Firmware History from version 1.22

No.	FW ver.	classification	Symptom/Problem	Source/Occasion	Modification
1	1.29	Read	Microsoft WHQL Test Error	Allowing access of Lead-out area	Prohibit access of Lead-out area Create Check Condition status to try to read the Lead-out area
2		DVD play	variation of spindl moter		expand the range of Wobble bias adjisutment

3		DVD write	can not write to DVD-RW disc which has three or more closed Border	check incorrect sector in the Border-in when check the last Border closing in setup sequence	change checked sector in Border-in
4		DVD write			avoid to blank embossed area in Lead-in on the DVD-RW media
5		CD read	can not read the CD-Text on occasion	Does not set the complete flag of CD Text reading when last red pack is the pack which has total pack number of CD-Text	fixed
6		CD write	does not write the PMA of closed track on occasion	loss the request of PMA write when the Read Track Information command is issued repeatedly after track closed	fixed
7		CD Write	The start time in TOC and PMA is set to FF:FF:FF after session closing on packet writing mode	does not read the start time of Index 1 when checking of Incomplete Track	fixed

8		CD Read	faile to setup the Multi-Session CD-R disc which has about 5Mbyte contents in 1st Session	If the setup starts in Lead-in area of 2nd Sessin, the calculation of sub code offset is fail. Then seek operation is failed.	fixed
9		CD Read	Seek error is occurred if tray is not opened after session closing except first session	The Muliti Session disc information is not update for mecha controll block after session closing	fixed
10		CD Write	faile the Session closing on scratch disc	RF end check fails on scrach disc by noise on the RF signal	add the filterring operation on the RF detection
11		I/F		release the BSY signal of ATAPI I/F before the creation of ATAPI Task	waiting creation of ATAPI Task
12		DVD Write	can not set the ADP_TY field in CPR_MAI for DVD-RW Ver 1.0 disc		fixed

13		I/F	If receive ATA Device Reset command just after receiving data transfer command, the data transfer is executed		fixed
14		CD play	can not read multiple language CD-Text	Data handling mistake	fixed
15		CD play	can not play CD-I Movie		fixed
16		CD play	can not play audio for CD Video disc		fixed
17		CD play	can not play the enhanced CD		fixed

18	1,31	Kernel	can not work downloaded firmware when download the Normal only		fixed
19	1, 33	command	a application is freezed	return Check Condition status for Request Sense command	delete checking of reserved field for CDB of Request Sense command
20		playability	aging error	stepping moter position correction by the address is missed.	fixed
21		playability	aging error	most inner position seek from most outer position is failed (this operation is used aging only)	fixed
22	1,35	DVD Rec.	Write error occurs after 35-50 cycles of test writing for DVD-R.	Actual OPC was done in test writing mode and the writer cannot read address of OPC area at seek operation executed in the first RMD recording, then, the write error occurs without completion of seek operation.	Changed program not to write OPC when test write mode

23		CD Rec.	Start address of 2nd track is set with 1FFh instead of 200h sometime. It must be 200h	With a certain timing, one smaller address is used for setting start address since an address set by main routine is used not only an address set by interruption when the drive is checking pre-gap area	Changed to be set the start address by using an address set by interruption
24		DVD Rec.	Invalid error code 3-11-05 is returned at blank sector read, correct address is 8-00-00.	Outer area of recorded area is detected by controller and inner area is detected by decoder management, but, the program of decoder management is not working.	Changed enable to work the decoder management for unrecorded area detection
25		CD Rec.	The CD-RW disc which has been recorded by DVR-103 with disc at once format cannot be played in consumer CD recorders.	The same TOC data is recorded on the CD-RW disc when disc at once mode in the DVR-103. B0 and C0 pointer recording is necessary for CD-RW disc.	Changed to record B0 and C0 pointer when write CD-RW disc
26		DVD play	Unrecovered Read Error occurs even small scratches on DVD Dual disc if the scratch affects tracking servo system	Tracking servo is opened at beginning of trace after seek. The writer repeats seek and trace then return Unrecovered Read Error. This error always occurs if read speed is set to 1x by inadequate retrieve program for tracking loop open condition.	Added a back up routine in the firmware to change read speed with 2x when tracking open condition occurs many time in 1x read mode.
27	1,40	DVD play	Seek failure on DVD dual parallel track pass disc	Seek adjustment parameter is diverged when layer 0 and 1 seek.	fixed adjustment method

28		DVD play	Invalid Lead-out track start address of DVD-R via Read TOC command	Border-out start address is reported.	fixed
29		CD Rec.	Write failure when spindle motor is stopped by inactivity timeout	4X writing speed is set for actual 8X writing speed during setup (spin up) sequence	fixed
30		CD play	100 number of track information are reported for 99 track CD via Read TOC command	program mistake	fixed
31	1,43	Interface	WinME can not detect Media Eject after resuming from Stand by.	During Stand by, drive power is removed. When resuming from Stand by, drvie terminates Persistent Prevent command with CHECK CONDITION of Power on Reset.	Stop to report 6-29-00 error on Persistent Prevent command. (This is bug of WinME.)
32	1,44	DVD Rec.			Support 2X writing on Mitsui and Maxell media

33		DVD Rec.	Specific drive can not wirte on specific DVD-RW V1.0 disc.	LPP signal level of the specific DVD-RW V1.0 disc is low. DPP signal level of the specific drive is low. The drive can not read LPP.	Adjust LPP slice level. This problem is not occurred of DVD-R V2.0 and DVD-RW V1.1 media. Because disc LPP level is revied in the spec.
34		DVD Rec.	Fail to creat Multi-border DVD-R disc by Packet recording software.	Linking point of previous ECC block affected to LPP and wabble synchronization. Then sequenctial ECC block writing is failed.	Adjust LPP and wabble synchronization sequence.
35		DVD Rec.	TEST WRITE of DAO takes very long time.		Reduce Lead-out length to 100ECC blocks for DAO Test write.
36		LED	LED is disabled.		
37	1,45	CD play	During CD Audio playback, drive is hung up.	If CD audio disc has a lot of scratch, M63 (cd decorder) can not accept next command.	Detect problem of M63 and reset to be acceptable next command.

38		DVD play	During DVD Video playback, when eject button is pressed, DVD Video playback software is frozen and drive is removed from Windwos 2000 system.	When eject button is pressed, drive ejects disc but Read command is not terminated.	Read command is terminated as 4-44-00 error.
37	1,46	DVD Rec.	In the case of DVD-R incremental recording mode and BUFE=1, drive discards data at Synchronized cache command.	If operation temperature is changed, drive performs OPC automatically. When data remains in buffer due to BUFE and OPC is performed by Synchronized cache command, drive loses write address of the data.	Back up and restore the write target address.
38	1,48	Interface	Eject button does not work with Win98/ME	Side effect of No.38. Eject button event is discarded.	Fixed and checked.
39		DVD Rec.	During Encoding when ATA RESET is asserted, 80h shift recording occurs on the next DVD-R writing.	Data is remained in the FIFO from DRAM to Encoder, even if Encoder is reset.	Clear FIFO when write error and reset is occurred.
40	1,49	CD play	Illegal Mode for This Track error is reported on CD-ROM Mode1 data track reading.	Error sector was stored as an Invalid Mode Data sector. Then next Read command is failed.	Fixed and checked.