SELF DIAGNOSIS FUNCTION

The units in this manual contain a self-diagnostic function. If an error occurs, the Smart Core Red 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 Smart Core Red 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 Smart Core Red 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 .

<G>: Power supply board, <B>: Main board, <T>: T-con board,
<JK>: Power supply board for Power Adaptor, <LD> LD board, <P>: Panel module
<S>: Speaker, <A>: Power Adaptor, <Tu>: Tuner board, <K>: Audio board (KFW/KPSP only)

RED LED blinking count	Detection Items
2x	<B/G/A/JK> Main 12V over voltage [MAIN_POWER]
3x	<B/G/A/JK> Main 5.0V failure [DC_ALERT]
	<B/S/K/G/A/JK> Audio amp. protection [AUD_ERR]
4x	<LD/P/B/Tu/G/A/JK> LED driver failure/LED voltage protection [LD_ERR] <LD/P/B>*Error detection of the I2C communication between the Main device and the LD IC.[BCM_ERR]*
5x	<P/T/G/A/JK/B> *Panel ID EEPROM I2C No ACK (Also panel power failure is a suspect) [P_ID_ERR]*
6x	<G/P/B/LD> Backlight failure [BACKLIGHT]
7x	Over temperature protection [TEMP_ERR] <B/P> Temp. sensor I2C No ACK [TEMP_ERR]
8x	<B> 4KBE Error (4KBE WDT)

The following items will be recorded and displayed on screen although they do not carry out the RED LED blinking count.

Record Only Item	Detection Items
TU_DEMOD	<B/Tu> Tuner & Demodulator I2C communication failure Tuner board set detect signal monitoring
TCON_ERR	<T> *T-CON device I2C communication failure*
FRCTC_I2C	None
AUD_ERR_I2C	<B/K> Audio amp I2C communication failure
4KPQ_ERR_I2C	None

Blue italic: detect at startup sequence only.

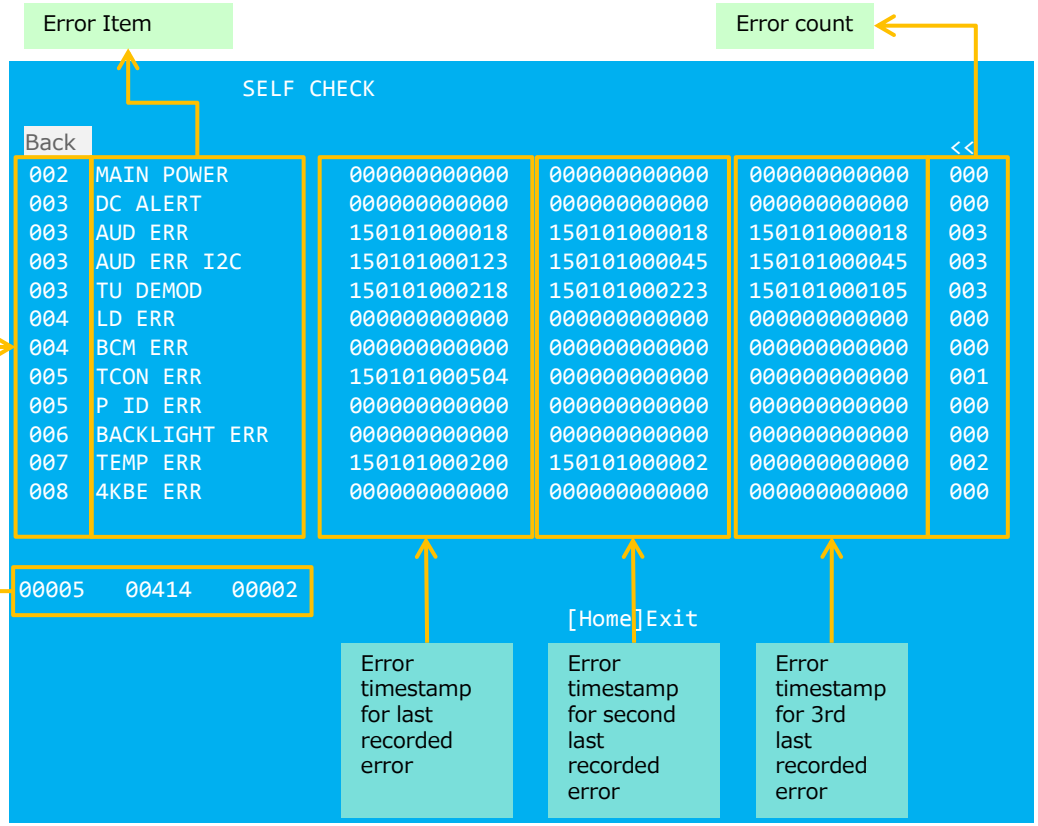
[SELF DIAGNOSTIC SCREEN DISPLAY]

