

MIL-E-4158E(USAF)  
 AMENDMENT 3  
 31 December 1985  
 Superseding  
 AMENDMENT 2  
 12 July 1977

MILITARY SPECIFICATION  
 ELECTRONIC EQUIPMENT, GROUND;  
 GENERAL SPECIFICATION, FOR

\*This amendment forms a part of MIL-E-4158E(USAF), dated 11 January 1973 and is approved for use within the Department of the Air Force and is available for use by all Departments and Agencies of the Department of Defense.

PAGE 1

\*Title: Delete and substitute as printed above.

PAGE 2

2.1 Under "STANDARDS": Delete "MIL-STD-891" in its entirety and substitute "MIL-STD-965 Parts Control Program".

PAGE 4

3.2.8 lines 4 and 5: Delete "published military standards in the MIL-STD-188-100, -200 and -300 series." and substitute "applicable MIL-STD-188-XXX series of standards for Long Haul Communications and Tactical Communications Technical Standards.

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3.2.12.2: Add new paragraph as follows:

"3.2.12.2.1 Lightning transients. All equipments generating electrical signals that are to be exchanged through any communication link or for any distance over local or long distance communication networks shall be protected to prevent equipment damage as a result of transients that may be conducted into the equipment through power, communication/control lines by natural phenomena such as lightning. Transient protection shall protect against pulses having the following characteristics:

<u>Peak Voltage</u>	<u>Pulse Rate</u>	<u>Pulse Width</u>	<u>Rise Time</u>	<u>Decay Time</u>	<u>Aprx Energy</u>
1000	Single Pulse	1000 $\mu$ Sec	10 $\mu$ Sec	1000 $\mu$ Sec	33 joules
1000	100 per Sec	100 $\mu$ Sec	1 $\mu$ Sec	100 $\mu$ Sec	3.3 joules

Note: Maximum use shall be made of "no fault" devices which should shunt transients to ground without causing failure of equipment or the protective device. The device shall be of the automatic reclosure type. Circuit design and protective devices shall be selected assuming a maximum 25 ohm ground condition."

3.2.17, line 1: Delete "and cams".

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AREA GDRQ

AMSC: N/A

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3.2.29, line 1: Delete "of personnel" and substitute "(personnel hazard)."

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3.2.30.1.2, line 4: Delete "52°C (plus 125°F)" and substitute "49°C (plus 120°F)".

Line 7: Delete "71°C (160°F)" and substitute "plus 68°C (plus 155°F)".

3.2.30.1.3 a and b: Delete in their entirety and substitute:

"a. Minimum: 20 percent from the minimum operating temperature to 16°C (61°F). Above 16°C (61°F) the relative humidity shall be based on a dew point of minus 7°C (19°F).

b. Maximum: 100 percent including condensation from the minimum operating temperature to 27°C (81°F). Above 27°C (81°F) the relative humidity shall be based on a dew point of 27°C (81°F)."

TABLE I:

Delete "-62°C (-80°F)" and substitute "-57°C (-70°F)"  
Delete "-54°C (-65°F)" and substitute "-51°C (-60°F)"  
Delete "+71°C (+160°F)" and substitute "+68°C (+155°F)"  
Delete "+52°C (+125°F)" and substitute "+49°C (+120°F)"  
Delete "(See 3.2.30.1.2)"

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3.2.30.1.4a.: Delete and substitute:

"a. Operating: Sea level to 429.1 millimeters (mm) of Hg (16.9 inches of Hg or 15000 feet above sea level)."

3.2.30.1.4b.: Delete and substitute:

"b. Nonoperating and storage: Sea level to 140.7 mm of Hg (5.54 inches of Hg or 40000 feet above sea level)."

3.2.30.2a(1)(a): Delete and substitute:

"(a) Fixed equipment: Inclination at any slope up to 10 percent from the normal position."

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3.2.30.2b: Delete and substitute:

"b. Other mechanical service conditions: The equipment shall be designed and constructed to meet the exposure to the following mechanical service conditions when and as specified in the detailed equipment specification. (See 6.2f).

- (1) Vibration
- (2) Shock
- (3) Bounce
- (4) Bench handling."

PAGE 14

3.2.34, line 1: Delete "Terminals (terminals, boards, and strips)" and substitute "Terminations".

3.2.35, lines 1 and 2: Delete "points, test facilities, and test equipment (internal and external)" and substitute "provisions".

3.2.38.1: Delete the words "engineering" and "transmission" and following "selection" add "and application".

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3.2.38.2: Delete "engineering".

3.2.38.5: Delete "engineering" and delete "electrical wire" and substitute "electrical internal hookup wire".

Add new paragraph as follows:

3.2.38.6 Cable and wire, interconnection. - The criteria for the selection and use of electric cables and wire used for interconnection between units shall be in accordance with MIL-STD-454, Requirement 71."

3.3.1.1, line 6: Delete "MIL-STD-891" and substitute "MIL-STD-965".

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\*3.4, Last two sentences. Delete in their entirety.

PAGE 19

\*3.5.1: Delete in its entirety.

PAGE 23

\*6.2j: Delete in its entirety.

\*6.2m: Delete in its entirety.

6.3.1a, line 5: Delete "minus 62<sup>0</sup>C (minus 80<sup>0</sup>F) and substitute "minus 57<sup>0</sup>C (minus 70<sup>0</sup>F)".

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The margins of this amendment are marked with asterisks to indicate where changes (additions, modifications, corrections, deletions) from the previous amendment were made. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire contents irrespective of the marginal notations and relationship to the last previous amendment.

Custodian  
Air Force - 17

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Air Force - 17

Reviewer:  
Air Force - 11, 13, 15, 18, 19, 90, 99

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