

APPLICATION		REVISIONS		
NEXT ASSY	USED ON	LTR	DESCRIPTION	DATE
	7506			

REV STATUS OF SHEETS													
REV													
SHEET													

UPDATE DOCUMENT, DX10 ONLINE DIAGNOSTICS,
RELEASE 2.1.1-990

TEXAS INSTRUMENTS INCORPORATED	drawing number	2308864-9901
DATA SYSTEMS GROUP	REV. *A	SHEET 1 OF 15

UPDATE INFORMATION
~~~~~

DX10 ONLINE DIAGNOSTICS/SYSTEM LOG ANALYSIS TASK

RELEASE 2.1.1 - 23 SEPTEMBER 1983

P/N 2308864-9901\*A

TABLE OF CONTENTS

| SECTION | TITLE                                   |
|---------|-----------------------------------------|
| 1.0     | GENERAL INFORMATION                     |
| 2.0     | CHANGES - DX10 ONLINE DIAGNOSTICS       |
| 3.0     | CHANGES - DX10 SYSTEM LOG ANALYSIS TASK |
| 4.0     | STRs CLOSED                             |
| 5.0     | PATCHES FOR DX10 3.6 COMPATIBILITY      |

## SECTION 1

## GENERAL INFORMATION

This document describes the changes to DX10 Online Diagnostics and System Log Analysis Task 2.1 Release. It also includes information on the patch file that is required to enable Online release 2.1.1 to execute under DX10 3.6. The instructions for installing either the source or the object can be found in the READ FIRST - DX10 online Diagnostic and System Log Analysis Task installation guides.

## SECTION 2

## CHANGES - DX10 ONLINE DIAGNOSTICS

## 2.1 Onlines 2.1 support under DX10 3.6.0

Online Diagnostics 2.1 release was designed to execute under the DX10 3.5.1 operating system. Online Diagnostics release 2.1.1 is a special patch release to enable execution under DX10 3.6. Functionally the 2.1 and 2.1.1 releases are identical, only a patch file (see section 5) has been added to provide for Onlines 2.1 and DX10 3.6 compatibility.

## 2.2 DSRW - Extended Disk Diagnostic

The online diagnostic tests for all of the disk systems ( DSRW ) have had major enhancements. There are now five groups of tests:

1. Tests 1 - 2: Read-Only File I/O.
2. Tests 3 - 4: Write/Read File I/O.
3. Tests 5 - 8: Extended Read-Only.
4. Tests 9 - 11: Extended Write/Read (Scratch disk only).
5. CH Verb: FD1000 head cleaning procedure

The extended disk tests allow the capability to read or write on the total surface of the disk volume. Also, many specific features of the various disk controllers are tested. However, in order to enable the extended disk tests ( Tests 5-11 or the CH verb), you must answer "YES" to the prompt:

"ONLINE DIAGNOSTICS SUPPORT?"

during system generation (sysgen). This ensures that the correct disk DSR (Device Service Routine) is included in the sysgen process.

NOTE: The online patch file (see section 5) must be applied in order to support the extended disk tests (tests 5-11 and the CH verb) under DX10 3.6.

### 2.3 LP600 - 300/600 Printronix Diagnostic

The online diagnostic test for the Printronix line printers ( LP600 ) exercises both the LP300 and LP600 line printers. There are 15 noninteractive tests available.

NOTE: The online patch file (see section 5) must be applied to allow the LP600/LP300 diagnostic to run properly under DX10 3.6 as well as provide support for the CI(XXX) interfaces.

### 2.4 LP2260 - 2230/2260 Data products diagnostic

NOTE: The online patch file (see section 5) must be applied to allow the LP2260 diagnostic to run properly under DX10 3.6 as well as provide support for the CI(XXX) interfaces.

### 2.5 LP810 - 810 Line Printer Diagnostic

NOTE: The online patch file (see section 5) must be applied to support the CI(XXX) interfaces for the LP810 under DX10 3.6.