Format of error timestamps
YYMMDDhhmmss (in UTC)
Example:
120823132523 -> Aug 23 2012 13:25:23 UTC
* Only when time is set, an error timestamp is saved.

Smart Core Red LED blinking count

• Panel Operation Time is recorded every 30 min,
but Total Operation Time is recorded every 1 hr.
Therefore, the panel op. time might become larger than the total op. time.

Total Operation Time [hr] – Boot Count – Panel Operation Time [hr]



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

DISPLAY ➡ Channel 5 ➡ Volume * – ➡ TV POWER

*** : Note that this differs from entering the service mode (volume +)**

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”.

Panel Operation Time clear :	Press the Channel 7 => Channel 0 .
Timestamps and Error Count clear :	Press the Channel 8 => Channel 0 .
Total Operation Time and Boot Count clear:	Press the Channel 9 => Channel 0 .

To exit the Self Diagnostic screen...
*If you want to finish service mode app, do AC OFF/ON → Service mode app is disabled perfectly
*if you want to move home menu, push <HOME>button → Service mode app do background(not disable perfectly)

ADJUSTMENT

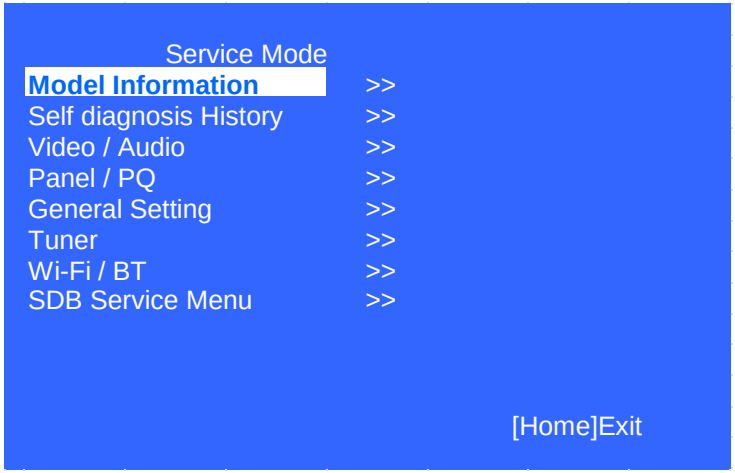
HOW TO ENTER SERVICE MODE

1) Turn on the main power switch to place the set in standby condition.

2) Press the buttons on the remote commander as follows, and entering service mode.

DISPLAY ➡ Channel 5 ➡ Volume + ➡ TV POWER

3) Service mode display.



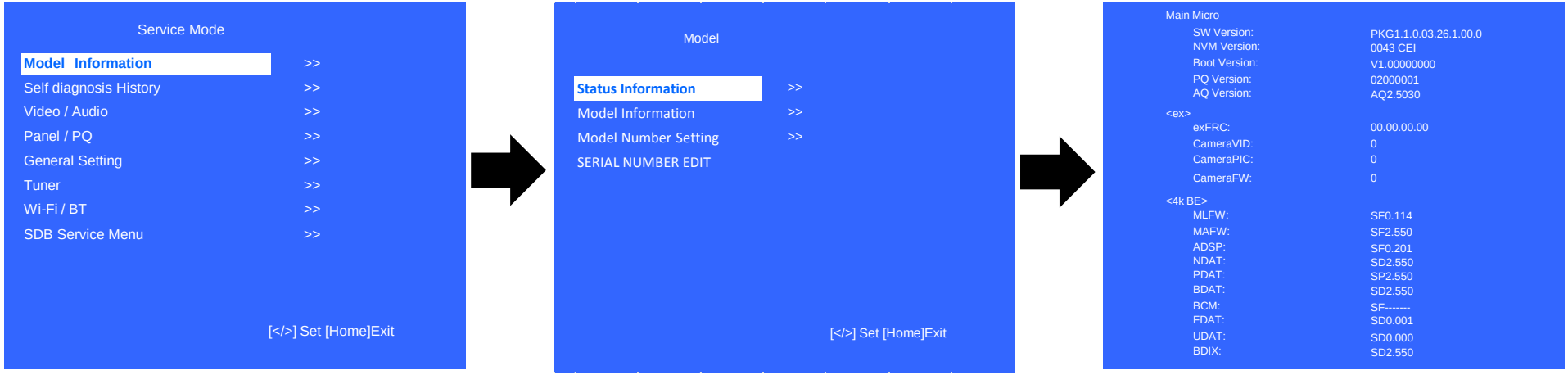
4) How to use the remote commander.

