

Seagate Diagnostikk Port for databerging/fun

Seagate 7200.10 og gamlere vil Baud rate være 9600

7200.11 og nyere er Baud rate 38400

[blocked URL](#)

Port mapping PWR?(Ikke sjekket)-GND-TX-RX

Source <https://blog.atola.com/connecting-seagate-drives-to-disksense-unit/>

For å aksessere terminalen bruker man Ctrl + z for å aktivere såkalt ASCII modus

Seagate F3 Terminal Command Set

Here's a consolidated version of all the Seagate terminal commands collected so far. It's not intended to be an exhaustive list, but rather a collection of commands useful in data recovery. If you have more info to share please post it and I'll add it to the list:

The Very Basics:

TTL Default Settings:

Bits per second - 38400

Data Bits - 8

Parity - None

Stop Bits - 1

Flow Control - None

Ctrl + z (initiates the terminal connection and should prompt with level T>)

Ctrl + a (displays drive info, Package Version, Serial #, Model # (useful for missing label), Servo FW, etc.)

Ctrl + l (displays drive info, # heads, serial, preamp type, family ID, etc.)

Ctrl + c (tells some drives to spin down, can be used immediately after CTL + z)

Ctrl + x (displays log of history commands)

/X (used to change levels, replace X with level 2, 3, 4,... 7, T, etc.)

2>Z (puts drive to sleep)

2>U (spins drive up)

7>X (test read/write head resistance)

T>B[N] (sets baud rate to N, so for example T>B921000 sets to 921000 baud. If invald rate is input, e.g. B1, drive will report supported rates)

T>V1 (returns slip defect list - confirm translator loading)

T>V2 (checks T-List)

T>V4 (checks G-List entries)

T>V10 (checks P-List)

T>V40 (checks for non-resident G-list entries)

1>G6A (clear P-List - Not Recommended!)

T> i2,2,22 (clear T-List - Non Recommended!)

C>Q (returns list of all available commands, sometimes just says "No Help Available" on all of them)

1>N1 (clears S.M.A.R.T)

1>N5 (returns SMART values in terminal window)

T>i4,1,22 (clears G-List)

7>m100 (clears DOS config tables)

T>J (displays CAP which has some drive info such as internal model, family ID, serial numbers, etc.)

C>U10 (regenerates the media cache)

F Command: (thanks to hddoracle.com)

This is helpful for drives stuck in pending reallocate mode (E.G. InitiateMarkPendingReallocateRequest for disc_lba:)

All commands issues at level T>. Also HDD needs to be power cycled after issuing.

F (lists out all the parameters and bytes that can be modified within the F command)

F"RWRecoveryFlags",00,22 (disables read sparing, write sparing, and enables correction)

F"RWRecoveryFlags",01,22 (disables read sparing, write sparing and disables correction)

F"BGMSFlags",00,22 (disables background media scan)

F"PerformanceFlags",043C,22 (disables offline sparing and deferred auto reallocation)

native adaptives (i.e non-original ROM)

SIM error 1002 = this message alerts us to some error with one or more defect list. Potentially P-list or NRG list can be bad.

SIM error 2044 - Translator tables cannot be read or are damaged.

SIM error 1009 - Module 17A is damaged

SIM Error 203F / SIM Error 2040 / SIM Error 2044 / SIM Error 3005 - Also seem to be damaged or unreadable translator related errors

LED:00000047 FAddr:FFFFFFFE - Usually this relates to Media Cache

LED:000000BC FAddr:00006220 - Usually this also relates to Media Cache or some relocation parameters.

More Terminal Errors Explained: (thanks to jol and acelabs)

SIM ERROR 3005 (mean that "format corrupted flag" in on and Translator is not loaded in RAM)

"No HOST FIS-ReadyStatusFlags" (reason message: why translator is not loaded).

More Terminal Errors Collected From the Web By Your's Truly

LED:0x000000BD FAddr:0x00009887 or LED:000000BD FAddr:0000988E - Usually relates to Media Cache or other background processes in System File 93. Some have reported clearing SMART as having fixed the issue.

MCMTFileHandler: EXCEPTION: Failed MCMT read request - Relates to System file 346 being damaged, or possibly media cache

LED:000000CC FAddr:0024A7E5 - Bad Translator. Short read channel, clear smart, regenerate translator.

SMI init (or) Training Failed - Bad PCB

Disc FW failed to load - Bad PCB

Sense code = xxxxxx82 - problem with sector translation (broken translator) (x's will be other numbers)

Sense code = xxxxxx81 - uncorrected error (bad sector, not translator)

LED:00000067 - Normal if PCB is removed from HDA. Otherwise it's heads/media damage

SimError - Remaining in BootFW

Perform a double download without a power cycle (This error occurs with non-original ROM code or PCB)

Source <https://www.data-medics.com/forum/seagate-f3-terminal-command-set-t901.html>

Seagate ST2000DL001 F3 commands

Rst 0x20M
(P) SATA Reset

ASCII Diag mode

F3 T>
ASCII Diag mode

F3 T>/C

F3 C>Q

Online CR: Rev 0011.0000, Flash,	Abort
Online ESC: Rev 0011.0000, Flash,	Abort Looping Command or Batch File
Online ' ': Rev 0001.0000, Flash,	Pause Output
Online ' . ': Rev 0011.0000, Flash,	Display Active Status
Online ' ? ': Rev 0011.0000, Flash,	Display Diagnostic Buffer Information
Online ' ' ': Rev 0012.0001, Flash,	Display Read/Write Statistics
Online ' \$ ': Rev 0012.0002, Flash,	Display Read/Write Statistics By Zone
Online ' { ': Rev 0011.0000, Flash,	Toggle EIB-Specific R/W Tracing