### 2.6 LP840 - 840 RO Line Printer Diagnostic

The online diagnostic test for the 840 RO line printer ( LP840 ) provides 13 noninteractive and 1 interactive tests.

NOTE: The online patch file (see section 5) must be applied to support the CI(XXX) interfaces for the LP840 under DX10 3.6.

### 2.7 911 Subtests Split into Separate Tests

The online diagnostic for the 911 VDT (STxx) now has 6 noninteractive and 1 interactive tests. Two subtests were split from test 1 and made into individual tests.

NOTE: The online patch file (see section 5) must be applied to support the CI(XXX) interfaces for the 911 VDT under DX10 3.6.

## 2.8 ST940 - 940 Terminal Diagnostic

The online diagnostic test for the 940 VDT ( ST940 ) provides testing for the Business System series 940 VDT. This diagnostic has five noninteractive and 1 interactive tests.

NOTE: The online patch file (see section 5) must be applied to allow the 940 VDT diagnostic to run properly under DX10 3.6 as well as provide support for the CI(XXX) interfaces.

## 2.9 DSXX - FD1000 DSDD Clean Head (CH)

The Clean Head verb allows the capability to use a special cleaning diskette to clean the heads on a FD1000 DSDD drive.

NOTE: The online patch file (see section 5) must be applied in order to support the Clean Head (CH) verb under DX10 3.6.

## 2.10 DIAG - Diagnostic Verb to Place Devices in the Diagnostic State

The DIAG verb allows changing the state of devices from ONline to DIAGnostic within the driver task. Thus, the user does not need to exit the driver, perform the DIAG or MDS commands via SCI, and then reenter the driver to continue testing.

## 2.11 ON - Online Verb to Place Devices in the Online State

The ON verb allows changing the state of devices from DIAGnostic to ONline inside the driver without requiring use of the ON or MDS commands via SCI.

## 2.12 SF - Show Diagnostic Files

The new Show Diagnostic File (SF) verb replaces the Show History (SH) verb. The SF verb is functionally equivalent to the Show File (SF) command in SCI. However, only the the following diagnostic related files are available:

- ONLINE HISTORY .S\$ODIAG.HISTORY (1)
- SYSTEM LOG ANALYSIS REPORT .S\$SLARPT
- SYSTEM LOG 1 .S\$SLG1
- SYSTEM LOG 2 .S\$SLG2
- ONLINE HISTORY ERRORS .S\$ODIAG.ERRORS

### Notes:

(1) This is the default history file name, and may be different from the name you specify in response to the XODD proc prompt: HISTORY FILE:.

## 2.13 SP - Show Picture

The SP verb shows a picture of the online diagnostic status of all active diagnostic tasks. The error and pass counts for each task are also displayed.

## 2.14 XSLA - Execute System Log Analysis Task

The XSLA verb executes the System Log Analysis Task from the Online Diagnostic Driver while in the diagnostic session. The SF verb can then be used to display the analysis report file (.S\$SLARPT).

## 2.15 Test Description HELP Messages for the XD Verb

Test descriptions for each diagnostic were added in the XD verb. When the prompt:

ENTER DIAGNOSTIC TEST (INTEGER, ALL)?

appears, then enter HELP, and a description of the tests will be displayed.

### 2.16 Master Total Error Count for Automatic Batch Mode Execution

A Master Error Count appears when the session is complete. This is to inform you if any errors occurred in the diagnostic session. If the error count is non-zero, then you should refer to the history file.

### 2.17 Conditional Error Flag Processing For Automatic Batch Mode Execution

A conditional error synonym flag is set internally by the driver if the master error count is non-zero. This allows checking of the DIAGERRS synonym to provide conditional error processing in the automatic batch mode.

### 2.18 Optional Installation of Help Messages to Reduce Size

The object installation kit allows the "OCLIP" file to be installed without HELP messages. This will save approximately 100 ADUs. However, this is not recommended since it reduces the functionality of the online driver.

