DEPARTMENT OF THE ARMY SUPPLY BULLETIN

Storage Serviceability Standard for USAECOM Materiel

AIRBORNE RADIO TRANSMITTERS

Headquarters, Department of the Army, Washington D.C. 21 January 1970

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SECTION I. (INTRODUCTION)

- 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 Procurements, or after repair, overhaul, or rebuild
- by a CONUS depot maintenance shop.
- 2. Scope. This bulletin applies to all activities engaged in the receipt, storage. and issue of USAECOM Airborne Radio Transmitters listed in appendix **B** with the applicable Federal stock number(s)

- 3. General. It is the Army's objective to attain and maintain a constant material readiness status for material 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 material in the custody of supply and storage activities This standard supplements TM 743-200-I by providing a systematic procedure for storage cyclic Inspection of the converters specified in paragraph 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 segregration, remedial care and preservation, or reclassification action Applicable requirements of the standard may be used for performing receipt and preshipment quality control inspections
- **4 Definitions** a Definitions for the majority of specialized terms 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 material 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.
- 5. **Reporting of Supply Bulletin Improvements.** Reporting of errors, omissions, and recommendations for improving this publication by the individual user is encouraged Reports should be submitted on DA Form 2028 (Recommended Changes to Publications) and forwarded direct to Commanding General, U S Army Electronics Command, ATTN AMSEL-ME-NMP-EM. Fort Monmouth, NJ 07703

SECTION II STORAGE AND SPECIAL INSTRUCTIONS

- **6 Preservation, Packaging, and Packing** Preservation, packaging. and packing will be in accordance with the requirements listed in appendix C Items designated by 17-digit code shall be preserved, and packaged in accordance with MIL-STD-726C, packing shall conform to the requirements specified in MIL-P-55585 (EL) Items designated by an asterisk (*) shall be preserved, packaged, and packed in accordance with the special instructions cited for the item
- **7. Marking.** Marking will be in accordance with MIL-STD-129D

- 8. **Storage a** *Type* Controlled humidity warehouse or heated warehouse
- b Age Control Radio transmitters will be issued on a first-in-first-out (FIFO) basis by date of manufacture, or date of rebuild
- c Shelf Life Radio transmitters are subject to deterioration during storage and are required to be inspected and tested as specified in appendix D

APPENDIX A

REFERENCES

MUL-P-55585 (EL)	Packing and Marking Requirements for Southeast Asia and Strat- com and Preparation for Delivery Requirements of Electron
MIL-STD-109B	ics Equipment and Components Quality Assurance Terms and Definitions
MIL-STD-129D MIL-STD-726C	Marking for Shipment and Storage Packaging Requirements Code
TM 743-200-1	Storage and Materials Handling

A P P E N D I X B

FEDERAL STOCK NUMBERS AND TEST REQUIREMENTS

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Type	FSN	Publication	To ' Requirements	
T 47 ART-13	5821-623-6405	*REP 1109	Perform all tests	
T-363 ARC	5821-503-3424	*REP 621	Perform all tests	
T-365 ARC	5621-503-3435	*REP 744	Perform all tests	
T 366/ARC	5821-503-3434	*REP 620	Perform all tests	
T-595 AR	5821-697-9745	TM 11-5821-203-35	Section II	
T-835/ARC-73	5821-682-8832	TM 11-821-217-45	Para 154 through 166	

^{*}These REP publications r may be obtained from U S Army Electronics Command, ATTN AMSEL-ME-NMP-EM, Fort Monmouth, N J 07703

APPENDIX C PRESERVATION, PACKAGING, AND PACKING

Type	Requirements
T-47/ÅRT-13*	
T-363/ARC	10-1-100-00-JN-X-ED-0-00-A
T-365/ARC	4Q-1-1-00-00-JJ-X-ED-0-00-A
T-366/ARC	10-1-1-00-00-JN-X-ED-0-00-A
T-595/AR*	
T-835/ARC-73	4Q-1-1-00-00-JJ-X-ED-0-00-A

^{*}Special Packaging Instructions (paras 1, 2, and 3)