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Online ^D: Rev 0011.0000, Flash, Toggle R/W Tracing
Online ^N: Rev 0011.0000, Flash, Toggle R/W Tracing
Online ^W: Rev 0011.0000, Flash, Enable and Init RW Statistics
Online ^O: Rev 0003.0000, Flash, Advance Servo Tracing State
Online ': Rev 0001.0000, Flash, PrepSecondaryOnlineCmd
Online '!': Rev 0011.0000, Flash, Display Current Read Channel Settings
Online '<': Rev 0011.0000, Flash, Decrement Read/Write Scope Sync
Online '>': Rev 0011.0000, Flash, Increment Read/Write Scope Sync
Online '~': Rev 0014.0000, Flash, Display Native Interface Command State
Online ^A: Rev 0013.0000, Flash, Display Firmware Revision
Online ^B: Rev 0012.0000, Flash, Get Thermistor Temperature
Online ^C: Rev 0011.0000, Flash, Firmware Reset
Online ^E: Rev 0011.0000, Flash, Display Native Interface Configuration
Online ^F: Rev 0011.0001, Flash, Display Native Interface Read Cache Information
Online ^I: Rev 0011.0000, Flash, Display Controller Registers
Online ^K: Rev 0011.0000, Flash, Display DST Status
Online ^L: Rev 0024.0000, Flash, Display Sign On Message
Online ^P: Rev 0011.0000, Flash, Toggle Diag Idle Mode
Online ^Q: Rev 0011.0000, Flash, Resume Interface Task
Online ^R: Rev 0011.0000, Flash, Enable ASCII Online Serial Port Mode
Online ^S: Rev 0011.0000, Flash, Pause Interface Task
Online ^T: Rev 0011.0000, Flash, Enable ESLIP Serial Port Mode
Online ^U: Rev 0011.0000, Overlay, Display Congen
Online ^V: Rev 0011.0000, Overlay, Toggle Interface Command Echo
Online ^X: Rev 0012.0000, Flash, Display Native Interface and Read/Write Command History
Online ^Y: Rev 0011.0000, Flash, Display DST Status
Online ^Z: Rev 0011.0000, Flash, Enable ASCII Diagnostic Serial Port Mode
Online ^\: Rev 0011.0000, Flash, Toggle Debug Display Enable
Level : '~': Rev 0002.0000, Flash, QMON Counters
Level : '$': Rev 0001.0000, Flash, QMON Stats
Level : '@': Rev 0001.0000, Flash, DRAM Refresh Intervals
All Levels CR: Rev 0011.0000, Flash, Abort
All Levels '/': Rev 0001.0000, Flash, Change Diagnostic Command Level, /[Level]
All Levels '+': Rev 0012.0000, Flash, Peek Memory Byte, +[AddrHi],[AddrLo],[NotUsed],[NumBytes]
All Levels '-': Rev 0012.0000, Flash, Peek Memory Word, -[AddrHi],[AddrLo],[NotUsed],[NumBytes]
All Levels '=': Rev 0011.0002, Flash, Poke Memory Byte, =[AddrHi],[AddrLo],[Data],[Opts]
All Levels '@': Rev 0001.0000, Overlay, Batch File Label, @[LabelNum]
All Levels '|': Rev 0001.0000, Overlay, Batch File Terminator, |
All Levels '*': Rev 0011.0000, Overlay, Special Batch File Function, *[FuncId],[FuncParm0],[FuncParm1]
All Levels 'A': Rev 0011.0000, Overlay, Set Test Space, A[OptsOrParmSelect],[ParmValue],[AddrType],[HdForCylLimit]
All Levels 'L': Rev 0001.0002, Overlay, Enable Looping, L[Opts],[CountOrStopOnErrCode]
Level 1 'S': Rev 0011.0001, Flash, Edit Processor Memory Byte, S[AddrHi],[AddrLo],[MemValue],[NumBytes],[Opts]
Level 1 'U': Rev 0011.0001, Flash, Edit Buffer Memory Byte, U[AddrHi],[AddrLo],[MemValue],[NumBytes]
Level 1 'e': Rev 0011.0000, Flash, Spin Down and Reset Drive, e[MsecDelay],[Opts]
Level 1 'm': Rev 0011.0001, Flash, Edit Processor Memory Word, m[AddrHi],[AddrLo],[MemValue],[NumBytes],[Opts]
Level 1 'B': Rev 0011.0000, Overlay, Buffer Display, B[DisplayBlk],[RefBlk],[NumBlks],[Opts],[SymBits]
Level 1 'D': Rev 0011.0001, Overlay, Memory Block Display, D[AddrHi],[AddrLo],[CompVal],[NumBytes],[Opts],[SizeInBytes]
Level 1 'G': Rev 0011.0000, Overlay, Generic Read/Write Request, G[Parm0],[Parm1],[Parm2],...[Parm9]
Level 1 'N': Rev 0015.0000, Overlay, SMART Control, N[SubCmd],[SubCmdParm0],[SubCmdParm1]
Level 1 'c': Rev 0011.0000, Overlay, Buffer Compare, c[SrcBlk],[RefBlk],[NumBlks],[ContOnErr]
Level 1 'j': Rev 0001.0000, Overlay, Display Hardware Jumper Setting, j[HardwareJumperSelect]
Level 1 's': Rev 0001.0000, Overlay, Call SDBP Cmd, s[Parm1],[Parm2],[Parm3]
Level 2 'J': Rev 0001.0000, Flash, Particle Sweep, J[ Start Cyl ],[ End Cyl ],[ Duration mSec ],[ Dwell mSec ],[ JIT mode ]
Level 2 'U': Rev 0011.0000, Flash, Spin Up Drive, U[HoldState],[Hd],[Cyl]
Level 2 'Z': Rev 0011.0000, Flash, Spin Down Drive, Z
Level 2 'B': Rev 0011.0000, Overlay, Buffer Display, B[DisplayBlk],[RefBlk],[NumBlks],[Opts],[SymBits]
Level 2 'C': Rev 0011.0000, Overlay, Buffer Copy, C[SrcBlk],[DestBlk],[NumBlks]
Level 2 'D': Rev 0001.0002, Overlay, LdpcIterationControl, D[itratn cnt],[glbl itratn],[BERP opts],[erasure],[slidewindowjog_sz],[ext itratn]
Level 2 'E': Rev 0013.0000, Overlay, Display / Edit Log, E[LogNum],[ErrCodeOrSpecialFuncKey],[SpecialFunc]
Level 2 'F': Rev 0011.0001, Overlay, Modify Track Defect List, F[PSctr/LBA],[Action]
Level 2 'H': Rev 0011.0000, Overlay, Select Logical Head, H[Hd],[SkType],[Options]
Level 2 'I': Rev 0011.0003, Overlay, Display / Modify Adaptive Parameter, I,[GroupId]
Level 2 'K': Rev 0011.0000, Overlay, Set Tracking Offset, K[OffsetValue],[PersOrTempOpt],[UnitsOpt],[ChanReload]
Level 2 'M': Rev 0012.0000, Overlay, Set Diag Idle Mode, M[ModeSelect],[ModeMask],[ResetToPowerOn]
Level 2 'N': Rev 0001.0000, Overlay, Set Direct Write Mode, N[EnabledDirWrtModeOpt]
Level 2 'O': Rev 0011.0000, Overlay, Seek Repeatedly Between Physical Cylinders, O[StartPhyCyl0],[StartPhyCyl1],[NumSkPairs],[NumSeconds],[Hd]

