

Service Mode

7.1. Self-Diagnosis and Special Mode Setting

7.1.1. Self-Diagnosis Functions

Self-Diagnosis Function provides information for errors to service personnel by **Self-Diagnosis Display** when any error has occurred.

U**, **H**** and **F**** are stored in memory and held.

You can check latest error code by transmitting [0] [1] of Remote Controller in Service Mode.

Automatic Display on FL will be cancelled when the power is turned off or AC input is turned off during self-diagnosis display is ON.

Error Code	Diagnosis contents	Description	Monitor Display	Automatic FL display
U30	Remote control code error	Display appears when main unit and remote controller codes are not matched.	No display	<div style="border: 1px solid black; padding: 5px; text-align: center;">SET *</div> <p>* is remote controller code of the main unit. Display for 5 seconds.</p>
U59	Abnormal inner temperature detected	Display appears when the drive temperature exceeds 70°C. The power is turned off forcibly. For 30 minutes after this, all key entries are disabled. (Fan motor operates at the highest speed for the first 5 minutes. For the remaining 25 minutes, fan motor is also stopped.) The event is saved in memory as well.	No display	<div style="border: 1px solid black; padding: 5px; text-align: center;">U59</div> <p>U59 is displayed for 30 minutes.</p>
U71	HDMI incompatible error (HDCP incompatible)	Display this error when the equipment (compatible with DVI such as TV, amplifier etc.) connected to the unit by HDMI is incompatible with HDCP. *HDCP=High-bandwidth Digital Content Protection	No display	<div style="border: 1px solid black; padding: 5px; text-align: center;">U71</div>
U72	HDMI connection error (communication error)	This error is displayed when there are any communication problems with the unit and the equipments (TV, amplifier etc.) connected to the unit by HDMI. (or when there is a problem with the HDMI cable)	No display	<div style="border: 1px solid black; padding: 5px; text-align: center;">U72</div> <p>U72 display disappears when error has been solved by Power OFF/ON of connecting equipment or by inserting/removing of HDMI cable.</p>
U73	HDMI connection error (authentication error)	when authentication error occurs while the equipments (TV, amplifier etc.) are connected by HDMI. (or when there is a problem with the HDMI cable)	No display	<div style="border: 1px solid black; padding: 5px; text-align: center;">U73</div> <p>U73 display disappears when error has been solved by Power OFF/ON of connecting equipment or by inserting/removing of HDMI cable.</p>
F99	Hang-up	Displayed when communication error has occurred between Main microprocessor (MV2-PLUS (IC60009)) and Timer microprocessor (IC7501).	No display	<div style="border: 1px solid black; padding: 5px; text-align: center;">F99</div> <p>Displayed is left until the [POWER] key is pressed.</p>
H19	Inoperative fan motor	When inoperative fan motor is detected after powered on, the power is turned off automatically. The event is saved in memory.	No display	No display
F00	No error information	Initial setting for error code in memory (Error code Initialization is possible with error code initialization and main unit initialization.)	No display	No display
F34	Initialization error when main microprocessor is started up for program recording	When initialization error is detected after starting up main microprocessor MV2-PLUS (IC60009), the power is turned off automatically. The event is saved in memory.	No display	No display
F58	Drive hardware error	When drive unit error is detected, the event is saved in memory.	No display	No display

