

DEPARTMENT OF THE ARMY SUPPLY BULLETIN

Storage Serviceability Standard for USAECOM Materiel

RADAR SETS AN/PPS-5 and AN/PPS-5A

Headquarters Department of the Army, Washington, D.C.

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Section I. INTRODUCTION

1-1. Purpose. This bulletin provides a storage serviceability standard which establishes uniform criteria for determining the acceptability of the items designated herein for continued storage and/or issue, on the condition that all specifications and requirements applicable to the items have previously been met at the time of receipt from new procurement, or after repair, overhaul, or rebuild by a CONUS depot maintenance shop.

1-2. Scope. This bulletin applies to all activities engaged in the receipt, storage, and issue of USAECOM Radar Sets AN/PPS-5 and AN/PPS-5A (FSC 5840) listed in appendix B with the applicable Federal stock numbers.

1-3. Definitions. *a.* Definitions for the majority of specialized terms used can be found in MIL-STD-109B.

b. Definitions for other specialized terms are as follows:

(1) *Storage serviceability standard.* A written procedure providing storage methods and standards and prescribing the necessary requirements for the surveillance of materiel in storage.

(2) *Storage quality level (SQL).* That quality

level applicable to storage sampling inspection expressed in terms of percent defective or defects per 100 units, whichever is applicable, specified for a given group of defects of a product. It is the maximum allowable accidental departure from specification requirements which can be tolerated.

1-4. General. It is the Army's objective to attain and maintain a constant materiel readiness status for materiel in depot stocks. The scope of such an objective is of such magnitude that only general guidelines are provided by chapter 3, section VIII of TM 743-200-1 for the quality evaluation of materiel in the custody of supply and storage activities. This standard supplements TM 743-200-1 by providing a systematic procedure for storage cyclic inspection of Radar Sets AN/PPS-5 and AN/PPS-5A specified in paragraph 1-2 and indicates the limiting degree of deterioration, damage, unsatisfactory storage practices, and other characteristics which are acceptable. It also establishes the basis for identifying materiel requiring segregation, remedial care and preservation, or reclassification action. Applicable requirements of the standard may be used for performing receipt and preshipment quality control inspections.

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1-5. Reporting of Supply Bulletin Improvements. The Reporting of errors, omissions, and recommendations for improving this publication by the individual user is encouraged. Reports should be sub-

mitted on DA form 2028 (Recommended Changes to Publications) and forwarded direct to Commanding General. U. S. Army Electronics Command, ATTN: AMSEL-ME-MMP-EM. Fort Monmouth. N.J. 07703.

Section II. STORAGE AND SPECIAL INSTRUCTIONS

2-1. Preservation, Packaging, and Packing. Preservation, packaging, and packing will be in accordance with the requirements listed in appendix C.

2-2. Marking. Marking of Radar Sets AN/PPS-5 and AX/PPS-5A will be in accordance with MIL-STD-129D.

2-3. Storage. *a. Type.* The preferred type of storage environment for Radar Sets AA/PPS-5 and AN/PPS-5A is a controlled humidity warehouse or heated warehouse (Class A3, MIL-M-55524 (EL)).

b. Age Control. Radar Sets AX/PPS-5 and AN/PPS-5A will be issued on a first-in-first-out (FIFO) basis by date of manufacture, or date of rebuild. The dates can be established from the original government procurement contract number or the rebuild lot number.

c. Shelf Life. Radar Sets AX/PPS-5 and AN/PPS-5A are subject to deterioration during storage

and are required to be inspected and tested as specified in appendix D.

d. Special Handling. If Radar Sets AN/PPS-5 and AN/PPS-5A are to be stored in crates, a fork lift or three men is required for handling.

e. Precautionary Action. When Radar Sets AX/PPS-5 and AX/PPS-5A are being prepared for storage or issue, be sure that there are enough personnel and sufficient moving apparatus available to eliminate the possibility of damage to the equipment or injury to the personnel.