- **C-l. Preservation and Packaging.** Preservation and packaging shall be level A
- **a Cleaning** Cleaning shall be accomplished in accordance with process C-l of MIL-P-116
- b Drying Drying shall be accomplished in accordance with the applicable procedure of MIL-P-116
- c Unit Packaging Unit packaging shall be in accordance with the methods prescribed in MIL-P-116 and as specified in this appendix
- (1) Technical literature Each technical literature shall be packaged method IC-1
- (2) Electron tubes All tubes not securely clamped in place shall be removed and packaged individually in accordance with MIL-E-75

- (3) Running spares, accessories and ancillary items Running spares, accessories, and ancillary items shall be packaged in accordance with MIL-E-17555
- (4) Stowage within compartments. When stowage space Is provided in the equipment, the applicable items packaged as specified above will be stowed within the compartments provided. Over-now packages will be consolidated as specified in d below
- d Consolidated Package Consolidate the items packaged as specified above within a close fitting fiberboard box conforming to PPP-B-636, type CF, class weather-resistant Fill all voids with paper-board conforming to PPP-P-291, type III, to prevent movement Box closure shall be as specified in the appendix of the box specification.

e. Packaging Development Packaging shall be developed in accordance with method IIb for radio transmitter T-47 ART-13 and method III for radio transmitter T-595 AR 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 outer container of a method IIb or method III package shall conform to the requirements of PPP-B-636, type CF, class weather-resistant Closure shall be in accordance with the appendix of the box specification

C-2 Packing Packing shall be level A

- a. The radio transmitters packaged as specified in paragraph 1. shall be packed in containers selected from table 1. based on the most economical container required to provide minimum, adequate protection for the packaged items for this packing level of protection
- b When the containers being placed directly into the shipping container are not waterproofed, waterproofing shall be effected by use of an indicidual wrap or a caseliner conforming to MIL-L-10547. grade B, and appendix thereto, before packing Dunnage not inclosed within the waterproof wrap or caseliner shall consist of materials treated to resist water Wraps or caseliners may be omitted from fiberboard boxes if all seams, corers, and manufacturer's joints are waterproofed

by sealing with tape not less than 2 inches wide conforming to PPP-T-76 The tape shall be centered over the seams and joints and extend over all corners and edges of the box mimunum of 2 inches onto the adjacent box panels Tape shall be applied over the lengthwise seams of the outer flaps closing the openings of the box and over the manufacturer's joint before the tape is applied to the edge scams of the box The tape applied to the manufacturer's joint shall fully cover only the joint and not extend over the corners of the box onto the adjacent panels

- c Closure shall be in accordance with the applicable container specifications of appendix thereto
- d Metal strapping. conforming to QQ-S-781. type 1. class B shall be applied to wood and wood-cleated shipping containers in accordance with the requirements of the applicable box specification or appendix thereto Fiberboard shipping containers shall be reinforced by pressure-sensitive filament tape banding. or nonmetallic strapping conforming to PPP-T-97, type IV, and PPP-S-760, type II, respectively, **selection** of the material and application shall he in accordance with the appendix of the applicable box specification
- C-3 Inspection. Inspection of military packaging shall be in accordance w1t.h MIL-P-116

Table C1 Container Requirements

Container	Specification	I coef A	Level B	Max gross weight limitation (lb)
Boxes wood maled and lock corner, style 4	PPP B 621	Class 2	Class ¹	2001
Box, cleated plywood	PPP B 601	Ox. sertype	Domestic type	2004
Boxes (tiberboard, corrugated triple wall style E	PPP B 6 10	Class 2	Class 2	200 -
Box (tibe, board, type Cl	PPP B G 36	Class weather resist int	Class weather resist int	See fee (note)
Box, therboard, corrugited, double will, weather resist int	MH B 13293	Lype CF	1 хүн СЭ	

When the weight of a single stem (regether with the Japping configure exceeds 200 pound) the maximum prox weight limitation of the configure specification shall apply. Also skids or pullet bases shall be applied in accordance with the equicaments of the configure specification or if not specified in the specification or it was which will idequatel, support the item and facilitate the use of material handling equipment.

