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AUTHORITY

USATEC ltr, 14 Dec 1970

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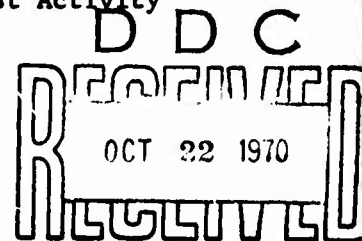
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3 August 1970

Materiel Test Procedure 10-2-199
General Equipment Test Activity

U. S. ARMY TEST AND EVALUATION COMMAND
COMMODITY ENGINEERING TEST PROCEDURE

DECEASED PERSONNEL ID SYSTEMS



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1. OBJECTIVE*

This document provides the test methodology and testing techniques to determine the technical performance and safety characteristics of deceased personnel ID systems as described in Qualitative Materiel Requirements (QMR's), Small Development Requirements (SDR's), and Technical Characteristics (TC's), and to determine the suitability of the items for service tests.

2. BACKGROUND

Prompt, positive identification of the dead is perhaps the most vital aspect of graves registration operations, and at the same time it is often the most difficult to accomplish. Identification is essential because of many considerations. In addition to the continued bereavement of the family when an individual is listed as missing in action for an extended period, the legal implications become extremely involved. Insurance claims cannot be paid, estates cannot be settled, and the widow cannot remarry, to mention but a few considerations. Another factor is the expense to the government which accrues when military dead are not promptly identified. The pay and allowances of an individual continue as long as he is carried as missing and this status may continue for years. If a large number of individuals are in a missing status the cost to the government may be staggering. Although the Secretary of the Army may, after review of all evidence, find an individual who has been missing for one year to be dead, this finding is not binding on the courts of the individual states. The results of a sample survey, which was made of the laws of 18 states, indicates that a finding of death by the military services under the Missing Persons Act is not acceptable as conclusive evidence of death in settling estates and other legal matters of the deceased.

It follows then that every effort should be made by personnel of a unit to recover and identify the bodies of their comrades who fell in battle. Unfortunately this is not always possible because of tactical considerations or the denial of an area by nuclear agents or persistent chemical agents. Under these conditions it may be impossible to recover remains for several days or, in some instances, even several months. In the meantime, the unit sustaining the loss has moved on and personal recognition statements are not possible; personal effects have disappeared, and it is no longer possible to obtain fingerprints when the remains are recovered. Now the long laborious process of establishing identity begins. In past conflicts a remarkable record has been achieved in establishing positive identity of temporary unknowns. The process however, requires highly skilled technicians, rather extensive

*This MTP is intended to be used as a basic guide in preparing actual test plans for the subject equipment. Specific criteria and test procedures must be determined only after careful appraisal of pertinent QMR's, SDR's, TC's, and any other applicable documents.

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facilities and a great deal of time. It is doubtful that in any conflict involving the use of mass casualty weapons, resulting in a large number of unknown dead, the processing of unknowns as presently done could be continued. A need exists, therefore, for a simple, quick, positive means of identification of remains upon recovery whether they be flesh covered or only skeletal.

3. REQUIRED EQUIPMENT

- a. Physical Laboratory Testing Equipment.
- b. Fingerprint kit - Type H. (Taking)
- c. Environmental Test Chamber. Range -65°F. to +155°F; 5-100% RH; solar radiation to 360 Btu/ft²/hr.
- d. Shock and Vibration Test Equipment.
- e. Human Cadavers (may be required).
- f. Live Sheep (if applicable).
- g. Human Test Subjects (volunteers) as approved by The Surgeon

General.