2-4. Disposition of Rejected Material. Rejected materiel will be tagged and reclassified into the proper condition code in accordance with AR 725-50. For other than new materiel, all defective units in a lot shall be repaired, or disposition requested in accordance with AMC and depot procedures.

APPENDIX A REFERENCES

MIL-B-43291	Box, Fiberboard, Corrugated, Double-Wall, Weather Resistant
MIL-C-4150	Case, Carrying, Water-Vaporproof
MIL-C-13777	Cable, Special Purpose, Electrical, General Specification for
MIL-F-14072	Finishes for Ground Signal Equipment
MIL-P-116	Preservation, Methods of
MIL-T-152	Treatment, Moisture- and Fungus-Resistant of Communications, Electronic, and Associated Equipment
MIL-STD-109B	Quality Assurance Terms and Definitions
MIL-STD-129	Marking for Shipment and Storage
PPP-B-640	Box, Fiberboard, Corrugated, Triple-Wall
PPP-P-291	Paperboard, Wrapping, Cushioning

APPENDIX B FEDERAL STOCK NUMBERS AND TEST REQUIREMENTS

<i>Type</i>	<i>F S N</i>	<i>Publication</i>	<i>Test Requirements</i>
AN/PPS-5	5840-999-7649	TM 11-5840-298-35	Paragraph 18-2
AN/PPS-5 (less power unit)	5840-168-1567	TM 11-5840-298-35	Paragraph 18-2
AN/PPS-5A	5840-453-5662	TM 11-5840-298-35	Paragraph 18-2
AN/PPS-5A (less power unit)	5840-238-9366	TM 11-5810-298-35	Paragraph 18-2

APPENDIX C PRESERVATION, PACKAGING, AND PACKING

C-1. Preservation and Packaging. Preservation and packaging shall be level A or C as specified.

a. Level A.

(1) *Cleaning.* Cleaning shall be accomplished in accordance with process C-1 of MIL-P-116.

(2) *Drying.* Drying shall be accomplished in accordance with applicable procedure of MIL-P-116.

(3) *Preservation application.* None required.

(4) *Unit packaging.* Unit packaging shall be in accordance with the methods prescribed in MIL-P-116 and as specified in this appendix.

(a) Technical literature. Each technical literature shall be packaged in accordance with method 1C-1.

(b) Packaging development. Each Radar Set AN/PPS-5 and AN/PPS-5A shall be packaged individually in accordance with method III of MIL-P-116. Packaging shall be developed in accordance with method III, using kinds and types of materials which, when applied, will afford adequate protection against corrosion, deterioration, and damage during worldwide shipment, handling, and storage. The container of a method III package shall conform to the requirements of PPP-B-636, type CF, class weather-resistant. Place components of Radar Set AN/PPS-5 and AN/PPS-5A within the designated compartments of the carrying case CY-3872 ()/PPS-5. Fill all voids with corrugated paper conforming to PPP-P-291

type 1 to prevent movement. Close cover and secure fasteners provided. No further packaging is required.

b. Level C. Each Radar Set AN/PPS-5 and AN/PPS-5A shall be preserved and packaged in a manner that will afford adequate protection against corrosion, deterioration and damage during shipment from the supply source to the first receiving activity.

C-2. Packing. Packing shall be level A, B, or C as specified.

a. Level A and B. Radar Sets AN/PPS-5 and AN/PPS-5A shall be packed within a close-fitting fiberboard box conforming to MIL-B-43291 or PPP-B-640, class weather-resistant. Place the technical literature, packaged as specified earlier, in the box directly under the lid of the box. Closure shall be as specified in the Appendix of the applicable box specification.

b. Level C. Radar Sets AN/PPS-5 and AN/PPS-5A shall be packed as in paragraph C-2a except that the fiberboard box shall be of the type, size, and kind commonly used for the purpose and shall comply with rules and regulations of the common carrier as applicable to the mode of transportation. Packing shall be accomplished in a manner that will afford adequate protection to the package and its content during shipment from the supply source to the first receiving activity.

