MANUAL TEST OF

LINE LOAD CONTROL EQUIPMENT

NOS. 1, 1C, 1D, 9C, 9D, AND 11 OFFICES

1. GENERAL

1.01 This section describes a method of making tests of the line load control equipment in Nos. 1, 1C, 1D, 9C, 9D and 11 manual offices.

1.02 The tests covered are:

(A) Line Load Control Equipment

(B) Alarm Equipment

1.03 Line Load Control equipment provides facilities for denying originating service to as many as 80 per cent of the lines in an office. It is therefore extremely important that every safeguard should be employed to guard against operations resulting in denial of originating service during test. In some cases the tests described herein delay originating service for a few seconds. In order to avoid delaying service beyond this the following should be observed.

(a) Tests should be made only when specific authorization is obtained in accordance with local instructions.

(b) Where possible it may be desirable to have someone in a supervisory capacity supervise the test man while he is making the tests.

(c) Care must be taken that trouble clearing activities do not introduce hazards of denying service.

(d) Alarm facilities are provided to detect cases where crossed or grounded leads result in denial of service on a group of lines. If trouble of this nature develops measures should be taken to restore the affected lines to service immediately.

(e) If it is desired to discontinue testing at any time, even temporarily, restore all line load equipment to normal.

(f) The cautions which appear in the test procedures should be given special attention.

1.04 The lines in an office arranged for line load control are divided into two categories. One category includes all lines which are essential to National Defense and public welfare during an emergency. The tests covered herein do not in any way affect service on lines in this group. The other category includes lines which are considered non-essential during the emergency.

1.05 Test (A) should be made using one idle non-essential non-coin line associated with each group of lines supplied by an individual fuse. Choose lines for each test which have jack and line lamp (or signal) appearances as close as possible to the location of the keys associated with the line load control equipment. For example, in the No. 1 switchboard the line load control keys are usually grouped in one panel at the head of the board. Each key controls the operation of a relay having ten break contacts and an alarm contact. Each break contact opens the fuse which supplies battery to a group (usually 120) of line relays. The answering jack appearances of the lines associated with these relays are usually distributed throughout the board. For testing the line load control features of this group of lines use the non-coin line having an answering jack appearance in the position nearest the load control keys.

1.06 Care should be taken not to connect to a busy line. It is assumed in all cases that busy tests will be made before connections are established to the line to be used for the test.

2. APPARATUS

2.01 Operator's Telephone Set.

2.02 No. 309, 310 or 257A plug with tip and ring short-circuited.

3. METHOD

(A) Line Load Control Features

3.01 After making sure that the line to be used for the test is idle, insert the short-circuited plug in the line jack. On lines equipped with No. 141 cut-off jacks insert the No. 257A plug into the jack so that the white line is on top. Observe that the line lamp lights (or the line signal operates.)

3.02 Operate the line load control key associated with the group of lines being tested. Observe that the line lamp is extinguished (or the line signal restores) and the guard lamp associated with the operated line load control key lights. Restore the line load control key. Observe that the

line lamp lights and the guard lamp is extinguished. Remove the plug from the jack.

Note: Audible and visual indications are provided by the annunciator circuit when the line load control key is operated. If desired, these may be rendered inoperative during the test by holding the ARK (alarm release key) key operated when operating the line load control key.

Caution: Originating service will be delayed on all lines controlled by the line load control key during the interval when the key is operated. Observations should be made as rapidly as possible to avoid delaying of service any longer than necessary.

3.03 Repeat this test for each group of lines associated with the same line load control key and then proceed to the groups of lines controlled by other keys.

(B) Alarm Features

3.04 If desired this test may be made in conjunction with test (A) by observing the operation of the alarm features when the line load control key is operated on the test of the line load control features of one of the line groups.

3.05 Operate one of the line load control keys. Observe that the alarm lamp in a nearby annunciator cabinet lights and the audible alarm sounds. Momentarily operate the ARK key. Observe that the audible alarm is silenced, the annunciator alarm lamp is extinguished and the annunciator guard lamp lights.

3.06 Restore the line load control key and observe that the annunciator guard lamp is extinguished.

4. REPORTS

4.01 The required record of these tests should be entered on the proper form.

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