

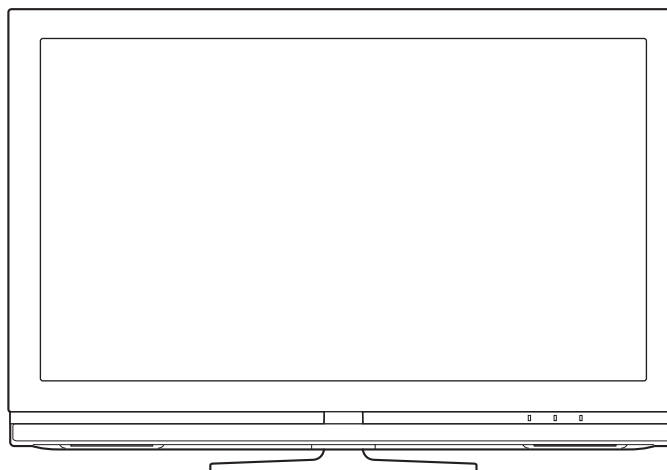
# SERVICE MANUAL

## EG1L CHASSIS

<u>MODEL</u>	<u>COMMANDER</u>	<u>DEST.</u>	<u>MODEL</u>	<u>COMMANDER</u>	<u>DEST.</u>
<b>KDL-40Z4500</b>	RM-SD001	Chinese			
<b>KDL-46Z4500</b>	RM-SD001	Chinese			
<b>KDL-52Z4500</b>	RM-SD001	Chinese			















RM-SD001



KDL-40Z4500/46Z4500/52Z4500

LCD Digital Colour TV  
**SONY**®

# SPECIFICATIONS

Model name		KDL-52Z4500	KDL-46Z4500	KDL-40Z4500
System				
Panel system		LCD (Liquid Crystal Display) Panel		
TV system		Analogue: D/K, I, B/G, M Digital: GB20600-2006		
Colour system		Analogue: PAL, PAL60, SECAM, NTSC3.58, NTSC4.43 Digital: MPEG-2 MP@HL, MP@ML		
Channel coverage		Analogue: D/K: VHF: C1 to C12, R1 to R12/ UHF: C13 to C57, R21 to R60/ CATV: S01 to S03, S1 to S41, Z1 to Z39 I: UHF: B21 to B69/ CATV: S01 to S03, S1 to S41 B/G: VHF: E2 to E12/ UHF: E21 to E69/ CATV: S01 to S03, S1 to S41 M: VHF: A2 to A13/ UHF: A14 to A79/ CATV: A-8 to A-2, A to W+4, W+6 to W+84 Digital: GB20600-2006		
Sound output		8.5 W + 8.5 W, 11 W (Woofer) (as distortion of 7%)		
Input/Output jacks				
Antenna/Cable		75 ohm external terminal for VHF/UHF		
S 视频 (S VIDEO)  1		S video input (4-pin mini DIN)		
视频 (VIDEO)  1, 2, 3		Video input		
HD/DVD 输入 (HD/DVD IN)  1/  2		Supported formats: 1080p (50/60 Hz), 1080i (50/60 Hz), 720p (50/60 Hz), 576p, 576i, 480p, 480i Y: 1 Vp-p, 75 ohms, 0.3V sync negative/Pb/Cb: 0.7 Vp-p, 75 ohms/ Pr/Cr: 0.7 Vp-p, 75 ohms		
音频 (AUDIO)  1, 2, 3		Audio input: 500 mVrms, 47 kilohms		
HDMI 输入 (HDMI IN) 1, 2, 3		Video: 1080/24p, 1080p (50/60 Hz), 1080i (50/60 Hz), 720p (50/60 Hz), 576p, 576i, 480p, 480i Audio: Two channel linear PCM 32, 44.1 and 48 kHz, 16, 20 and 24 bits  Analogue audio input (minijack): 500 mVrms, 47 kilohms (HDMI IN 3 only)		
视频 (VIDEO) 		Video output		
音频 (AUDIO OUT) 		Audio output		
PC 输入 (PC IN)  (RGB)		PC Input (D-sub 15-pin) G: 0.7 Vp-p, 75 ohms, non Sync on Green/B: 0.7 Vp-p, 75 ohms/ R: 0.7 Vp-p, 75 ohms/HD: 1-5 Vp-p/VD: 1-5 Vp-p  PC audio input (minijack)		
耳机 (Headphones)		Headphones jack		
DMPORT		DIGITAL MEDIA PORT		
数字音频输出 (光纤) (DIGITAL AUDIO OUT (OPTICAL)) 		Digital optical jack		
 USB		USB port		
LAN		10BASE-T/100BASE-TX connector (Depending on the operating environment of the network, connection speed may differ. 10BASE-T/100BASE-TX communication rate and communication quality are not guaranteed for this TV.)		
Power and others				
Power Requirements		220 V AC, 50 Hz		
Viewing Screen Size (diagonal)*		132 cm (52 inches)	117 cm (46 inches)	102 cm (40 inches)
Display Resolution		1,920 pixels (horizontal) × 1,080 lines (vertical)		
Power Consumption		320 W	283 W	235 W
Standby Power Consumption**		Less than 0.20 W (20 W when “快速开机 (Quick Start)” is set to “开 (ON)” )		
Dimensions* (w × h × d)	with Stand (mm)	1,281 × 882 × 346	1,140 × 790 × 307	1,005 × 705 × 279
	without Stand (mm)	1,281 × 839 × 135	1,140 × 749 × 132	1,005 × 666 × 128
Mass*	with Stand (kg)	43.5	34.0	27.0
	without Stand (kg)	36.5	29.5	23.5

\* Dimensions and mass are approximate values.

\*\* Specified standby power is reached after the TV finishes necessary internal processes.

Model name		KDL-52Z4500	KDL-46Z4500	KDL-40Z4500
Product usage condition				
Environment Temperature		5°C - 35°C		
Humidity		20% - 80%		
Air Pressure		86 kPa - 106 kPa		
Display Spec				
Luminance*		≥ 350 cd/m <sup>2</sup> **		
Contrast*		≥ 150:1 **		
Viewing angle (L0/3)*		Horizontal ≥120°, Vertical ≥80°	Horizontal ≥110°, Vertical ≥ 80°	
Definition (TV Line)*	analog RF	Horizontal ≥350, Vertical ≥ 400 TVL**		
	SDTV	Horizontal ≥450, Vertical ≥ 450 TVL**		
	HDTV	Horizontal ≥720, Vertical ≥ 720 TVL**		
Color gamut*		≥ 32 % **		
Smearing time of motion picture*		≤ 20 ms **		
Audio characteristic*		Sound pressure THD in rated input ≤ 10%**		

\* Refer to SJ/T11348-2006 <Methods of measurement for digital television flat panel displays>.

\*\* These values are required by SJ/T11343-2006 <General specification for digital television LCD displays> in normal temperature.

Design and specifications are subject to change without notice.

#### PC input signal reference chart for PC 输入 (PC IN) ↔ (RGB)

Resolution				Horizontal frequency (kHz)	Vertical frequency (Hz)	Standard
Signals	Horizontal (Pixel)	×	Vertical (Line)			
VGA	640	×	480	31.5	60	VGA
	640	×	480	37.5	75	VESA
	720	×	400	31.5	70	VGA-T
SVGA	800	×	600	37.9	60	VESA Guidelines
	800	×	600	46.9	75	VESA
XGA	1024	×	768	48.4	60	VESA Guidelines
	1024	×	768	56.5	70	VESA
	1024	×	768	60.0	75	VESA
WXGA	1280	×	768	47.4	60	VESA
	1280	×	768	47.8	60	VESA
	1280	×	768	60.3	75	
	1360	×	768	47.7	60	VESA
SXGA	1280	×	1024	64.0	60	VESA

- This TV's PC input does not support Sync on Green or Composite Sync.
- This TV's PC input does not support interlaced signals.
- This TV's PC input supports signals in the above chart with a 60 Hz vertical frequency.

#### PC input signal reference chart for HDMI 输入 (HDMI IN) 1, 2, 3

Resolution				Horizontal frequency (kHz)	Vertical frequency(Hz)	Standard
Signals	Horizontal (Pixel)	×	Vertical (Line)			
VGA	640	×	480	31.5	60	VGA
SVGA	800	×	600	37.9	60	VESA Guidelines
XGA	1024	×	768	48.4	60	VESA Guidelines
WXGA	1280	×	768	47.4	60	VESA
	1280	×	768	47.8	60	VESA
SXGA	1280	×	1024	64.0	60	VESA

## WARNINGS AND CAUTIONS

### CAUTION

These servicing instructions are for use by qualified service personnel only.

To reduce the risk of electric shock, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.

### WARNING!!

An isolation transformer should be used during any service to avoid possible shock hazard, because of live chassis.

The chassis of this receiver is directly connected to the ac power line.



### SAFETY-RELATED COMPONENT WARNING!!

Replace all components with Sony parts whose part numbers appear as shown in this manual or in supplements published by Sony.

