

MIL-E-85726A(AS)  
 29 October 1991  
SUPERSEDING  
 MIL-E-85726(AS)  
 25 July 1986

## MILITARY SPECIFICATION

### ENCLOSURE, STANDARD AVIONICS, FORCED AIR-COOLED, GENERAL SPECIFICATION FOR

This specification is approved for use by the Naval Air Systems Command, Department of the Navy, and is available for use by all Departments and Agencies of the Department of Defense.

#### 1. SCOPE

1.1 Scope. This specification establishes the requirements for the design, manufacture, and testing of forced air-cooled standard avionics enclosures, hereinafter referred to as enclosures. The enclosures accommodate Standard Electronic Modules (SEM) Format B 2-Span, Format C, and Format E, and a standard backplane. The enclosures provide cooling for the enclosed devices, protection from the environment, and shielding from Electromagnetic Interference (EMI) for various military avionics systems on multiple platforms.

#### 2. APPLICABLE DOCUMENTS

##### 2.1 Government documents.

2.1.1 Specifications and standards. The following specifications and standards form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those listed in the issue of the Department of Defense Index of Specifications and Standards (DODISS) and supplement thereto, cited in the solicitation (see 6.2).

#### SPECIFICATIONS

##### MILITARY

MIL-P-116	Preservation, Methods of
MIL-E-5400	Electronic Equipment, Aerospace, General Specification for
MIL-T-23103	Thermal Performance Evaluation, Airborne Electronic Equipment and Systems, General Requirement for

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: Commanding Officer, Naval Air Engineering Center, Systems Engineering and Standardization Department (SESD) Code 53, Lakehurst, NJ 08733 by using the self-addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

AMSC N/A

FSC 5975

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.

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## SPECIFICATIONS (continued)

## MILITARY (continued)

MIL-C-38999	Connector, Electrical, Circular, Miniature, High Density, Quick Disconnect (Bayonet, Threaded, and Breach Coupling), Environment Resistant, Removable Crimp and Hermetic Solder Contacts, General Specification for
MIL-C-83527	Connectors, Plug and Receptacle, Electrical, Rectangular Multiple Insert Type, Rack To Panel, Environment Resisting, General Specification for
MIL-F-85731	Fastener, Electronic Equipment, Positive Self-Locking

## STANDARDS

## MILITARY

MIL-STD-109	Quality Assurance Definitions
MIL-STD-129	Marking for Shipment and Storage
MIL-STD-454	Standard General Requirement for Electronic Equipment
MIL-STD-462	Electromagnetic Interference Characteristics, Measurement of
MIL-STD-794	Parts and Equipment, Procedures for Packaging and Packing of
MIL-STD-810	Environmental Test Methods and Engineering Guidelines
MIL-STD-889	Dissimilar Metals
MIL-STD-1389	Design Requirements for Standard Electronic Modules
DOD-STD-1788	Avionics Interface Design Standard

(Unless otherwise indicated, copies of federal and military specifications and standards are available from the Standardization Documents Order Desk, Bldg. 4D, 700 Robbins Avenue, Philadelphia, PA 19111-5094.)

**2.2 Order of precedence.** In the event of a conflict between the text of this document and the references cited herein (except for related associated detail specifications, specification sheets or MS standards), the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

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### 3. REQUIREMENTS

3.1 First article. When specified (see 6.2), a sample shall be subjected to first article inspection (see 6.4) in accordance with 4.3.

3.2 General requirements. The enclosures specified herein shall meet the requirements of MIL-E-5400, for Class 2X equipment.

#### 3.3 Mechanical design.

##### 3.3.1 Size.

3.3.1.1 Enclosure. The external size dimensions of the enclosure, excluding cooling interfaces, shall be in accordance with DOD-STD-1788. The enclosure shall come in two, four, six, eight, ten, and twelve Modular Concept Unit (MCU) sizes. The enclosure shall meet the accessibility requirements of MIL-STD-454, requirement 36, regarding access panels, attachment mechanisms and gaskets.

3.3.1.2 Protrusions. All protrusions such as hold-downs, carrying handles, switches, knobs, connectors, and indicators shall be within an outline envelope in accordance with DOD-STD-1788 in the latched and actuated position.

3.3.2 Modularity. The family of enclosures is to be part of a modular packaging approach that will provide electrical, mechanical, and thermal interfaces for the Standard Electronic Modules. This technique shall provide for the joining of two, four, and six MCU sized enclosures to form four, six, eight, ten, and twelve MCU sizes with a minimum of additional components. Each enclosure tier shall accept not less than 13 modules at a 0.60-inch pitch. The modules to be used are the Standard Electronic Modules (SEM) Format B 2-Span Module, the SEM Format C, and the SEM Format E as described in MIL-STD-1389. Table I provides possible combinations of enclosure sizes, module sizes and backplane module interconnection methods in which enclosures shall be configurable. The maximum enclosure mass value provided refers to the maximum weight of an avionics system which can be packaged using an enclosure.

3.3.3 Backplane interface. The mechanical interface of the backplanes used to interconnect the modules shall be in accordance with the dimensions of figure 1. This applies to both multilayer and wire wrap backplanes.

##### 3.3.4 Enclosure hold-downs.

3.3.4.1 Front. The enclosure shall have two (one on the 2 MCU enclosure size) hooks in accordance with MIL-F-85731/1, or functional equivalents, on the front of the enclosure as shown on figure 2. These hooks shall be used to apply the force required to insert the rear mounted connector, establish preload and secure the front of the enclosure.

