

HISTORY INFORMATION FOR THE FOLLOWING MANUAL:

SERVICE MANUAL

AZ1-K Chassis

ORIGINAL MANUAL ISSUE DATE: 1/2010

Version	Date	Subject
1.0	1/14/2010	No revisions or updates
2.0	4/19/2010	Added Safety Related Warning. Replaced Page 5. Corrected instructions for Accessing Factory Mode. Replaced Page 20.
3.0	7/26/2010	Added information for Business to Business KDL-55EX500 model. Replaced Pages 15 & 18.
4.0	9/28/2010	Updated Disassembly Section 1-7-2. Connectors. Replaced Page 17.
5.0	11/1/2010	Corrected Specification information. Replaced page 2.

LCD Digital Color TV

SONY®

SERVICE MANUAL

AZ1-K Chassis

LCD Digital Color TV

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MODEL LIST

<i>MODEL</i>	<i>COMMANDER</i>	<i>DESTINATION</i>
KDL-55EX500	<i>RM-YD034</i>	<i>CND</i>
KDL-55EX500	<i>RM-YD034</i>	<i>MEXICO</i>
KDL-55EX500	<i>RM-YD034</i>	<i>US</i>
KDL-55EX501	<i>RM-YD034</i>	<i>CND</i>
KDL-55EX501	<i>RM-YD034</i>	<i>US</i>

<i>MODEL</i>	<i>COMMANDER</i>	<i>DESTINATION</i>
KDL-60EX500	<i>RM-YD034</i>	<i>CND</i>
KDL-60EX500	<i>RM-YD034</i>	<i>MEXICO</i>
KDL-60EX500	<i>RM-YD034</i>	<i>US</i>

TABLE OF CONTENTS

Specifications.....	1
Warnings and Cautions	3
Safety-Related Warning.....	5
Safety Check-Out.....	6
Self Diagnosis Functions	8
SEC 1. Disassembly/Part Number Information	12
1-1. Table-Top Stand Assembly Removal	12
1-2. Rear Cover, Under Cover, and Vesa Brackets Removal	13
1-3. Speakers, Speaker Spacers, AC Inlet, and Panel Supports Removal	14
1-4. Bottom Frame, G5E/G8S (Power) Boards, D1 Board, Switch Unit, A Board, Side Jack Bracket, LCD Panel, and HRK Board Removal	15
1-5. Cleaning the LCD Panel	16
1-6. Screw Legend.....	16
1-7. Connectors	17
1-7-1. Connectors (KDL-55EX500/55EX501 Only)	17
1-7-2. Connectors (KDL-60EX500 Only).....	17
1-8. Accessories and Packaging	18
1-9. Miscellaneous.....	18
1-10.Remote commander.....	18
SEC 2. Service Adjustments	19
2-1. Accessing Service Adjustment Mode	19
2-1-1. Accessing Service Mode.....	19
2-1-2. Accessing Factory Mode.....	20

TABLE OF CONTENTS

SEC 3. Diagrams	21
3-1. Circuit Boards Location	21
3-2. Block Diagram	22

SPECIFICATIONS

System	
Television system	NTSC: American TV standard ATSC (8VSB terrestrial): ATSC compliant 8VSB QAM on cable: ANSI/SCTE 07 2000 (Does not include CableCARD functionality)
Channel coverage	Analog terrestrial: 2 - 69 / Digital terrestrial: 2 - 69 Analog Cable: 1 - 135 / Digital Cable: 1 - 135
Panel system	LCD (Liquid Crystal Display) Panel
Speaker output	10 W + 10 W
Input/Output jacks	
CABLE/ANTENNA	75-ohm external terminal for RF inputs
VIDEO IN 1/2	VIDEO: 1 Vp-p, 75 ohms unbalanced, sync negative AUDIO: 500 mVrms (Typical) / Impedance: 47 kilohms
COMPONENT IN 1/2	YPbPr (Component Video): Y: 1.0 Vp-p, 75 ohms unbalanced, sync negative / PB: 0.7 Vp-p, 75 ohms PR: 0.7 Vp-p, 75 ohms / Signal format: 480i, 480p, 720p, 1080i, 1080p AUDIO: 500 mVrms (Typical) / Impedance: 47 kilohms
HDMI IN 1/2/3/4	HDMI: Video: 480i, 480p, 720p, 1080i, 1080p, 1080/24p Audio: Two channel linear PCM 32, 44.1 and 48 kHz, 16, 20 and 24bits, Dolby Digital
AUDIO OUT	500 mVrms (typical)
DIGITAL AUDIO OUT (OPTICAL)	PCM/Dolby Digital optical signal
PC IN	D-sub 15-pin, analog RGB, 0.7 Vp-p, 75 ohms, positive
PC/HDMI IN 1 AUDIO INPUT	Stereo mini jack, 500 mVrms, (Typical) / Impedance: 47 kilohms

Licensing Information

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HDMI, the HDMI logo and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing, LLC.


Ferguson Patent Properties, LLC:

U.S. Patent No. 5,717,422

U.S. Patent No. 6,816,141

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“PlayStation” is a registered trademark and “PS3” is a trademark of Sony Computer Entertainment Inc.



Your BRAVIA TV is ENERGY STAR® qualified in the “Home” mode. It meets strict energy efficiency guidelines set by the U.S.

Environmental Protection Agency and Department of Energy.