## SAFETY-RELATED COMPONENT WARNING

It is essential that all critical parts be replaced only with the part number specified in the electrical parts list to prevent electric shock, fire, or other hazard.

NOTE: Do not modify the original design without obtaining written permission from the manufacturer or you will void the original parts and labor guarantee.

### USE CAUTION WHEN HANDLING THE LCD PANEL

When repairing the LCD panel, be sure you are grounded by using a wrist band.

When repairing the LCD panel on the wall, the LCD panel must be secured using the 4 mounting holes on the rear cover.

- 1) Do not press on the panel or frame edge to avoid the risk of electric shock.
- 2) Do not scratch or press on the panel with any sharp objects.
- 3) Do not leave the module in high temperatures or in areas of high humidity for an extended period of time.
- 4) Do not expose the LCD panel to direct sunlight.
- 5) Avoid contact with water. It may cause a short circuit within the module.
- 6) Disconnect the AC power when replacing the backlight (CCFL) or inverter circuit.  
(High voltage occurs at the inverter circuit at 650Vrms.)
- 7) Always clean the LCD panel with a soft cloth material.
- 8) Use care when handling the wires or connectors of the inverter circuit. Damaging the wires may cause a short.
- 9) Protect the panel from ESD to avoid damaging the electronic circuit (C-MOS).

## SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

1. Check the area of your repair for unsoldered or poorly soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are “pinched” or touching high-wattage resistors.
3. Check that all control knobs, shields, covers, ground straps, and mounting hardware have been replaced. Be absolutely certain that you have replaced all the insulators.
4. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
5. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
6. Check the line cords for cracks and abrasion. Recommend the replacement of any such line cord to the customer.
7. Check the antenna terminals, metal trim, “metallized” knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

### Leakage Test

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes).

Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instructions.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The “limit” indication is 0.75 V, so analog meters must have an accurate low voltage scale.  
The Simpson's 250 and Sanwa SH-63TRD are examples of passive VOMs that are suitable. Nearly all battery-operated digital multimeters that have a 2 VAC range are suitable (see Figure A).

### How to Find a Good Earth Ground

A cold-water pipe is a guaranteed earth ground; the cover-plate retaining screw on most AC outlet boxes is also at earth ground. If the retaining screw is to be used as your earth ground, verify that it is at ground by measuring the resistance between it and a cold-water pipe with an ohmmeter. The reading should be zero ohms.

If a cold-water pipe is not accessible, connect a 60- to 100-watt trouble- light (not a neon lamp) between the hot side of the receptacle and the retaining screw. Try both slots, if necessary, to locate the hot side on the line; the lamp should light at normal brilliance if the screw is at ground potential (see Figure B).

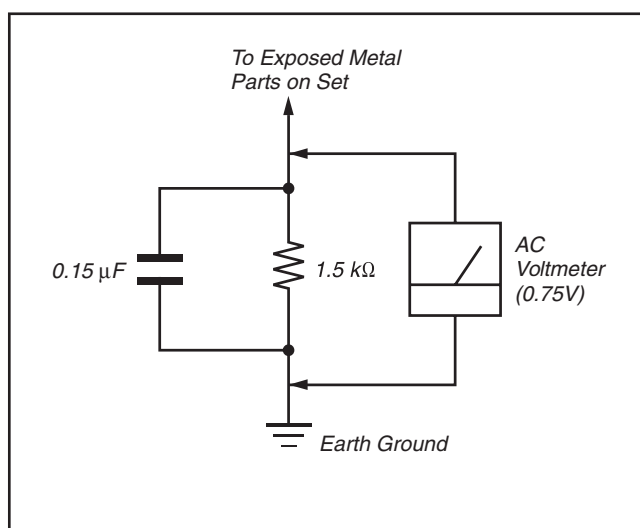


Figure A. Using an AC voltmeter to check AC leakage.

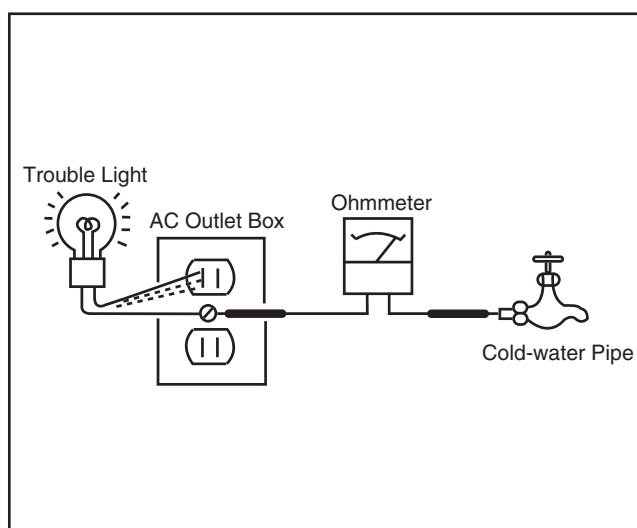


Figure B. Checking for earth ground.

## SELF DIAGNOSIS FUNCTION

The units in this manual contain a self-diagnostic 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.

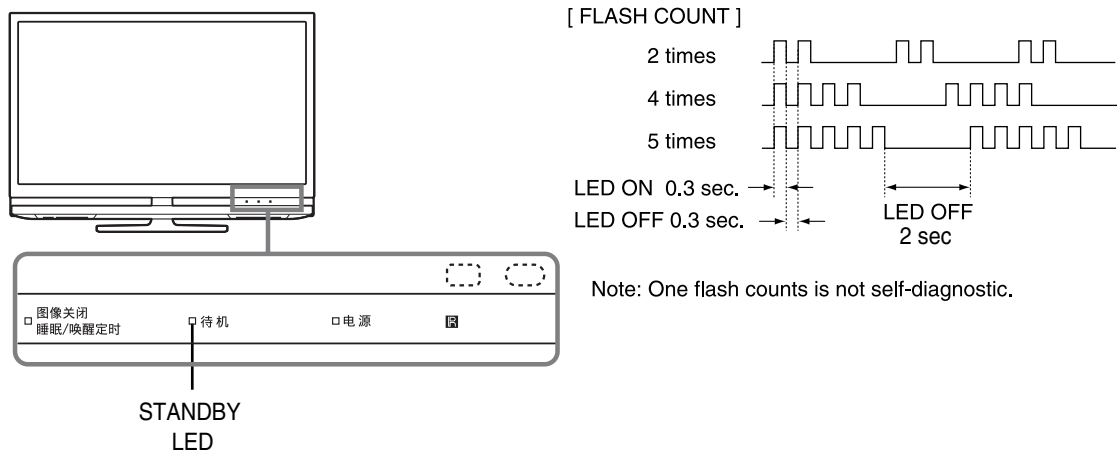
If there is more than one error, the LED will identify the first of the problem areas.

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

If the screen displays a "0", no error has occurred .

Number of times STANDBY LED (Red) flashes	Monitoring Items	Diagnostic Item Description
2 times	DC_DET	Main Supply Voltage (12V) Error.
6 times	PANEL_DET	Panel detect Error.
7 times	TEMPERATURE	monitor an Increase of an Inside-temperature.
8 times	AUDIO	Audio error (SP protect).
9 times	HFR	High Frame Rate Error.
10 times	DEF	DEF (Digital Front End module) Error.
11 times	NVM	EEPROM Error (not read/write available).
12 times	I2C	VCT I2C Bus Error.
13 times	BALANCER	Panel Balance Error.
14 times	HDMI	HDCP cannot be setup correctly.
15 times	TUNER	If circuit of PLL circuit do not respond to I2C commands.
16 times	I2C CH1	I2C CH1Error in MOUTON.
17 times	I2C CH0	I2C CH0 Error in MOUTON.
18 times	DIGITAL DEMOD	No Acknowledge detected.
19 times	USB	USB over current detected.
20 times	CI	CI Error
21 times	VCT	No DPI-I2C
22 times	MSP	MSP3410G IC does not respond to I2C commands.

### DISPLAY OF STANDBY LIGHT FLASH COUNT



### STOPPING THE STANDBY FLASH

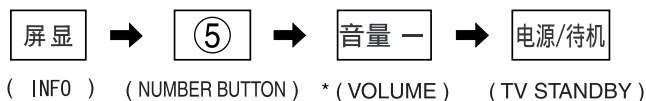
Turn off the power switch on the TV main unit or unplug the power cord from the outlet to stop the STANDBY LED for flashing.