3.3.4.2 Rear. The rear hold-downs of the enclosure shall be either dagger pin receptacles in accordance with figure 3 or a rack and panel connector in accordance with MIL-C-83527, but not both.

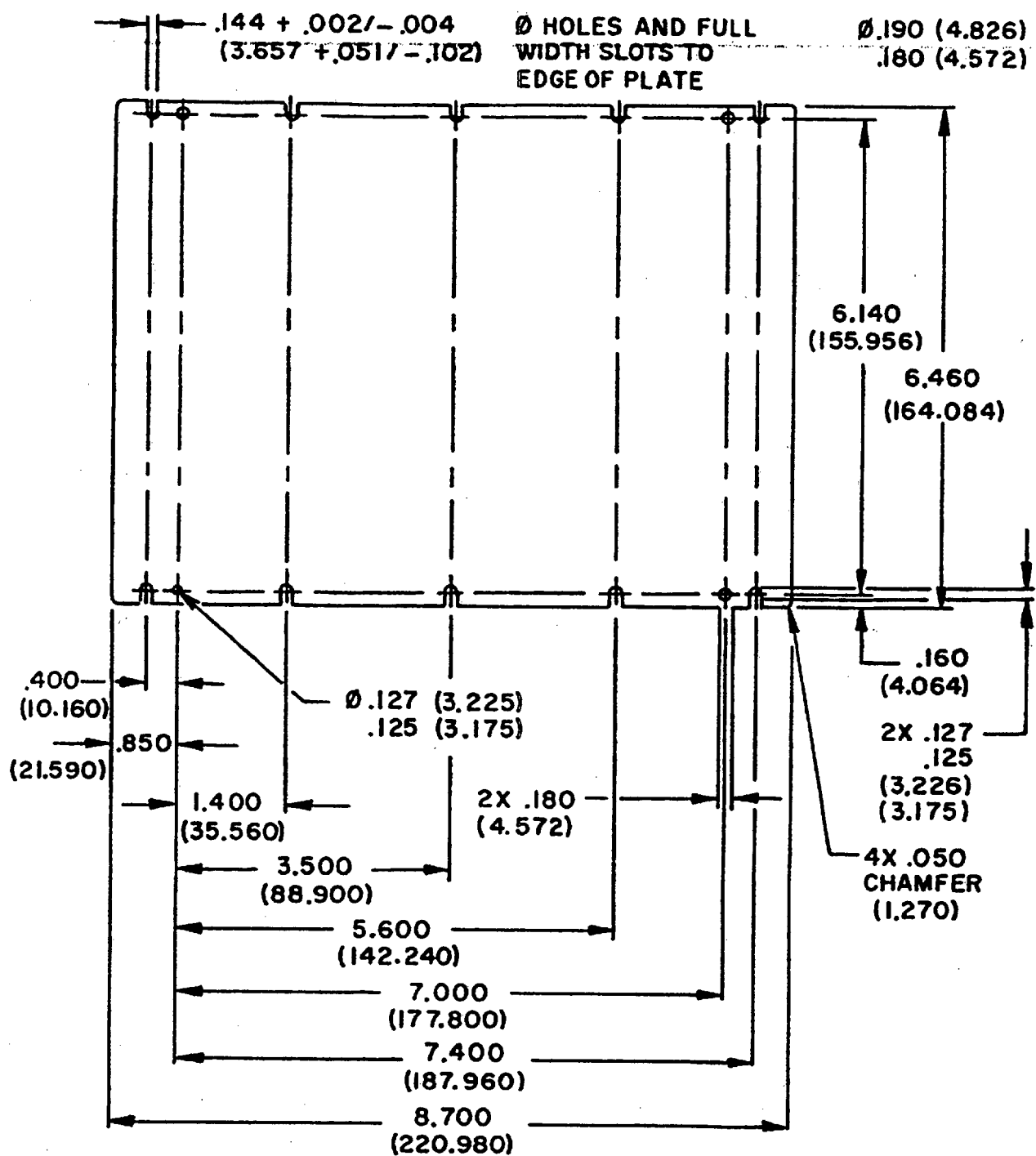
TABLE I. Standard enclosure size and configuration.

Enclosure size	Module size	Backplane interconnect medium	Max enclosure weight, pounds(Kg)
2 MCU	SEM Format B	Multilayer board	14.3 (6.49)
4 MCU	SEM Format C	3 level wire wrap or multilayer board	25.3 (11.48)
4 MCU	2 levels of SEM Format B	2 multilayer boards	25.3 (11.48)
6 MCU	1 level of SEM Format B 1 level of SEM Format C	2 backplanes using 3 levels of wire wrap each or 2 multilayer boards	35.2 (15.97)
6 MCU	SEM Format E	3 level wire wrap or multilayer board	35.2 (15.97)
8 MCU	2 levels of SEM Format C	2 backplanes using 3 levels of wire wrap each or 2 multilayer boards	47.3 (21.46)
8 MCU	1 level of SEM Format B 1 level of SEM Format E	2 backplanes using 3 levels of wire wrap each or 2 multilayer boards	57.2 (25.95)
10 MCU	1 level of SEM Format C 1 level of SEM Format E	2 backplanes using 3 levels of wire wrap each or 2 multilayer boards	57.2 (25.95)
12 MCU	2 levels of SEM Format E	2 backplanes using 3 levels of wire wrap each or 2 multilayer boards	67.1 (30.44)