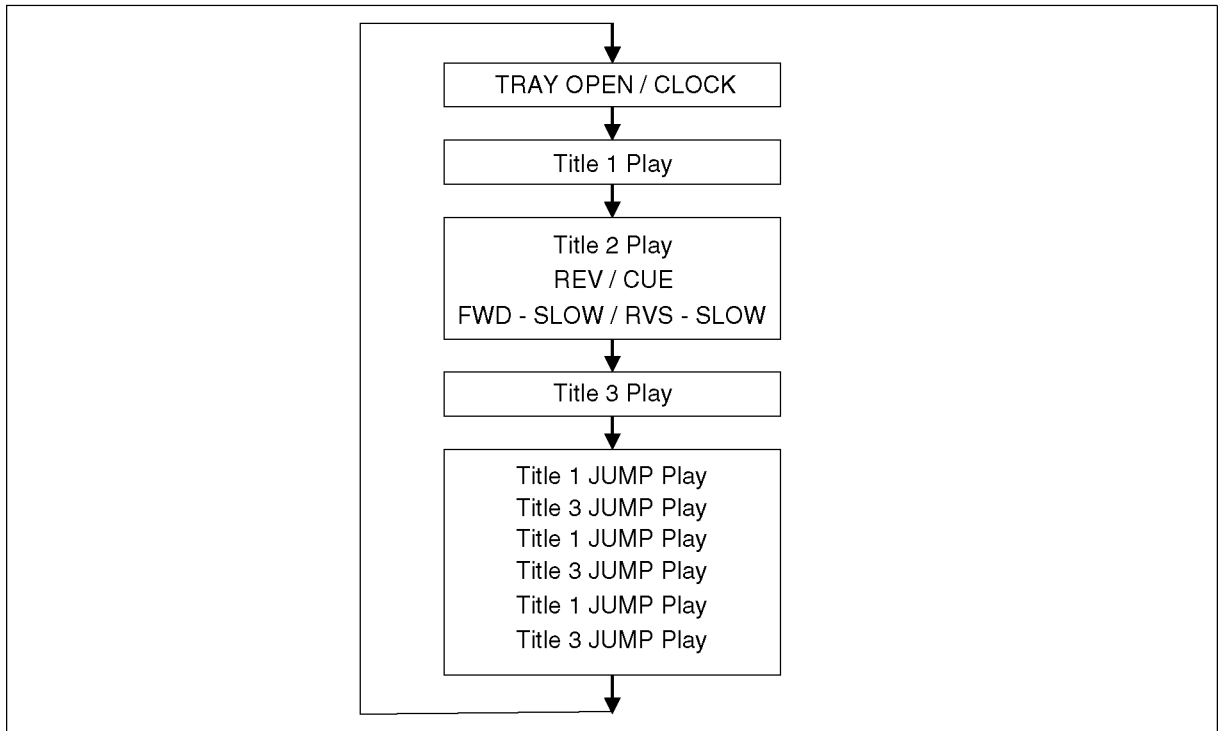
Error Code	Diagnosis contents	Description	Monitor Display	Automatic FL display
UNSUP-PORT	Unsupported disc error	*An unsupported format disc was played, although the drive starts normally. *The data format is not supported, although the media type is supported. *Exceptionally in case of the disc is dirty.	This disc is incompatible.	<div style="border: 1px solid black; padding: 5px; text-align: center;">UNSUP</div> <div style="text-align: center;">↓</div> <div style="border: 1px solid black; padding: 5px; text-align: center;">PORT</div> Display for 5 seconds.
NO READ	Disc read error	*A disc is flawed or dirty. *A poor quality failed to start. *The track information could not be read.	Cannot read. Please check the disc.	<div style="border: 1px solid black; padding: 5px; text-align: center;">NOREAD</div>
HARD ERR	Drive error	The drive detected a hard error.	DVD drive error.	Display for 5 seconds. <div style="border: 1px solid black; padding: 5px; text-align: center;">HARD</div> <div style="text-align: center;">↓</div> <div style="border: 1px solid black; padding: 5px; text-align: center;">ERR</div>
IR ERR	IR communication error	[IR ERR] is displayed when communication between Timer microprocessor and IR microprocessor fails.	No display	<div style="border: 1px solid black; padding: 5px; text-align: center;">IR ERR</div>
SELF CHECK	Restoration operation	Since the power cord fell out during a power failure or operation, it is under restoration operation. *It will OK, if a display disappears automatically. If a display does not disappear, there is the possibility that defective Digital P.C.B. / DVD drive.	No display	<div style="border: 1px solid black; padding: 5px; text-align: center;">SELF</div> <div style="text-align: center;">↓</div> <div style="border: 1px solid black; padding: 5px; text-align: center;">CHECK</div>
PLEASE WAIT	Unit is in termination process	Unit is in termination process now. BYE is displayed and power will be turned off.	No display	<div style="border: 1px solid black; padding: 5px; text-align: center;">PLEASE</div> <div style="text-align: center;">↓</div> <div style="border: 1px solid black; padding: 5px; text-align: center;">WAIT</div>
UNFORMAT	Unformatted disc error	You have inserted an unformatted DVD-RAM or DVD-RW that is unformatted or recorded on other equipment.	The disc is not formatted properly.	<div style="border: 1px solid black; padding: 5px; text-align: center;">UNFOR</div> <div style="text-align: center;">↓</div> <div style="border: 1px solid black; padding: 5px; text-align: center;">MAT</div>
No PLAY	When there is a viewing restriction on a BD-Video or DVD-Video.	Rating password is set.	No display	<div style="border: 1px solid black; padding: 5px; text-align: center;">No PLAY</div>

