

SONY KDL-40EX720

3D LED TV

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SELF DIAGNOSTICS SERVICE MODE AND LED BACK LIGHT INVERTER CIRCUIT

HOW TO ENTERING SERVICE MODE

- 1) Turn on the main power switch to place this set in standby mode.
- 2) Press the buttons on the remote commander as follows, and entering service mode.

DISPLAY > Channel 5 > Volume+ > TV POWER

- 3) Service mode display.

Note: First of all, when you enter Service Mode, you can see "Digital" service mode. Whenever you press "OPTIONS" or "JUMP" on remote, each service mode is changed. "Digital" -> "Chassis" -> "VPC"

WHITE BALANCE ADJUSTMENT

Note: Please execute this adjustment if necessary.

Change Data of "VPC" service mode. ("006 WB" category)

- a. Press "1" or "4" on remote to select WB adjustment menu.
- b. Change data by pressing "3" or "6". Each range of these items is 0~255.
- c. Press "mute" + "0" on remote to save the data.
"SERVICE" comment is changed to "WRITE", indicating writing process.
- d. After a while, "WRITE" comment returns to "SERVICE", which means writing process is done.

RESTORE WHITE BALANCE / GAMMA ADJ-DATA TO B BOARD

Note: Please apply after USB-DL when B board is replaced.

Change Data of "VPC" service mode.

- a. Select "010 DATA_COPY" category by pressing "2 / 5" on remote.
- b. Change data from "0" to "1" by pressing "1 / 4" on remote.
- c. Wait until data is changed from 1 to 3.
- d. When data is changed from 1 to 3, restoring process is finished.
- e. In case data is changed from 1 to 2, keep default setting. (No more process is needed)

VCOM ADJUSTMENT (IMPORTANT – Only for S-LCD 60Hz Panels)

Note: Please execute this adjustment if necessary.

1) Change Data of “VPC” service mode.

a. Select “002 VCOM” category by pressing “2 / 5” on remote.

b. Select “000 ENABLE” item by pressing “1 / 4” on remote.

c. Change ENABLE from “0” to “1” to enable VCOM adjustment.

d. Select “002 VCOM” category by pressing “2 / 5” on remote.

e. Select “001 ADJUST” item by pressing “1 / 4” on remote.

f. Change data by pressing “3 / 6” on remote controller.

g. Finish the adjustment when the picture seems OK.

Attention:

Every time the data changed by pressing “3 / 6” Key, the VCOM pattern will display for 5s and in the mean time OSD will disappear, After the 5s period, VCOM pattern will disappear and OSD will display again.

The 5s time can be adjust by data change.

-If pressing the “3/6” key again during the 5s period, the VCOM pattern display time will be extended to another 5s

SELF DIAGNOSIS FUNCTION

If an error occurs, the STANDBY LED will automatically begin to flash. The number of times the LED flashes translates to a probable source of the problem. A definition of the STANDBY LED flash indicators is listed in the instruction manual for the user’s knowledge and reference. If an error symptom cannot be reproduced, the remote commander can be used to review the failure occurrence data stored in memory to reveal past problems and how often these problems occur.

DIAGNOSTIC TEST INDICATORS

When an error occurs, the STANDBY LED will flash a set number of times to indicate the possible cause of the problem.

If there is more than one error, the LED will identify the first of the problem areas.

Result for all of the following diagnostic items are displayed on screen.

If the screen displays a “0”, no error has occurred

SELF-DIAGNOSTIC SCREEN DISPLAY

For errors with symptoms such as “power sometimes shuts off” or “screen sometimes goes out” that cannot be confirmed, it is possible to bring up past occurrences of failure for confirmation on the screen:

To Bring Up Screen Test

In standby mode, press buttons on the remote commander sequentially in rapid succession as shown below:

DISPLAY > Channel > Volume - >TV POWER

POWER LED BLINKING

STBY LED Flash time	Service menu Item name (Screen Display)	Diagnostic Item Description
2	MAIN_POWE	Main Power Over Voltage Protection
3	DC_ALERT	DC_ALERT
	AUD_PROT	Audio Abnormal Detection
4	BALANCER	Panel Balancer Error
5	TCON_ERR	Not used
	HFR_ERR	HFR Error
	P_ID_ERR	Panel ID NVM Error
6	BACKLITE	Back Light Error (Panel Inverter)
7	TMP_ERR	Thermal Error
8		Software Error
9		Not used
10	EMIT_ERR	Emitter Error
11		Reserved for BTV
12		Not used

Since the diagnostic results displayed on the screen are not automatically cleared, always check the self-diagnostic screen.