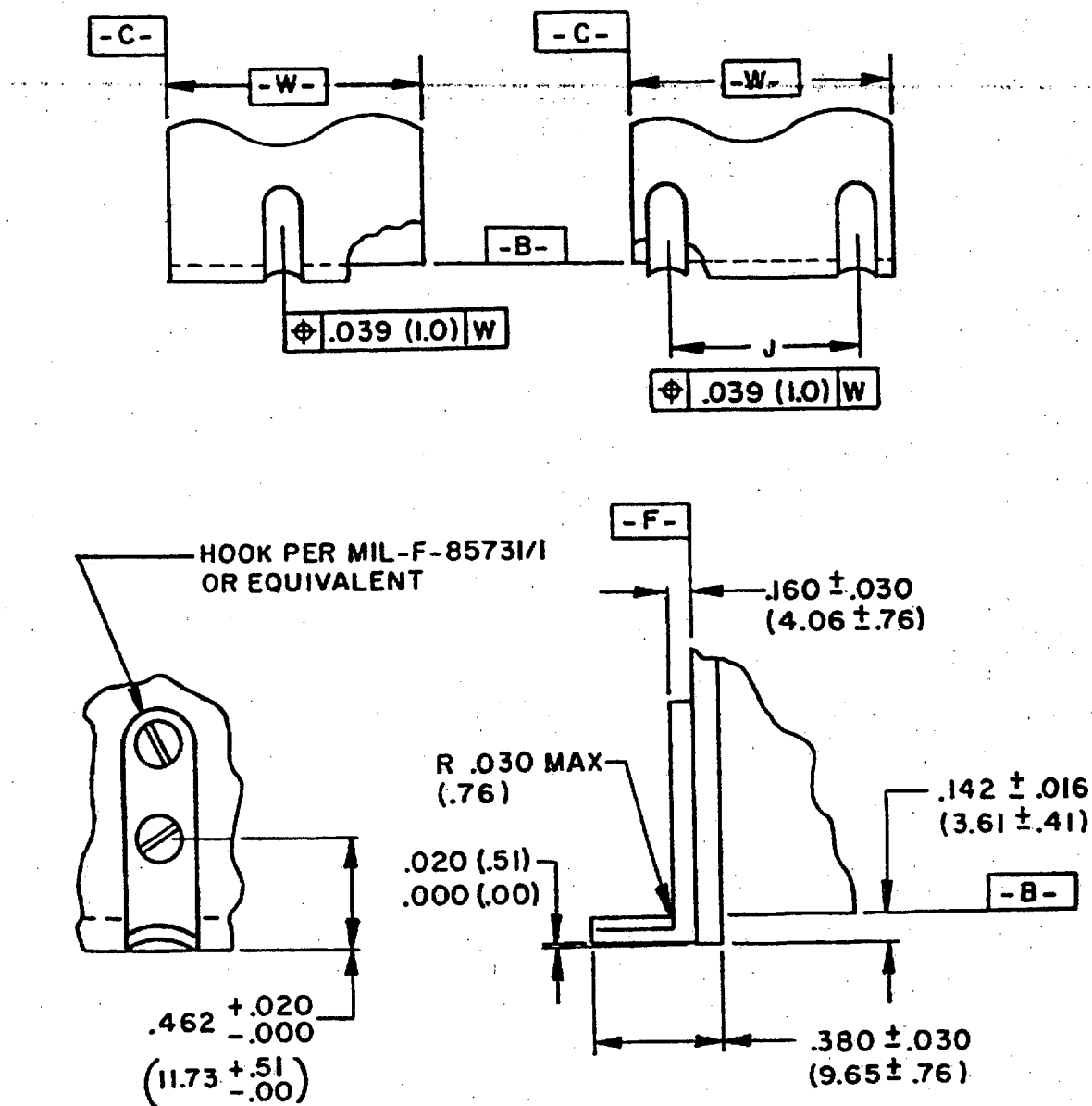
3.3.5 Module types. The six MCU enclosure types shall be capable of accepting a random mix of SEM Format E modules mounted at pitches of .4, .5 and .6 inch. The 4 MCU enclosure shall be capable of accepting a random mix of SEM Format C modules mounted at pitches of .3, .4, .5 and .6 inch. The 2 MCU enclosure shall accept SEM Format B modules mounted on pitches that are multiples of 0.3 inch. Card guides uniquely machined for a given system are permissible with all enclosures.

3.3.6 Drain holes. The enclosure may contain drain holes to allow the escape of fluids in any enclosure orientation to prevent collection of fluid inside the module compartment. Moisture entrapment shall be in accordance with MIL-STD-454, requirement 31.

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FIGURE 1. Backplane mechanical interfaces.