C-3. Inspection. Inspection of military packaging shall be in accordance with MIL-P-116.

APPENDIX D STORAGE QUALITY ASSURANCE PROVISIONS

D-1. Index Number. The four-digit index number of this storage quality assurance provision (SQAP) (reserved for future use in automatic data processing) is to be assigned.

D-2. Federal Stock Number. Each item listed in appendix B, with its Federal stock number, is subject to the provisions of this SQAP.

D-3. Definitions. Special terms used in this SQAP are defined as follows:

a. Acceptance Quality Level (AQL) The nominal value expressed in terms of percent defective or defects per 100 units, whichever is applicable, specified for a given group of defects of product. It is the maximum allowable accidental departure from specification requirements which can be tolerated.

b. Storage Quality Level (SQL). That quality level applicable to storage sampling inspection expressed

in terms of percent defective or defects per 100 units, whichever is applicable, specified for a given group of defects of a product. It is the maximum allowable accidental departure from specification requirements which can be tolerated.

c. Defect. Any nonconformance of the unit of product with specified requirements.

d. Defective Unit. A unit of product which contains one or more defects.

e. Critical Defect. A defect that judgement and experience indicate is likely to result in hazardous or unsafe conditions for individuals using, maintaining, or depending on the product performance of the tactical function of a major end item, such as a ship, aircraft, tank, missile, or space vehicle.

f. Major Defect. A defect other than critical that could result in failure, or materially reduce the usa-

bility of the product for its intended purpose.

g. Minor Defect. A defect that does not materially reduce the usability of the unit of product for its intended purpose, or is a departure from established standards having little bearing on the effective use or operation of the unit.

h. Mechanical- Visual-Inspection. An inspection by visual means to observe the item and/or its packaging and packing to detect deficiencies. Mechanical-visual inspection may require disassembly.

i. Technical Inspection. A complete functional inspection, including disassembly, where required, and performance testing and/or laboratory testing.

D-4. Specifications, Technical Manuals, and Other Documents. The following documents, of the latest issue in effect contain inspection and testing information, data, and instructions applicable to these quality assurance provisions:

<i>Publication</i>	<i>Title</i>
DA Pam 310-4	Index of Technical Manuals, Technical Bulletins, Supply Manuals (types 7, 8, and 9), Supply Bulletins, and Lubrication Orders.
DA Pam 310-7	U.S. Army Equipment Index of Modification Work Orders
AR 725-50	Requisitioning, Receipt, and Issue System
MIL-P-11268	Parts, Materials and Processes Used in Electronic Communications Equipment
MIL-M-13231	Marking of Electronic Items
MIL-STD-105	Sampling Procedures and Tables for Inspection by Attributes
MIL-STD-108	Definitions of and Basic Requirements for Enclosures for Electric and Electronic Equipment
MIL-STD-252A	Wired Equipment, Classification of Visual and Mechanical Defects
MIL-STD-454	Standard General Requirements for Electronic Equipment
MIL-STD-461	Electromagnetic Interference Characteristics Requirements for Electronic Equipment
MIL-STD-726	Packaging Requirement Code
MIL-STD-810	Environmental Test Methods