### 2.19 LDC - List Device Configuration

The LDC verb calls the List Device Configuration task to show the current device configuration from the online driver.

### 2.20 SMM - Show Memory Map

The SMM verb calls the Show Memory Map task to show the current memory map of the system from the online driver. This is helpful when executing memory diagnostics to determine if memory is completely full.

### CAUTION

Do not leave this display active at all times as it will disallow processing of online diagnostic progress messages. The SP verb should be the normal mode of viewing



diagnostic progress.

## SECTION 3

## CHANGES - SYSTEM LOG ANALYSIS TASK

## 3.1 Level 3 Report for Remote High/Medium Summary Analysis

The level 3 report provides a combination of level one and level two reports. For hardware type errors, level 3 gives a level 1 report plus an expanded listing of any errors for those devices that have recommendations due to possible hardware failures. However, this listing does not give expanded messages for devices having only operational errors.

## 3.2 XSLAP - Purge Master Log Data File by Date and Device

The XSLAP proc allows the capability to delete old data on the master log file. Thus, if a malfunction has filled the file with error messages and other data is desired to be saved, then the old malfunction data can be purged from the S\$DML file after the hardware is repaired. The prompts for the command are as follows:

```
PURGE RECORDS IN .S$DML FILE - VERSION 2.1.0
  STARTING DATE (MMDD):
    ENDING DATE (MMDD):
      DEVICE NAME:
```

The STARTING DATE prompt requires a 4 digit input, 2 for the month (MM) and 2 for the date (DD). The ENDING DATE prompt requires the same type of input. All records between these 2 dates will be purged where they concern the device you specify to the DEVICE NAME prompt.

## 3.3 SLA Execution Regardless of Log File Content

The System Log Analysis Task has been extensively enhanced to allow the task to execute regardless of the content of the system log files or the appearance of any data that would not normally be considered by the analysis task. Previous versions of the task would terminate abnormally without completing a report if unexpected conditions were encountered. The goal of this version

is to always provide a report before termination of SLA.

### 3.4 Specific Device Selection using XSLA Procedure

Rather than generating a full report, you can generate a report for a specific device. You can request any report for any level of device using the following options:

- All Devices, ie, ALL
- Like Type Class Devices; ie. DS
- Specific Device; ie, DS01

### 3.5 Level 1 and Level 2 Tasks Merged into One Single Task

The previous release had two separate tasks for level 1 and 2 report generations. This release combines those tasks into a single task (>5E) for a disk space savings in excess of >8000 bytes of storage.

### 3.6 Master Log Data File Reorganized to hold More System Log Data

The SLA master log file ( S\$DML ) has been reorganized to hold more system log data. Thirty records are created at installation time.