4. REFERENCES

- A. Army Regulations 70-10, Test and Evaluation During Research and Development of Material.
- B. Army Regulations 70-38, Research, Development, Test and Evaluation Of Materiel for Extreme Climatic Conditions.
- C. Army Regulations 750-6, Maintenance Support Planning.
- D. USAMC Pamphlet 706-134, Maintainability Guide for Design.
- E. USATECOM Regulation 385-6, Verification of Safety of Materiel During Testing.
- F. USATECOM Regulation 700-1, Value Engineering.
- G. USATECOM Regulation 70-23, Equipment Performance Report (EPRs).
- H. USAGETA Document, Human Factors Evaluation Data for General Equipment (HEDGE).
- I. Federal Test Method Standard 101, Methods 5007 and 5019.
- J. FM 10-63, Handling of Deceased Personnel in Theaters of Operations.
- K. TM 10-286, Identification of Deceased Personnel.
- L. Report from the QM Board, Project No. 25, Graves Registration Operations Under Concept of Future.
- M. MIL-S-38130, Safety Engineering of Systems and Associated Sub-systems, and Equipment, General Requirements For.
- N. MIL-STD-461, Electromagnetic Interference Characteristics, Requirements for Equipment.
- O. MIL-STD-462, Electromagnetic Interference Characteristics, Measurement of.
- P. MIL-STD-463, Definitions and System of Units, Electromagnetic Interference Technology.
- Q. MTP 6-1-006, Electromagnetic Compatibility.
- R. MTP 10-2-500, Physical Characteristics.
- S. MTP 10-2-501, Operator Training and Familiarization.
- T. MTP 10-2-502, Durability.
- U. MTP 10-2-503, Surface Transportability (General Supplies and Equipment).

- V. MTP 10-2-505, Human Factors Evaluation.
- W. MTP 10-2-507, Maintenance Evaluation.
- X. MTP 10-2-508, Safety.

5. SCOPE

5.1 SUMMARY

This procedure describes the preparation for and methods of evaluating the technical characteristics of deceased personnel ID systems. The required subtests are as follows:

- a. Preparation for Test - A determination of the condition and physical characteristics of the test item upon arrival and to ensure that the test item is complete, functionally operational and safe to test. Also, to provide test participant training and familiarization and certain pre-operational procedures including the reassembly, servicing and checkout of all controls.
- b. Performance - A series of subtests to determine the functional suitability of the test item. The degree to which it meets all technical characteristics. The system, electromagnetic and CBR compatibility.
- c. Environmental Tests - A series of evaluations designed to examine and measure changes in the performance and physical characteristics of the test item when it is subjected to controlled changes in environmental parameters.
- d. Transportability - A determination of the ability of the test item to withstand the forces which it will experience during normal handling and transporting.
- e. Maintenance Evaluation - An evaluation to determine and appraise the maintenance characteristics and requirements of the test item, a verification and appraisal of its malfunctions, an evaluation of the test item's associated publications and other common and special support elements (maintenance test package), an appraisal of the test item's design for maintainability (AMCP 706-134: accessibility, ease of maintenance, standardization, and interchangeability), an evaluation of component and system durability and reliability, and the calculation of indicators which express the effects of appropriate preceding aspects.
- f. Durability - An evaluation of the endurance and reliability of the test item under conditions of continuous use for extended periods of time.
- g. Safety - An evaluation to determine the test item compliance with safety requirements and to confirm the test item's safety characteristics during conduct of all tests.
- h. Human Factors Evaluation - An evaluation to determine the adequacy of the design and performance characteristics of the test item and associated equipment in terms of conformance to accepted human factors engineering design criteria.
- i. Value Analysis - An evaluation directed at analyzing the primary function and features of the test item for the purpose of reducing the cost of the test item without compromising performance and safety characteristics.
- j. Quality Assurance - A review for the purpose of determining and evaluating defects in material and workmanship.

5.2 LIMITATIONS

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None

6. PROCEDURES

6.1 PREPARATION FOR TEST

NOTE: Prepare an Equipment Performance Report in accordance with the provisions of USATECOM Regulation 70-23 for any items that are missing, damaged or considered inadequate when completing the following procedures.

6.1.1 Initial Inspection

Upon receipt of the test item at the test site, perform applicable procedures of MTP 10-2-500 to include the following:

Record and photograph as applicable:

- a. Evidence of damage incurred during transport or storage
- b. Defects or variations in material or workmanship
- c. Missing components

6.1.2 Inventory Check

Conduct an inventory against the Basic Issue Items List (BIIL). Record evidence of the following:

- a. Missing maintenance literature or draft technical manuals
- b. Shortages in repair parts, accessories, or tools
- c. Missing kits

6.1.3 Physical Characteristics

Determine the physical characteristics of the test item by performing the applicable procedures of MTP 10-2-500.

