

Service Mode

Information necessary for service can be displayed.

Service mode setting:

1. Turn the power off.
2. Press the [SUB MNU] + [PLAY] and [VOL DOWN] button simultaneously for five seconds.
3. It is displayed on LCD as [SERV]. : It is shown to have entered the service mode.
([PLEASE WAIT] is displayed previously according to the A/V mode.)
4. The command is transmitted by attached remote control.
Method of making clear service mode : Press the power button (power off).
The display of information to each command is as follows.

NOTE:

Do not use it excluding the designated command.

Item		LCD display	Key operation
Mode name	Description		(Remote controller key)
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/F held by memory is displayed on FL. *Details are described in "Self-Diagnosis Functions". 7.1. Self-Diagnosis Functions.	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> ◎○○ *◎shows U/H/F ○○shows number. If any error history does not exist, [F00] is displayed. </div>	Press [0] [1] in service mode.
ROM Version Display	The display contents are switched over every 5 seconds. 1. Region code 2. Main firm version 3. Timer firm version 4. Drive firm version 5. ROM correction version 6. BOO2 version 7. BOO3 version	1. <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">NO_ \$%</div> \$: Region of DVD (Example: 1,2.....) %: Region of BD (Example: A,B.....) 2. <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">*****</div> 3. <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">##0***</div> ##: Timer firm version O: OEM ***: Product number of microcomputer 4. <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">*****</div> 5. <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">***</div> 6. <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">***</div> 7. <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">***</div>	Press [0] [2] in service mode.

Item		LCD display	Key operation
Mode name	Description		(Remote controller key)
Drive Check	Simple quality of BD drive	<p>When the drive is OK.</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">DRV OK</div> <p>When the 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 [0] [3] in service mode.
Drive Check	Simple quality of BD drive	<p>When BD drive is OK and a drive error is not stored in EEPROM.</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">DRV OK</div> <p>When BD drive is NG or drive errors are stored in EEPROM.</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 Indication	Check laser used time (hours) of drive.	<p>Laser used time: BD Playback</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">BP * * * *</div> <p>Laser used time: BD Recording</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">BR * * * *</div> <p>Laser used time: DVD Playback</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">DP * * * *</div> <p>Laser used time: DVD Recording</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">DR * * * *</div> <p>Laser used time: CD Playing</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">CD * * * *</div> <p>● (****) is the used time display in hour. ● Laser used time of BD/ DVD/ CD in Playback/Recording mode is counted.</p>	Press [4] [1] in service mode.

Item		LCD display	Key operation
Mode name	Description		(Remote controller key)
BD drive last error	BD 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;">YYMMDD</div> <p>YY: Year MM: Month DD: Day</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 5 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 ROM</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 5px auto;">DVD</div> <p>CD</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 5px auto;">CD</div> <p>DVD-RAM (2.6GB)</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 5px auto;">RAM26</div> <p>DVD-RAM (4.7GB)</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 5px auto;">RAM47</div> <p>DVD-R</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 5px auto;">DVDR</div> <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>	Press [4] [2] in service mode.

Item		LCD display	Key operation (Remote controller key)												
Mode name	Description														
		CD-RW <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 5px auto;">CDRW</div> DVD+R <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 5px auto;">DVDPR</div> DVD+RW <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 5px auto;">DVDPRW</div> BD-ROM <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 5px auto;">BDROM</div> 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> 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>	In case that the maker cannot be identified, display is blackout.												
		<table border="1" style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td style="width: 50px;">00</td> <td>DVD-ROM</td> </tr> <tr> <td>01</td> <td>CD</td> </tr> <tr> <td>02</td> <td>2.6GB DVD-RAM</td> </tr> <tr> <td>03</td> <td>4.7GB DVD-RAM</td> </tr> <tr> <td>04</td> <td>DVD-R</td> </tr> <tr> <td>After 05</td> <td>Others</td> </tr> </tbody> </table>	00	DVD-ROM	01	CD	02	2.6GB DVD-RAM	03	4.7GB DVD-RAM	04	DVD-R	After 05	Others	
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		□□ : 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> 8. When the last error doesn't exist . <div style="border: 1px solid black; width: 100px; margin: 10px auto; text-align: center; padding: 5px;">NO DATA</div>	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	Check of the CEC terminal high output of HDMI.	When the check is OK <div style="border: 1px solid black; width: 100px; margin: 10px auto; text-align: center; padding: 5px;">CECHOK</div> When the check is NG <div style="border: 1px solid black; width: 100px; margin: 10px auto; text-align: center; padding: 5px;">CECHNG</div>	Press [5] [5] in service mode.																																																																																									
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Manufacturing Date	Read out the manufacturing date of the unit.	<div style="border: 1px solid black; width: 100px; margin: 10px auto; text-align: center; padding: 5px;">YYMMDD</div> YY: Year MM: Month DD: Day	Press [6] [1] in service mode.																																																																																									
Delete the Laser Used Time	Laser used time information stored in the memory of the unit is deleted.	<div style="border: 1px solid black; width: 100px; margin: 10px auto; text-align: center; padding: 5px;">CLR</div>	Press [9] [5] in service mode.																																																																																									
Delete the Last Drive Error	Laser Drive Error information stored on the BD Drive is deleted.	<div style="border: 1px solid black; width: 100px; margin: 10px auto; text-align: center; padding: 5px;">CLR</div>	Press [9] [6] in service mode.																																																																																									
Delete the Error History	Error History information stored on the unit is deleted.	<div style="border: 1px solid black; width: 100px; margin: 10px auto; text-align: center; padding: 5px;">CLR</div>	Press [9] [7] in service mode.																																																																																									
Initialization of Error code	Last Error Code information stored by timer is deleted. (Write in F00)	<div style="border: 1px solid black; width: 100px; margin: 10px auto; text-align: center; padding: 5px;">CLR</div>	Press [9] [8] in service mode.																																																																																									
Initialization of the Service Mode	Last Drive Error, Error History and Error code information stored on the unit are initialized to factory setting.	<div style="border: 1px solid black; width: 100px; margin: 10px auto; text-align: center; padding: 5px;">CLR</div>	Press [9] [9] in service mode.																																																																																									