7.1.2. Special Modes Setting

Item		FL display	Key operation
Mode name	Description		
TEST Mode	*All the main unit's parameters are initialized.	<div style="border: 1px solid black; padding: 5px; text-align: center;">TEST</div>	Press [STOP], [SKIP FWD] and [OPEN/CLOSE] keys simultaneously for five seconds when power is off.
Rating password	The audiovisual level setting password is initialized to Level 8 .	<div style="border: 1px solid black; padding: 5px; text-align: center;">INIT</div>	Open the tray, and press [SKIP REV] and [PLAY] simultaneously for 5 seconds.
Service Mode	Setting every kind of modes for servicing. *Details are described in 7.1.3. Service Mode at a glance .	<div style="border: 1px solid black; padding: 5px; text-align: center;">SERV</div>	When the power is off, press [SKIP FWD], [OPEN/CLOSE] and [PAUSE] keys simultaneously for 5 seconds.
BD-ROM history cleaning	< Persistent Storage > of BD-ROM standard is cleaned. Screen display: [The player's history data has been cleared] is displayed for five seconds.	<div style="border: 1px solid black; padding: 5px; text-align: center;">*****</div> Same display as before execution.	When disc is not in tray, press [STOP] and [POWER] keys simultaneously for 5 seconds.
Forced disc eject	Removing a disc that cannot be ejected. The tray will open and unit will shift to P-off mode. While Demonstration Lock is being set, this Forced disc eject function is not accepted.	The display before execution leaves. <div style="border: 1px solid black; padding: 5px; text-align: center;">*****</div>	When the power is off, press [SKIP FWD] and [PAUSE] keys simultaneously for 5 seconds.

Item		FL display	Key operation
Mode name	Description		Front Key
Forced power-off	When the power button is not effective while power is ON, turn off the power forcibly.	Display in P-off mode.	Press [POWER] key over than 10 seconds.
Aging	Perform sequence of modes as * Aging Description shown below continually.	Display following the then mode.	<p>When the power is ON, press [STOP], [POWER] and [OPEN/CLOSE] simultaneously for over 5 seconds and less than 10 seconds.</p> <p>NOTE1: If Unit has not turned into Aging mode by operations shown above, execute TEST MODE once and re-execute operation shown above. (*All the main unit's parameters include tuner are initialized by TEST mode.)</p> <p>NOTE2: If the unit has hung-up because of pressing keys for over 10 seconds, once turn off the power, and re-execute this command. *When releasing Aging mode, press [POWER] key over 10 seconds.</p>

Aging Contents (Example):



Item		FL display	Key operation
Mode name	Description		Front Key
Demonstration lock/unlock	Ejection of the disc is prohibited. The lock setting is effective until unlocking the tray and not released by Main unit initialization of service mode.	*When lock the tray. <div style="border: 1px solid black; padding: 5px; text-align: center;">LOCK</div> LOCK is displayed for 3 seconds.	When the power is on (SS mode), press [SKIP FWD] and [OPEN/CLOSE] keys simultaneously for 5 seconds. Note: When a disc is not in tray, this setting is not effective.
		*When unlock the tray. <div style="border: 1px solid black; padding: 5px; text-align: center;">UNLOCK</div> UNLOCK is displayed for 3 seconds.	When the power is on (SS mode), press [SKIP FWD] and [OPEN/CLOSE] keys simultaneously for 5 seconds.
		*When press OPEN/CLOSE key while the tray being locked. <div style="border: 1px solid black; padding: 5px; text-align: center;">LOCK</div> Display LOCK for 3 seconds.	Press [OPEN/CLOSE] key while the tray is being locked.
Progressive initialization	The progressive setting is initialized to Interlace.	The display before execution leaves. <div style="border: 1px solid black; padding: 5px; text-align: center;">*****</div>	When the power is on (SS mode), press [STOP] and [PLAY] simultaneously for 5 seconds.

Service Modes at a glance

Service mode setting: While the power is off, press [SKIP FWD], [PAUSE] and [OPEN / CLOSE] simultaneously for five seconds.