6.1.4 Preoperational Procedures

The following is to be performed by a qualified organizational mechanic:

- a. Reassemble any components that were removed for packaging/packaging and shipping.
- b. Perform all services-upon-receipt procedures in accordance with instructions in the maintenance package. Included should be all before-operation services as detailed in the draft technical manual.
- c. Check all mechanical and electrical controls by hand manipulation to ensure freedom and smoothness of movement.
- d. Determine that the test item is safe to test and that a safety certification has been received from the developer.

6.1.5 Operator Training and Familiarization

Test personnel shall receive training and familiarization in accordance with applicable procedures of MTP 10-2-501.

6.2 TEST CONDUCT

NOTE: All equipment malfunctions shall be reported in accordance with the provisions of USATECOM Regulation 70-23.

6.2.1 Performance

6.2.1.1 Technical Characteristics

Determine the degree to which the system operation meets each of the technical characteristics as set forth in the QMR, SDR or other applicable documents.

a. Initial marking, or determining data, for subsequent identification. Determine the following:

- 1) Ease of performing the operation
- 2) Possibility of error
- 3) Time to perform the operation

NOTE: Also determine the time to take a set of fingerprints of a typical test subject.

b. Data recovery, (identification). Determine the following:

- 1) Ease of performing the operation
- 2) Time to perform the operation
- 3) Time to take a full set of fingerprints from a human cadaver

6.2.1.2 System Compatibility

Determine any evidence of incompatibility between the following:

- a. The equipment employed for initial marking or determination of data.
- b. Equipment employed in retrieval of data. (Making identification)
- c. Various steps in the overall system operation.

6.2.1.3 Electromagnetic Compatibility

Test any electrically operated components of the system, such as an X-ray readout device, for undesirable emission of electronic interference in accordance with applicable procedures of MIL-STD-461, 462, 463 and MTP 6-1-006.

6.2.1.4 CBR Compatibility

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a. Determine the presence and extent of any adverse effects on any one or more of the components of the ID system when being utilized on remains and/or in an area contaminated by CBR agents, the residual effect of which has decayed to a level sufficiently low to permit GRS personnel to enter and/or work safely. Utilize the following types of contaminants:

1) Chemical Agents.

- a) Lethal war gases.
- b) Smoke and phosphorus (non-lethal).
- c) Ease of decontamination of ID system equipment, if required.

2) Biological Weapons. No adverse effect on equipment is expected.

3) Nuclear Weapons.

- a) Fallout (radioactive dust)
- b) Induced radioactivity (irradiation)
- c) Unfissioned radioactive material

b. If contamination of ID system equipment results from any of the above causes, determine the ease of decontamination.

6.2.2 Environmental Tests

6.2.2.1 Storage Under Extreme Environments

With the test item packaged and packed for normal delivery to and storage in the field, store in a test chamber for 48 hours under each of the following conditions:

a. Hot-Dry

- 1) Temperature of 155°F
- 2) Solar Radiation of 360 Btu/ft²/hr.
- 3) Relative Humidity of 5 percent

b. Warm-Wet

- 1) Temperature of 95°F
- 2) Solar Radiation of 310 Btu/ft²/hr.
- 3) Relative Humidity of 100 percent

c. Cold

- 1) Temperature of -65°F
- 2) No Solar Radiation

6.2.2.2 Post Test Inspection and Operability Check

After storage under each of the environmental conditions specified in paragraph 6.2.2.1 above perform the following:

- a. Inspect the test item package(s) immediately after exposure for damage or deterioration.
- b. Unpack and inspect the test item for damage or deterioration (to include any carrying cases).
- c. Repeat the performance tests in paragraph 6.2.1.1 above to determine any adverse effects on operability.