Item		LCD display	Key operation (Remote controller key)
Mode name	Description		
Release Service Mode	Release Service Mode and turns the Power Off.	Display in STOP (SS) mode. <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> ***** </div>	Press [POWER] button on the front panel or Remote controller in service mode.

7.1. 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.

In case of clear the self-diagnosis display, remove the battery pack and the AC adaptor from the main unit after the power of the main unit is turned off.

Error Code	Diagnosis contents	Description	LCD Display
U580	Battery supply current abnormality	A problem has occurred with the battery pack. Consult your dealer.	U580
U581	Abnormal charge time on battery power	The battery pack has been recharging but has failed to recharge for some reason. Recharge again.	U581
U582	Battery-powered temperature anomaly	You are recharging in a location that is too hot or too cold. Recharge at normal temperature [+5 to +35 °C (+41 to +95 °F)].	U582
U59	Abnormal inner temperature detected	Display appears when drive temperature exceeds 70°C. The power is turned off forcibly. For 30 minutes after this, all key entries are disabled. The event is saved in memory as well.	U59 "U59" is displayed for 30 minutes.
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). The display disappears only when the connection is released. Neither the button operation nor the passage of the fixed time disappear the display.	U72
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). The display disappears only when the connection is released. Neither the button operation nor the passage of the fixed time disappear the display.	U73
U76	Connection error	This error is displayed when equipment such as TVs or amplifiers connected to the unit with the HDMI cable do not correspond to the copyright protection. (The BD/DVD video where the copyright is protected cannot be played.)	U76
U77	Illegal disc error	This error is displayed when it becomes impossible to reproduce because of copyright illegal information.	U77
U88	Restoration is operation. (When the disc is in the disc tray)	This error is displayed when there is a disc in the disc tray or abnormality is confirmed during playback. It is shown that the restoration to return the main unit operation normally is operating. It becomes possible to use as soon as not the breakdown but the U88 display disappears.	U88 Display for 30 seconds.
H19	No working Fun Motor	Preserves the Error record in case the Fun Motor doesn't work at the time of Power-On.	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.)	Not automatic display. Press [0][1] in service mode. (Remote controller key)
F58	Drive hardware error	When drive unit error is detected, the event is saved in memory.	Not automatic display. Press [0][1] in service mode. (Remote controller key)
F74	HDMI Device Key Communication error	This error is displayed when the information error is occurred at HDMI device key loading.	F74
F75	HDMI Device Key Loading error	This error is displayed when the key of loaded is illegal at HDMI device key loading.	F75

Error Code	Diagnosis contents	Description	LCD Display
F99	Hang-up	Displayed when communication error has occurred between Main microprocessor and Timer microprocessor.	<div style="border: 1px solid black; padding: 5px; text-align: center; width: fit-content; margin: 0 auto;">F99</div> <p>"F99" is displayed until the [Power] key is pressed.</p>
UNSUPPORT	Unsupported disc error	This error is displayed when the following are detected. 1. When the unsupported format disc is reproduced. 2. When the unsupported format data is saved in the supported format disc. 3. When it becomes impossible to read because the quality of the disc is bad.	"This disc is incompatible." Display for 5 seconds.
No Read	Disc read error	This error is displayed when the following are detected. 1. When the disc is dirty or damaged. 2. When failing in reading the track information. 3. When the drive error occurs.	"Cannot read, please check the disc." Display for 5 seconds.
Hard Error	Drive error	This error is displayed when the drive detected a hard error.	"DVD drive error." Display for 5 seconds.
Self Check	Restoration operation	This error is displayed when the restoration is operating because it is power failures or turns off power during a operation. If there is no problem, the display disappears automatically. If a display does not disappear, there is the possibility that defective Main P.C.B. / Drive unit.	<div style="border: 1px solid black; padding: 5px; text-align: center; width: fit-content; margin: 0 auto;">SELF CHECK</div>
Unformat	Unformatted disc error	This error is displayed when the unformatted DVD-RAM/ DVD-RW or the DVD-RW recorded by another make of recorder is inserted.	<div style="border: 1px solid black; padding: 5px; text-align: center; width: fit-content; margin: 0 auto;">Unformat</div> <p>This disc is not formatted properly. Format the disc in DISC MANAGEMENT?</p>