

TECHNICAL BULLETIN

CALIBRATION PROCEDURE

FOR

LC-4E DEPOT TEST SET

HEADQUARTERS, DEPARTMENT OF THE ARMY

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DEPARTMENT OF THE ARMY**CALIBRATION PROCEDURE FOR LC-4E****DEPOT TEST SET**

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SECTION I

GENERAL

1. Purpose and Scope

a. This bulletin provides information for the periodic calibration of LC-4E depot test set and is used by maintenance calibration personnel. Since maintenance personnel are trained and qualified in the usage of the test and measuring equipment involved, detailed instructions concerning the operation and use of these equipments are not contained in this bulletin.

b. Integrated within this bulletin are illustrations depicting the locations of all controls and components utilized in this calibration procedure, as well as diagrams showing complex equipment setups.

2. Reporting of Technical Bulletin Improvement

The direct reporting by the individual user of errors, omissions, and recommendations for improving this bulletin is authorized and encouraged. DA Form 2028 (Recommended Changes to Publications) will be used for reporting these improvement recommendations and forwarded direct to Commanding General, US Army Electronics Command, ATTN: AMSELMA-CR.A Fort Monmouth, N.J. 07703.

3. Description

LC-4E depot test set is used to assist maintenance personnel in the maintenance and servicing of modular assemblies of the dual frequency diversity microwave terminal model LC-4E. The test set enables maintenance personnel to verify faults, to troubleshoot, and to requalify LC-4 modules. Additional data is contained in a, b and c below.

a. Identification.

Nomenclature -----	LC4E Depot Test Set
Manufacturers -----	Philco-Ford
Manufacturers model	
number -----	397-1485-1
Size -----	82.5" x 16 9" x 20.5"
Weight -----	550 pounds

b. Specifications.

Power supplies:

+28 v de -----	28 v $\pm$ 150 mv
+20 v dc -----	20 $\pm$ 1v
-6 v de -----	6 $\pm$ 60 mv
+ 120 v dc -----	120 v nominal
-750 v de -----	750 $\pm$ 10 v
+30 v dc -----	30 v $\pm$ 60 mv
+15 vdc -----	15 v $\pm$ 30 mv

-15 v dc -----	15 v $\pm$ 30 mv
Transmitter:	
Frequency -----	4670 MHz $\pm$ 0.01%
Power -----	12 dbm $\pm$ 2 db to -52 dbm $\pm$ 3 dbm
RF sources:	
Frequency -----	4,600 MHz $\pm$ 1%
Output power -----	5 mw
Deviator sensitivity'	
Exciter video -----	-45 dbm for 140 kHz
Exciter service	
channel -----	30 dbm for 140 kHz
Receiver video -----	15 dbm at 140 kHz
Receiver service	
channel -----	15 dbm at 140 kHz
Impedance'	
Exciter video* -----	75 ohms
Exciter service	
channel* -----	600 ohms
Receiver	
video* -----	75 ohms
Receiver service	
channel* -----	600 ohms
Frequency response:	
Video -----	4.3 kHz to 2540 kHz $\pm$ 0.5 db
Service	
channel -----	300 Hz to 4.3 kHz $\pm$ 1 db
Receiver signal-to-noise	
ratio -----	30 db for 600 channel loading at -75 dbm
Pilot tone frequency -----	3.2 MHz $\pm$ 150 Hz
Linearity panel:	
Frequency -----	250 kHz $\pm$ 2 kHz
Level -----	0 to 0.2v pp
Filter frequency -----	250 kHz
Bandwidth -----	25 kHz
Insertion loss -----	10 db max
<i>c. Calibration Programming.</i>	
Time required for	
calibration -----	16 hours
Calibration level -----	Maintenance
Calibration interval -----	In accordance with TB 750-236

4. General Instructions*a. Calibration Reporting.* During the perform-

*These specifications are for information only and are not necessarily verified in this bulletin

ance of this procedure, annotate DA Form 2416 (Calibration Data Card) in accordance with TM 3-750.

b. Equipment and Accessory Identification. The equipment and accessories referred to throughout this bulletin are identified in tables 2-1A, 2-1B, and 2-1C.

c. Terms. The LC-4E depot test set being calibrated will be referred to as the "unit under test."

d. Equipment Setup. Disconnecting instructions are not contained in this procedure since equipment in one setup must be partially disconnected to arrange another setup.

e. Personal Safety.

(1) In order to prevent personal injury, caution should be taken throughout the performance of this procedure. Injuries could result from raising up under the writing shelf or turning into exposed sharp edges of open door assemblies.

(2) If the test set is not properly bolted to the floor, the possibility of tipping forward exists if all doors and power supplies are opened or pulled forward at the same time.

5. Differences Among Models

None.