6.2.3 Transportability

- a. Subject the test item to applicable procedures of MTP 10-2-503 to include a suitable shock and vibration test such as Methods 5007 and/or 5019, Federal Test Method Standard 101.
- b. After completion of the above test, examine the test item for damage such as cracks, breaks, ruptures, etc.
- c. Repeat applicable portions of the performance tests, paragraph 6.2.1 above to confirm operability.

6.2.4 Maintenance

Evaluate and appraise the maintenance related factors of the test item as described in MTP 10-2-507, MTP 10-2-512 and AMC Pamphlet 706-134 with emphasis on the following:

- a. Organizational (O), Direct Support (F), and General Support (H) Maintenance requirements.
- b. Operator through General Support Maintenance Literature.
- c. Repair parts.
- d. Tools.
- e. Test and handling equipment.
- f. Calibration and maintenance facilities.
- g. Personnel skill requirements.
- h. Maintainability.
- i. Reliability.
- j. Availability.

6.2.5 Durability

Perform pertinent procedures of MTP 10-2-502

6.2.6 Safety

Evaluate the safety characteristics and features of the test item. Applicable provisions of MTP 10-2-508 and MIL-S-38130 will apply.

NOTE: Provide a safety recommendation in accordance with USATECOM Regulation 385-6, and the test directive, as applicable. During the conduct of all tests, test personnel shall observe the proper safety precautions and, in particular, shall adhere

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closely to the draft manual for the handling and use of the test item. The procedures for all tests shall be examined and any condition which might constitute a safety hazard shall be recorded and also reported to the testing officer.

Perform the following:

a. Examine the safety characteristics of the test item including the procedures for its operation and its design to ensure that maximum safety has been provided consistent with military requirements. Hazards shall be classified as safe, marginal, critical, and catastrophic in accordance with the definitions contained in MIL-S-38130. Consider the following, as applicable:

- 1) Examine operating procedures in the light that improperly executed or misinterpreted instructions could result in bodily harm or equipment damage.
- 2) Where unsafe conditions cannot be avoided, is the item properly and conspicuously marked for the condition?
- 3) Are all moving parts shielded and completely enclosed?
- 4) Where electrical power is utilized, are the electrical circuits guarded against accidental contact?
- 5) Are any environmental limitations explicitly denoted?
- 6) Are fuels, propellants, etc., properly protected and handling procedures given?

b. Prepare a list of all protective and warning devices included on the test item. Consider the following, if present:

- 1) Overheat devices
- 2) Overload
- 3) Locking mechanisms
- 4) Limit switches
- 5) Safety brakes
- 6) Visual and audible warning devices
- 7) Interlocks

c. For each device listed, a minimum of 2 cycles of operation shall be caused by simulating the type failure which the device is to detect or otherwise utilizing the feature. Record the following:

- 1) The device/feature tested
- 2) Failure which the device is to detect
- 3) Proper operation of the device or failure detected

d. Examine the test item for the possible additions and/or improvements to its safety characteristics. Record any recommendations.

6.2.7 Human Factors Evaluation

Throughout the test, evaluate the effectiveness and characteristics

of the man-item interaction as related to human factors by performing the applicable section of MTP 10-2-505 and the following:

a. Prepare a checklist to evaluate the human factor characteristic using Human Factors Evaluation Data for General Equipment (HEDGE) for the Class IV-A equipment, including the following:

1) Operability

- a) Unstow/Restow - evaluate the design of the test item (and carrying or storage case, if any) for ease of unstowing/restowing, adequacy of storage space, ease of operating fasteners (both barehanded and while wearing hand wear) and adequacy of internal fastenings to prevent impact damage.
- b) Assemble/Connect - evaluate the design of the test item for quick and easy field assembly (if required), connection with other components of the system and ease of setup in the use area.
- c) Align, Calibrate, Adjust - evaluate the design of any variable elements of the test item for ease of alignment and/or calibration.
- d) Checkout - evaluate the test item for ease and reliability of verifying operational readiness.
- e) Receive Information - evaluate the output of the test item for the ability of intended users to fully understand the information that it provides.