The maximum grows seeght limitation to special requirements operated in FFP Better had apply

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) will be assigned when available
- **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 nommal value 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.
- 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.
- e. Defect Any nonconformance of the unit of product with specified requirements

- e Critical Defect. A defect that judgement and experience indicate is likely to result in hazardous or unsafe conditions for individual using, maintaining, or depending on the product performanance of the tactical function of a major end item, such as a ship, au-craft, tank, missile. or space vehicle
- f. Major Defect. A defect other than critical that could result in failure, or materially reduce the usability 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 packaging and packing to detect deficiencies Mechanical-visual inspection may require disassembly
- i Technical Inspection A complete functional inspection, including disassembly, where required, and performanance 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;

contains one or more defects

Publication	Title
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-116	Preservation, Methods of
MIL-P 11268	Parts, Materials and Processes Used in Electronic Communication Equipment
MIL-M-13231	Marking of Electronic Items
MIL-STD-105D	Sampling Procedures and Tables for Inspection by Attributes
MIL-STD-109B	Quality Assurance Terms and Definitions
MIL-STD-129D	Marking for Shipment and Storage
MIL STD-130C	Identification Marking of U.S. Military Property
MIL STD-252A	Wired Equipment, Classification of Visual and Mechanical Defects
MIL-STD-726C	Packaging Pequirements Code
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

Publication	Title

TB SIG 355-4	Depot Inspection Standard for Balancing Rotating Parts and Assemblies
TB 770-236	Calibration Requirements for the Maintenance of Army Material
TM 38 750	Army Equipment Record Procedures
*REP 620	Specific Standard for Transmitter. Radio T-366/ARC
*REP 621	Specific Standard for Transmitter, Radio T-363/ARC
*REP 744	Specific Standard for Transmitter. Radio T-365/ARC
*REP 1109	Specific Standard for Transmitter, Radio T-47/ART-13
TM 11-582r-203-35	Field and Depot Maintenance Radio Transmitting Set AN/ART-34
TM 11-5821-217-45	GS and Depot Maintenance Manual Radio Sets AN/ARC-73 and AN/ARC-73A

*These REP publications may be obtained from US Army Electronics Command, ATTN AMSEL ME-NMP-EM. Fort Monmouth, NJ 07703

D-5. Other Directives.

Publication Title

AR 795-17 General Policies and Principles for Furnishing Army Material on a Grant

Aid Basis

AR 795-204 General Policies and Principles for Furnishing Defense Articles and Services 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 with the following identical marking,
 - 1 Purchase order number.
 - 2 Date packaged or packed.
 - 3 Depot certification stamp and data.
- (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
- (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 material 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 contamer. 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 2-A 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 10 percent; major SQL 25 percent, minor SQL 10 percent.
- (b) Electrical; Critical SQL 10 percent major SQL 25 **pe**rcent.
- (c) Preservation, packaging packing, and marking major SQL 40 percent, minor SQL 10 percent
- (d) The acceptance or reject number for the above SQL'S shall be the same as those shown for comparable acceptance quality levels (AQL'S) in table 2-4 of MIL-STL-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 assembly for physical damage, condition missing parts. foreign objects, and finish
- (5) Inspect cabling and wiring for potential short circuits, cuts, breaks, fraying, deterioration, kirks and strain
- (6) Inspect solaer connections for missing solder cold solder insufficient. excessive solder, and improper wrap
- (7) Inspect for Illegible. incorrect, or missing markings
- (8) Inspect for corrosion, dirt moisture, and fungus
- (9) Inspect all hardware and parts for damage and condition
 - d Test Requirements

Perform those tests that are specified for each radio transmitters listed in Appendix B

