

DIAL TONE DELAY ALARM OPERATION

NO. 3 ELECTRONIC SWITCHING SYSTEM

CONTENTS	PAGE
1. GENERAL	1
2. DIAL TONE DELAY ALARM CONTROLS	1
3. TTY CONTROL OF THE DTDA	2
4. DTDA INTERFACE WITH OFFICE ALARM SYSTEM	3
5. CHANGING ASSIGNMENT OF TEST LINE	5
Figures	
1. Dial Tone Delay Alarm Unit	2
2. Dial Tone Delay Alarm Circuit	4
Tables	
A. DTDA Control	2
B. DTDA Test Operation	3
C. DTDA Logic States	5
D. DTDA Scan Point	5

1. GENERAL

- 1.01** This section describes the operation of the dial tone delay alarm (DTDA) used in No. 3 Electronic Switching System (ESS).
- 1.02** Whenever this section is reissued, the reason(s) for reissue will be listed in this paragraph.
- 1.03** The purpose of the DTDA unit (Fig. 1) (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 and can be defined as either a dial pulse or TOUCH-TONE® line.

1.04 The line location to which the test line is assigned should be changed at 2-month intervals. The new assignment may be in any other frame, but it should not be associated with the same first stage switch group as the previous assignment. Rotation of the test line assignment distributes the test call load more evenly. The dial administration is responsible for these assignments and procedures should be available to rotate the assignments on a routine basis.

1.05 The DTDA unit is mounted above the trunk line test panel on the test frame.

1.06 The traffic count programs peg a count for the dial pulse origination (ØFT03) or TOUCH-TONE origination (ØFT07) counters each time a test origination is made. 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 counts can be properly evaluated.

2. DIAL TONE DELAY ALARM CONTROLS

- 2.01** Controls provided to monitor and control the DTDA are contained in Table A.
- 2.02** Keys and lamps provided to control and test operation of the DTDA are contained in Table B.

NOTICE

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Bell System except under written agreement

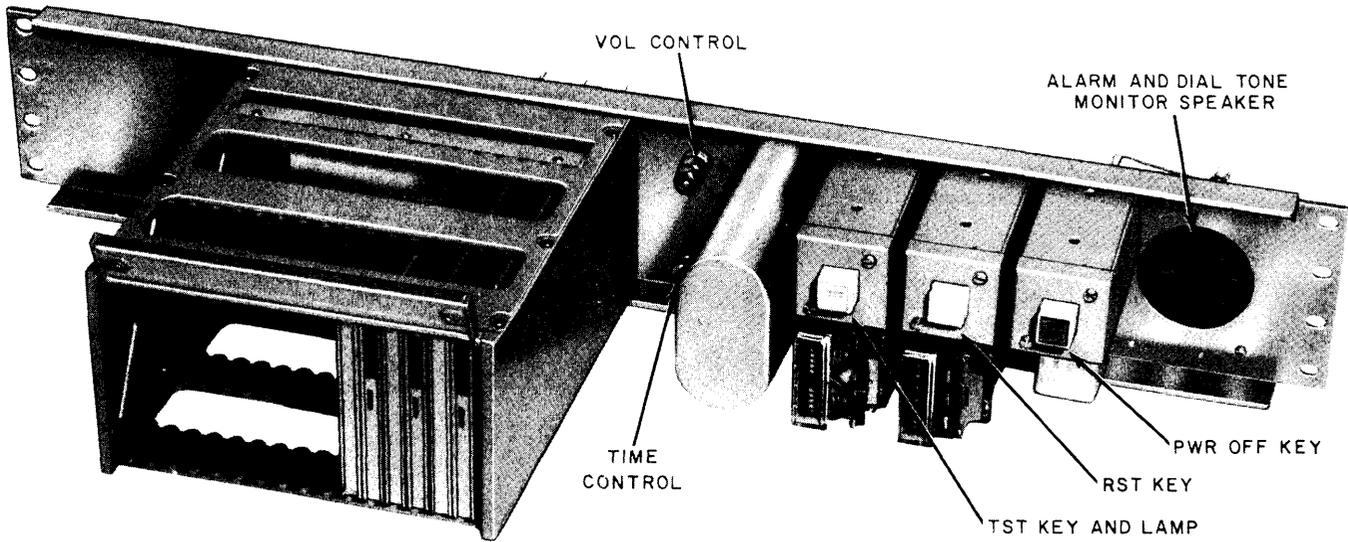


Fig. 1—Dial Tone Delay Alarm Unit

TABLE A

DTDA CONTROL

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

3. TTY CONTROL OF THE DTDA

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

3.02 The following TTY messages provide the ability to retire, enable, or inhibit the DTDA.

These messages are available with 3E3 and later generic programs.