## 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:

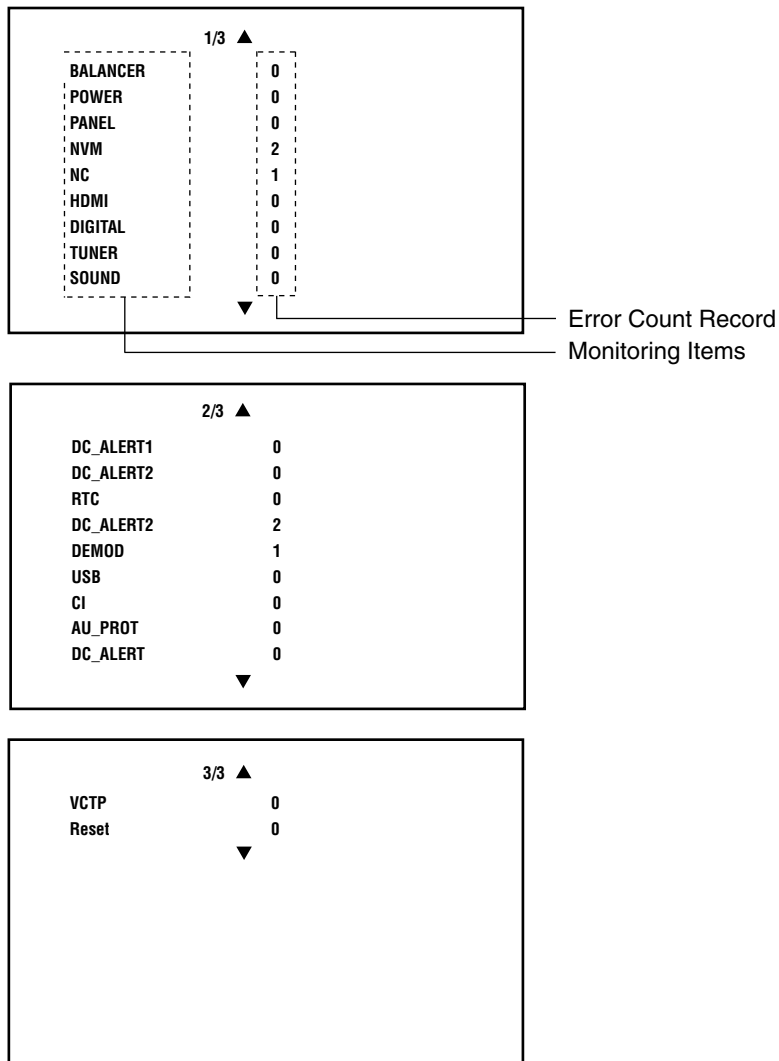
### [To Bring Up Screen Test]

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



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

### [ SELF-DIAGNOSTIC SCREEN DISPLAY ]



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 result display

To clear the result display to “0”, press button on the remote commander sequentially as shown below when the diagnostic screen is being displayed.

<Deletion of Error Count and Error History>

Press “⑧” button → Press “⑩” button

<Deletion of Panel Operation Time>

Press “⑦” button → Press “⑩” button

### Quitting Self-diagnostic screen

To quit the entire self-diagnostic screen, turn off the power switch on the remote commander or the main unit.

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# TROUBLESHOOTING

## 1. TRIAGE CHART

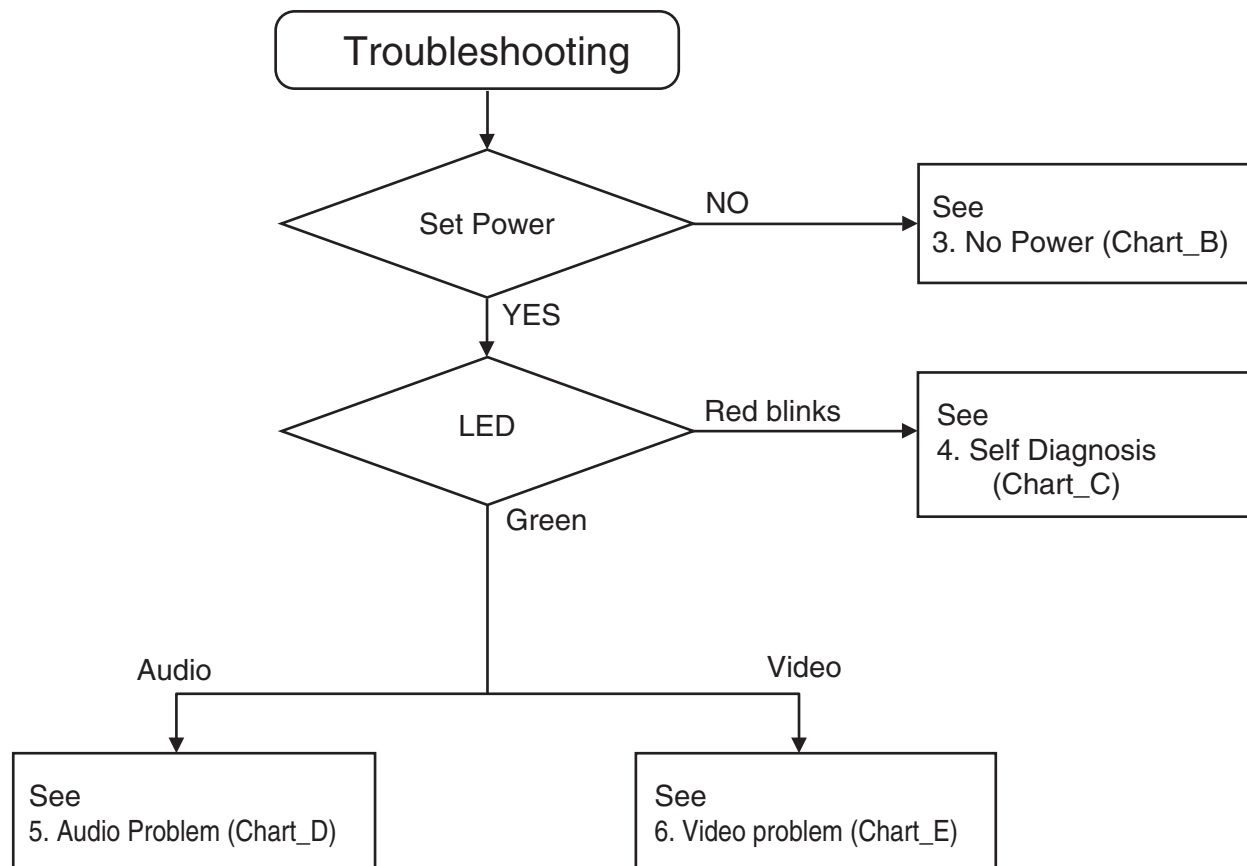
Reference	Symptoms - (dead set)															
	2 Blinks	6 Blinks	7 Blinks	8 Blinks	10 Blinks	11 Blinks	12 Blinks	13 Blinks	14 Blinks	15 Blinks	16 Blinks	17 Blinks	18 Blinks	19 Blinks	21 Blinks	No Power
BGC COMPL			●	●	●	●	●		●	●	●	●	●	●	●	▲
D5 COMPL (52")	●	●						●								▲
D4 COMPL (52")	●	●						●								▲
G6 COMPL	●															●
Panel Module		●	●					●								
Flowchart Reference	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	B
Problem	Power_ DET	Back Light	TEMP	Audio	DFE	NVM	I2C VCT	Balancer	HDMI	Tuner	I2C CH1	I2C CH0	D Demod	USB	VCTP	

Reference	Video - distorted or missing					
	No Video BL OK OSD OK	No Video No BL	No Video BL OK No OSD	No Tuner Video OK	No HDMI	No Audio
BGC COMPL	●	●	●	●	●	●
D5 COMPL (52")		●				
D4 COMPL (52")		●				
G6 COMPL		●				
Panel Module		●	●			
Flowchart Reference	E	E	E	E	E	D
Problem						

