

Appendix K

Calibration

MANAGEMENT AND CONTROL

K-1. AR 750-43 assigns Armywide management of the U.S. Army TMDE C&RS Program to HQ, AMC, except for the ARNG. In turn, the U.S. Army TMDE Activity (through AMC) is responsible for the DA TMDE program management and execution. The National Guard Bureau is assigned management, command, and control over the ARNG maintenance companies (TMDE). It also controls calibration facilities at combined support maintenance shops.

TRACEABILITY OF MEASUREMENT ACCURACY

K-2. The DA TMDE C&RS program makes sure that measurement accuracy is traceable from owner or user instrumentation through the Army system to the NIST or fundamental physical constants. The USAPSL (an organizational element of USATA), TSCs, and ATSTs are established to provide calibration and repair support for U.S. Army instrumentation worldwide. They assure the accurate transfer of measurements within the Army. The following provides calibration service traceable to NIST.

PRIMARY LEVEL

K-3. The USAPSL or primary (P) level receives calibration service from NIST for selected U.S. Army primary reference standards. The USAPSL provides calibration and repair service for selected calibration standards in subordinate calibration laboratories and for TMDE that requires the USAPSL level of accuracy. All standards requiring NIST support must be coordinated with Director, USATA, ATTN: AMSAM-TMD-S, Redstone Arsenal, AL 35898-5400.

SECONDARY LEVEL

K-4. ACL or secondary (S) level receives calibration and repair service from the USAPSL for selected measurement standards in each measurement parameter and calibrate all lines accuracy standards within the ACL. The ACL provides calibration and repair service for selected measurement standards and instruments of ATST's transfer or (T) level and other customers that are identified in TB 43-180 as requiring S-level support. The ACL may also provide calibration and repair service for measurement standards and instruments not listed in TB 43-180 that the ATSTs do not have the capability to support.

TRANSFER LEVEL

K-5. ATST's T- level receives support from the S- and P-levels of support for the standards used to calibrate user/owner equipment. The ATST provides C&RS to units located in the divisions and corps. These teams are located in CONUS and OCONUS, and are staffed by military in a theater of war. Civilian ATST's are deployed at echelons above corps.

USER LEVEL

K-6. Owner/user or F-level receives calibration and repair services from its supporting ATST for TMDE identified in TB 43-180 as requiring ATST (T-level) calibration and repair support. DS/GS/AVIM units provide calibration and repair service for TMDE support program identified in TB 43-180 as requiring DS/GS/AVIM unit calibration and repair.

SUPPORT OF TEST, MEASUREMENT, AND DIAGNOSTIC EQUIPMENT

K-7. Calibration and repair support requirements of instruments used in support of U.S. Army materiel will be listed in TB 43-180. The calibration procedures listed in TB 43-180 are DOD or USATA approved procedures and shall be used. The approved maintenance manual is also listed in TB 43-180.

AREA TMDE SUPPORT TEAM SUPPORT

K-8. TMDE designated in TB 43-180 as requiring ATST support must be transported to the location where the ATST is scheduled to provide calibration and repair services. When justified by sufficient workload or when the size or construction of the TMDE precludes movement, the ATST will be dispatched to the TMDE owner/user site. When an ATST is not capable of providing a calibration or repair service, the TMDE will be evacuated as directed by the calibration and repair center. The ATST is responsible for providing the necessary service and returning the repaired and calibrated TMDE to the owner/user. When service external to the ATST is necessary, except for warranty TMDE, the ATST will arrange for the service and assure the return of the TMDE to the owner/user.

AREA CALIBRATION LABORATORIES/U.S. ARMY PRIMARY STANDARDS LABORATORY SUPPORT

K-9. TMDE and/or standards requiring ACL support or USAPSL support may be transported to the ATSTs or shipped directly to the ACLs or USAPSL.

MANUFACTURER SUPPORT

K-10. TMDE support requiring manufacturer's calibration or repair will be arranged by the supporting activity. If the TMDE is under warranty, the owner/user will arrange for support and send it to the manufacturer for service.

RESPONSIBILITIES OF THE TMDE SUPPORT COORDINATOR

K-11. Following are instructions for TMDE support coordinators and an outline of their responsibilities. This guidance will acquaint TMDE support coordinators with procedures to enable them to monitor their units' implementation of the U.S. Army TMDE support program for compliance with the regulations and directives.

K-12. The TMDE support coordinator is the focal point of contact and key person for all matters pertaining to TMDE support for the unit. The TMDE support coordinator is the principal interface between the TMDE user and the TMDE support organization. The assigned TMDE support coordinator should establish and maintain a good working relationship with the TMDE support operation. The TMDE support coordinator performs the following duties:

- Serves as the central point of contact for matters concerning TMDE calibration and repair support.
- Develops and implements SOP for identification, turn-in, and control of TMDE requiring calibration and repair support.
- Ensures that hand receipt holders bump hand receipts when changes to TB 43-180 or to supply catalogues occur.
- Assures compliance with AR 750-43, TB 750-25, TB 43-180, DA Pam 738-750, command regulations, local SOPs, and the supporting ATST's external SOP.
- Reviews the IMRF to ensure that all authorized TMDE requiring calibration or repair support is contained therein and that the listed information is correct. Ensures that the supporting ATST is notified of any changes.
- Ensures that the supporting ATST is advised when changes, additions, or deletions in the TMDE inventory occur to make sure that the IMRF is maintained according to TB 750-25.
- Coordinates with the supporting ATST and the unit to ensure that the recording scheduling and reporting system is maintained as prescribed in AR 750-43 and TB 750-25.
- Monitors the projected item list to make certain that TMDE is submitted for calibration service according to the published schedule. When necessary, arranges for unscheduled calibration support.
- Monitors the delinquent item list to determine why TMDE was not submitted for calibration as scheduled. Initiates action to obtain calibration service for these delinquent items.
- Assures that all organizational maintenance has been performed on TMDE submitted for support and that required accessories and manuals accompany the TMDE.
- Highlights delinquent list with appropriate hand receipt holder and commander monthly.
- Reviews all reports received from support organization to—
 - Identify TMDE that was out-of-tolerance, repaired, or determined to be unserviceable when presented for calibration.
 - Determine if system maintenance checks previously performed using this out-of-tolerance TMDE must be repeated.
 - Advise TMDE owners/users who did not present their equipment for calibration, according to the schedule, that corrective action must be taken.
- Ensures that new items of TMDE not listed in TB 43-180 are reported according to TB 43-180 and to Appendix B of TB 750-25.
- Maintains a record of all items in temporary storage by nomenclature, model, and serial number. Ensures that this equipment is operational and the affixed DA Label 80 has been over stamped "calibrate before use." Notify the supporting ATST in writing that TMDE has been placed in storage so that these items may be removed from the cyclic calibration schedule. Ensures that a designated temporary storage area is established for storing CBU/void items. Constant monitoring of the TMDE inventory is required to achieve maximum effectiveness. Items that are seldom

used should be placed in temporary storage. Items never used should be turned into supply and deleted from the TOE or TDA authorization.

K-13. Whether the unit or installation is large or small, the TMDE support coordinator's responsibility remains the same, that is, assuring that responsive TMDE calibration and repair support is provided. These services may be rendered by an ATST, area calibration laboratory or support center, DOD support facility, or DS/GS/AVIM support unit for TMDE-SP.

K-14. From the same control point, the TMDE support coordinator must assure that users identify their calibration and repair needs and then adhere to the schedules and procedures for obtaining the required support. Enlightening customers concerning the goals of the TMDE support program and what this support means to them is an important task. Essentially, the customer should know that cyclic calibration of TMDE provides a high confidence factor in the integrity and reliability of measurements performed. Should the measurement capabilities of TMDE ever be in doubt, calibration should be requested.

K-15. Some organizations may be so large that there should be an alternate TMDE support coordinator or several unit coordinators assigned to a major mission area. The primary coordinator needs to assure that unit coordinators are knowledgeable of program objectives, policies, and procedures and of their responsibilities.

RESPONSIBILITIES OF TMDE USERS

K-16. The following checklist applies to TMDE users; other checklists in applicable regulations also contain questions concerning customer compliance with regulatory requirements:

- Have the property book and hand receipts been reviewed to determine calibration and repair requirements of TMDE?
- Does TMDE in use have a current DA Label 80 or DA Label 163 affixed and correctly annotated?
- Is TMDE that was provided a limited calibration identified with DA Label 163?
- Is physical inventory periodically conducted to verify the types and quantities of TMDE on hand that require calibration or repair?
- Are all TMDE changes, additions, and deletions identified to the supporting ATST as they occur?
- Is an operational check performed on items before they are placed in CBU status, is a correctly annotated DA Label 80 affixed, and has the supporting ATST been notified of the status change?
- When TMDE is removed from temporary storage (CBU), is it submitted for calibration before use?
- Is the storage area segregated from the work area?
- Are projected items lists provided by the supporting facility? Are they reviewed and corrective action taken?
- Are delinquent items lists (TMDE not presented for scheduled calibration) reviewed and corrective action taken by hand receipt holder and is commander briefed?
- Are controls established to assure that TMDE is not used after expiration of the calibration due date on the DA Label 80 or DA Label 163?

- When there is doubt about the accuracy of TMDE, is action taken to request unscheduled calibration?
- Has an operator or organizational maintenance program for TMDE been established?
- Is operator or organizational maintenance performed as prescribed by equipment maintenance manuals?
- Are preventive maintenance services performed on TMDE as listed in the appropriate technical publications and are faults recorded on DA Form 2404?
- Is DD Form 314 (Preventive Maintenance Schedule and Record) maintained at unit level for all CNR items of TMDE requiring scheduled periodic preventive maintenance services other than calibration?

TMDE MANAGEMENT REPORTS

K-17. IMRF (master list) is distributed quarterly to TMDE support coordinators. TB 750-25 requires TMDE calibration and repair support activities to establish and maintain an IMRF. The IMRF for TMDE-SP supported by DS/GS/AVIM units will also be maintained by the supporting ATST. The accuracy of these files rests, in part, with the TMDE owner/user who must initially provide accurate information and thereafter review master lists for accuracy and take corrective action when necessary. The TMDE owner/user must advise the supporting ATST/DS/GS/AVIM as changes, additions, or deletions in the TMDE inventory occur. The IMRF must contain all TMDE that requires support.

FORMS AND LABELS

K-18. A DA Label 80 or DA Label 163 must be affixed to all calibration standards and TMDE identified in TB 43-180 as requiring calibration. This certifies that the instruments have been calibrated to required specifications and indicates support dates. Detailed instructions for the preparation of these labels are in TB 750-25, Appendix C. Instructions for maintenance forms are in DA Pam 738-750. Surveillance of the TMDE support program includes a review of forms and labels to ensure uniformity and proper annotation. Policies and questions pertaining to labels and forms used for instruments in storage are also specified in Appendix C, TB 750-25.