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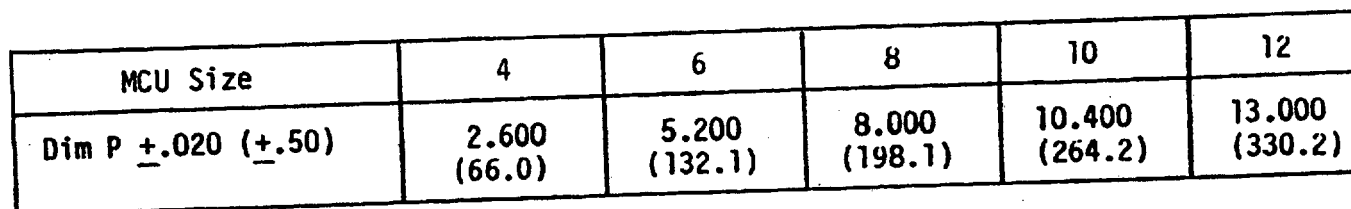


MCU Size	4	6	8	10	12
Dim J $^{+.020}_{-.000}$ ( $^{+.51}_{-.00}$ )	2.600 (66.0)	5.200 (132.1)	8.000 (198.1)	10.400 (264.2)	13.000 (330.2)

## NOTES:

1. Dimensions are in inches.
2. Metric dimensions in parentheses are for information only.

FIGURE 2. Front hold-down.



1. Dimensions are in inches.
2. Metric dimensions in parentheses are for information only.

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3.3.7 Configuration. The enclosure shall be forced air cooled with air entering the rear of the enclosure and exhausting from the front. The enclosure shall meet the requirements of MIL-STD-454, requirement 52 for forced air cooling.

3.3.8 Fluid entrapment. Any feature that may trap a fluid on the exterior of the enclosure, thereby increasing the possibility of fluid entering the module compartment, is not permissible.

3.3.9 Module retainer. The module retainer mechanism shall be part of the enclosure and not part of the module. The module retainer mechanism shall apply a minimum clamping pressure of  $50 \pm 1$  psi on the module. This mechanism shall be shop and depot replaceable.

### 3.4 Electrical design.

3.4.1 Wiring harness. The enclosure shall be designed to facilitate the removal and installation as an assembly of the enclosure input/output connectors, wiring, EMI filters and the connectors tying these items to the backplane. Wiring practices shall be in accordance with MIL-STD-454, requirement 69.

3.4.2 Meters. The enclosure shall be capable of mounting both a time elapsed meter and built-in test (BIT) status indicators. The time elapsed meter chosen shall be military qualified. Electrochemical deposition meters shall not be used. Meters shall be in accordance with MIL-STD-454, requirement 51.

### 3.4.3 Input/output connectors.

3.4.3.1 Front. The front mounted connectors shall be in accordance with MIL-C-38999, Series III or IV. Connectors shall be removable from the inside of the enclosure.

3.4.3.2 Rear. The rear mounted rack and panel connector and the position of it in the enclosure shall be in accordance with MIL-C-83527.

3.4.3.3 Connector restriction. Front and rear connectors shall not be used simultaneously.

### 3.5 Materials.

3.5.1 Corrosion resistance. Materials shall be of corrosion resistant types or shall be processed to resist corrosion in accordance with MIL-STD-889.

3.5.2 Nameplate. There shall be provisions to mount a nameplate, including the serial number, on the front of the enclosure.

### 3.6 Environment.

3.6.1 High temperature. The enclosure shall withstand high temperature excursions for uninhabited fighter environments up to 71°C. Structural and



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electrical integrity shall be maintained for temperatures to 95°C for prolonged periods of time. The enclosure shall not bind, crack, discolor or bulge and the gaskets shall not lose their resiliency, or become permanently distorted (see 4.5.1.2).

3.6.2 Low temperature. The enclosure shall withstand cold temperature excursions for uninhabited fighter environments down to -55°C. The enclosure shall maintain structural and electrical integrity during such temperature exposure. The enclosure shall not bind, crack, discolor or bulge and the gaskets shall not lose their resiliency, or become permanently distorted (see 4.5.1.3).

3.6.3 Temperature shock. The enclosure shall withstand temperature cycling at a maximum rate of change of 8°C per minute. The enclosure shall withstand temperature shock with no physical or performance degradations (see 4.5.1.4).

3.6.4 Humidity. The enclosure shall withstand relative humidity levels up to 100 percent for 80 hours duration, while maintaining structural and electrical integrity. There shall be no resulting evidence of swelling, absorption of water, change of mechanical properties, corrosion or other forms of deterioration. There shall be minimal entrapped water inside the enclosure (see 4.5.1.5).

3.6.5 Fungus. The enclosure shall be certifiable that non-nutrient material for microbiological growth has been used in the construction of the enclosure as required in accordance with MIL-STD-454, requirement 4, paragraph 3.2 (see 4.5.1.6).

3.6.6 Salt fog. The enclosure shall not sustain damage with a 48-hour exposure to a nominal 5 percent salt solution. There shall be no resulting evidence of corrosion, deterioration, or performance degradation (see 4.5.1.7).

3.6.7 Acceleration. Aircraft forward acceleration levels of 4g shall be met. There shall be no resulting material yield or failure and no loss of joint integrity (see 4.5.1.8).

3.6.8 Vibration. The enclosure shall be able to withstand the vibration levels of internally mounted equipment on jet aircraft, helicopters and propeller driven aircraft. The enclosure shall maintain structural and mechanical rigidity, and electrical connectivity. There shall be no resulting material yield or failure and no loss of joint integrity (see 4.5.1.9).

3.6.9 Shock. The enclosure shall withstand the physical shock of equipments mounted internally to aircraft making carrier landings. The enclosure shall maintain structural and mechanical rigidity, and electrical connectivity with no resulting material yield or failure and no loss of joint integrity (see 4.5.1.10).