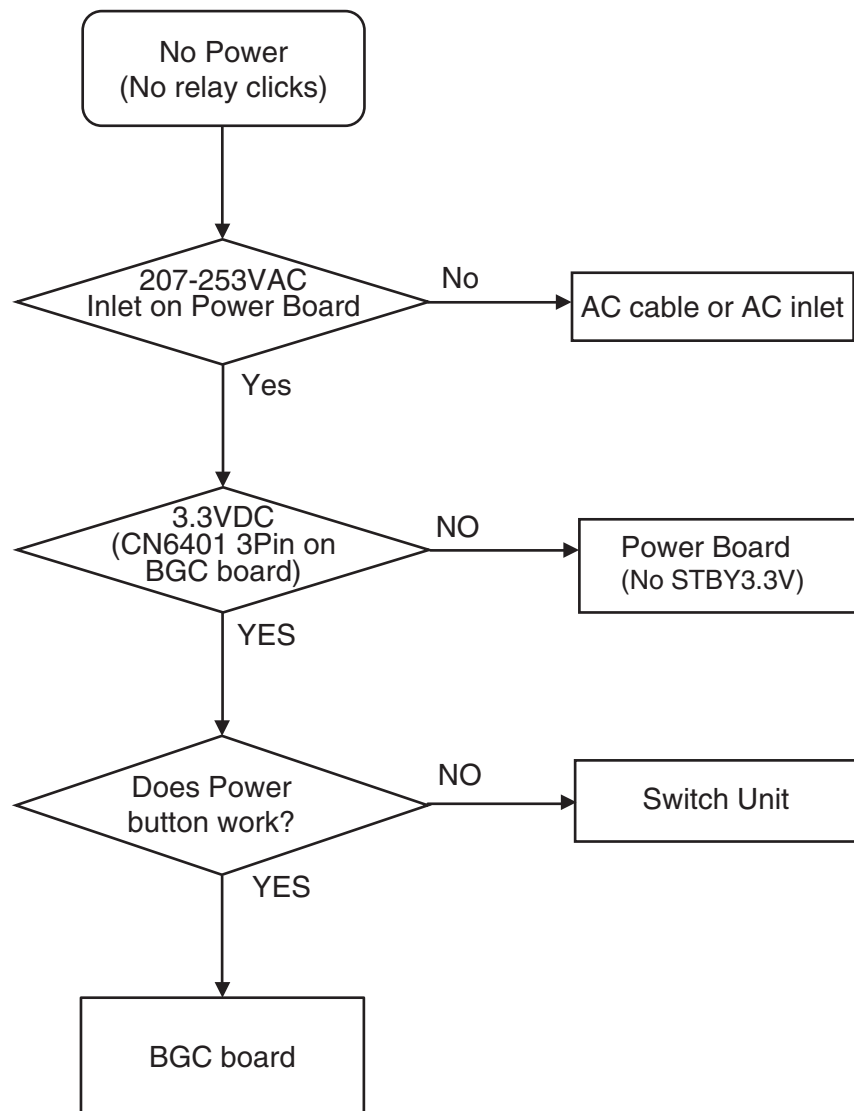
● : Doubtful part

▲ : just a few possibility

## 2. FLOW CHART



### 3. No Power (Flow Chart\_B)

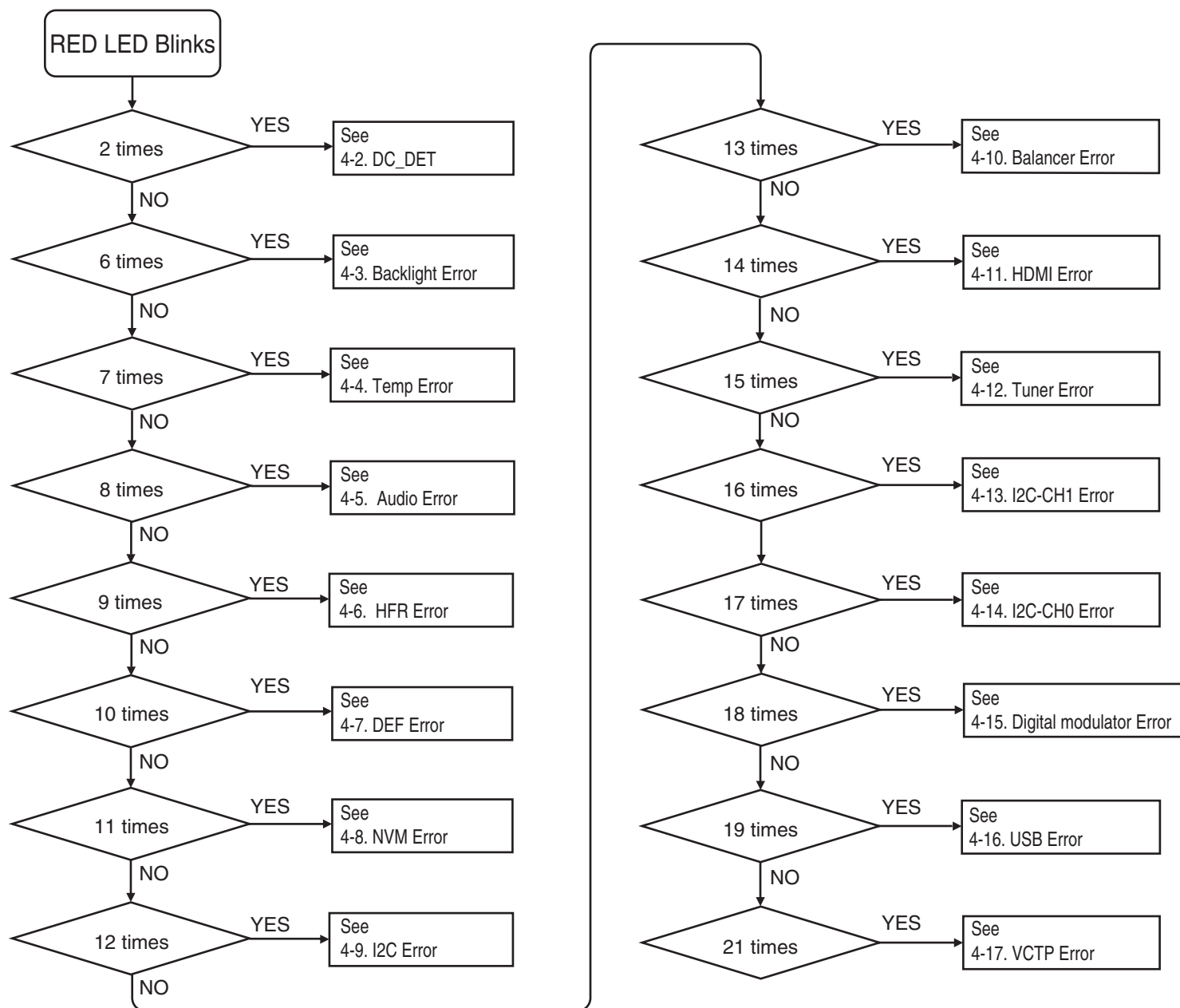


## 4. Self Diagnosis

Red LED Blink	Display (Self Diagnosis mode)	Contents
2 times	DC_DET (12V Main Voltage)	Main Supply Voltage Trouble.
6 times	Panel Det Error	Backlight Trouble.
7 times	Internal Temperature Error	Monitor an Increase of an Inside-Temperature.
8 times	Audio Error (SP Protection)	Audio Trouble.
9 times	HFR Error	High Frame Rate Error.
10 times	Digital Error	DEF (Digital Front End Module) Trouble.
11 times	NVM Error	EEPROM Error (not read/write available).
12 times	I2C Error VCT	VCT I2C Bus Trouble.
13 times	Balance Error	Panel Balance Trouble.
14 times	HDMI Error	HDCP cannot be setup correctly.
15 times	Tuner Error	If circuit or PLL circuit do not respond to I2C commands.
16 times	I2C CH1 (MOUTON TAS)	I2C Ch1 Error in MOUTON.
17 times	I2C CH0 (MOUTON NVM/RTC)	I2C Ch0 Error in MOUTON.
18 times	Digital Demod	No Acknowledge detected.
19 times	USB Error	USB over current detected.
20 times	CI Error	CI Trouble.
21 times	VCT Error	No DPI-I2C
22 times	MSP Error	MSP3410G IC does not respond to I2C commands.

When self diagnosis happens, STBY (Red) LED blinks and the history can be seen on display by self diagnosis mode.

## 4-1. Self Diagnosis (Flow Chart\_C)



## 4-2. DC\_DET (RED 2 times blink)

- This indicates DC\_DET of Power Board.
- 12V line on Power Board.
- MOUTON micro (on BGC board) Pin6 detects POWER\_DET and shuts down chassis power to standby status.

MOUTON micro Pin6    Normal condition: 1.3V - 2.5V

                                 Error case: lower than 1.3V or higher than 2.5V

– Replace Power Board.

## 4-3. Backlight Error (RED 6 times blink)

- This indicates panel power circuit error such as inverter.
- MOUTON micro (on BGC board) Pin40 detects PANEL\_DET and shuts down chassis power to standby status.

MOUTON micro Pin40    Normal condition: High / Error case: Low (lower than 0.8V)

– Replace Panel or Power/Inverter Board .

## 4-4. Temp Error (RED 7 times blink)

- This indicates high temperature inside chassis.  
IC5507 on BGC board is monitoring temperature.  
IC5507 is controlled by MOUTON micro.
- When it happens:
  - Check chassis environment.
  - Check around IC5507 and replace BGC board if temperature monitoring circuit has problem.
  - Check panel.

## 4-5. Audio Error (RED 8 times blink)

- This indicates Audio Error (Protection).
- It happens:
  - IC8200 on BGC board, Audio Amp detects over current, thermal shut down and/or low voltage of itself.
  - DC voltage detected for audio line.
  - MOUTON micro Pin5     Normal condition: High / Error case: Low
- Check UNREG15V at CN6401 Pin4 and Pin5 on BGC board .  
And F3401 on BGC board has 13V or not.
- Check above and replace BGC board.

## 4-6. HFR Error (RED 9 times blink)

- This indicates HFR Communication error.
- [ HFR Communication error ]  
Mouton (IC5505) micro (on BGC board) is communicating with T-con board.
- Check above and replace BGC board or LVDS harness (between BGC board and T-con board).