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Level 2 'P': Rev 0011.0000, Overlay, Set Buffer Pattern, P[PatternSelOrPatternLow],[PatternHi],[PatternBits],[Opts],[BlkNum],[NumBlks]
 Level 2 'Q': Rev 0011.0000, Overlay, Write, Read, Read CHS, Q[Sec],[NumSecs],[PhyOpt],[Opts]
 Level 2 'R': Rev 0011.0000, Overlay, Read CHS, R[Sec],[NumSecs],[PhyOpt],[Opts]
 Level 2 'S': Rev 0011.0000, Overlay, Seek to Logical Cylinder and Head, S[Cyl],[Hd],[Offset],[OffsetUnitsOpt],[SkType],[Options]
 Level 2 'T': Rev 0014.0000, Overlay, Measure Throughput, T[Opts],[CylSkew],[HeadSkew],[MiniZoneSkew],[SkewStep],[LengthInTracks],[OffsetInTracks],[NumberOfRetries]
 Level 2 'V': Rev 0011.0000, Overlay, Read Verify CHS, V[Sec],[NumSecs],[CompareBlk],[Opts]
 Level 2 'W': Rev 0011.0000, Overlay, Write CHS, W[Sec],[NumSecs],[PhyOpt],[Opts]
 Level 2 'X': Rev 0013.0000, Overlay, Display Track Information, X[LogCyl],[Hd],[SysAreaOpt],[Opts],[RowsPerPage]
 Level 2 'Y': Rev 0011.0000, Overlay, Set Retries - DERP, Y[Mode],[MaxRdRetries],[MaxWrtRetries],[OtcTLevel],[Options]
 Level 2 'a': Rev 0002.0000, Overlay, Measure Optimum Skew, a
 Level 2 'b': Rev 0001.0000, Overlay, BER by Hd / Zone, b[h][,zone]
 Level 2 'c': Rev 0011.0000, Overlay, Buffer Compare, c[SrcBlk],[RefBlk],[NumBlks],[ContOnErr]
 Level 2 'h': Rev 0013.0000, Overlay, Translate Physical Sector, h[Sec],[NumSecs]
 Level 2 'i': Rev 0011.0000, Overlay, Display Defects On Current Track, i
 Level 2 'j': Rev 0011.0000, Overlay, Read Wedge, j[WedgeAddr],[NumWedges],[NumSkippedWedges],[TranSize],[Opts],[RegAddr0],...,[RegAddr13]
 Level 2 'k': Rev 0001.0000, Overlay, Set User Cylinder/Head/MiniZone Skew, k[CylSkew],[HeadSkew],[MiniZoneSkew]
 Level 2 'l': Rev 0013.0000, Overlay, Translate Logical Sector, l[Sec],[NumSecs]
 Level 2 'o': Rev 0001.0000, Overlay, Corrupt LBA, o[Lba],[NumBlocks],[BurstSpan],[BurstOffset],[NumberOfRandomCorrupt],[Flags]
 Level 2 'r': Rev 0011.0000, Overlay, Read Long CHS or Read System CHS, r[LongSec],[LongSecsOrSysSec],[SysSecs],[LongPhySecOpt],[LongOpts],[SysOpts]
 Level 2 's': Rev 0011.0000, Overlay, Seek to Physical Cylinder and Head, s[Cyl],[Hd],[ValidKey],[Offset],[OffsetUnitsOpt],[SkType],[Options]
 Level 2 't': Rev 0013.0000, Overlay, Translate Wedge, t[Wdg],[NumWdgs]
 Level 2 'u': Rev 0011.0000, Overlay, Enable/Disable Channel/Preamp Register Display, u[EnableDisableOpt]
 Level 2 'v': Rev 0011.0000, Overlay, Convert Data Track Percentage To Servo Offset Count, v[Percentage]
 Level 2 'w': Rev 0011.0000, Overlay, Write Long CHS or Write System CHS, w[LongSec],[LongSecsOrSysSec],[SysSecs],[LongPhySecOpt],[SysOpts]
 Level 2 'x': Rev 0014.0000, Overlay, Display Zone Information, x[Partition],[Hd],[Zone],[Options]
 Level 2 'y': Rev 0011.0000, Overlay, Set DERP Retry State, y[Type],[PathState],[RetryStateCnt],[LoopCnt1],[LoopCnt2]