INH:DTDA!

RESET:DTDA!

INH — Inhibits the DTDA circuit and does not allow any alarm.

RESET — Retires the alarm and resets the DTDA circuit.

TABLE B

DTDA TEST OPERATION

KEY OR LAMP DESIGNATION	LAMP COLOR	PURPOSE
TST	Yellow	The TST (test) key is a locking pushbutton 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 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 used to remove power from the DTDA unit. The power should be removed before working on circuits or before replacing circuit packs.

Note: Reference CO-1A277-01.

When the Inhibit or Reset messages are entered, a response of "OK" indicates the request was accepted. If the response is no good "NG", a problem was encountered while processing the request. If the response was an "OK", an "REPT DATA row pt sps state" message will be printed indicating the success or failure (status) of the DTDA circuit.

4. DTDA INTERFACE WITH OFFICE ALARM SYSTEM

4.01 The DTDA circuit (Fig. 2) has connections for two *remote master scanner applique* (scan) points (SD-1A210-01) and one *PD applique* (scan) point (SD-3H911) which are preassigned (per SD-3H912). Figure 2 illustrates the three scan point assignments for the DTDA circuit used as follows: Scan point (1) is used to detect an alarm-on condition. Scan point (2) is used to detect a power-off condition. Scan point (3) is used to detect an inhibited condition. Table C gives the eight possible states of the DTDA circuit. If an alarm is sounded by the DTDA circuit, an audible critical alarm is sounded and the maintenance TTY prints out the following message:

*C REPT DTDA 27 13 000005 OFN

4.02 The DTDA alarm is retired by pushing the RST key on the DTDA. The DTDA may also be retired with either of the input messages:

INH:DTDA!

RESET:DTDA!

These messages are available with 3E3 and later generic programs. Refer to paragraph 3.02 for an explanation of these messages.

4.03 Retirement of alarm at the DTDA unit, either automatically or manually results in the following TTY output message:

REPT DTDA 27 13 000004 NORM

4.04 For unattended office, these alarm messages appear on the remote maintenance TTY and the remote audible alarm sounds. The INH:DTDA! and RESET:DTDA! messages (paragraph 3.02) may be used at the remote maintenance TTY to Reset or Inhibit the DTDA.

