DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

CALIBRATION PROCEDURES FOR DIGITAL DEPOT TEST SET LITCOM MODEL NO. 7200

Headquarters, Department of the Army, Washington, D.C.
22 February 1972

Section I. GENERAL

1. Purpose and Scope

This bulletin contains calibration instructions for Digital Depot Test Set, Litcom Model No. 7200 (digital depot test set), and is used by maintenance calibration personnel. Since maintenance calibration personnel are trained and qualified in the use of test and measuring equipment, detailed instructions concerning the operation and use of these equipments are not contained in this bulletin.

2. Reporting of Technical Bulletin Improvements.

The 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, US Army Electronics Command, ATTN: AMSEL-MA-CFA, Fort Monmouth, NJ 07703.

3. Description

The digital depot test set is a depot level maintenance equipment. It provides program matrices, switching functions, indicators, logic signals and operational voltages used for testing, aligning, and repairing modules and printed circuit boards of subassemblies contained in Transmitting Set, Radio AN/FRT-76, Transmitting Set, Radio AN/FRT-77, and Receiving Set, Radio AN/FRR-79 The digital depot test set consists of three major panels: namely; digital test panel 1A1, power supply 1A2, and service outlets panel 1A4. A utility drawer for cable storage is also provided. Additional data are listed in *a,* b, and c below.

a. Identification.

Nomenclature..... Digital Depot Test Set Litcom Model 7200.
Size ..... 253/4 by 211/2 by 493/8 in.
Weight..... 345 lbs. (approx.)
References..... TB 9-6625-961-50

b. Specifications.

Input requirement ..... 103.5 to 126.5 volts, 54 to 66 Hz, single phase.
Power supply output voltages ..... +28, +5 volts dc(±3 per cent)
Multimeter ..... 0 to 1000 volts dc and ac,
0 to 50 microamperes,
0 to 500 milliamperes,
0 to 10 amperes, and
0 to 20 megohms.

c Program Data.

Calibration
interval ..... In accordance with TB-750-236
Time required
for calibration 30 minutes
Calibration
level..... Maintenance

4. General Instructions

*a. Calibration Report*ing During the performance of the calibration procedures included in this manual, annotate DA Form 2416 (Calibration Data Card) in accordance with TM 38-750.

b. Removal. Do not remove any of the sub-assemblies to be calibrated from its protective case unless necessitated by equipment connections and/or components to be adjusted which cannot be reached from the external parts on the digital depot test set.

c. Unit under test. Digital depot test set will be referred to as "unit under test" throughout this procedure.

Section II. CALIBRATION

5. Equipment Required

Equipment required for calibration performance checks and adjustments is listed in table 1.

NOTE

Minimum use specifications are the principal parameters required for performance of the calibration and are included to assist in the selection of alternate equipment which may be used at the discretion of the calibrating activity. Satisfactory performance of alternate items shall be verified prior to use. All applicable equipment must bear evidence of current calibration.

Table 1. Equipment Required

Item	Minimum use specification	Calibration equipment'	Military equivalent
Dc voltmeter,	5 to 28 volts, dc accuracy + 3 percent.	John Fluke Model 803B	ME-202/U

[1]The calibration equipment utilized in this procedure was selected from those known to be available at Department of Defense facilities, and the listing by make or model number carries no Implication of preference, recommendation, or approval by the Department of Defense for use by other agencies It is recognized that equivalent equipment produced by other manufacturers may be capable of equally satbsfac-ton performance in the procedure

NOTE

It is recommended that personnel famil- iarize themselves with the entire procedure before performing calibration.

6. Preliminary Procedure

This section includes instructions to prepare the unit under test for the calibration procedures outlined in paragraph 7. These preliminary operating procedures place the power supplies (1A2PS1 and 1A2PS2) in the unit under test in a turned-on condition. Verify the results of each step and take corrective action whenever the requirement is not met, before proceeding.

a. Operate all unit under test switches to down positions.

b. Operate TEST SWITCH 24 to up position.

c. Operate power supply panel (1A2) MAINS switch to ON. Observe that MAINS indicator illuminates and fan motor operates.

d. Operate 28 VDC switch to ON. Observe that 28 VDC indicator illuminates.

e. Operate 5 VDC switch to ON. Observe that 5 VDC Indicator illuminates.