 Level 2 'z': Rev 0011.0001, Overlay, Write Wedge, z[WedgeAddr],[NumWedges],[NumSkippedWedges],[TranSize],[Opt],[RegAddr0],...,[RegAddr13],[TSpacing]
 Level 2 '7': Rev 0011.0000, Overlay, Write Verify CHS, 7[Sec],[NumSecs],[WrBufBlk],[Opts]
 Level 3 'U': Rev 0011.0000, Flash, Spin Up Drive, U[HoldState],[Hd],[Cyl]
 Level 3 'V': Rev 0012.0000, Flash, Read or Write Power ASIC Register, V[RegAddr],[RegValue],[WrOpt]
 Level 3 'Z': Rev 0011.0000, Flash, Spin Down Drive, Z
 Level 3 'D': Rev 0011.0000, Overlay, Measure Seek Access Time, D[SkLength],[SkType],[NumSks]
 Level 3 'E': Rev 0013.0000, Overlay, Display / Edit Log, E[LogNum],[ErrCodeOrSpecialFuncKey],[SpecialFunc]
 Level 3 'H': Rev 0011.0000, Overlay, Select Logical Head, H[Hd],[SkType],[Options]
 Level 3 'O': Rev 0011.0000, Overlay, Seek Repeatedly Between Physical Cylinders, O[StartPhyCyl0],[StartPhyCyl1],[NumSkPairs],[NumSeconds],[Hd]
 Level 3 'Q': Rev 0011.0000, Overlay, Write, Read, Write, Read CHS, Q[Sec],[NumSecs],[Opts]
 Level 3 'R': Rev 0011.0000, Overlay, Read Current Servo Destination, R
 Level 3 'S': Rev 0011.0000, Overlay, Seek to Logical Cylinder and Head, S[Cyl],[Hd],[Offset],[OffsetUnitsOpt],[SkType],[Options]
 Level 3 'b': Rev 0001.0000, Overlay, LoadUnloadHeads, b[Cmd],[Velocity],[Dwell],[Lock]
 Level 3 'f': Rev 0013.0000, Overlay, Real Time Servo Trace, f[SubCmd],[SubPrm0],[SubPrm1],[SubPrm2]
 Level 3 'p': Rev 0013.0000, Overlay, Translate Physical Sector, p[Sec],[NumSecs]
 Level 3 'q': Rev 0013.0000, Overlay, Translate Logical Sector, q[Sec],[NumSecs]
 Level 3 's': Rev 0011.0000, Overlay, Seek to Physical Cylinder and Head, s[Cyl],[Hd],[ValidKey],[Offset],[OffsetUnitsOpt],[SkType],[Options]
 Level 4 'B': Rev 0011.0000, Overlay, Enable / Disable RVFF, B[NewRvffControlMode]
 Level 4 'D': Rev 0011.0000, Overlay, Measure Seek Access Time, D[SkLength],[SkType],[NumSks]
 Level 4 'E': Rev 0013.0000, Overlay, Display / Edit Log, E[LogNum],[ErrCodeOrSpecialFuncKey],[SpecialFunc]
 Level 4 'H': Rev 0011.0000, Overlay, Select Logical Head, H[Hd],[SkType],[Options]
 Level 4 'K': Rev 0011.0000, Overlay, Set Tracking Offset, K[OffsetValue],[PersOrTempOpt],[UnitsOpt],[ChanReload]
 Level 4 'O': Rev 0011.0000, Overlay, Display Micro Jog for Logical Cylinder and Head, O[LogCyl],[Hd],[Opts],[SysAreaOpt]
 Level 4 'S': Rev 0011.0000, Overlay, Seek to Logical Cylinder and Head, S[Cyl],[Hd],[Offset],[OffsetUnitsOpt],[SkType],[Options]
 Level 4 'U': Rev 0011.0000, Overlay, Servo Batch Test sub commands, U[SubCmd],[SubCmdParm0],[SubCmdParm1],[SubCmdParm2]
 Level 4 'c': Rev 0001.0000, Overlay, Find Min Or Max Cylinders c[Head],[Mode],[RangeMultiplier],[RetryCountLimit],[FilterTimeConstant]
 Level 4 'd': Rev 0001.0000, Overlay, Display Servo Disc Slip