3.6.10 Crash safety. The enclosure shall maintain structural and mechanical rigidity, and electrical connectivity, with acceleration crash safety values of 40g fore/aft, 14g lateral, and 20g up/down (see 4.5.1.11).

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There shall be no resulting failure of the mounting attachments; however, bending and distortion are permitted. The test item shall remain in place and shall not create a hazard.

### 3.7 Thermal.

3.7.1 Thermal requirement. No module guide rib temperature shall be greater than 85°C and cooling air exhaust temperature shall be not greater than 71°C. The airflow rate divided by the enclosure power shall be 3.0 lb/KW-minute (1.36 kg/KW-minute) maximum.

3.7.2 Leakage. The maximum air leakage rate shall not be greater than 0.1 percent of the maximum flow rate through the enclosure (see 4.5.2.4).

### 3.8 Electromagnetic interference (EMI).

3.8.1 Shielding effectiveness. The enclosure shall be an effective shield against electric, magnetic and electromagnetic field radiation.

3.8.2 Outside-to-inside shielding effectiveness. The outside-to-inside shielding effectiveness of the standard enclosure shall meet the minimal requirements shown on figure 4 (see 4.5.3.2).

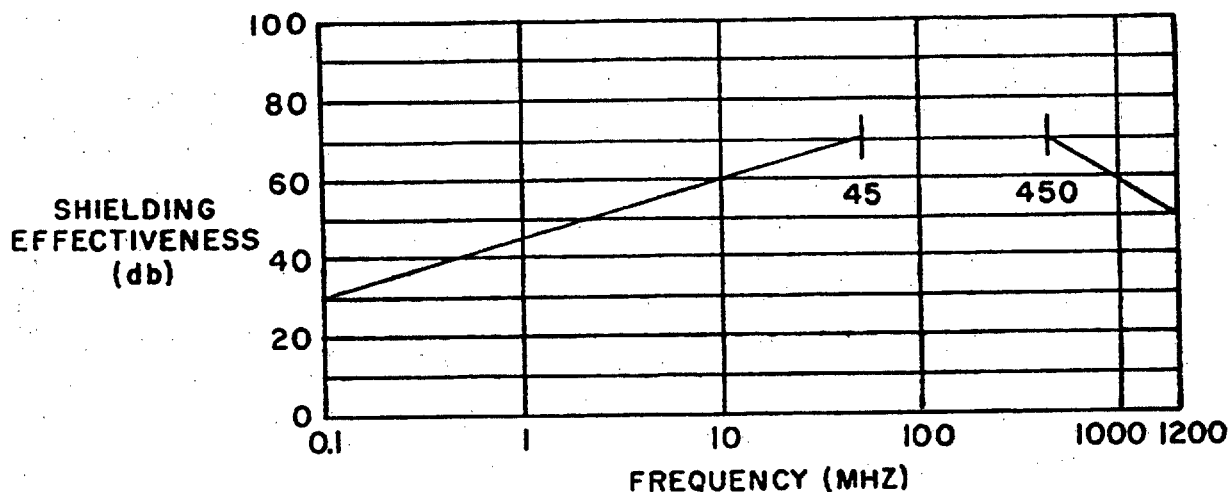


FIGURE 4. EMI shielding design requirements.

3.9 Workmanship. Workmanship shall be in accordance with MIL-STD-454, requirement 9.

## 4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection. Unless otherwise specified in the contract or purchase order, the contractor is responsible for the performance of all inspection requirements (examinations and tests) as specified herein. Except as otherwise specified in the contract or purchase order, the contractor may use his own or any other facilities suitable for the performance of the inspection requirements specified herein, unless disapproved by the

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Government. The Government reserves the right to perform any of the inspections set forth in this specification where such inspections are deemed necessary to ensure supplies and services conform to prescribed requirements.

**4.1.1 Responsibility for compliance.** All items shall meet all requirements of sections 3 and 5. The inspection set forth in this specification shall become a part of the contractor's overall inspection system or quality program. The absence of any inspection requirements in the specification shall not relieve the contractor of the responsibility of ensuring that all products or supplies submitted to the Government for acceptance comply with all requirements of the contract. Sampling inspection, as part of manufacturing operations, is an acceptable practice to ascertain conformance to requirements; however, this does not authorize submission of known defective material, either indicated or actual, nor does it commit the Government to accept defective material.

**4.2 Classification of inspections.** The inspection requirements specified herein are classified as follows:

- a. First article inspection (see 4.3).
- b. Quality conformance inspection (see 4.4).

**4.3 First article inspection.** Unless otherwise specified, first article tests shall be performed on two units representative of the equipment to be supplied under the contract (see 6.4). Tests shall be performed in accordance with the approved test procedures.

**4.3.1 First article inspection routine.** First article inspection shall consist of the examinations and tests specified in table II.

TABLE II. First article inspection.

Inspection	Requirement paragraph	Test Method Paragraph
High temperature	3.6.1	4.5.1.2
Low temperature	3.6.2	4.5.1.3
Temperature shock	3.6.3	4.5.1.4
Humidity	3.6.4	4.5.1.5
Fungus	3.6.5	4.5.1.6
Salt fog	3.6.6	4.5.1.7
Acceleration	3.6.7	4.5.1.8
Vibration	3.6.8	4.5.1.9
Shock	3.6.9	4.5.1.10
Crash safety	3.6.10	4.5.1.11
Thermal characteristics	3.7.1	4.5.2
Leakage	3.7.2	4.5.2.4
Shielding outside-to-inside	3.8.2	4.5.3.2

**4.4 Quality conformance inspection.** Quality conformance inspections shall be as specified in table III. Group C inspections shall consist of 9 units of the same production lot. A production lot shall consist of all

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enclosures of the same size and design produced under essentially the same conditions and offered for inspection at one time. Any single failure to meet a Group C test shall be cause to fail the inspection.