<i>Publication</i>	<i>Title</i>
TB 750-236	Calibration Requirements for the Maintenance of Army Material
TB SIG 355-1	Depot Inspection Standard for Repaired Signal Equipment
TB SIG 355-2	Depot Inspection Standard for Refinishing Repaired Signal Equipment
TB SIG 355-3	Depot Inspection Standard for Moisture and Fungus Resistant Treatment.
TB SIG 355-4	Depot Inspection Standard for Balancing Rotating Parts and Assemblies.
TM 11-5840-298-12	Organizational Maintenance Manual Including Repair Parts and Special Tool List Radar Set AN/PPS-5
TM 11-5840-298-35	DS, GS, and Depot Maintenance Manual Radar Set AN/PPS-5
TM 11-5840-298-35P	DS, GS, and Depot Maintenance Manual Repair Parts and Special Tool List Radar Set AN/PPS-5
MWO 11-5840-298-30/1	Modification Work Order Radar Set AN/PPS-5
MWO 11-5840-298-30/1	Modification Work Order Radar Set AN/PPS-5
USAECOM DMWR 11-5840-298	Depot Maintenance Work Requirements Radar Set AN/PPS-5.
TM 38-750	The Army Maintenance Management System

<i>Publication</i>	<i>Title</i>
AR 795-17	General Policies and Principles for Furnishing Army Materiel on a Grant Aid Basis.
AR 795-204	General Policies and Principles for Furnishing Defense Articles and Service on a Sale or Loan Basis.

D-5. Other Directives.

<i>Publication</i>	<i>Title</i>
AR 795-17	General Policies and Principles for Furnishing Army Materiel on a Grant Aid Basis.
AR 795-204	General Policies and Principles for Furnishing Defense Articles and Service on a Sale or Loan Basis.

D-6. Inspection Criteria. *a. Lot Criteria.*

(1) *Lot definition.* A lot is defined as a group of like items from which a sample is to be drawn and inspected to determine conformance with the acceptability criteria. The following are examples:

(a) A group of like items in storage, which

were received in a shipment, for the following identical markings:

- 1 Purchase order number.
- 2 Date packaged or packed.
- 3 Depot certification stamp and date.

(b) A group of like items repaired or rebuilt by the Maintenance Division in one production run.

(2) *Lot formation.* The items shall be assembled into identifiable lots. Each lot shall, as far as practicable, consist of units of product of a single type, grade, class, size, and composition manufactured, repaired, or rebuilt at the same time and stored under the same conditions. It is recommended that equipments from different limited production buys be placed in different lots and that the equipment serial numbers, by limited production buy, be used as a lot formation criteria.

<i>Limired Production Buy</i>	<i>Serial Numbers</i>	<i>Type</i>
1	1-125	AN/PPS-5
2	126-226	AN/PPS-5
3	227-340	AN/PPS-5
4	341-614	AN/PPS-5A

(3) *Lot size.* The lot size is the total number of individual like items in the lot that is to be inspected.

b. Sampling Procedure.

(1) *Sample selection.* Select samples of materiel in a way which will assure that each unit in the lot has an equal chance of being selected. Biased methods, such as selecting items from the same position in a container, pallets, or stacks; taking items all from one location; or selecting items that appear defective, will not be used.

(2) *Sample size.* Use table I of MIL-STD-105D, General Inspection Level II, to obtain the sample size code letter, and table IIA of MIL-STD-105D, to obtain the sample size using the storage quality levels shown in (3) below.

(3) *Storage quality levels (SQL).*

(a) Mechanical-visual inspection: Critical SQL 1.0 percent: major SQL 2.5 percent: minor SQL 10 percent.

(b) Electrical: Critical SQL 1.0 percent: major SQL 2.5 percent.

(c) Preservation, packaging, packing, and marking: major SQL 4.0 percent: minor SQL 10 percent.

(d) The acceptance or reject number for the above SQLs shall be the same as those shown for comparable acceptance quality levels (AQLs) in table IIA of MIL-STD-105D.

c. Inspection Requirements. The following mechanical-visual inspections shall be performed:

(1) Inspect case for physical damage, condition, and finish.

(2) Inspect all controls and switches for proper operation and loose or missing hardware.

(3) Inspect all connectors, plugs, and cord receptacles for condition and damage.

(4) Inspect cabling and wiring for potential short circuits, cuts, breaks, fraying, deterioration, kinks, and strain.