## 4-7. DEF Error (RED 10 times blink)

- This indicates DEF communication error.
- [ communication error ]
  - TVM micro (on BGC board) is communicating with EMMA3SL (on BGC board).
- Check above and replace BGC board .

## 4-8. NVM Error (RED 11 times blink)

- This indicates MOUTON NVM communication error.
- MOUTON micro (on BGC board) is communicating with NVM (on BGC board) .
- Check above and replace BGC board.

## 4-9. I2C Error (RED 12 times blink)

- This indicates I2C communication error.
- VCTP micro (on BGC board) is communicating with each devices (on BGC board).
- Check above and replace BGC board .



## 4-10. Balancer Error (RED 13 times blink)

- This indicates panel power circuit error such as inverter.
- MOUTON micro (on BGC board) Pin81 detects PANEL\_DET and shuts down chassis power to Standby status.

MOUTON micro Pin40    Normal condition: High / Error case: Mid (0.85 - 2.65V)

- Replace Panel or Power/Inverter board.

## 4-11. HDMI Error (RED 14 times blink)

- This indicates HDCP error.
- HDMI setting trouble matter on BGC board.
- Check above and replace BGC board.

## 4-12. Tuner Error (RED 15 times blink)

- This indicates Tuner error.
- VCTP and EMMA3SL micro (on BGC board) is communicating with Tuner (TU2200) on BGC board.
- Check above and replace BGC board.

## 4-13. I2C-CH1 Error (RED 16 times blink)

- This indicates I2C communication error.
- MOUTON micro (on BGC board) is communicating with Audio processor (IC3201) on BGC board.
- Check above and replace BGC board.

## 4-14. I2C-CH0 Error (RED 17 times blink)

- This indicates I2C communication error.
- MOUTON micro (on BGC board) is communicating with Real time clock (IC5502) on BGC board.
- Check above and replace BGC board.

## 4-15. Digital modulator Error (RED 18 times blink)

- This indicates Tuner error.
- EMMA3SL micro is communicating with inside of the Tuner (TU2200) on BGC board.
- Check above and replace BGC board.

## 4-16. USB Error (RED 19 times blink)

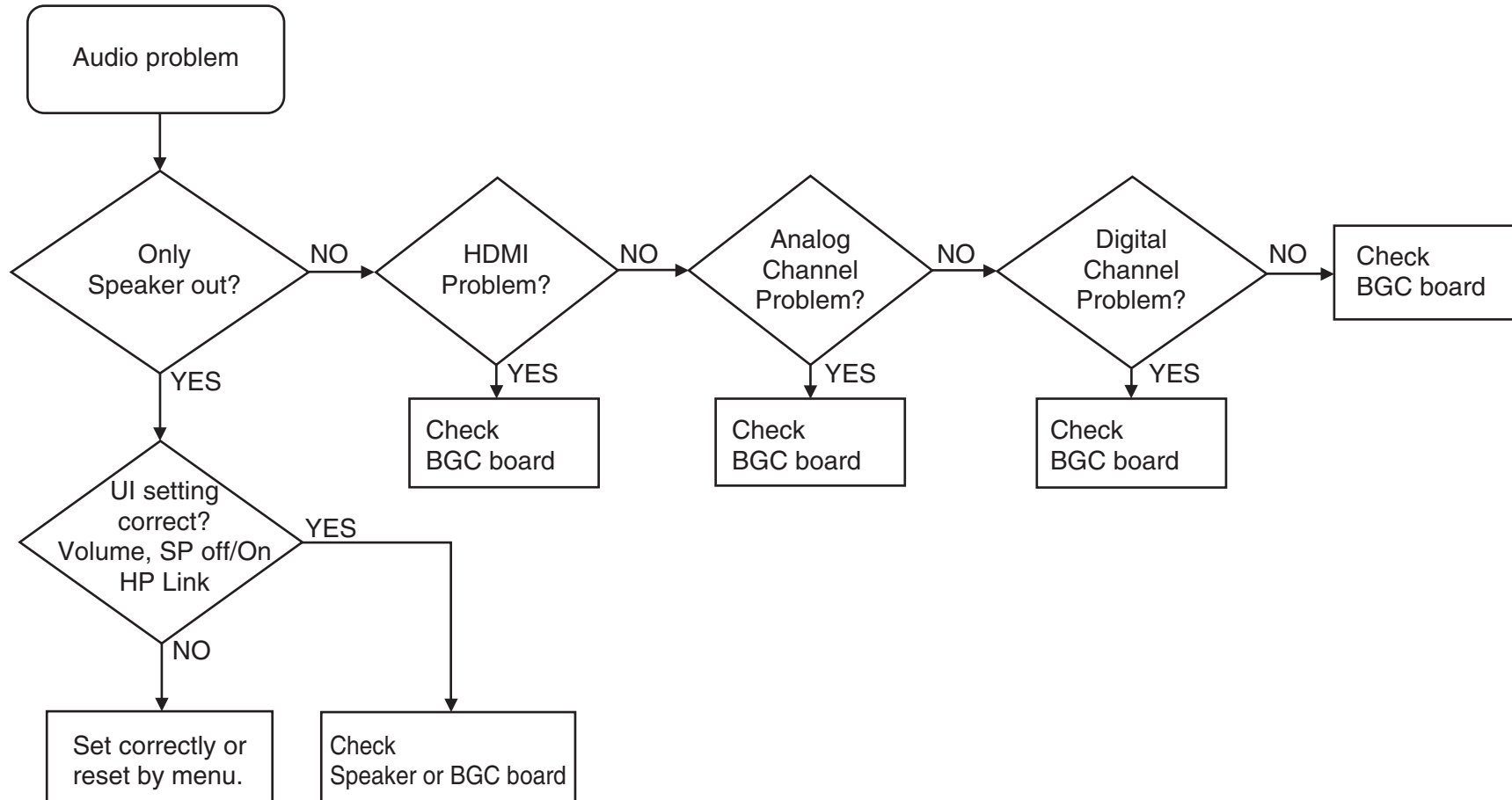
- This indicates USB error.
- EMMA3SL micro found out USB over current detection on BGC board.
- Check above and replace BGC board.

## 4-17. VCTP Error (RED 21 times blink)

- This indicates VCTP error.
- VCTP micro (IC4701) does not work normally.
- Check above and replace BGC board.

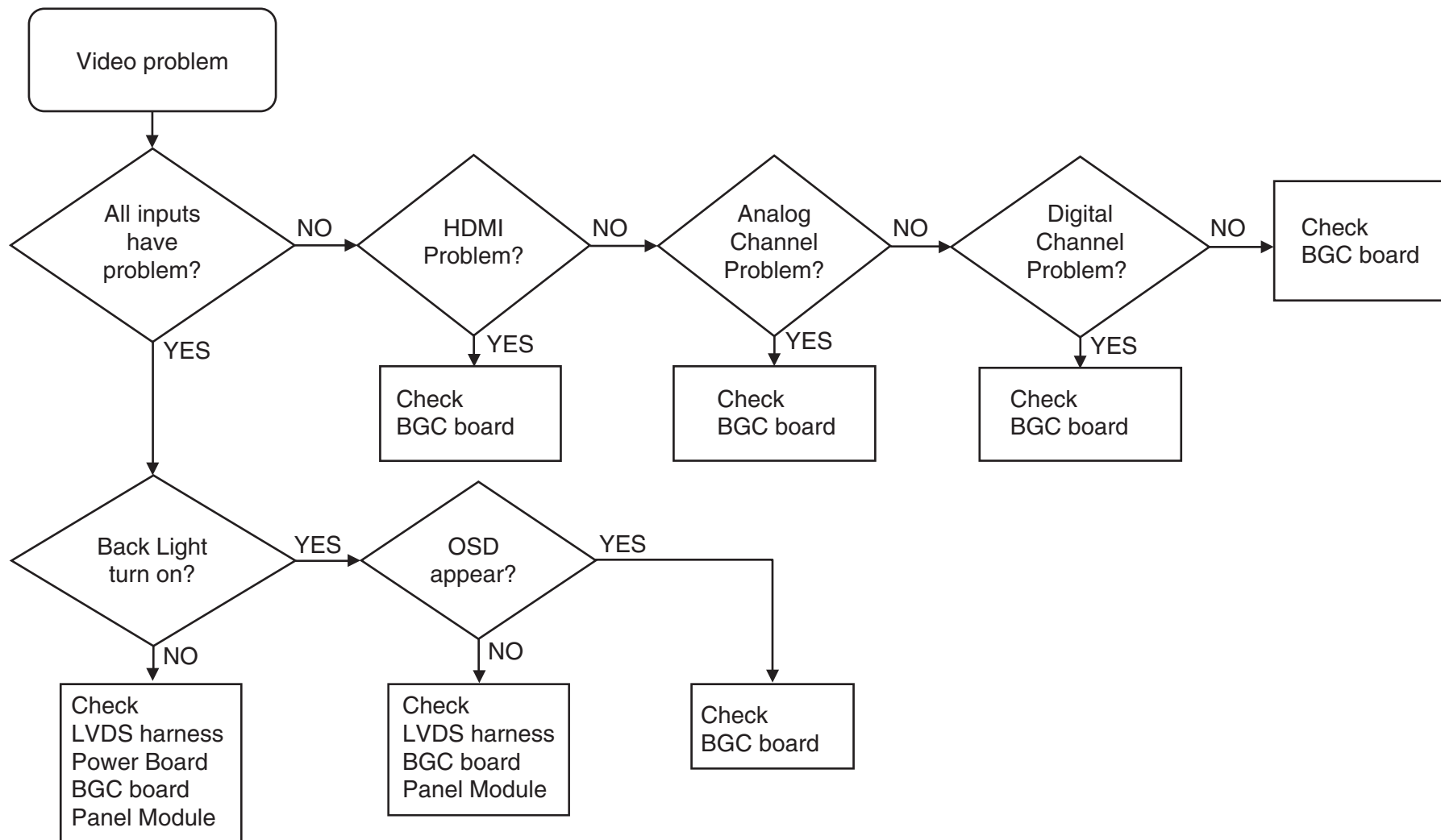
## 5. Audio Problem (Flow Chart\_D)