Item		FL display	Key operation (Remote controller key)
Mode name	Description		
Release Items	Item of Service Mode executing is cancelled.	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">SERV</div>	Press [0] [0] or [Return] in service mode.
Error Code Display	Last Error Code of U/H/F held by Timer is displayed on FL. *Details are described in 7.1.1. Self-Diagnosis Functions .	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">♣ □ □</div> <p>*♣ shows U/H/F. □□ shows number.</p> <p>If any error history dose not exist, [F00] is displayed.</p>	Press [0] [1] in service mode
ROM Version Display	1. Region code (displayed for 5 sec.) 2. Main firm version (displayed for 5 sec.) 3. Timer firm version (displayed for 5 sec.) 4. Drive firm version (displayed for 5 sec.) 5. ROM correction version (left displayed)	<p>1. <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">NO\$%</div></p> <p>\$: Region of DVD (Example: 1,2.....) %: Region of BD (Example: A,B.....)</p> <p>2. <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">*****</div></p> <p>3. <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">*****</div></p> <p>4. <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">*****</div></p> <p>5. <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">***</div></p> <p>* are version displays.</p>	Press [0] [2] in service mode
Drive check	Simple quality of BD/DVD drive.	<p>When BD/DVD drive is OK</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">DRV OK</div> <p>When BD/DVD drive is NG</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">DRV NG</div> <p>*If the date of the present or the trouble occurred time is incorrect, it may be not able to judge correctly.</p>	Press [3] [8] in service mode.
Laser Used Time Indicatoion	Check laser used time (hours) of drive.	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">*****</div> <p>I(****) is the used time display in hour. ILaser used time of DVD/ CD in Playback/Recording mode is counted.</p>	Press [4] [1] in service mode.

Item		FL display	Key operation
Mode name	Description		(Remote controller key)
BD/DVD drive last error	BD/DVD drive error code display.	<p>1. Error Number is displayed for 5 seconds.</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 5px auto;">NO **</div> <p>2. Time when the error has occurred is display for 5 seconds.</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 5px auto;">DDhhmm</div> <p>DD : Day hh : Hour mm : Minute</p> <p>3. Last drive error (1/2) is displayed for 5 seconds.</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 5px auto;">*****</div> <p>00 : Bad disc 03 : Bad disc 04 : Bad disc or drive malfunction</p> <p>4. Last drive error (2/2) is displayed for five seconds.</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 5px auto;">*****</div> <p>5. Error occurring disc type is displayed for 5 seconds.</p> <p>DVD-RW</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 5px auto;">DVDRW</div> <p>CD-R</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 5px auto;">CDR</div> <p>CD-RW</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 5px auto;">CDRW</div> <p>DVD+R</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 5px auto;">DVDPR</div> <p>DVD+RW</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 5px auto;">DVDPRW</div> <p>BD-ROM</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 5px auto;">BDROM</div>	Press [4] [2] in service mode.

Item		FL display	Key operation (Remote controller key)												
Mode name	Description														
		BD-RE <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 5px auto;">BDRE</div> BD-R <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 5px auto;">BDR</div> DVD ROM <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 5px auto;">DVD</div> CD <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 5px auto;">CD</div> RAM (2.6GB) <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 5px auto;">RAM26</div> RAM (4.7GB) <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 5px auto;">RAM47</div> DVD-R <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 5px auto;">DVDR</div> Others <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 5px auto;">MEDIA*</div> <small>* is displayed the respeced value from RTSC.</small>													
		6. Disc maker ID is displayed for 5 seconds. <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 5px auto;">*****</div> 7. Factor of drive error (hexadecimal) occurring is left displayed. <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 5px auto;">* * + + □ □</div> <small>* * : Error occurring operation code (This is not used)</small> <small>+ + : Error occurring disc type</small> <table border="1" style="margin-left: 20px; margin-top: 5px;"> <tr><td>0</td><td>DVD-ROM</td></tr> <tr><td>1</td><td>CD</td></tr> <tr><td>2</td><td>2.6GB DVD-RAM</td></tr> <tr><td>3</td><td>4.7GB DVD-RAM</td></tr> <tr><td>4</td><td>DVD-R</td></tr> <tr><td>After 5</td><td>Others</td></tr> </table>	0	DVD-ROM	1	CD	2	2.6GB DVD-RAM	3	4.7GB DVD-RAM	4	DVD-R	After 5	Others	In case that the maker cannot be identified, display is black out.
0	DVD-ROM														
1	CD														
2	2.6GB DVD-RAM														
3	4.7GB DVD-RAM														
4	DVD-R														
After 5	Others														