**4.4.1 Visual inspection.** A visual inspection shall be made to assess that the enclosure meets dimensional, hold-down and workmanship requirements of section 3.9.

**4.5 Inspection conditions.** The following conditions shall be used to establish normal performance characteristics under standard conditions and for making laboratory bench tests.

- |                |  |
|----------------|--|
| a. Temperature | Room Ambient ( $25 \pm 10^{\circ}\text{C}$ ) |
| b. Altitude    | Normal Ground                                |
| c. Vibration   | None   |
| d. Humidity    | Room Ambient up to 90% Relative Humidity     |

**4.5.1 Environmental testing.**

**4.5.1.1 General.** The shock, vibration, crash safety and acceleration tests should be performed with the enclosures containing dummy modules of equal mass which brings the enclosure weight to the maximum (+0.550 lbs) specified for that enclosure in table I. The enclosure being tested shall be restrained only by its hold-downs.

**TABLE III. Quality conformance inspection.**

Inspection	Requirement paragraph	Test method paragraph
Group A		
Visual and workmanship	3.3, 3.9	4.4.1
Group B		
Dimensional	3.3	4.4.1
Hold-downs	3.3.4	4.4.1
Group C		
High temperature	3.6.1	4.5.1.2
Low temperature	3.6.2	4.5.1.3
Temperature shock	3.6.3	4.5.1.4
Humidity	3.6.4	4.5.1.5
Fungus	3.6.5	4.5.1.6
Salt fog	3.6.6	4.5.1.7
Acceleration	3.6.7	4.5.1.8
Vibration	3.6.8	4.5.1.9
Shock	3.6.9	4.5.1.10
Crash safety	3.6.10	4.5.1.11
Thermal characteristics	3.7	4.5.2
Leakage	3.7.2	4.5.2.4
EMI	3.8	4.5.3

4.5.1.2 High temperature. The enclosure shall withstand the high temperature test in accordance with MIL-STD-810, method 501.3, procedure II with a constant temperature exposure of not less than 95°C.

4.5.1.3 Low temperature. The enclosure shall withstand the low temperature test in accordance with MIL-STD-810, method 502.3, procedure II. The test temperature shall not be greater than -57°C.

4.5.1.4 Temperature shock. The enclosure shall be temperature shock tested in accordance with MIL-STD-810, method 503.3, procedure I except that the diurnal cycle shall be replaced by a constant temperature. The five minute maximum transfer time and the test duration of one hour or until stabilization whichever is longer shall apply to both hot and cold shocks. Test temperature extremes shall be -57°C and 95°C.

4.5.1.5 Humidity. The humidity test shall be performed in accordance with MIL-STD-810, method 507.3, procedure III. This test shall be performed with the enclosure resting on each of three mutually perpendicular surfaces.

4.5.1.6 Fungus. The manufacturer shall present proof by certification that the enclosure does not contain nutrient material for microbiological growth. If certification is not provided, then the fungus test shall be performed in accordance with MIL-STD-810, method 508.4.

4.5.1.7 Salt fog. The salt fog test shall be performed in accordance with MIL-STD-810, method 509.3, procedure I.

4.5.1.8 Acceleration. Acceleration testing shall be performed in accordance with MIL-STD-810, method 513.4, procedure I. Acceleration values shall be computed using table 513.4-1 for aircraft with a forward acceleration value of 4g. Test time shall be one minute.

4.5.1.9 Vibration. Testing shall be performed in accordance with MIL-STD-810, method 514.4, procedure I. The random vibration envelope shall be in accordance with figure 514.4-8 Random Vibration Envelope and a  $W_0$  of  $0.06g^2/Hz$  for the functional tests and  $0.2g^2/Hz$  for the endurance tests. Whenever possible, flight vibration measurements should be used to develop vibration criteria for laboratory tests.

4.5.1.10 Shock. The test shall be performed in accordance with MIL-STD-810, method 516.4, procedure I. Test level and duration shall be in accordance with I-3.3.c(1)(b) for functional test of flight vehicle equipment.

4.5.1.11 Crash safety. The test shall be performed in accordance with MIL-STD-810, method 513.4, procedure I. Acceleration values shall be 40g fore and aft, 14g lateral and 20g up and down. Test time shall be one minute. Orientation is in accordance with figure 5 of that test procedure.

4.5.2 Thermal testing. The contractor shall perform thermal testing (see 6.3). The tests shall assess the thermal dissipation properties of the enclosure in the following manner using the procedures of MIL-T-23103 except as noted in 4.5.2.1, 4.5.2.2, 4.5.2.3 and 4.5.2.4.