Level 4 'e': Rev 0011.0000, Overlay, Enable / Disable PES Output, e[PesLeftShiftCnt],[DisablePesOut]
 Level 4 'g': Rev 0001.0000, Overlay, Display Servo Sector Error Log, g
 Level 4 'k': Rev 0001.0000, Overlay, Get VGA Data, k[OpType],[StartHt],[EndHt],[HtInc]
 Level 4 'l': Rev 0011.0000, Overlay, Scan Track for Servo Defects and ZAP, l[RdPositionOpt]
 Level 4 'q': Rev 0001.0000, Overlay, Display Servo Event Log, q
 Level 4 's': Rev 0001.0000, Overlay, Display Servo Sector Error Count, s
 Level 4 't': Rev 0011.0000, Overlay, Display / Modify ZAP Table, t[EntryNum],[EntryValue]
 Level 4 'u': Rev 0011.0000, Overlay, Set Seek Speed, u[Opts],[SkSpeed]
 Level 4 'v': Rev 0011.0000, Overlay, Butterfly Seek Test, v[StartPhyCyl0],[StartPhyCyl1],[NumSkPairs],[NumSeconds],[Hd]
 Level 5 'S': Rev 0011.0000, Flash, Enter Servo Matlab Shell, S
 Level 5 'B': Rev 0011.0000, Overlay, Servo Bode Plot, B[BodeType],[InjAmp],[Fmin],[Fmax],[NumFreq],[NumSamples],[EnableTracing]
 Level 5 'C': Rev 0011.0000, Overlay, Generic Servo Command, C[CmdNum],[Parm1],...[Parm7]
 Level 5 'D': Rev 0011.0000, Overlay, Read / Unlock DDR Buffer, B[OperateCode]
 Level 5 'E': Rev 0001.0000, Overlay, Measure Disc Eccentricity
 Level 5 'G': Rev 0011.0000, Overlay, Select Servo Controller, G[Head],[Controller],[InputShift]
 Level 5 'K': Rev 0001.0000, Overlay, Servo Disc Slip, K [OperationSelectId]
 Level 5 'R': Rev 0011.0000, Overlay, Read Servo RAM at Address, R[Addr],[NumBytes]
 Level 5 'U': Rev 0011.0000, Overlay, Enable / Disable Servo Updates, U[VcmDacUpdateOpt],[AToDUdateOpt]
 Level 5 'W': Rev 0011.0000, Overlay, Write Servo RAM at Address, W[Addr],[NumBytes],[Data]
 Level 5 'Z': Rev 0011.0000, Overlay, Read Zap from Disc to Table, Z
 Level 5 'd': Rev 0011.0000, Overlay, Disable / Enable Servo ZAP coefficients and ZAP read, d[ZapControlMode]
 Level 5 'e': Rev 0001.0000, Overlay, Enable / Disable Shock Sensor, e[Operation]
 Level 5 'i': Rev 0011.0000, Overlay, Read Servo Symbol Table at Index, i[Index]
 Level 5 'r': Rev 0011.0000, Overlay, Read Servo RAM at Index, r[Index],[NumBytes],[ByteOffset]
 Level 5 'w': Rev 0011.0000, Overlay, Write Servo RAM at Index, w[Index],[NumBytes],[Data],[ByteOffset]
 Level 6 'B': Rev 0011.0000, Overlay, Run Batch File, B[BatchFileNum],[DisplayOpt]
 Level 6 'D': Rev 0011.0000, Overlay, Display Batch File, D[BatchFileNum]
 Level 6 'E': Rev 0011.0000, Overlay, Enter Batch File, E[BatchFileNum]
 Level 7 'Z': Rev 0011.0000, Flash, Spin Down Drive, Z
 Level 7 's': Rev 0011.0000, Flash, Write Peripheral Register - channel or preamp, s[OpType],[RegAddr],[RegValue],[RegMask],[RegPagAddr]
 Level 7 't': Rev 0012.0000, Flash, Read Peripheral Register - channel or preamp, t[OpType],[RegAddr],[NumRegs],[RegMask],[RegPagAddr]
 Level 7 'B': Rev 0011.0000, Overlay, Buffer Display, B[DisplayBlk],[RefBlk],[NumBlks],[Opts],[SymBits]
 Level 7 'C': Rev 0011.0000, Overlay, Buffer Copy, C[SrcBlk],[DestBlk],[NumBlks]
 Level 7 'D': Rev 0012.0000, Overlay, Display Temperature, D,[DevSelect]
 Level 7 'E': Rev 0013.0000, Overlay, Display / Edit Log, E[LogNum],[ErrCodeOrSpecialFuncKey],[SpecialFunc]
 Level 7 'H': Rev 0011.0000, Overlay, Select Logical Head, H[Hd],[SkType],[Options]
 Level 7 'I': Rev 0011.0003, Overlay, Display / Modify Adaptive Parameter, I,[GroupId]
 Level 7 'K': Rev 0011.0000, Overlay, Set Track Format, K[UserAreaTrkFormatType],[SysAreaTrkFormatType]
 Level 7 'P': Rev 0011.0000, Overlay, Set Buffer Pattern, P[PatternSelOrPatternLow],[PatternHi],[PatternBits],[Opts],[BlkNum],[NumBlks]
 Level 7 'Q': Rev 0011.0000, Overlay, Write, Read, Read CHS, Q[Sec],[NumSecs],[PhyOpt],[Opts]
 Level 7 'R': Rev 0011.0000, Overlay, Read CHS, R[Sec],[NumSecs],[PhyOpt],[Opts]
 Level 7 'S': Rev 0011.0000, Overlay, Seek to Logical Cylinder and Head, S[Cyl],[Hd],[Offset],[OffsetUnitsOpt],[SkType],[Options]
 Level 7 'U': Rev 0014.0000, Overlay, Preamp Temperature Adjust, U[TweakTemperature],[Partition],[Hd],[Zone],[Opts],[Preht],[WrtHt],[RdHt]
 Level 7 'W': Rev 0011.0000, Overlay, Write CHS, W[Sec],[NumSecs],[PhyOpt],[Opts]
 Level 7 'X': Rev 0011.0000, Overlay, Display Preamp Head Resistance
 Level 7 'Y': Rev 0011.0000, Overlay, Set Retries - DERP, Y[Mode],[MaxRdRetries],[MaxWrtRetries],[OtcTLevel],[Options]
 Level 7 'b': Rev 0011.0000, Overlay, Erase Track, b[AdjacentTrkCnt],[EraseCntPerTrk],[AcEraseOpt]
 Level 7 'c': Rev 0011.0000, Overlay, Off Track Capability, c[Sec],[NumSecs],[SecIncrement],[Offset]
 Level 7 'g': Rev 0001.0000, Overlay, Sector Based BER, g[sctr],[len],[option]
 Level 7 'h': Rev 0011.0001, Overlay, Mark Media Flaw, h[PhyCyl],[Hd],[PhySec],[UndisturbedRadius],[EraseBandTrks],[PtrLen],[WgSpec],[Od/Id]
 Level 7 'i': Rev 0011.0000, Overlay, Generic Read/Write Request, i[Parm0],[Parm1],[Parm2],...[Parm9]
 Level 7 'm': Rev 8004.0000, Overlay, Display Single Track Directed Offline Scan Information, m[clr,min scn]
 Level 7 'r': Rev 0011.0000, Overlay, Read Non-Volatile Adaptive Parameters, r[Opts]
 Level 7 'u': Rev 0011.0000, Overlay, Enable/Disable Write Fault, u[Op]
 Level 7 'w': Rev 0011.0000, Overlay, Save Adaptives To Flash, w[Seg],,22
 Level 7 'x': Rev 0014.0000, Overlay, Display Zone Information, x[Partition],[Hd],[Zone],[Options]
 Level 7 'y': Rev 0011.0000, Overlay, Set DERP Retry State, y[Type],[PathState],[RetryStateCnt],[LoopCnt1],[LoopCnt2]
 Level 8 'U': Rev 0011.0000, Flash, Spin Up Drive, U[HoldState],[Hd],[Cyl]
 Level 8 'Z': Rev 0011.0000, Flash, Spin Down Drive, Z
 Level 8 'C': Rev 0011.0000, Overlay, Servo Diag Sub Cmds, C[SubCmd],[Parm0],[Parm1],[Parm2]
 Level 8 'R': Rev 0011.0000, Overlay, Read Current Servo Destination, R