Item		FL display	Key operation (Remote controller key)																																																																																									
Mode name	Description																																																																																											
		<input type="checkbox"/> <input type="checkbox"/> : Error occurring disc situation <table border="1"> <thead> <tr> <th rowspan="2">Display</th> <th colspan="4">Detail</th> </tr> <tr> <th>Disc distinction</th> <th>With or without Cartridge</th> <th>Disc cart-ridge state</th> <th>Size</th> </tr> </thead> <tbody> <tr><td>00</td><td>OK</td><td>With</td><td>Not opened</td><td>12cm</td></tr> <tr><td>10</td><td>OK</td><td>With</td><td>Not opened</td><td>8cm</td></tr> <tr><td>20</td><td>OK</td><td>With</td><td>Opened</td><td>12cm</td></tr> <tr><td>30</td><td>OK</td><td>With</td><td>Opened</td><td>8cm</td></tr> <tr><td>40</td><td>OK</td><td>Without</td><td>Not opened</td><td>12cm</td></tr> <tr><td>50</td><td>OK</td><td>Without</td><td>Not opened</td><td>8cm</td></tr> <tr><td>60</td><td>OK</td><td>Without</td><td>Opened</td><td>12cm</td></tr> <tr><td>70</td><td>OK</td><td>Without</td><td>Opened</td><td>8cm</td></tr> <tr><td>80</td><td>NG</td><td>With</td><td>Not opened</td><td>12cm</td></tr> <tr><td>90</td><td>NG</td><td>With</td><td>Not opened</td><td>8cm</td></tr> <tr><td>A0</td><td>NG</td><td>With</td><td>Opened</td><td>12cm</td></tr> <tr><td>B0</td><td>NG</td><td>With</td><td>Opened</td><td>8cm</td></tr> <tr><td>C0</td><td>NG</td><td>Without</td><td>Not opened</td><td>12cm</td></tr> <tr><td>D0</td><td>NG</td><td>Without</td><td>Not opened</td><td>8cm</td></tr> <tr><td>E0</td><td>NG</td><td>Without</td><td>Opened</td><td>12cm</td></tr> <tr><td>F0</td><td>NG</td><td>Without</td><td>Opened</td><td>8cm</td></tr> </tbody> </table>	Display	Detail				Disc distinction	With or without Cartridge	Disc cart-ridge state	Size	00	OK	With	Not opened	12cm	10	OK	With	Not opened	8cm	20	OK	With	Opened	12cm	30	OK	With	Opened	8cm	40	OK	Without	Not opened	12cm	50	OK	Without	Not opened	8cm	60	OK	Without	Opened	12cm	70	OK	Without	Opened	8cm	80	NG	With	Not opened	12cm	90	NG	With	Not opened	8cm	A0	NG	With	Opened	12cm	B0	NG	With	Opened	8cm	C0	NG	Without	Not opened	12cm	D0	NG	Without	Not opened	8cm	E0	NG	Without	Opened	12cm	F0	NG	Without	Opened	8cm	
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CEC (H) output	Check of the CEC terminal high output of HDMI.	When the check is OK <div style="border: 1px solid black; padding: 5px; text-align: center;">CECHOK</div> When the check is NG <div style="border: 1px solid black; padding: 5px; text-align: center;">CECHNG</div>	Press [5] [5] in service mode.																																																																																									
CEC (L) output	Check of the CEC terminal low output of HDMI.	When the check is OK <div style="border: 1px solid black; padding: 5px; text-align: center;">CECHOK</div> When the check is NG <div style="border: 1px solid black; padding: 5px; text-align: center;">CECHNG</div>	Press [5] [6] in service mode.																																																																																									
Tray OPEN/CLOSE Test	The DVD drive tray is opened and closed repeatedly.	<div style="border: 1px solid black; padding: 5px; text-align: center;">*****</div> * is number of open/close cycle times.	Press [9] [1] in service mode *When releasing this mode, press the [POWER] button of Remote Controller more than 10 seconds.																																																																																									
Delete the Laser Used Time	Laser used time stored in the memory of the unit is deleted.	<div style="border: 1px solid black; padding: 5px; text-align: center;">CLR</div>	Press [9] [5] in service mode.																																																																																									
Delete the Last Drive Error	Delete the Last Drive Error information stored on the DVD Drive.	<div style="border: 1px solid black; padding: 5px; text-align: center;">CLR</div>	Press [9] [6] in service mode.																																																																																									
Delete the Error History	Delete Error History information stored on the unit.	<div style="border: 1px solid black; padding: 5px; text-align: center;">CLR</div>	Press [9] [7] in service mode.																																																																																									
Error code initialization	Initialization of the last error code held by timer (Write in F00)	<div style="border: 1px solid black; padding: 5px; text-align: center;">CLR</div>	Press [9] [8] in service mode.																																																																																									
Initialize Service	Last Drive Error, Error history and Error Codes stored on the unit are initialized to factory setting.	<div style="border: 1px solid black; padding: 5px; text-align: center;">CLR</div>	Press [9] [9] in service mode.																																																																																									
Finishing service mode	Release Service Mode.	Display in STOP (SS) mode. <div style="border: 1px solid black; padding: 5px; text-align: center;">*****</div>	Press power button on the front panel or Remote controller in service mode.																																																																																									