(5) Inspect solder connections for missing solder, cold solder, insufficient solder, excessive solder, and improper wrap.

(6) Inspect for illegible, incorrect, or missing markings.

(7) Inspect for corrosion, dirt, moisture, and fungus.

(8) Inspect all parts and hardware for damage and condition.

d. Test Requirements. Perform those tests that are specified for each Radar Set AN/PPS-5 and AN/PPS-5A listed in appendix B.

e. Defect Classification.

(1) *Mechanical-Visual.*

(a) *Critical.* Refer to the definition of a critical defect.

(b) *Major.*

1 Damage due to handling or storage (crushed, deformed, or broken).

2 Soldering defects as listed in MIL-STD-252A.

3 Solderless connectors: defects as listed in MIL-STD-252A.

4 Cabling and wiring: defects as listed in MIL-STD-252A.

5 Hardware: defects as listed in MIL-STD-252A.

6 Foreign objects: defects as listed in MIL-STD-252A.

7 Potential short circuits: defects as listed in MIL-STD-252A.

8 Finish: defects as listed in MIL-STD-252A.

9 Marking: defects as listed in MIL-STD-252A.

10 Parts: defects as listed in MIL-STD-252A.

11 Contacts: defects as listed in MIL-STD-252A.

12 Plating, painting, or MFP missing.

13 Dimensional: a dimensional defect which directly affects interchangeability, assembly, or operation.

(c) *Minor.*

1 Soldering: defects as listed in MIL-STD-252A.

2 Solderless connectors: defects as listed in MIL-STD-252A.

3 Cabling and wiring: defects as listed in MIL-STD-252A.

- 252A. 4 Hardware: defects as listed in MIL-STD-252A.
5 Finish: defects as listed in MIL-STD-252A.
252A. 6 Marking: defects as listed in MIL-STD-252A.
7 Parts: defects as listed in MIL-STD-252A.
252A. 8 Contacts: defects as listed in MIL-STD-252A.

(2) *Electrical.*

(a) *Critical.* Refer to the definition of a critical defect.

(b) *Major.* Any electrical defect, other than critical, that does not meet the requirements specified for each item shall be considered a major defect.

(c) *Minor.* None. All electrical defects shall be considered critical or major, as applicable.

(3) *Packaging and marking - major.*

(a) Use of improper or defective materiel.

(b) Quantity in unit package not as specified.

(c) Incorrect packaging method applied.

(d) Cushioning or padding omitted.

(e) Cushioning or padding inadequate for the protection of the barrier material from projections, sharp edges, or other similar features of the item.

(f) Cushioning inadequate for the physical and mechanical protection of the item.

(g) Unsealed, punctured, or improperly sealed barrier bag, wrap, or envelope.

(h) Stock number omitted, incorrect, or illegible.

(i) Nomenclature omitted, incorrect, or illegible.

(j) Marking of quantity of items in package omitted, incorrect, or illegible.

(k) Different stock numbered items in the same unit package.

(4) *Packaging and marking - minor.*

(a) Item not properly blocked or braced within the unit package to prevent movement.

(b) Packaging materiel damaged.

(c) Conforming or cushioning wraps are not snug fitting and contain voids.

(d) Air not expelled from barrier prior to sealing.

(e) Any item of marking information other than (3) (h), (i), and (j) listed above under major defects, omitted, incorrect, or illegible.

(5) *Packing and marking — major.*

(a) Use of improper or defective materiel.

(b) Quantity in pack not as specified.

(c) Gross weight in excess of specified amount.

(d) Box closure not as specified.

(e) Type, grade, class, and style of the shipping container not as specified.

(f) Strapping omitted (when required).

(g) Strapping inadequate or incorrectly applied

(when required).

(h) Items not adequately blocked, braced, or cushioned within the shipping container to prevent movement or damage.

(i) Shipping documents or packing list omitted.

(j) Stock number omitted, incorrect, or illegible.