2) Maintainability

- a) Inspect and Checkout - evaluate the design of the test item for enabling a thorough preoperational check to be performed.
- b) Perform Routine Preventive Maintenance - evaluate the test item for ease and safety in the performance of routine preventive maintenance tasks, bearing in mind that tasks difficult to perform or components hard to find or reach will be more likely overlooked or avoided in a standard field situation.
- c) Detect Malfunction - evaluate the test item for adequacy of information provided to the operator regarding operating condition of various parts of the item.
- d) Isolate and Identify Causes - evaluate the design of the test item for ease and accuracy of locating and identifying a malfunctioning element once a malfunction has been detected.
- e) Remove Malfunctioning Element - evaluate the test item for ease and safety of removal of broken or malfunctioning element.
- f) Replace or Repair Element - evaluate the design of the item for allowing elements to be easily and quickly

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replaced, or, in some cases, to be repaired while mounted on or attached to the item.

3) Transportability

- a) Place in Transit Configuration - evaluate the test item for ease of disassembly, if required.
- b) Package/Pack - evaluate the test item for ease of packaging and/or packing for transport in a military vehicle or shipment by truck, rail or air.
- c) Portability/Usability - evaluate the test item for its ability to be hand carried in the field for use in identifying remains at the point of recovery; evaluate for its ease of use during field recovery operations.

b. Evaluation of the tasks of step a shall include but not be limited to the following:

- 1) Title of task conducted
- 2) Adequacy of instructions and tools to perform task
- 3) Ease of performing task
- 4) Design of test item as it affects the task
- 5) Time and personnel required for task

6.2.8 Value Analysis

a. Throughout all tests, the test item shall be examined for any unnecessary, costly, "nice-to-have" features as described in USATECOM Regulation 700-1.

b. To assist in the above, utilize the following design checklist as applicable:

1) General Value Design

- a) Does the design of the test item meet the required function and no more?
- b) Could costs be radically reduced by a reduction of performance, reliability, and/or maintainability to the minimum specified in TC's?
- c) Could costs be radically reduced by a reduction of resistance to high temperature, shock, vibration or other environments to the minimum specified in TC's?
- d) Have circumstances changed (changes in concept or specification, progress in the art, development of new components or processes) so that the design includes unnecessary or expensive materials, parts or processes?

2) Mechanical Value Design

- a) Does the design represent optimum mechanical simplicity?

- b) Is every part absolutely necessary? Can any part be eliminated or combined with another part to reduce total number of parts and cost?

- 3) Standardization - Has the design been coordinated with similar designs, parts, or components to obtain optimum benefit from standardization and past experience?

c. Question test personnel regarding features of the test item which could be eliminated without decreasing the functional value of the test item or man-item effectiveness.

6.2.9 Quality Assurance

Determine the quality of the test item as described in the applicable section of MTP 10-2-511.

6.3 TEST DATA

6.3.1 Initial Inspection

Record the following:

- a. Data required by applicable procedures of MTP 10-2-500.
- b. Evidence of damage incurred during transport or storage.
- c. Evidence of defects in test item materials and construction, treatment and finish, and/or workmanship.
- d. Missing components.
- e. Identify and retain all photographs.

6.3.2 Inventory Check

Record the following:

- a. Evidence of missing literature
- b. Shortages in repair parts, accessories, or tools
- c. Missing kits

6.3.3 Physical Characteristics

Record the data required by applicable procedures of MTP 10-2-500

6.3.4 Preoperational Procedures

Record the following:

- a. Any difficulties experienced in reassembling the various components of the system.
- b. Comments as to clarity of instructions pertaining to services-upon-receipt and preoperational procedures; also any difficulties in carrying out the instructions.

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- c. Any malfunction of mechanical and/or electrical controls.
- d. Statement that a safety release has been received and that the test item is safe to test.