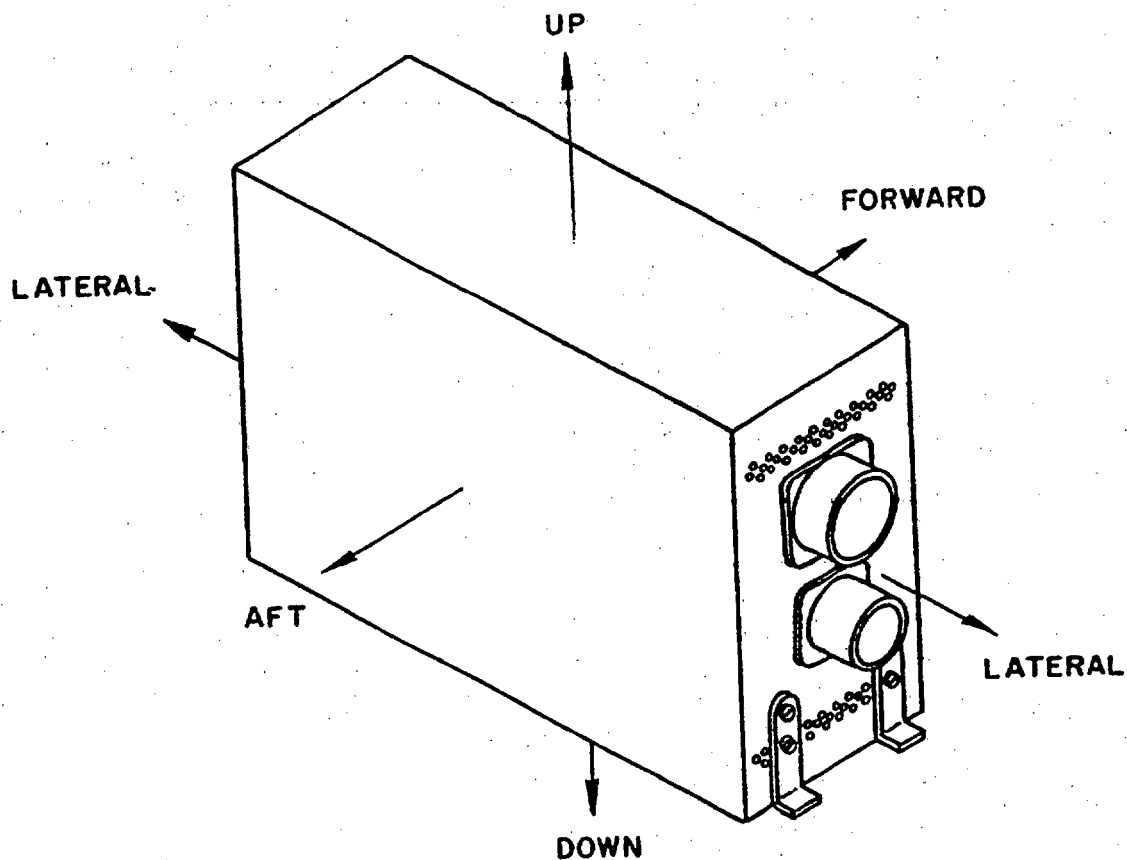


FIGURE 5. Standard enclosure test orientations.

4.5.2.1 Test set-up. The enclosure shall be constrained using only its front and rear hold-downs, with cooling air being supplied through the same hardware as in its final installation. Each enclosure will be fully populated with dummy modules dissipating an equal amount of power. The dummy module guide ribs shall have dimensions, materials and plating in accordance with MIL-STD-1389.

4.5.2.2 Test conditions. The test shall be run in a 71°C ambient temperature. Cooling air inlet temperature and pressure drop across the enclosure shall be 27°C and 2.5 inches of water, respectively. Input power shall be in accordance with table IV.

TABLE IV. Standard enclosure power capacity.

Enclosure size (MCU)	Power capability (watts)
2	250
4	500
6	750
8	1000
10	1250
12	1500



4.5.2.3 Data. The enclosure shall be instrumented to gather the following data:

- a. Inlet air temperature and relative humidity.
- b. The guide rib temperatures of modules (numbered sequentially from the air inlet end of the enclosure) 1, 4, 7, 10, 13, 17, 20, 23 and 26 are to be recorded on enclosures that house .3-inch pitch SEM, and modules 1, 2, 5, 7, 9, 10 and 13 on the .6-inch pitch SEM enclosure (comparable locations for other pitches).
- c. The exhaust air temperature.
- d. The air mass flow rate through the enclosure.

4.5.2.4 Leakage. The enclosure shall be tested in accordance with contractor-formulated test method (see 6.3). The enclosure shall be pressurized to not less than two inches of water at a temperature of 21°C.

#### 4.5.3 Electromagnetic interference testing.

4.5.3.1 Shielding effectiveness. These tests shall demonstrate that the shielding effectiveness of the enclosure complies with the requirements specified in 3.8.

4.5.3.2 Outside-to-inside shielding effectiveness. The enclosure shall be tested in accordance with the contractor-formulated test method (see 6.3). The test setup shall be in accordance with MIL-STD-462.

4.6 Inspection of packaging. Except when commercial packaging is specified, the sampling and inspection of the preservation and interior package marking shall be in accordance with groups A and B quality conformance inspection requirements of MIL-P-116. The sampling and inspection of the packing for shipment and storage shall be in accordance with the quality assurance provisions of the applicable container specification shown in section 5. The inspection of marking for shipment and storage shall be in accordance with MIL-STD-129. The inspection of commercial packaging shall be as specified in the contract (see 6.2).

### 5. PACKAGING

5.1 Standard enclosure preservation and packing. Preservation and packing shall be in accordance with Level A, B or C of MIL-STD-794, as specified in the contract, without the use of preservation compound (see 6.2). Shipping containers may contain a multiple number of enclosures.