Level 8 'S': Rev 0011.0000, Overlay, Seek to Logical Cylinder and Head, S[Cyl],[Hd],[Offset],[OffsetUnitsOpt],[SkType],[Options]

Level 8 'd': Rev 0001.0000, Overlay, Head Smash Test, d[HeadDirection],[AccelerationDuration],[DecelerationDuration],[AccelerationCurrent],[DecelerationCurrent]

Level A 'C': Rev 0013.0000, Overlay, Translate PBA, C[PbaHi],[PbaLow],[NumPbas]

Level A 'D': Rev 0013.0000, Overlay, Translate Symbols From Index, D[PhyCyl],[Hd],[Sfi],[NumSfis]

Level A 'E': Rev 0013.0000, Overlay, Display / Edit Log, E[LogNum],[ErrCodeOrSpecialFuncKey],[SpecialFunc]

Level A 'F': Rev 0013.0000, Overlay, Translate LBA, F[LbaHi],[LbaLo],[SysAreaOpt],[NumLbas]

Level A 'M': Rev 0011.0000, Overlay, Set Controller Test Port, M[Port],[Value]

Level A 'Q': Rev 0011.0000, Overlay, Write, Read, Read LBA, Q[Lba],[NumLbas],[Opts]

Level A 'R': Rev 0011.0000, Overlay, Read LBA, R[Lba],[NumLbas],[Opts]

Level A 'S': Rev 0011.0000, Overlay, Seek to LBA, S[LbaHi],[LbaLo],[Offset],[OffsetUnitsOpt],[SkType],[Options]

Level A 'W': Rev 0011.0000, Overlay, Write LBA, W[Lba],[NumLbas],[Opts]

Level A 'Y': Rev 0011.0000, Overlay, Set Retries - DERP, Y[Mode],[MaxRdRetries],[MaxWrtRetries],[OtcTLevel],[Options]

Level A 'c': Rev 0013.0000, Overlay, Translate Logical Cylinder, Logical Head and Logical Sector, c[Cyl],[Hd],[Sec],[SysAreaOpt],[NumSecs]

Level A 'd': Rev 0013.0000, Overlay, Translate Physical Cylinder, Logical Head and Physical Sector, d[Cyl],[Hd],[Sec],[NumSecs]

Level A 'e': Rev 0013.0000, Overlay, Translate Nominal Cylinder and Logical Head, e[Cyl],[Hd],[Sec],[SysAreaOpt]

Level A 'f': Rev 0013.0000, Overlay, Translate Physical Cylinder, Logical Head and Physical Wedge, f[Cyl],[Hd],[Wdg],[NumWdgs]

Level A 'l': Rev 0013.0000, Overlay, Display Track Information, l[LogCyl],[Hd],[SysAreaOpt],[Opts],[RowsPerPage]

Level A 'y': Rev 0011.0000, Overlay, Set DERP Retry State, y[Type],[PathState],[RetryStateCnt],[LoopCnt1],[LoopCnt2]