### 3.7 Report Format Enhancements

The following major report enhancements have been incorporated in this release:

- Install/unload volume names tracked by devices
- Concatenation of statistics counters
- Recommendation messages expanded for more precise explanations
- Report run time and date
- Revision level of analysis task

## SECTION 4

## STRs CLOSED

The following STRs were closed as a result of this release:

| STR NUMBER     | DESCRIPTION                                                                                                                                 |
|----------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| 13144          | AN >1111 ERROR IS REPORTED TO THE HISTORY FILE WHEN THE DRIVER IS RUN IN BACKGROUND.                                                        |
| 13143          | THE "FILL IN MATERIAL FOR MESSAGE IS TOO LONG" AND "ABNORMAL TERMINATION" ERROR MESSAGES ARE REPORTED WHEN THE 940 INTERACTIVE TEST IS RUN. |
| 13142          | THE SYSTEM HANGS UP WHEN THE 940 INTERACTIVE TEST IS RUN.                                                                                   |
| 13007          | THE WRONG STACK AND HEAP PARAMETERS ARE BEING USED IN THE MDS PROC FOR DNOS 1.1.                                                            |
| 13006          | SLA DOES NOT PLACE ANY DATA IN THE SLARPT FILE WHEN BID FROM THE DRIVER.                                                                    |
| 13005          | THE 940 EDT TEST WOULD NOT EXECUTE.                                                                                                         |
| 13004          | >2BFD ERROR WHEN BIDDING THE 810 PRINTER TEST.                                                                                              |
| 12879          | WITHIN THE DISK DIAGNOSTICS, THE DIAG AND LDC COMMANDS ARE NOT WORKING.                                                                     |
| 12665          | THE DISK TEST RETURNS AN SVC 03 ERROR ( LUNO NOT ASSIGNED ) UNDER DNOS.                                                                     |
| 11273          | THE INSTALLATION COPIES TASKS WITHOUT ATTACHED PROCEDURES.                                                                                  |
| 11274          | 'RD' REQUIRED FOR INSTALLATION FROM TAPE ON ONE-DISK SYSTEMS.                                                                               |
| 10772          | SYNONYM 'VOL' DISCREPANCY IN BATCH STREAM.                                                                                                  |
| 10885,<br>9730 | >OFFC ERROR ON 'XODD' EXECUTION ( OCCURS ONLY IF YOU CHOSE NOT TO INSTALL ALL DIAGNOSTIC TASKS ).                                           |

10773, EXECUTION OF SLA FAILED WITH MESSAGE: "HALT  
10357, CALLED IN MODULE SDERR".  
9585

9945 SLA CANNOT HANDLE "GARBAGE" ( \*\*\*\* IN THE TYPE  
FIELD ) IN THE SYSTEM LOG FILE.

9819 ONLINES CAN ONLY BE INSTALLED ON THE SYSTEM  
DISK.

9810 SLA ABORTS WHEN IT ENCOUNTERS A SPECIAL DEVICE  
NUMBER.

9727 ERROR WHEN EXECUTING ONLINES ON SYSTEM DISK.

9722 SLA FAILS ( .S\$DML POINTER PROBLEM ).

9721 SLA FAILS WHEN COMPRESSING .S\$SLG OR .S\$DML.

## SECTION 5

## PATCHES FOR DX10 3.6 COMPATIBILITY

All the patches included in the Online Patch File are required to provide support for certain devices (see patch descriptions below) when running the 2.1 version of Online Diagnostics under DX10 3.6. Instructions for applying the patches are included in the patch file (pathname: <volumename>.DX0DOBJ.PATCH.ONLINE21)

NOTE: Do not apply the patches if the onlines are to be run under DX10 3.5.1.

## PATCH DESCRIPTIONS:

PATCH #2973 Allows the parallel line printer tests (Printronic and Data Products 2230/2260) to run under DX10 3.6.

PATCH #2974 Allows the extended disk tests (tests 5 thru 11) to run under DX10 3.6.

PATCH #3006 Provides for the proper identification of a 940 vdt from the Read Device Characteristics data under DX10 3.6.

PATCH #3026 Defeats the direct cru offline status check on the LP810 line printer in order to provide CIxxx interface support under DX10 3.6.

PATCH #3027 Defeats the direct cru offline status check on the DP2260/2230 line printers in order to provide CIxxx interface support under DX10 3.6.

PATCH #3028 Defeats the direct cru offline status check on the LP840 line printer in order to provide CIxxx interface support under DX10 3.6.

PATCH #3029 Defeats the direct cru offline status check on the LP600/LP300 line printers in order to provide CIxxx interface support under DX10 3.6.

PATCH #3030 Defeats the direct cru offline status check on the 911 VDT in order to provide CIxxx interface support under DX10 3.6.

PATCH #3032 Defeats the direct cru offline status check on the 940 VDT in order to provide CIxxx interface support under DX10 3.6.

PATCH #3033 Corrects the problem of the 940 vdt test #1 displaying subscript 2 characters instead of dash characters under DX10 3.6.