(k) Nomenclature omitted, incorrect, or illegible.

(l) Marking of quantities of items in pack omitted, incorrect, or illegible.

(m) Destination marking omitted, incorrect, or illegible.

(n) Special marking or labeling (when required) omitted, incorrect or illegible.

(o) Oversea code marking (when required) omitted, incorrect, or illegible.

(6) *Packing and marking — minor.*

(a) Unsealed carton.

(b) Defective taping or sealing of carton.

(c) Any other box defect which may be considered minor by definition of MIL-STD-106.

(d) Any item of required marking information other than (5) (j) through (c) listed above under major defects, omitted, incorrect, or illegible.

f. Calibration of Measuring and Test Equipment. All measuring and test equipment shall have been calibrated and certified within its prescribed period, in accordance with TB 750-236, before use. Certification shall be affixed in such a way as to preclude any altering or tampering.

g. Storage Inspection Records. Results of inspections and tests shall be recorded on data sheets and a copy attached to each unit.

D-7. Inspection Frequency. *a.* Controlled humidity warehouse: 60 months.

b. Heated warehouse: 36 months.

c. Unheated warehouse 18 months.

D-8. Type of Storage. Controlled humidity warehouse or heated warehouse.

D-9. Other Instructions. *a. Rejected Lots.* Each rejected lot shall be tagged and reclassified into the proper condition code in accordance with AR 725-50. For other than new materiel, all defective units in a lot shall be repaired, or disposition requested in accordance with AMC and depot procedures.

b. Repackaging of Samples Inspected. Restore the packaging of the samples inspected and accepted to the level of the lot from which the samples were drawn.

D-10. Special Requirements. If the subject items are allocated for Foreign Military Sales, Grant Aid, or Loan, the following additional requirements must be met:

a. Policies and Special Conditions.

<i>Publication</i>	<i>Title</i>
AR 795-17	General Policies and Principles for Furnishing Army Materiel on a Grant Aid Basis.
AR 795-204	General Policies and Principles for Furnishing Defense Articles and Services on a Sale or Loan Basis.
DD Form 1513	Offer and Acceptance.

NOTE

Special terms, conditions, and agreements with the customer country and shown on the DD Form 1513 must be complied with as well as any special instructions from the responsible commodity command.

b. Basic Issue Items List (BIIL). BIIL deck, normally furnished to the depots by USAECOM BIIL Office, Lexington Blue Grass Army Depot, Lexington, Ky. office symbol AMSEL-ME-NMP-MR-L, shall be used.

c. Level A Packaging and Packing. Level A packaging and packing is mandatory for Foreign Military Sales and Grant Aid shipments.

d. Depot Documentation. Depot documentation of final acceptance shall be furnished the ECOM quality check team before ECOM inspection.

By Order of the Secretary of the Army:

W. C. WESTMORELAND,
General, United States Army
Chief of Staff.

Official:

KENNETH G. WICKHAM,
Major General, United States Army,
The Adjutant General.

Distribution:

Active Army:

CNGB (1)
ACSC-E (2)
USAARENBD (1)
USACDCCEA (1)
USACDCCEA (Ft Huachuca) (1)
CONARC (5)
ARADCOM (2)
OS Maj Comd (4)
USARV (5)
LOGCOMD (3)
USAMC (1)
USAECOM (3)
USAESC (40)
USAMICOM (3)
USATECOM (3)

USAMUCOM (3)
USAMECOM (3)
USAWECOM (3)
USASTRATCOM (2)

Armies (2)
Corps (2)
Army Dep (2) except
SAAD (50)
LBAD (20)
TOAD (20)
ANAD (10)
ATAD (10)
LEAD (7)
Gen Dep (2)
Sig Sec, Gen Dep (5)
Sig Dep (12)
Units org under fol TOE:
11-1598 (1)

ARNG & USAR: None.

For explanation of abbreviations used, see AR 310-50.