Level C 'B'No help available

Level C 'D': Rev 0002.0000, Overlay, Display Bonanza Memory, D[MemorySelect],[StartAddress],[NumberOfSymbols],[BufferSelect]

Level C 'E': Rev 0001.0001, Overlay, Display Bonanza Memory Size, E

Level C 'H'No help available

Level C 'I'No help available

Level C 'Q': Rev 0001.0000, Overlay, Display ASCII Command Information, Q[CmdLevel],[Cmd]

Level C 'S'No help available

Level C 'T': Rev 0011.0000, Overlay, Goop Plot, T[Hd],[StartTrk],[EndTrk],[ECCLvl],[NoFrcSync],[SkipCnt]

Level E 'B': Rev 0011.0001, Overlay, Write Wedge, B[WedgeAddr],[NumWedges],[NumSkippedWedges],[TranSize],[Opt],[RegAddr0],...,[RegAddr13],[TSpacing]

Level E 'C': Rev 0011.0000, Overlay, Read Wedge, C[WedgeAddr],[NumWedges],[NumSkippedWedges],[TranSize],[Opts],[RegAddr0],...,[RegAddr13]

Level E 'G': Rev 0001.0000, Overlay, HeadDegradation, G[OperationControlOptions],[MeasurementControlOptions]

Level E 'm': Rev 0011.0000, Overlay, Fast MSESER Measurement, m[]

Level E 'n': Rev 0001.0000, Overlay, Dibit Extraction, n[sctr],[cnt],[dibit],[dibit],[dibit],[skip],[trim],[dsply]

Level E 'o': Rev 0011.0000, Overlay, Fine RW Offset Measurement, o[NumAves],[TrkStepSize],[NumGuardTrks]

Level E 'w': Rev 0011.0001, Overlay, Slow Write CHS, w[Sec],[NumSecs],[ConSec],[Skip],[UnitOfSkip]

Level F 'U': Rev 0011.0000, Flash, Spin Up Drive, U[HoldState],[Hd],[Cyl]

Level F 'Z': Rev 0011.0000, Flash, Spin Down Drive, Z

Level F 'b': Rev 0011.0000, Flash, Set Baud Rate, b[BaudRate],[MsecDelay]

Level F 't': Rev 0011.0000, Flash, Write Peripheral Register - channel or preamp, t[OpType],[RegAddr],[RegValue],[RegMask],[RegPagAddr]

Level F 'B': Rev 0011.0000, Overlay, Buffer Display, B[DisplayBlk],[RefBlk],[NumBlks],[Opts],[SymBits]

Level F 'C': Rev 0011.0000, Overlay, Buffer Copy, C[SrcBlk],[DestBlk],[NumBlks]

Level F 'D': Rev 0011.0001, Overlay, Memory Block Display, D[AddrHi],[AddrLo],[CompVal],[NumBytes],[Opts],[SizeInBytes]

Level F 'E': Rev 0001.0000, Overlay, Symbol Error Map, E[trk],[hd],[srt sctr],[sctr cnt],[action],[mx err]

Level F 'P': Rev 0011.0000, Overlay, Set Buffer Pattern, P[PatternSelOrPatternLow],[PatternHi],[PatternBits],[Opts],[BlkNum],[NumBlks]

Level F 'V': Rev 0011.0000, Overlay, Buffer Compare, V[SrcBlk],[RefBlk],[NumBlks],[ContOnErr]

Level F 'Y': Rev 0011.0000, Overlay, Set Retries - DERP, Y[Mode],[MaxRdRetries],[MaxWrtRetries],[OtcTLevel],[Options]

Level F 'r': Rev 0011.0000, Overlay, Read System CHS, r[LogSec],[NumSecs],[Opts]

Level F 's': Rev 0011.0000, Overlay, Seek to Physical Cylinder and Head, s[Cyl],[Hd],[ValidKey],[Offset],[OffsetUnitsOpt],[SkType],[Options]

Level F 'y': Rev 0011.0000, Overlay, Set DERP Retry State, y[Type],[PathState],[RetryStateCnt],[LoopCnt1],[LoopCnt2]

Level F 'z': Rev 0011.0000, Overlay, SataDebug, z[SubCmd],[Parm1],[Parm2],[Parm3]

Level G 'B': Rev 0011.0000, Overlay, Fill Correction Buffer, B[StartAddr],[EndAddr],[Pattern],[Opts]

Level G 'C': Rev 0011.0000, Overlay, Copy Correction Buffer, C[SrcAddr],[DestAddr],[NumSyms]

Level G 'D': Rev 0011.0000, Overlay, Display Correction Buffer, D[StartAddr],[EndAddr],[CompareData]

Level G 'F': Rev 0011.0000, Overlay, Fill Super Parity RAM, F[StartAddr],[EndAddr],[Pattern]

Level G 'G': Rev 0011.0000, Overlay, Display Super Parity RAM, G[StartAddr],[EndAddr]

Level H 'B': Rev 0011.0000, Overlay, Buffer Display, B[DisplayBlk],[RefBlk],[NumBlks],[Opts],[SymBits]