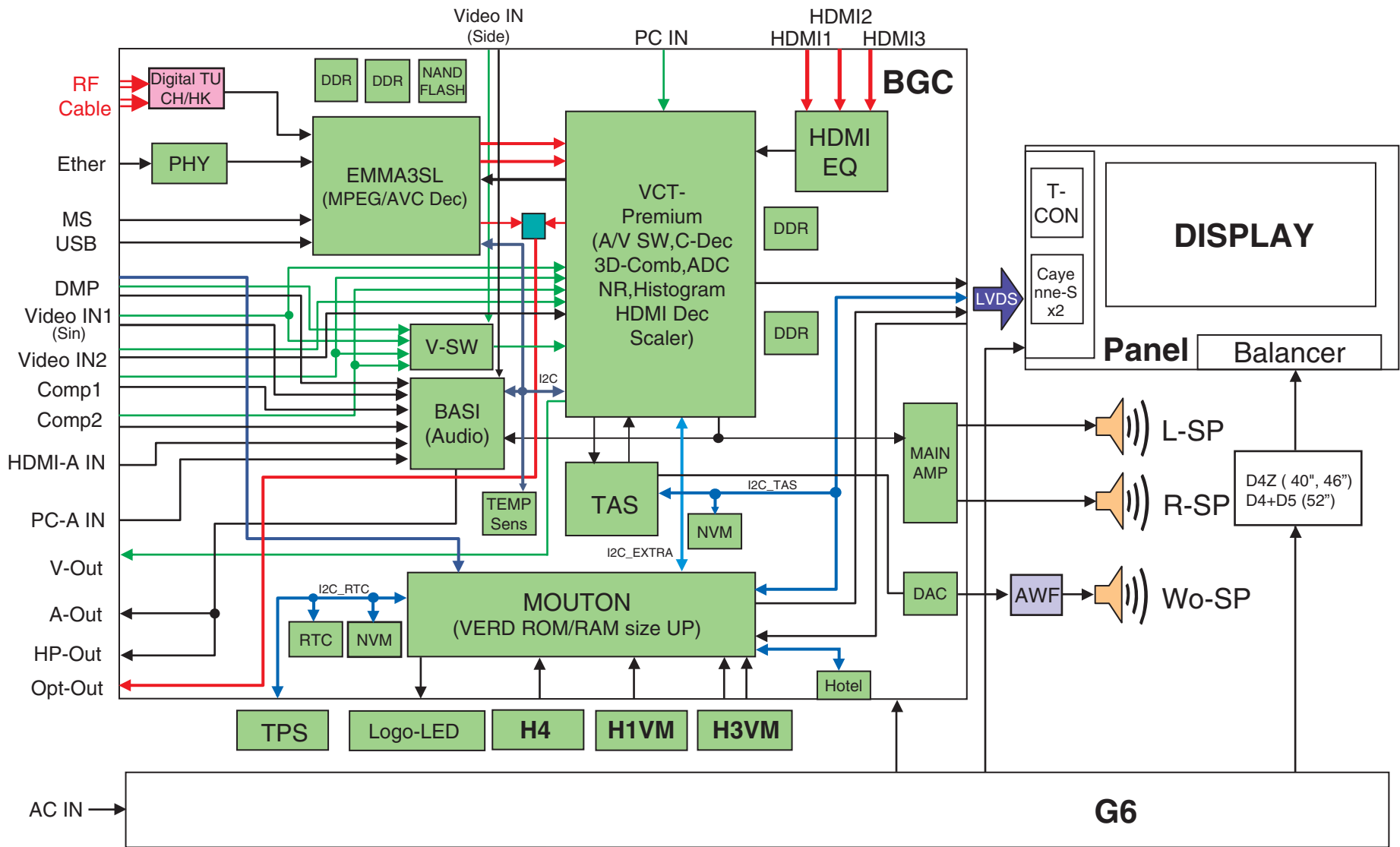
Here is trouble shooting flow related audio.



## 6. Video Problem (Flow Chart\_E)

Here is trouble shooting flow related Video.

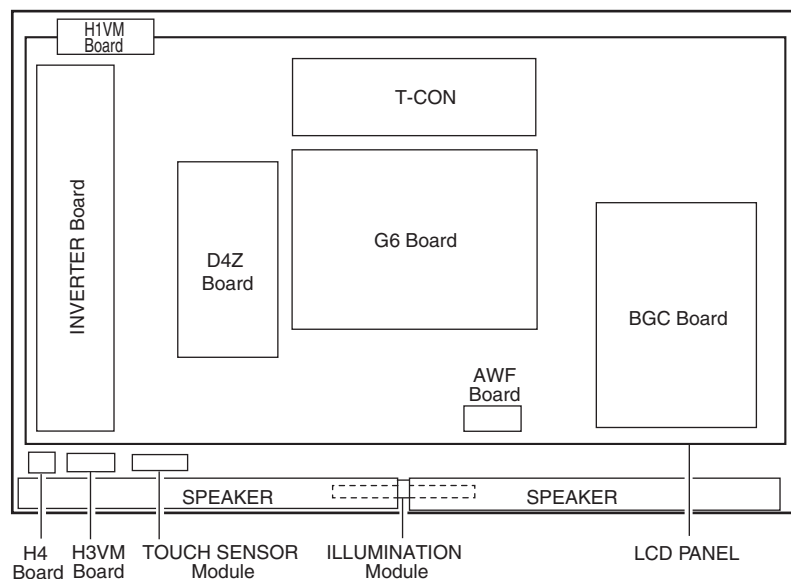




## SPARE PARTS LIST

### (1) KDL-40Z4500

[ BOARD LAYOUT ] ( BACK VIEW )



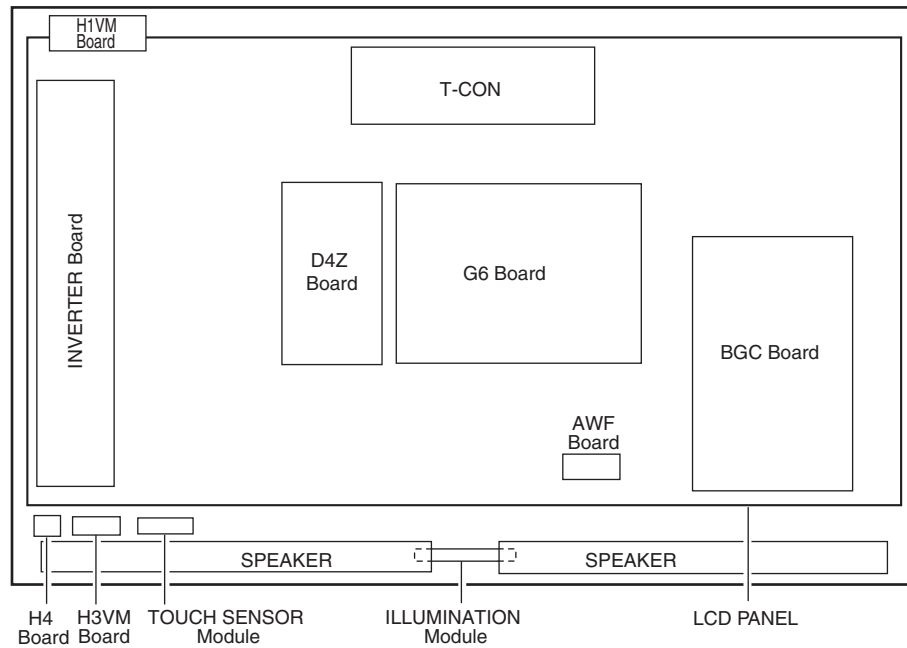
Part No.	Description
A-1494-142-A	AWF MOUNT
△ A-1552-097-B	G6 COMPL
△ A-1557-278-A	D4Z COMPL
A-1557-911-A	H4 COMPL
A-1557-912-A	H1VM COMPL
A-1617-902-A	H3VM COMPL
🔒 A-1641-083-A	BGC COMPL
1-480-680-11	ILLUMINATION MODULE
1-798-150-12	TOUCH SENSOR MODULE
△ 1-802-823-11	LCD PANEL (40INCH FHD 3TFT)

The components identified by shading and mark △ are critical for safety. Replace only with part number specified.

