TECHNICAL BULLETIN

CALIBRATION PROCEDURE

FOR

LC-4E DEPOT TEST SET

HEADQUARTERS, DEPARTMENT OF THE ARMY

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DEPOT TEST SET

SECTION I

GENERAL

1. Purpose and Scope

a. This bulletin provides information for the periodic calibration of LC-4E depot test set an is used by maintenance calibration personnel Since maintenance personnel are trained an 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 an, 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 o: errors, omissions, and recommendations for improving this bulletin is authorized and encouraged. DA Form 2028 (Recommended Changes t(Publications) will be used for reporting these improvement recommendations and forwarder 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 ±150 mv
+20 v dc	20 ± 1v
-6 v de	6 ± 60 mv
+ 120 v dc	120 v nominal
-750 v de	750 ± 10 v
+30 v dc	30 v ± 60 mv
+15 vdc	15 v ± 30 mv
-15 v dc	15 v ± 30 mv

Transmitter:

Frequency	4670 MHz +0.01%
Power	12 dbm ± 2 db to -52 dbm ± 3 dbm

RF sources:

Frequency	4,600 MHz ±+ 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 +0.5 db
Service channel	300 Hz to 4.3 kHz + 1 db

Receiver signal-to-noise ratio	30 db for 600 channel loading at -75 dbm
Pilot tone frequency	3 2 MHz + 150 Hz

Linearity panel:

Frequency	250 kHz + 2 kHz
Level	0 to 0.2v pp
Filter frequency	250 kHz
Bandwidth	25 kHz
Insertion loss	10 db max

c. Calibration Programing.

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 an 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.