6.3.5 Operator Training and Familiarization

Record data required by the applicable procedures of MTP 10-2-501

6.3.6 Test Conduct

6.3.6.1 Performance

6.3.6.1.1 Technical Characteristics -

a. Initial marking for subsequent identification

- 1) List all technical characteristics set forth in the QMR, SDR or other applicable document. Opposite each, record whether the test item met the requirement or not. (Yes or No.) In a third column, record remarks or comments, particularly if the test item failed to meet the requirement.
- 2) Also, record the following
 - a) Ease of obtaining initial (reference) identification data or marking the individual for subsequent identification.
 - b) Possibility of error.
 - c) Time to perform the operation.
 - d) Time to take a complete set of fingerprints of the test subject.

b. Data Recovery (identification)

Record the following:

- 1) Ease of performing the operation.
- 2) Time to perform the operation.
- 3) Time to take a complete set of fingerprints from a human cadaver.

6.3.6.1.2 System Compatibility -

Record any evidence of incompatibility between:

- a. The various equipments or components of the system employed in initial marking or obtaining data for subsequent identification.
- b. Equipment employed in the retrieval of data. (Making identification.)
- c. The various procedural steps during overall operation.

6.3.6.1.3 Electromagnetic Compatibility -

Record the following:

- a. Nomenclature of component(s) tested. (If any)
- b. Data required by applicable portions of MIL-STDs-461, 462, 463 and MTP 6-1-006.

6.3.6.1.4 CBR Compatibility -

Record the following:

- a. A short narrative statement of any adverse effects noted on any components of the system for each of the contaminants listed in paragraph 6.2.1.4 above.
- b. Ease of decontaminating the component(s). (If contaminated.)

6.3.6.2 Environmental Tests

Record for each storage environment:

- a. Evidence of damage to or deterioration of the packaged item. Describe the deleterious effect.
- b. Damage or deterioration to the test item (to include any carrying cases).
- c. Extent of any adverse effects on the proper operation of the test item.

- 1) As a complete system
- 2) Individual components

6.3.6.3 Transportability

Record the following:

- a. Data required by applicable procedures of MTP 10-2-503
- b. Results of shock and vibration test
 - 1) Cracks
 - 2) Breaks
 - 3) Ruptures
 - 4) Other damage
- c. Confirmation of proper operation after shock and vibration tests

6.3.6.4 Maintenance

Record the following:

- a. Results of evaluation and appraisal of maintenance related factors set forth in MTP 10-2-507, MTP 10-2-512 and AMC Pamphlet 706-134. Include comments on:

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- 1) Maintenance characteristics.
- 2) Maintenance requirements.
- 3) Appraisal of test item malfunctions, if any.
- 4) Adequacy of maintenance test package to include associated publications.
- 5) Test item's design for maintainability.
 - a) Accessibility
 - b) Ease of maintenance
 - c) Standardization
 - d) Interchangeability
- 6) System and component durability.
- 7) System and component reliability.

b. Calculated indicators, as appropriate, which express the effects of the preceding aspects.

6.3.6.5 Durability

Record data required by pertinent procedures of MTP 10-2-502

6.3.6.6 Safety

Record the data required by applicable provisions of MTP 10-2-508, MIL-S-38130 and the following:

- a. Comments regarding unsafe conditions found in the procedures of any test.
- b. For general safety characteristics:
 - 1) Poorly worded or unclear operating instructions
 - 2) Warning labels - lacking; not conspicuous
 - 3) Unshielded moving parts
 - 4) Unprotected electrical circuits
 - 5) Markings for environmental limitation
 - 6) Unsafe procedures for flammables or explosive materials
- c. Prepare a table to include the following:
 - 1) A list of all safety devices used on the test item.
 - 2) The type of failure each device is to detect.
 - 3) Indication that the device has successfully passed two cycles of operation.
- d. List any missing devices or unsafe conditions.
- e. List any suggested additions to the test item's safety features.

6.3.6.7 Human Factors Evaluation

- a. Record the data required by applicable provisions of MTP 10-2-505,

b. The rating of each task, being either satisfactory or unsatisfactory, will be determined by considering the effects which the human factors characteristics of the test item have on the accomplishment of the task.

c. Retain all check lists.

d. Record recommendations in any area to improve man-item effectiveness.

