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Subject	**: FORMAT STATUS LOG PAGE**
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Introduction

SCSI-2 provides very powerful controls over the format of a rigid disk drive device. The advent of the FORMAT STATUS LOG PAGE for SCSI-3 provides the vital information necessary to understand the conditions under which the most recent successful FORMAT UNIT operation occurred and create a correlation to the current condition of the drive.

The result of this correlation provides the capability to understand defect growth rates.

To delineate the differences between X3.131-199x and this document, changes are noted with ***bold italics***. Entire new sections relative to X3.131-199x are highlighted via a ***bold italic*** heading. Changes from revision one of this document are presented in *underline italics* alone.

7.3.2 Log Parameters

[many paragraphs...]

...Most log pages contain one or more special data structures called log parameters (see Table 7-51). Log parameters may be data counters of a particular event (or events), ***the conditions under which certain operations were performed*** or log parameters may be list parameters (strings) which contain a description of a particular event.

[many paragraphs...]

Table 7-53: Log Page Codes

Page Code	Description	Section
01h	Buffer Over-Run/Under-Run Page	7.3.2.1
03h	Error Counter Page (Read) Page	7.3.2.2
04h	Error Counter Page (Read Reverse) Page	7.3.2.2
05h	Error Counter Page (Verify) Page	7.3.2.2
02h	Error Counter Page (Write) Page	7.3.2.2
07h	Last n Error Events Page	7.3.2.3
06h	Non-Medium Error Page	7.3.2.4
00h	Supported Log Pages	7.3.2.5
08h	***Format Status Page***	*8.3.2.1*
09h - 2Fh	Reserved	
3Fh	Reserved	
30h - 3Eh	Vendor-specific pages	

8.3.2 Log Parameters

This section defines the descriptors and pages for log parameters used with direct-access devices.

The log page codes for direct-access devices are defined in Table 8-44.

Table 8-44: Log Page Codes

Page Code	Description	Section
01h	Buffer Over-Run/Under-Run Page	7.3.2.1
03h	Error Counter Page (Read) Page	7.3.2.2
05h	Error Counter Page (Verify) Page	7.3.2.2
02h	Error Counter Page (Write) Page	7.3.2.2
07h	Last n Error Events Page	7.3.2.3
06h	Non-Medium Error Page	7.3.2.4
00h	Supported Log Pages	7.3.2.5
08h	***Format Status Page***	*8.3.2.1*
04h	Reserved	
09h - 2Fh	Reserved	
3Fh	Reserved	
30h - 3Eh	Vendor-specific pages	

8.3.2.1 Format Status LOG Page

This page (page code 08h) captures the state of the device since the most recent successful FORMAT UNIT command performed. Additionally, this page records the impact that Defect Management has had on the device. *Table 8-43 defines the parameter codes for the Format Status Log Page.*

Table 8-43: **Format Status Page**

Parameter Code	Description
0000h	Format *DATA OUT*
0001h	Grown Defects during Certification
0002h	Total Blocks Reallocated during Format
0003h	Total New Blocks Reallocated
0004h	Power On Minutes Since Format
0005h - 7FFFh	Reserved
8000h - FFFFh	Vendor Specific

Event counts are returned as a result of the LOG SENSE command. LOG SELECT cannot be used to preset (a value other than zero) any of the above event counts. Attempts to change these event counts by issuing a LOG SELECT with these fields set to non-zero values is not considered an error and shall have no effect on the saved values.

All of the log parameters described above shall be reported as *-1 (all FFh in all bytes of the log parameter)* if the most recent FORMAT UNIT command failed. Individual log parameters described above shall be reported as *-1 (all FFh in all bytes of the log parameter)* if no such information is available.

Format DATA OUT: This field contains the *entire DATA OUT phase of the most recently successful FORMAT UNIT operation performed. This includes the Defect List Header (4 bytes), the Initialization Pattern Descriptor(s), if any (variable number of bytes) and the Defect Descriptor(s), if any (variable number of bytes). Refer to section 8.2.1 for details about these fields.*

Grown Defects During Certification Event Count: This is a counter of the number of defects detected and replaced as a result of performing Certification *during execution of FORMAT UNIT. This count reflects only those defects detected and replaced* which were not already part of the Plist or Glist. If a Certification pass was not performed this field shall be returned as *zero*.

Total Blocks Reallocated During Format Event Count: This is a counter of the total blocks reallocated as a result of the FORMAT UNIT operation. This includes those errors in the Plist, Glist, Dlist or Clist.

Total New Blocks Reallocated Event Count: This is a counter of the total number of blocks which have been reallocated since the completion of last successful FORMAT UNIT command as of the current LOG SENSE request.

Power On Minutes Since Format Event Count: This field represents the unsigned number of usage minutes *(power applied regardless of power state)* which have elapsed since the most recently successful FORMAT UNIT command.

Implementor's Note 1: *Upon receiving the FORMAT UNIT command, the target should set all fields within the Format Status Log Page to reflect no such information being available. Only upon successful completion of the FORMAT UNIT command, should the target update the affected fields.*

Implementor's Note 2: The TSD (Target Save Disable) bit is always returned as 0 to indicate that the target shall provide an implicit saving frequency so that the information contained in the log page has statistical significance.

Implementor's Note 3: *The intent relative to removable media is that log page information be stored with the media in a vendor specific manner and location.*