The components identified by mark 🔒 contain confidential information. Strictly follow the instructions whenever the components are repaired and/or replaced.

## (2) KDL-46Z4500

[ BOARD LAYOUT ] ( BACK VIEW )



Part No.	Description
A-1494-142-A	AWF MOUNT
△ A-1552-099-B	G6 COMPL
△ A-1557-281-A	D4Z COMPL
A-1557-911-A	H4 COMPL
A-1557-912-A	H1VM COMPL
A-1617-902-A	H3VM COMPL
🔒 A-1641-084-A	BGC COMPL
1-480-680-11	ILLUMINATION MODULE
1-798-150-12	TOUCH SENSOR MODULE
△ 1-802-822-11	LCD PANEL (46INCH FHD 3TFT)

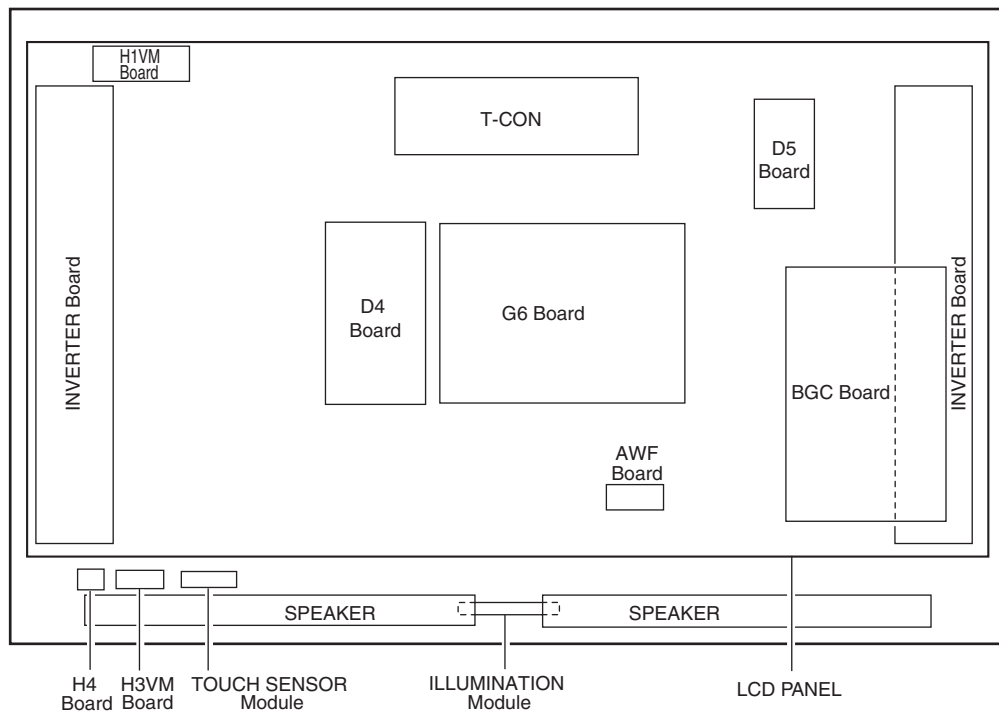
The components identified by shading and mark △ are critical for safety. Replace only with part number specified.

The components identified by mark 🔒 contain confidential information. Strictly follow the instructions whenever the components are repaired and/or replaced.



### (3) KDL-52Z4500

[ BOARD LAYOUT ] ( BACK VIEW )



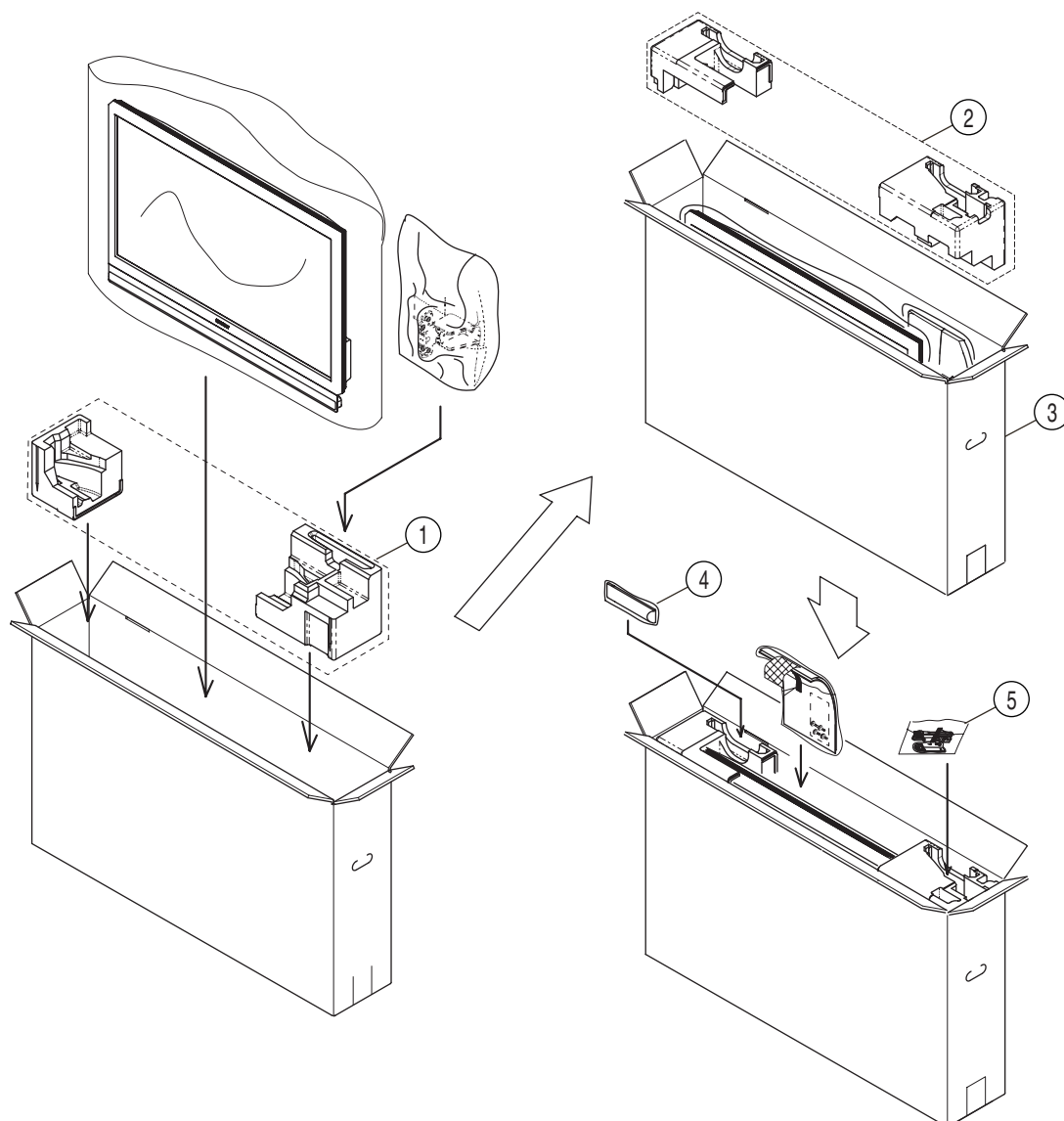
Part No.	Description
A-1494-142-A	AWF MOUNT
△ A-1653-731-B	G6 COMPL
△ A-1553-195-A	D4 COMPL
△ A-1553-197-A	D5 COMPL
A-1557-911-A	H4 COMPL
A-1557-912-A	H1VM COMPL
A-1617-902-A	H3VM COMPL
🔒 A-1641-085-A	BGC COMPL
1-480-680-11	ILLUMINATION MODULE
1-798-150-12	TOUCH SENSOR MODULE
△ 1-802-821-11	LCD PANEL (52INCH FHD 3TFT)

The components identified by shading and mark △ are critical for safety. Replace only with part number specified.

The components identified by mark 🔒 contain confidential information. Strictly follow the instructions whenever the components are repaired and/or replaced.

