

DIAL TONE DELAY ALARM OPERATION NO. 1 ELECTRONIC SWITCHING SYSTEMS

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1. GENERAL

1.01 This section describes the operation of the dial tone delay alarm (DTDA) used for 2-wire and 4-wire No. 1 Electronic Switching System (ESS).

1.02 This section is reissued to eliminate outdated information and to correct errors in the section. Since this reissue is a general revision, arrows ordinarily used to indicate changes have been omitted.

1.03 The purpose of the DTDA (SD-1A277-01) is to sound an alarm if an ESS office fails to supply dial tone to a test line within required timing limits of 8 to 10 seconds. This device is

designed as an external module to detect catastrophic system problems which may not be known or are not available through normal internal means. The alarm is internal to the DTDA unit and consists of a 1000-Hz signal amplified and fed at a high level to a monitor speaker. The test line should have an originating only (denied terminating) class of service.

1.04 The line location to which the test line is assigned should be changed at intervals as specified in the Equipment Test List. The new assignment may be in any frame, but it should not be associated with the same first stage as the previous assignment. Rotation of the test line assignment distributes the test call load more evenly. The dial administrator is responsible for these assignments and procedures should be available to rotate the assignments on a routine basis.

1.05 The DTDA unit (Fig. 1) is mounted below the writing shelf on the trunk and line test panel of the master control center.

1.06 The traffic count programs score a false start for each test origination (measurement Code 05, office count number 023). Each time the rate is changed by moving the TIME control, the traffic department should be notified of the new rate. The traffic department should also be notified when tests are started or discontinued in order that the false start count can be properly evaluated.

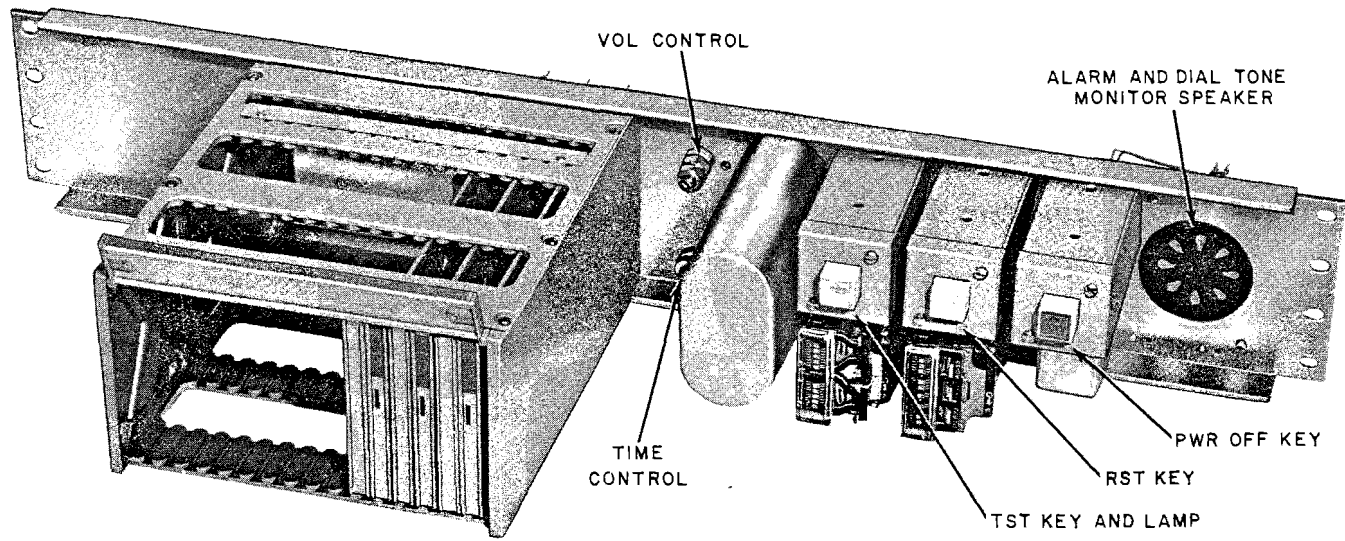


Fig. 1—Dial Tone Delay Alarm Unit

2. DIAL TONE DELAY ALARM CONTROLS

2.01 The following controls are provided to monitor and control the DTDA.

VOL

The VOL (volume) control adjusts the output volume of the dial tone being received. A dial tone monitor circuit receives, amplifies, and feeds dial tone to a monitor speaker. This feature permits maintenance personnel to monitor operation of the DTDA. The VOL control permits the dial tone to be completely silenced for normal conditions. This control does not affect the volume of an alarm signal.

CONTROL DESIGNATION

PURPOSE

TIME The TIME control permits adjusting the rate at which test originations occur from one origination every 20 seconds to one origination every 60 seconds.