NOTE

The following paragraph is divided into subparagraph *a, Performance Check,* and subparagraph *b, Adjustments.* When the performance check is within tolerance do not perform the corres- ponding adjustment. When the performance check is not within tolerances, perform the corresponding adjustment before continuing with the calibration procedure. When the performance check is not within tolerance and the adjustment cannot bring It into tolerance, the deficiency must be corrected before continuing with the procedure.

7. Power Supplies 1A2PS1 and 1A2PS2 Calibration

a. Performance Check.

(1) Connect dc voltmeter to test points on power supply panel (1A2) as noted in table 2.

(2) Observe that voltages indicated on dc voltmeter are within the limits specified in table 2.

Table 2. Power Supply Output Voltages

Unit under test	Dv voltmeter indication (volts, dc)		
Power supply]	Front panel test points	Minimum	Maximum
1A2PS1	GND and 5V	4.75	5 25
1A2PS2	GND and 28V	26 6	29 4

(3) Operate power supply panel MAINS, 28 VDC, and 5 VDC switches to off.

(4) Disconnect dc voltmeter from power supply panel (1A2) test points.

b. Adjustments.

(1) Remove screws securing power supply panel (1A2) to cabinet frame on unit under test.

(2) Pull out panel until it locks into open position.

(3) Remove protective screen from power supply panel (1A2).

(4) Rotate the voltage adjust potentiometer (located on power supply circuit cards) associated with each power supply to obtain indications within the limits specified in table 2. (5 Volts, dc supply located to left of fan).

(5) Replace cover plate on power supply panel (1A2).

(6) Secure power supply panel (1A2) to cabinet frame.

8. Multimeter Calibration

The multimeter is to be calibrated according to procedures contained in TB 9-6625-961-50.

9. Final Procedure

a. Deenergize and disconnect all equipment.

b. In accordance with TM 38-750, annotate and affix calibration DA Label 80 (U.S Army Calibration System). When the unit under test cannot be adjusted to within tolerance, annotate and affix DA Form 2417 (Unserviceable Test Instrument or Limited Use Tag).

By Order of the Secretary of the Army.

W C WESTMORELAND,
General, United States Arm y,
Chief of Staff

Official:

VERNE L BOWERS,
Major General, United States Army,
The Adjutant General

Distribution:

To be distributed in accordance with DA Form 12-34, Section II (qty rqr block No 75) requirements for Calibration Procedures publications.

'*U. S. GOVERNMENT PRINTING OFFICE 1972-769031 787

TEAR ALONG PERFORATED LINE

RECOMMENDED CHANGES TO EQUIPMENT TECHNICAL PUBLICATIONS

SOMETHING WRONG WITH THIS PUBLICATION?

FROM: (PRINT YOUR UNIT'S COMPLETE ADDRESS)

DATE SENT

PUBLICATION NUMBER	PUBLICATION DATE	PUBLICATION TITLE
TM 11-5825-270-10	23 Jul 81	Radio Frequency R-2176/FRN

BE EXACT. . .PIN-POINT WHERE IT IS

PAGE NO.	PARA-GRAPH	FIGURE NO	TABLE NO.

IN THIS SPACE TELL WHAT IS WRONG AND WHAT SHOULD BE DONE ABOUT IT:

PRINTED NAME, GRADE OR TITLE, AND TELEPHONE NUMBER

SIGN HERE:

DA FORM 1 JUL 79 2028-2

PREVIOUS EDITIONS ARE OBSOLETE.

P.S.—IF YOUR OUTFIT WANTS TO KNOW ABOUT YOUR RECOMMENDATION MAKE A CARBON COPY OF THIS AND GIVE IT TO YOUR HEADQUARTERS.

PIN: 012897-000