## PACKING MATERIALS

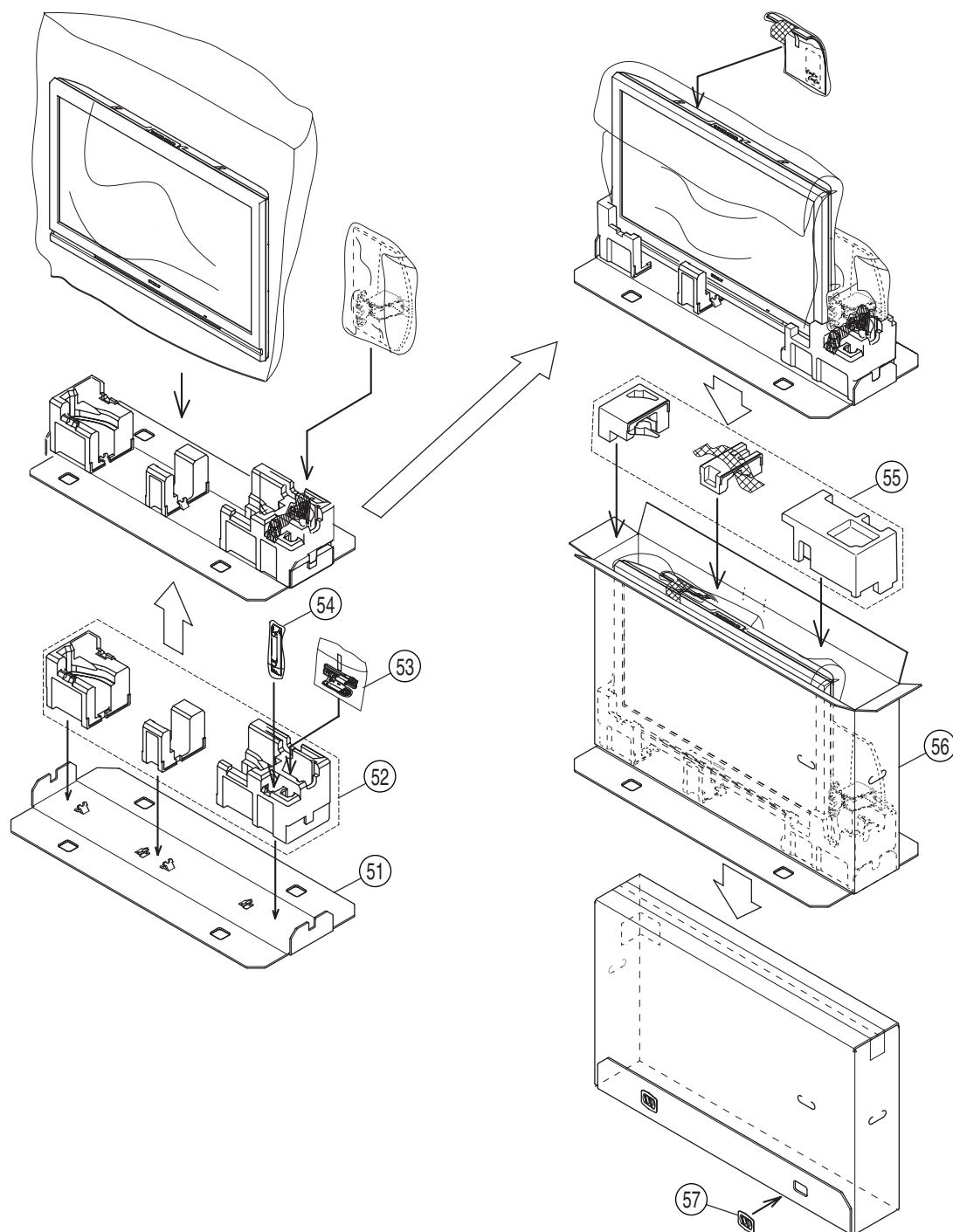
### (1) KDL-40Z4500



REF. No.	PART No.	DESCRIPTION	MARK
1	* 4-127-258-01	CUSHION LOWER	
2	* 4-127-257-01	CUSHION UPPER	
3	* 4-127-231-02	INDIVIDUAL CARTON	
4	1-480-911-12	REMOTE COMMANDER (RM-SD001)	
5	△ 1-835-188-11	POWER-SUPPLY CORD	

REF. No.	PART No.	DESCRIPTION	MARK
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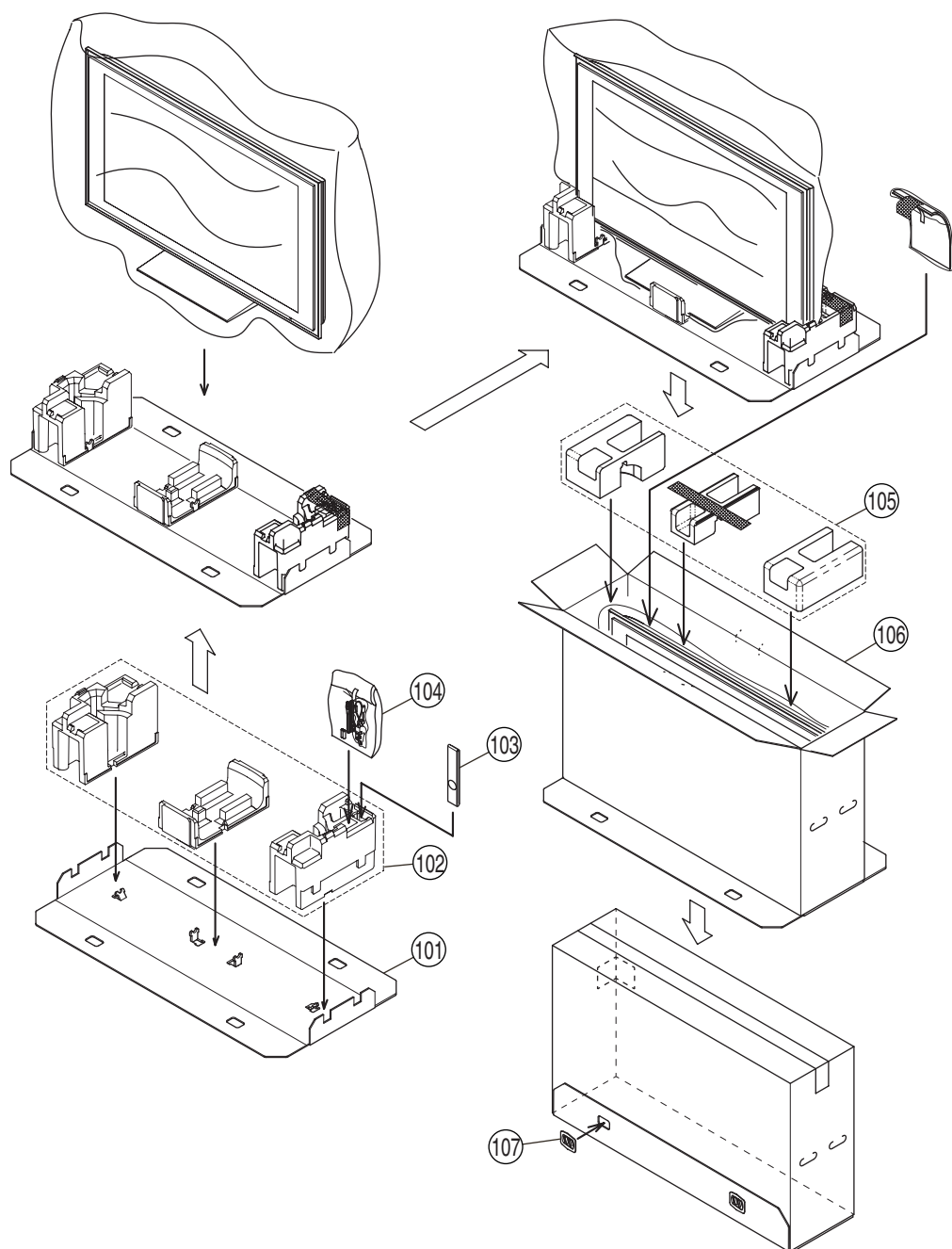
## (2) KDL-46Z4500



REF. No.	PART No.	DESCRIPTION	MARK
51	* 4-127-256-01	TRAY	
52	* 4-127-255-01	CUSHION LOWER	
53	△ 1-835-188-11	POWER-SUPPLY CORD	
54	1-480-911-12	REMOTE COMMANDER (RM-SD001)	
55	* 4-127-254-01	CUSHION UPPER	

REF. No.	PART No.	DESCRIPTION	MARK
56	* 4-127-230-01	INDIVIDUAL CARTON	
57	* 4-081-035-01	JOINT	

### (3) KDL-52Z4500



REF. No.	PART No.	DESCRIPTION	MARK
101	* 4-128-214-01	TRAY	
102	* 4-128-216-01	CUSHION (LOWER)	
103	1-480-911-12	REMOTE COMMANDER (RM-SD001)	
104	△ 1-835-188-11	POWER-SUPPLY CORD	
105	* 4-128-215-01	CUSHION (UPPER)	

REF. No.	PART No.	DESCRIPTION	MARK
106	* 4-128-213-01	INDIVIDUAL CARTON	
107	* 4-081-035-01	JOINT	