Function	The flow of control
Service mode on	<Display or i+(info)> <5> <Vol. Up> <Power>
Close Service menu	<Home>
Service mode off	AC plug OFF
Item up / down	<↑>/ <↓>
Item select left/right	<←>/<→>
Execute	<Enter>

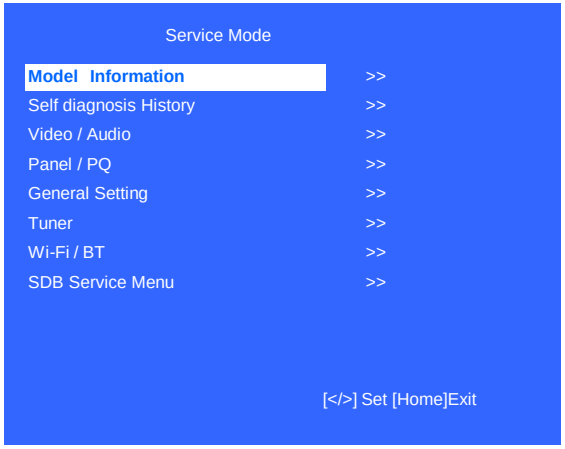
*When finished the operation of service mode, please AC Plug OFF/ON the TV set.
If you don't do AC plug OFF/ON, remain the Service Mode App and User can see the Service Mode after RC ON.
(Refer the previous page.)

SOFTWARE VERSION

1) In Service Mode, select “Model Information”, press “Enter” or “→” button to enter Status Information.



2) Press “Enter” or “BACK” button to return to Service Mode.



SERIAL NUMBER EDIT (1)

1) In “Service Mode”, select “Model Information” by pressing “↑” or “↓” button then pressing “Enter” or “→” button to enter inside.
2) Select “Serial Number Edit” by pressing “↑” or “↓” button then pressing “→” button.
3) Press “↑” or “↓” button to input numbers.
4) After user input data, press <Enter> .
    - Pop-up dialog appear to confirm input data correct
    - **Serial Number can be set ONLY ONCE**

5) Press “→” or “←” button to select YES or NO.
   Select YES if input data is correct.
   Select NO if input data is incorrect.
   Press <Enter> to save answer.

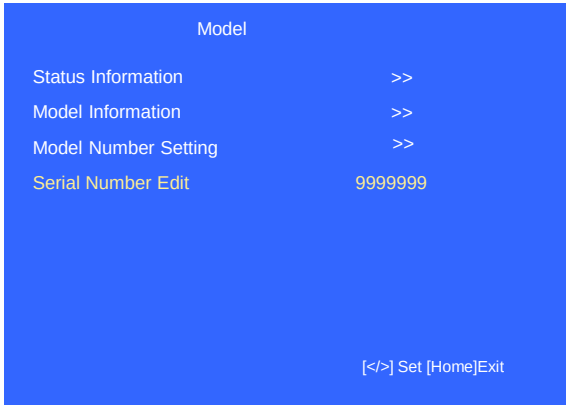
* The font color of YES/NO is change to black when it is selected.

SERIAL NUMBER EDIT (2)

If YES is selected, the input data is saved into EEPROM.

SERIAL NUMBER EDIT is grayed out and the serial number that has been input is displayed.