4.05 Table D gives translation information associated with the alarm scan point.

27-14 (3) DTDA INH

27-15 (2) DTDA PWR OFN

27-13 (1) DTDA ALARM

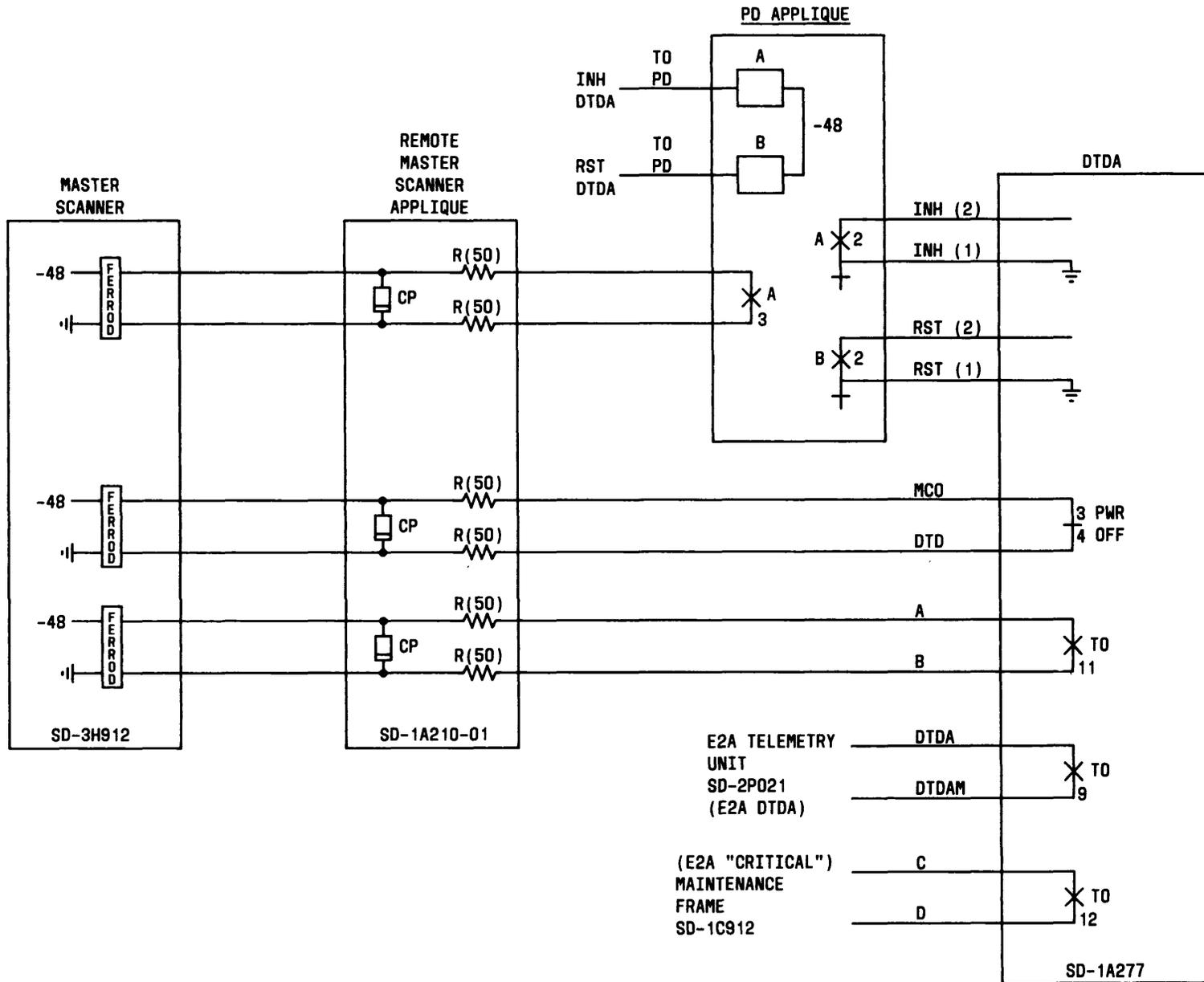


Fig. 2—Dial Tone Delay Alarm Circuit

TABLE C
DTDA LOGIC STATES

POWER DTD	INHIBITED DTD1	ALARM DTDO	CONDITIONS
0	0	0	DTDA circuit PWR is OFF
0	0	1	DTDA circuit PWR is OFF
0	1	0	DTDA circuit PWR is OFF + alarm
0	1	1	DTDA circuit PWR is OFF + inhibited
1	0	0	DTDA circuit normal
1	0	1	DTDA circuit alarm (critical)
1	1	0	DTDA circuit inhibited
1	1	1	DTDA circuit inhibited + alarm

Note: SPS field of REPT DTDA message in the OM-3H300-03.

TABLE D
DTDA SCAN POINT

DESIGNATION	SCAN POINT		USER ID	ALARM	CIRCUIT
	ROW	POINT			
Dial Tone Delay Alarm	27	13	51	07	open
Dial Tone Delay Alarm Inhibited	27	14	51	no	open
Dial Tone Delay Alarm Power	27	15	51	no	closed

Note: Reference RC:SP message in IM-3H300-03.

5. CHANGING ASSIGNMENT OF TEST LINE

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

(a) Remove power from DTDA. The TTY prints out:

REPT DATA 27 15 0000 OFN

(b) Change network appearance (OE) of DTDA by typing in the following messages:

RC:LINE/

ORD 0000/

TYP NEW/

SECTION 233-122-110

TN NXX xxxx/

OE gg cws/*

LCC ttt/*

EL yes/

RTI nnn/**

TTC YES/***

END!

*LCC in office which has denied termination class
of service and allowed originating class.

**Denied termination.

***TTC equal to yes—need only be specified if
the test line for the DTDA is to be a TOUCH-TONE
line.

(c) REMOVE (OE) DTDA network appearance
by typing in the following messages:

RC:LINE/

ORD 0000/

TYP OUT/

TN NXX xxxx/

OE gg cws/*

END!