**After you have completed the repairs, clear the result display to “0”.
Clearing the Self Check Diagnostic List**

1. Error history and Error count : Press the Channel 8 => Channel 0 .
2. Panel operation time : Press the Channel 7 => Channel 0 .

Exiting the Self-diagnostic screen

To exit the Self Diagnostic screen, turn off the power to the TV by pressing the POWER button on the remote or the POWER button on the TV

SAVE CHANGING DATA

1) Change Data of “Chassis” or “VPC” service mode

2) Write data for “Chassis” or “VPC” service mode

a. Press “Mute” on remote.

It shows green “SERVICE” changes to green “WRITE”.

b. Press “0” or “enter” on remote. Green “WRITE” changes to red “WRITE”. It indicate writing is processing.

c. After a while, red “WRITE” changes to green “SERVICE”. Writing process is done at this point.

3) TV reboot is necessary for applying data change.

CHANGE DATA

Note: “Digital” service mode don’t have to Save. (except “002 MODEL” and “005 CHAPRESET” category)

1) Change Data of “Digital” service mode. (except “003 DIG_SRV_MODE” category)

a. Press “2 / 5” on remote to select (up / down) category.

b. Press “1 / 4” on remote to select (up / down) Item.

c. Press “0 / 10” on remote to select item.

2) Change Data of “Digital” service mode. (“003 DIG_SRV_MODE” category)
“003 DIG_SRV_MODE” is one category of “Digital” service mode.

Please note because this operation is special.

a. Press “2 / 5” on remote to select “003 DIG_SRV_MODE”.

b. Press “1 / 4” on remote to select (up / down) Item.

c. Press “0 / 10” on remote to select item.

d. Press number key “1”~”9” directly. “*” stamp move.

e. Press “12 / enter / select” to decide and advance next step. Press “return”, when returning on the previous page.

3) Write data for “Digital” service mode. (“002 MODEL” category)

Note: This procedure operation, when replaced the B board.

Note: Do not write a wrong segment or destination information in Product ID.

When the wrong setting is written, TV may not operate.

000 SEG -----Select JDM code information

001 DEST -----Select destination information

002 MODELNAME ---Select model name

004 SERIAL ----- Can be set only once for the new board

a. Change data for each model.

b. Press “Mute”, “0” on remote sequentially.

It shows red “WRITE”. It indicate writing is processing.

c. After a while. Red “WRITE” disappears. Writing process is done after a while.

CHANGE THE EMITTER OUTPUT LEVEL

Note: To reduce the emitter LED output power strength.

Change Data of "VPC" service mode

- a. Select "005 TD" category by pressing "2 / 5" on remote.
 - b. Select "000 EMIT_STR" item by pressing "1 / 4" on remote.
 - c. Change data from "0" to "1" by pressing "3 / 6" on remote.
- 0: Strong (Default)
1: Weak
- d. Save by pressing "Mute" + "0" or "10" & Reboot.

HDD REC SETTING

1) Key Copy

Change Data of "Digital" service mode

- a. Select "003 DIG_SRV_MODE" category by pressing "2 / 5" on remote.
 - b. Select "006 REC SETTING" item by pressing "1 / 4" on remote.
 - c. Press "0" or "10" to go to detailed REC Setting screen.
 - d. Press "1" to select "Key Copy" item.
 - e. Press "Enter" or "12" twice to execute the command.
 - f. If OK, show the message "Key Copy OK"
- If NG, show the message "Key Copy NG (= xx)"

2) HDD Re-Register

- a. Press "2" to select "HDD Re-Register" Item.
 - b. Press "Enter" or "12" twice to execute the command.
 - c. If OK, xx= x+1
- If NG, xx=x

LED BACK LIGHT INVERTER CIRCUIT