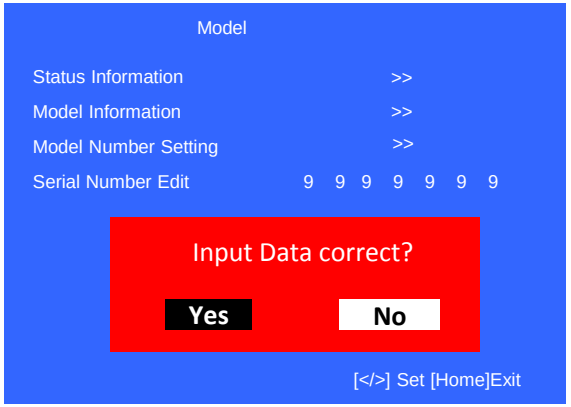
Operator will not be able to edit anymore.



If NO is selected, the input data is not saved into EEPROM.

The serial number that has been input is displayed.

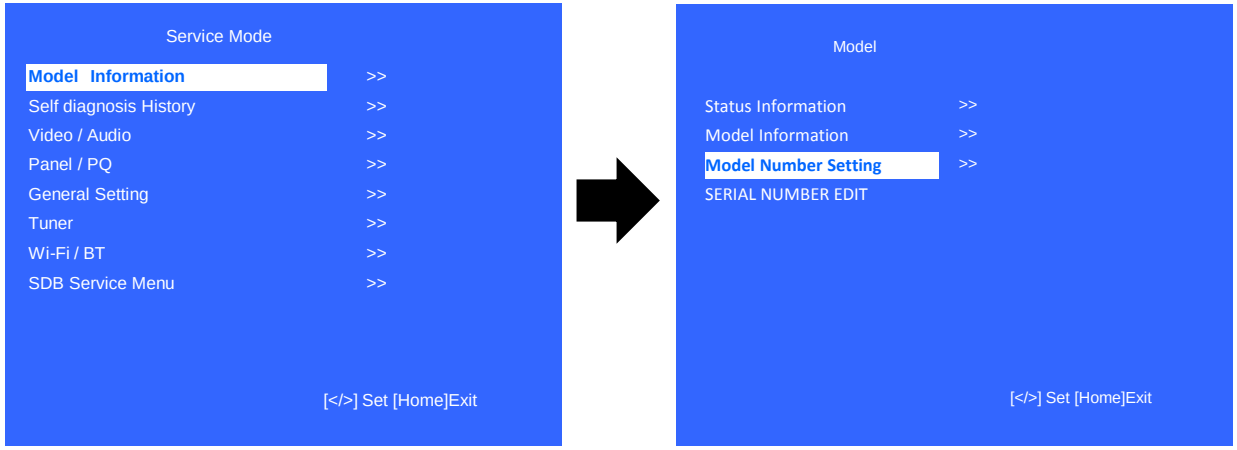
Operator can still edit the Serial Number.



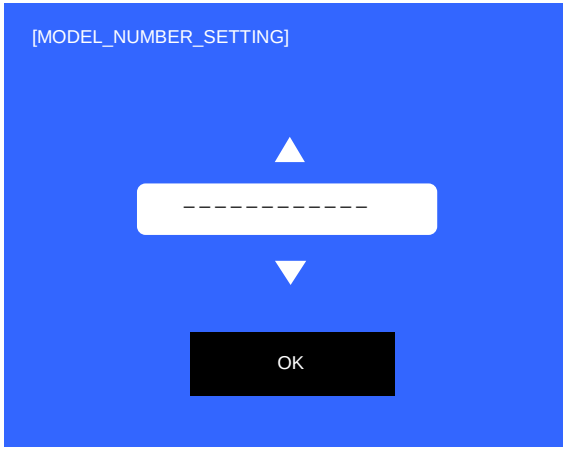
*The font color of YES/NO is change to black when it is selected.

MODEL NUMBER SETTING

1) In “Service Mode”, select “Model Information” by pressing “↑” or “↓” button then pressing “Enter” or “→” button to enter inside.
2) Select “Model Number Setting” by pressing “↑” or “↓” button then pressing “Enter” or “→” button.
3) Press “↑” or “↓” button to scroll Product Name Candidate.



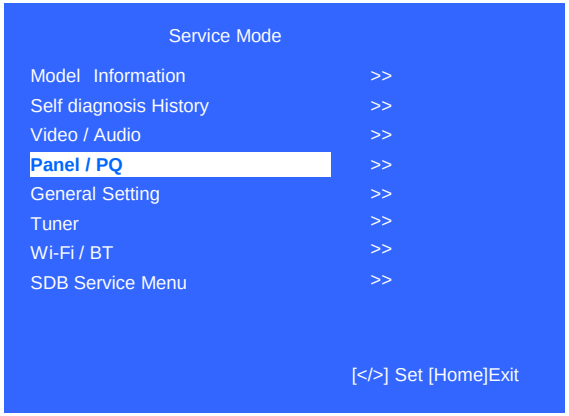
4) Select one Product Name from the list. After that select “[OK]” and press “Enter” button.



