installation Instruction**. The contractor shall provide step-by-step instructions for the installation and checkout of the system. The instructions shall include, but not be limited to, assembly, mounting and connection procedures, and bonding and grounding procedures. Step-by-step procedures shall be provided to demonstrate that the system is operating correctly and within specified tolerances. This section shall include the information necessary for Government engineering or contractor personnel to properly engineer the installation of the system. This information shall include, but not be limited to the following:

a. Dimensions of equipment cabinets, mounting brackets, consoles, etc.

b. Inside and outside pictures of all cabinets to assist in the location of conduit and cable entry into cabinets.

**10.5 Format.** In addition to the format specified in FAA-D-2494/b, the Technical Instruction Book shall consist of at least two books.

a. The Operations Manual shall contain the level of detail required (e.g., theory to the block level, block diagrams, operations, maintenance and installation instruction, etc.,) to enable a trained maintenance person to identify line replaceable unit (LRU) failures as hardware, software, or firmware failures and shall enable the individual to replace the faulty LRU level. The Operations Manual shall be a standalone document and shall be distributed down to and including the site level.

b. The Service Manual shall contain the level of detail required to (e.g., theory to the component level, schematic diagrams, etc.,) to enable a trained maintenance support engineer to isolate system failures to the hardware component, software module, or firmware component level. The Service Manual will be used in combination with the Operations Manual and should replicate only essential information needed to support the continuity of the component level discussion. The Service Manual shall be distributed only to the addressees specified by the associated CDRL.

**10.6** The TIB shall be delivered to the Government without restriction on the reproduction or use of any information contained therein.