2.02 The following keys and lamps are provided to control and test operation of the DTDA.

KEY OR LAMP DESIGNATION	LAMP COLOR	PURPOSE
TST	Yellow	The TST (test) key is a locking pushbutton switch which opens the test line so that the system does not detect the off-hook condition. If the alarm circuit is functioning properly, the alarm sounds when origination and time-out functions occur after this key is operated.
RST		The RST (reset) key is a pushbutton switch used to recycle the test sequence. The RST key is normally used to silence the alarm after the TST key has been operated.
PWR OFF	Red	The PWR (power) OFF key is a locking pushbutton switch used to remove power from the DTDA unit. The power should be removed before working on circuits or before replacing circuit packs.

3. TTY CONTROL OF THE DTDA

3.01 The occasion may arise when the DTDA must be retired, enabled, or disabled by means other than the DTDA controls discussed in Part 2. An example of this control is switching control center (SCC) accessing the CO. In this case, the audible alarms at the CO must be remotely controlled from the SCC TTY.

3.02 The following TTY message provides the ability to retire, enable, or disable the DTDA. This message is available with 2-wire generic programs.

ALRM-CONFIG-DTD xxx.

xxx = RTR—Retires the alarm and resets the DTDA circuit

= INH—Disables the DTDA circuit and does not allow any alarms

= NOR—Enables the DTDA circuit to function normally.

When typing in the retire message, the only system response is OK. When typing in disable or enable, the system response is OK and an AR10 message. The AR10 message indicates the status of the DTDA (status being inhibited or normal).

4. DTDA INTERFACE WITH OFFICE ALARM SYSTEM

4.01 The DTDA circuit has connections for two master scanner applique (scan) points (SD-1A210-01) which are assigned by the operating

company. One scan point is used to detect an alarm-on condition, and the other scan point is used to detect an alarm-off condition. If an alarm is sounded by the DTDA circuit, an audible major alarm is sounded and the maintenance TTY prints out the following message:

AR01 MISC ALM MJ SPL 127

The DTDA alarm is retired by operating the RST RLS key on the DTDA. The DTDA may also be retired with the input message ALRM-CONFIG-DTD xxx. This message is available with 2-wire generic programs. Refer to paragraph 3.02 for an explanation of this message.

4.02 Retirement of the alarm at the DTDA unit, either automatically or manually results in an audible minor alarm being sounded and in the following TTY output message (Refer to paragraph 4.04):

AR01 MISC ALM MN SPL 127

This minor alarm is retired by operating the ALM RLS key on the alarm, display, and control panel.

4.03 For unattended offices these alarm messages appear on the remote maintenance TTY and the remote audible alarm sounds. The remote audible alarm can be retired at the remote TTY. The ALRM-CONFIG-DTD xxx. message (paragraph 3.02) may be used at the remote maintenance TTY to retire the DTDA.

4.04 The following table gives translation information associated with the alarm scan points.

DESIGNATION	FOR FERRODS	
	ALARM-ON	ALARM-OFF
NPI — Nontrunk Program Index	39	32
UTY — Unit Type	44	45
MEMN — Member Number	127	127

5. CHANGING ASSIGNMENT OF TEST LINE

5.01 Use the following procedure to change assignment of a test line.

- (1) Remove power from DTDA. System prints out

MA 11 MAN PWR RMV MCCD O

- (2) Change LEN (2-wire) or TNN (4-wire) by typing in one of the following:

- (a) 2-wire offices

RC:LINE;CHG:
 ORD *nnnnnnn*
 TN aaaaaaa
 OE bbbbbbbb
 IOE ccccccc!

nnnnnnn = Order number

aaaaaaa = Directory number of test line

bbbbbbbb = Old LEN

ccccccc = New LEN

- (b) 4-Wire offices

(ORD) 0000 (ACT) X (TYP) CHG
 (TEL) xxx xxxx
 (TNN) yyyyyy
 (SUP) DATA CG
 NEWTNN zzzzzz ↑ X-OFF

xxx xxxx = Directory Number of test line

yyyyyy = Old TNN

zzzzzz = New TNN

System response:

RC ORD ACPT

- (3) Change the LEN by changing the appropriate jumpers.
- (4) To verify if system accepts new DN-LEN translations, type in

VFY-DN-30 bbb bbbb.

bbb bbbb = Directory number

System response should be TR01 message with translation information.

- (5) Restore power to DTDA by releasing PWR OFF key. Key lamp is extinguished and system prints out

MA12 PWR RST MCCD O

Initialize circuit test by depressing reset key. Dial tone should be heard at next test origination.

- (6) Check timing to see if time interval between test originations is correct.

6. ASSIGNING A TEST LINE (NEW OFFICE)

6.01 Use the following procedure to assign a new test line in a 2-wire office:

RC:LINE:
 ORD *nnnnnnn*
 TN xxxxxxx
 LCC yy
 OE zzzzzzz!

nnnnnnn = Order number

xxxxxxx = Directory number of test line

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