WB ADJUSTMENT (If necessary)

In “Panel/PQ” service mode.

a. Go to “WB Adjustment” category by “↑” or “↓”.



b. To select “WB Adjustment”, press “→” button.

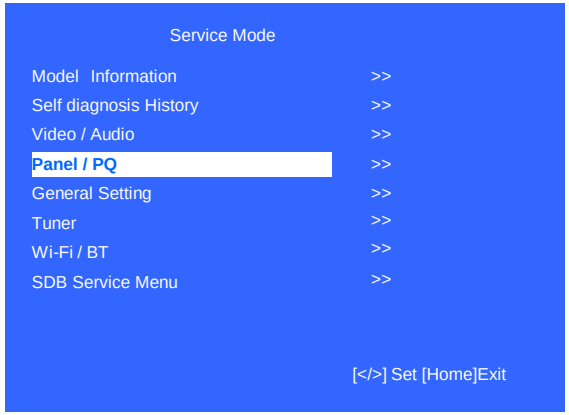
c. To change data, press “←” or “→” button on remote commander.

WB/MURA/CUC DATA TRANSFER

(Please apply Main board or panel is replaced.)

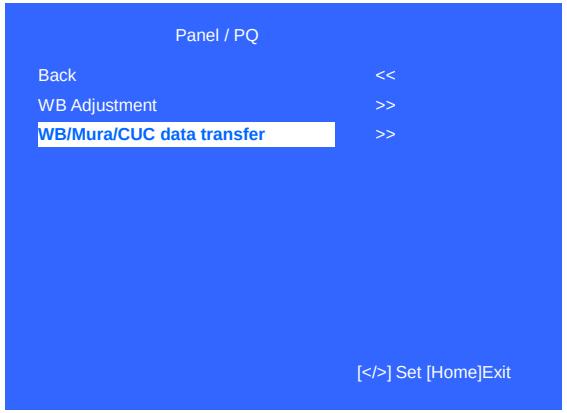
1. In “Panel/PQ” service mode.

   a. Go to “WB/Mura/CUC data transfer” category by “↑” or “↓”.



   b. To select “WB/Mura/CUC data transfer”, press “→” button.

   c. To change data, press “←” or “→” button on remote commander.



2. In “WB/Mura/CUC data transfer”.

   a. Select “WB/Gamma data transfer” by pressing “↑” or “↓” button on remote commander.

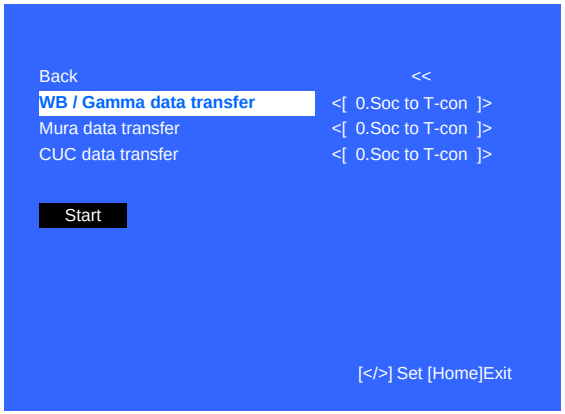
   b. To change the items, press “←” or “→” button on remote commander and press “Enter” button.

Selectable items are:

0. SoC to T-con
1. T-con to SoC
2. No action

   c. Similarly, select the items in Mura and CUC data.

   d. Select “[start]” and press “Enter” button to start transfer.



*Please refer to another manual “Service Procedure for Panel, Board and Software Change / Upgrade(P/N:98881800x)” for details. GN3TR chassis is the same as GN1T chassis basically.

	B-board replace	T-con replace	Panel replace
WB/ Gamma	1.T-con to Soc	0.SoC to T-con	0.SoC to T-con
Mura	1.T-con to Soc	0.SoC to T-con	1.T-con to Soc
CUC	1.T-con to Soc	0.SoC to T-con	1.T-con to Soc