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Level H 'D': Rev 0001.0000, Overlay, Field Adjust Fly Height, c[Flags],[NumCollectionsToAvg],[PctOfBpiLowFreq],[PctOfBpiHighFreq],[PctOfTgtClr],[CTFFR],[ATT2R],[VgaLowFreq],[VgaHighFreq],[StartHtr],[EndHtr],[HtrIncr],[StartPreHtr],[ContactDac],[NumPreHeatSects],[NumPreChanCollectHeatSects],[NumChanCollectHeatSects],[NumPostChanCollectHeatSects],[HscIntgLength],[ChannelPreheatRevs]
Level H 'F': Rev 0002.0002, Overlay, Modulation Detection Contact Detect, F[Flags],[NumRevsToAvg],[PctOfBpi],[HscIntgLength],[PatternSelect],[CTFFR],[ATT2R],[VGA],[StartHtr],[EndHtr],[HtrIncr],[StartPreHtr],[NumPreHeatSects],[NumPreChanCollectHeatSects],[NumChanCollectHeatSects],[NumPostChanCollectHeatSects],[CoarseSearchStartClr],[FineSearchStartClr],[ContactSearchLimitClr]
Level H 'P': Rev 0011.0000, Overlay, Set Buffer Pattern, P[PatternSelOrPatternLow],[PatternHi],[PatternBits],[Opts],[BlkNum],[NumBlks]
Level H 'S': Rev 0011.0000, Overlay, Seek to Logical Cylinder and Head, S[Cyl],[Hd],[Offset],[OffsetUnitsOpt],[SkType],[Options]
Level H 'b': Rev 0013.0000, Overlay, Contact Detect, b[Flags],[Revs],[BaselineRevs],[StartWedge],[A],[B],[C],[D],[E],[StartHt],[HtInc],[FixedPESThresh],[FilterDelta],[RangeStart],[RangePts],[AdjThreshSigmaLimit],[VarContactThreshBackup]
Level H 'c': Rev 0003.0000, Overlay, Calibrate Clearance Coefficients Adjustment, c[Flags],[NumRevsToAvg],[PctOfBpi],[PctOfTgtClr],[LowerHIWPLimit],[UpperHIWPLimit],[CTFFR],[ATT2R],[VGA],[StartHtr],[EndHtr],[HtrIncr],[StartPreHtr],[NumPreHeatSects],[NumPreChanCollectHeatSects],[NumChanCollectHeatSects],[NumPostChanCollectHeatSects],[HscIntgLength]
Level L 'C': Rev 0011.0000, Overlay, Copy Log File, C[SrcLog],[DestLog],[AppendOpt]
Level L 'D': Rev 0013.0001, Overlay, Display Log File, D[Log],[ErrCode],[Strt],[Cnt]
Level L 'E': Rev 0011.0001, Overlay, Enable / Disable Logging, E[ErrLoggingOpt],[AsciiLoggingOpt],[RwStatsLoggingOpt]
Level L 'I': Rev 0011.0000, Overlay, Display Log FileInfo, I[Log]
Level L 'c': Rev 0011.0000, Overlay, Create Log File, c[Log],[LogType],[BufferOrDiskOpt],[NumBytes]
Level L 'd': Rev 0011.0000, Overlay, Delete Log File, d[Log]
Level L 'i': Rev 0011.0000, Overlay, Initialize Log File, i[Log]
Level M 'S': Rev 0001.0000, Overlay, Serial Port Test Results, s[Sub-command],[SptIndex],[ValidKey]
Level T 'B': Rev 0011.0000, Flash, Set Baud Rate, B[BaudRate],[MsecDelay]
Level T 'm': Rev 0013.0067, Flash, Format Partition, m[Partition],[FormatOpts],[DefectListOpts],[MaxWrRetryCnt],[MaxRdRetryCnt],[MaxEccTLevel],[MaxCertifyTrkRewrites],[ValidKey],[DataPattern]
Level T 'E': Rev 0013.0000, Overlay, Display / Edit Log, E[LogNum],[ErrCodeOrSpecialFuncKey],[SpecialFunc]
Level T 'F': Rev 0011.0000, Overlay, Display / Modify Congen, F[ValueRef],[Data],[ResetEnable]
Level T 'J': Rev 0011.0001, Overlay, Display / Modify CAP, J[ParmValue],[ParmId],[ParmArrayBytes],[ParmByteArrayOffset]
Level T 'O': Rev 0001.0000, Overlay, Select Data Output Mode, O[Mode],[VerboseOpts]
Level T 'P': Rev 0011.0000, Overlay, Download Generic File, P[FileBytes]
Level T 'R': Rev 0011.0000, Overlay, Read Non-Volatile Adaptive Parameters, R[Opts]
Level T 'T': Rev 0011.0000, Overlay, Odd Even Encroachment Test, T[strt tk],[end tk],[hd],[rtry thrshld][ECC thrshld]
Level T 'V': Rev 0016.0000, Overlay, Display Defect Lists, V[ListMask],[Hd],[StartCyl],[NumCyls],[Summary],[FlagsMask]
Level T 'W': Rev 0011.0000, Overlay, Save Adaptives To Flash, W[Seg],,22
Level T 'i': Rev 0011.0002, Overlay, Initialize Defect List, i[DefectListSelect],[SaveListOpt],[ValidKey]
Level T 'r': Rev 0001.0000, Overlay, Read File, r[FileId],[VolumeNum],[CopyNum],[ByteOffset],[Length],[OutputFmt]
Level T 'q': Rev 0001.0000, Overlay, List Physical Head Table, q
Level T 'w': Rev 0001.0000, Overlay, Write File, w[FileId],[VolumeNum],[CopyNum],[ByteOffset]
Level T 'y': Rev 0001.0000, Overlay, List SIM files, y[Volume],[FileDescriptor]
Level T '[': Rev 0011.0000, Overlay, ASCII Log Control, [[LogFunction],[Log]

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Source <https://gist.github.com/rigred/d424673a113addf45805ad715b4b86a0>



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