- e Defect Classification
 - (1) Mechanical-visual
- (a) Critical Refer to the definition of a critical defect
 - (b) Major
- 1 D. mage due to handling or storage (crushed, deformed. or broken)
- 2 Soldering defects as listed in MIL-STD-252A
- ${\small 3\:\: Solderless\:\: connectors\:\: defects\:\: as\:\: list} \\ {\small ed\:\: in\:\: MIL\text{-}STD\text{-}252A}$
- 4 $\,$ Cabling and Wiring defects as listed in MIL-STD-152A
- $\,$ 5 Hardware defects as listed in MIL-STD-252A
- 6 Foreign objects defects as listed in MIL-STD-252A
- 7 . Potential shorts defects as listed in MIL-STD-252A $\,$
- f 8 Finish detects 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 $\mbox{\sc li}{}\mbox{sted}$ in MIL-STD-252A
 - 12 Plating painting. or MFP missing
- 13 Dimensional a dimensional defect which directly affects interchangeability, assembly, or operation
 - (c) Minor.
- $1 \hspace{0.5cm} \hbox{Soldering defects as listed in MIL-STD-252A}. \\$
- $\,$ 3 $\,$ Cabling and wiring defects as listed in MIL-STD-252A.
- ${\small 4\;\; Hardware\;\; defects\;\; as\;\; listed\;\; in\;\; MIL-STD-252A}$
- $\,$ 5 $\,$ Finish defects as listed in MIL-STD-252A $\,$
- $\,$ 6 Marking. defects as listed in MIL-STD-252A
- $7 \hspace{0.5cm} \textbf{Parts defects as listed in MIL-STD-} \\ \textbf{252A}$
- $\hbox{8 Contacts defects as listed in MIL-STD-252A}$
 - (2) Electrical
- (a) ${\it Critical}$ 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) USC of improper or defective material
- (b) Quantity of unit package not as specified
 - (c) Incorrect packaging method supplied
 - (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 emproperly sealed barrier bag wrap or envelope
- (h) Stock number omitted, incorrect, or illegible
- (i) Nomenclature omitted, incorrect, or illegible
- (1) 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 material damaged
- (c) Conforming or cushioning wraps are not snug fitting and contain voids
- (d) An not expelled from barner before sealing
- (e) Any item of marking information other than (3) (h), (i), and (j) above listed under major defects omitted, incorrect, or illegible
 - (5) Packing and marking major
 - (a) Use of improper or defective material
 - (b) Quantity in pack not as specified
- (c) Gross weight in excess of specified a-mount
 - (d) Box closure not as specified
- (e) Type, grade, class, and style of the shipping container not as specified
 - (f) Strapping omitted (when required)
- (a) Strapping inadequate or incorrectly applied (when required)
- (h) Items not adequately blocked, braced, or cushioned with nother shipping container to prevent movement or damage.
- (i) Shipping documents or packing list of mitted
- (j) Stock number omitted incorrect of dlegible.
- (k) Nomenclature omitted incorrect or allegable.

- 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-105D
- (d) Any item of required marking information other than (5) (j) through (o) above listed 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 persod, 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 warebouse or heated warehouse
- **D-9 Other Instructions** a Rejected Lots Each rejected lot shall be tagged and reclassified into the proper condition code is accordance with AR 725-50. For other than new material all defective units in a lot shall be repaired or disposition requested in accordance with AMC and depot pro-
- h Repection of Samples Inspected Restore the package ag of the samples aspected and accept ed to the level of the let 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

Publication	Title
AR 795-17	General Policies and Principles for Furnishing Army Ma terial on a Grant Aid Basis
AR 75 > 20-	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 List Items (BILI) BILI deck, normally furnished to the depots by USAECOM BILI 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 Sates 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

Official

KENNETH G WICKHAM, Majo: General, United States Army, The Adjutint General W C WESTMORELAND, General, United States Armu. Chief of Staff

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USAR None
For explanation of abbreviations used see AR 410 50
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USAWECOM (3) Armaes (2) Corps (2) USAESC (10) USMACV (10) USARV (5) Depots (2) except SAAD (50) LBAD (20) TOAD (20) LEAD (7) AN AD (10) ATAD (10) Gen Deps (2) Sig Sec Gen Deps (5) Sig Deps (12)

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