5.2 Unitized loading. Unitized loading for the enclosure is authorized as specified in MIL-STD-794.

5.3 Marking. All shipping containers shall be marked in accordance with the requirements of MIL-STD-129 with the following information:



- a. ENCLOSURE, STANDARD, (mcu size) MCU
- b. MILITARY SPECIFICATION NO. MIL-E-85726A
- c. PRESERVED (date)
- d. DOMESTIC OR EXPORT PACKED (as applicable)
- e. GOVERNMENT ORDER NO. (or contract no. if order no. is not assigned)
- f. NAME OF SUPPLIER (and name of manufacturer if not the same)
- g. MANUFACTURER'S CODE IDENTIFICATION NUMBER

## 6. NOTES

(This section contains information of a general or explanatory nature that may be helpful, but is not mandatory.)

6.1 Intended use. The enclosure covered by this specification is intended to accommodate functional avionics modules. It is intended for use on piloted aircraft. The user shall identify the electrical, cooling, and mounting structure interfaces, and their appropriate requirements. Also, the format, type, and location of modules shall be identified.

6.2 Acquisition requirements. Acquisition documents must specify the following:

- a. Title, number and date of the specification.
- b. Implementation of a parts control program, if required.
- c. Responsibility for inspection (see 4.1).
- d. Name and location of government approved test laboratory.
- e. Number of equipment subjected to first article inspection, if required (see 4.3).
- f. Approval of previously used test procedures, if required (see 4.3).
- g. Modification of previously used test procedures, if required (see 4.3).
- h. Selection of applicable levels of preservation, packaging and packing required (see 5.1 and 5.2).
- i. Mounting configuration and required interfaces.

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- j. Cooling resources and necessary appropriate interfaces.
- k. Number, format and placement of modules on backplanes.
- l. Electrical connector type and placement.

6.3 Consideration of data requirements. The following data requirements should be considered when this specification is applied on a contract. The applicable Data Item Descriptions (DIDs) should be reviewed in conjunction with the specific acquisition to ensure that only essential data are requested and provided and that the DIDs are tailored to reflect the requirements of the specific acquisition. To ensure correct contractual application of the data requirements, a Contract Data Requirements List (DD Form 1423) must be prepared to obtain the data, except where DOD FAR Supplement 27.475-1 exempts the requirement for a DD Form 1423.

<u>Reference paragraph</u>	<u>DID Number</u>	<u>DID title</u>
(a) 4.5.2	DI-NDTI-80808	Test Plan/Procedures

The above DID was cleared as of the date of this specification. The current issue of DOD 5010.12-L, Acquisition Management Systems and Data Requirement Control List (AMSDL), must be researched to ensure that only current, cleared DIDs are cited on the DD Form 1423.

6.4 First article. When first article inspection is required, the contracting officer shall provide specific guidance to offerors whether the item(s) should be a preproduction sample, a first article sample, a first production item, a sample selected from the first production items, a standard production item from the contractor's current inventory (see 3.1), and the number of items to be tested as specified in 4.3. The contracting officer should also include specific instructions in acquisition documents regarding arrangements for examinations, approval of first article test results, and disposition of first articles. Invitations for bids should provide that the Government reserves the right to waive the requirement for samples for first article inspection to those bidders offering a product which has been previously acquired or tested by the Government, and that bidders offering such products, who wish to rely on such production or test, must furnish evidence with the bid that prior Government approval is presently appropriate for the pending contract. Bidders should not submit alternate bids unless specifically requested to do so in the solicitation.

#### 6.5 Subject term (keyword) listing.

Air-cooled  
Aircraft  
Avionics  
Backplane  
Modules

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**6.6 Changes from previous issue.** Marginal notations are not used in this revision to identify changes with respect to the previous issue due to extensiveness of the changes.

Preparing activity:  
Navy (AS)

(Project 5975-N080)

# STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

## INSTRUCTIONS

1. The preparing activity must complete blocks 1, 2, 3, and 8. In block 1, both the document number and revision letter should be given.
2. The submitter of this form must complete blocks 4, 5, 6, and 7.
3. The preparing activity must provide a reply within 30 days from receipt of the form.

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**I RECOMMEND A CHANGE:**

1. DOCUMENT NUMBER

MIL-E-85726A(AS)

2. DOCUMENT DATE (YYMMDD)

29 October 1991

3. DOCUMENT TITLE

ENCLOSURE, STANDARD AVIONICS, FORCED AIR-COOLED

4. NATURE OF CHANGE (Identify paragraph number and include proposed rewrite, if possible. Attach extra sheets as needed.)

5. REASON FOR RECOMMENDATION

6. SUBMITTER

a. NAME (Last, First, Middle Initial)

b. ORGANIZATION

c. ADDRESS (Include Zip Code)

d. TELEPHONE (Include Area Code)

(1) Commercial

(2) AUTOVON  
(If Applicable)

7. DATE SUBMITTED  
(YYMMDD)

8. PREPARING ACTIVITY

a. NAME COMMANDING OFFICER

NAVAL AIR ENGINEERING CENTER  
SYSTEMS ENGINEERING & STANDARDIZATION DEPT.

b. TELEPHONE (Include Area Code)

(1) Commercial

(908)323-2326

(2) AUTOVON

624-2326

c. ADDRESS (Include Zip Code)

CODE 53  
LAKEHURST, NJ 08733-5100

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