6.3.6.8 Value Analysis

Record the following:

a. Any non-functional, costly, or "nice-to-have" features.

b. Comments on design:

1) General value design

- a) Degree to which the test item design exceeds minimum functional requirements.
- b) Comments regarding the possibility of radical cost reductions by a reduction of performance, reliability, and/or maintainability to the minimum specified in the Technical Characteristics.
- c) Comments regarding the possibility of radical cost reductions by a reduction of resistance to high temperature, shock, vibration, or other environments to the minimum specified in the Technical Characteristics.
- d) Are unnecessary or expensive materials, parts or processes incorporated in the design?

2) Mechanical Value Design

- a) Does the design represent optimum mechanical simplicity?
- b) Is every part absolutely necessary?
- c) Can any part be eliminated or combined with another part to reduce total number of parts and cost?

3) Standardization - Has design been coordinated with similar designs, parts or components to obtain optimum benefit from standardization and past experience?

c. Comments and opinions of participants regarding any features which might be eliminated.

6.3.6.9 Quality Assurance

Record data collected as described in the applicable section of MTP 10-2-511.

6.4 DATA REDUCTION AND PRESENTATION

Data obtained during the conduct of this test will be summarized

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making use of photographs and charts as appropriate. All photographs and charts will be properly identified and labeled. Test data will be obtained from each item tested, and summarized and evaluated as required.

Data obtained for each performance characteristic will be compared with established technical performance characteristics as specified in QMR's, SDR's, or other stated criteria. Test data obtained for different items undergoing the same test, or for the same item undergoing a repeated test, will be compared, and where differences occur, the differences shall be noted and summarized giving the degree of difference and the cause of the difference.

The presentation shall conclude with a summarization of the suitability of the test item for service testing.

A Safety Release Recommendation shall be submitted in accordance with USATECOM Regulation 385-6 based on the data collected related to safety.

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3 August 1970

UNCLASSIFIED

Security Classification

DOCUMENT CONTROL DATA - R & D

Security classification of title, body of abstract and indexing annotation must be entered when the overall report is classified

1. ORIGINATING ACTIVITY (Corporate author) US Army Test and Evaluation Command (USATECOM) Aberdeen Proving Ground, Maryland 21005		2a. REPORT SECURITY CLASSIFICATION Unclassified	
		2b. GROUP -----	
3. REPORT TITLE U. S. Army Test and Evaluation Command Materiel Test Procedure 10-2-199, Commodity Engineering Test Procedure, - "Deceased Personnel ID Systems".			
4. DESCRIPTIVE NOTES (Type of report and, inclusive dates) Final			
5. AUTHOR(S) (First name, middle initial, last name) -----			
6. REPORT DATE 3 August 1970		7a. TOTAL NO. OF PAGES 18	7b. NO. OF REFS 24
8a. CONTRACT OR GRANT NO. DA-18-001-AMC-1045(R)		9a. ORIGINATOR'S REPORT NUMBER(S) MTP 10-2-199	
b. PROJECT NO. AMCR 310-6			
c.		9b. OTHER REPORT NO(S) (Any other numbers that may be assigned this report) -----	
d.			
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11. SUPPLEMENTARY NOTES -----		12. SPONSORING MILITARY ACTIVITY Headquarters US Army Test and Evaluation Command Aberdeen Proving Ground, Maryland 21005	
13. ABSTRACT This Engineering Test Procedure describes test methods and techniques for evaluating the technical performance and characteristics of Systems designed to Identify Deceased Personnel, and for determining their suitability to undergo further test for service use by the U. S. Army. The evaluation is related to criteria expressed in applicable Qualitative Materiel Requirements (QMR), Small Development Requirements (SDR), Technical Characteristics (TC), or other appropriate design requirements and specifications.			

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1 NOV 65
S/N 0101-807-6811

UNCLASSIFIED

Security Classification

A-31408

A-1

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Security Classification

KEY WORDS	LINK A		LINK B		LINK C	
	ROLE	WT	ROLE	WT	ROLE	WT
Engineering Test						
Systems for Identifying Deceased Personnel						
Test Procedures						
Test Methods and Techniques						

DD FORM 1 NOV 65 1473 (BACK)

10101-807-5-01

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Security Classification

A-31403