ENERGY STAR is a joint program of these government agencies, designed to promote energy efficient products and practices. Changes to certain features, settings, and functionalities of this TV (i.e. Picture/Sound, Power Savings) can increase or change the power consumption. Depending upon such changed settings, the power consumption may exceed the limits required for the ENERGY STAR qualification in the “Home” mode.



SPECIFICATIONS

Model Name KDL-	60EX500	55EX500 55EX501
Power and others		
Power Requirement	110-240 V AC, 50/60 Hz (USA/Canada 120 V AC, 60 Hz)	
Power Consumption in use	425 W	315 W
in standby	Less than 0.23 W with 120 V AC and with 240 V AC less than 0.6 W	Less than 0.23 W with 120 V AC and with 240 V AC less than 0.4 W
Screen Size (inches measured diagonally)	60	54.6 (55 class)
Display Resolution	1,920 dots (horizontal) x 1,080 lines (vertical)	
Speaker/Full Range (2)	mm in 45 x 120 (1 ^{13/16} x 4 ^{3/4}) with speaker box	45 x 200 (1 ^{13/16} x 7 ^{7/8})
Dimensions		
with stand mm in	1,455 x 910 x 386 mm 57 ^{3/8} x 35 ^{7/8} x 15 ^{1/4} in	1,324 x 832 x 350 mm 52 ^{1/4} x 32 ^{7/8} x 13 ^{7/8} in
without stand mm in	1,455 x 873 x 119 mm 57 ^{3/8} x 34 ^{3/8} x 4 ^{3/4} in	1,324 x 795 x 105 mm 52 ^{1/4} x 31 ^{3/8} x 4 ^{1/8} in
wall-mount hole pattern (mm)	400 x 300	
wall-mount screw size (mm)	M6 x 8-12 mm	
Mass		
with stand		
kg	43.0 kg	30.7 kg
lbs	94.8 lbs	67.7 lbs
without stand		
kg	36.5 kg	26.7 kg
lbs	80.4 lbs	58.9 lbs
Supplied Accessories	Remote Control RM-YD034(1)/Size AAA Batteries(2)/Operating Instructions(1)/Quick Setup Guide(1)/ Warranty Card(1)/Safety and Regulatory Booklet(1)/ Software License(1)/Stand Installation Guide(1) (Except KDL-60EX500)	
Common to all Models		
Individual Models	AC Power Cord(1)	Table-Top Stand(1 set)/ AC Power Cord(1) Screw(4)
Optional Accessories	Connecting Cables/Support Belt Kit/Wall-Mount Bracket: SU-WL500	

* Optional Accessories availability depends on its stock.

* Design and specifications are subject to change without notice.

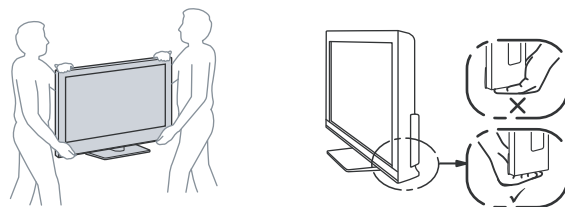
WARNINGS AND CAUTIONS

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.

CARRYING THE TV

- Carry the TV with the adequate number of people; larger size TVs require two or more people.
- Correct hand placement while carrying the TV is very important for safety and to avoid damage.




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!!

Components identified by shading and  mark on the exploded views are critical for safe operation. Replace all components with Sony parts whose part numbers appear as shown in this manual or in supplements published by Sony. It is essential that all critical parts be replaced only with the part number specified in this manual to prevent electric shock, fire, or other hazard. Circuit adjustments that are critical for safe operation are identified in this manual. Follow these procedures whenever critical components are replaced or improper operation is suspected.

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

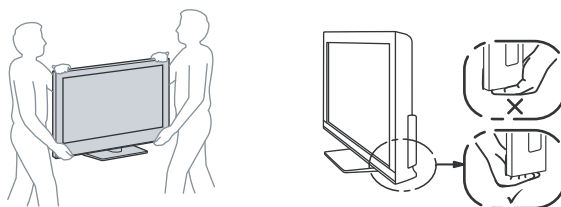
WARNING AND CAUTIONS

ATTENTION!!

Ces instructions de service sont à l'usage du personnel de service qualifié seulement. Pour prévenir le risque de choc électrique, ne pas faire l'entretien autre que celui contenu dans le Mode d'emploi à moins que vous soyez qualifié faire ainsi.

POUR TRANSPORTER LE TÉLÉVISEUR

- Transportez le téléviseur avec le nombre de personnes approprié ; un téléviseur de grande taille doit être transporté par au moins deux personnes.
- Lors du transport du téléviseur, l'emplacement des mains est très important pour votre sécurité, ainsi que pour éviter de causer des dommages.



ALERTE!!

Afin d'éviter tout risque d'électrocution provenant d'un châssis sous tension, un transformateur d'isolement doit être utilisé lors de tout dépannage. Le châssis de ce récepteur est directement raccordé à l'alimentation du secteur.

⚠ ATTENTION AUX COMPOSANTS RELATIFS A LA SECURITE!!

Les composants identifiés par une trame et par une marque ⚠ sur les schémas de principe, les vues explosées et les listes de pièces sont d'une importance critique pour la sécurité du fonctionnement. Ne les remplacer que par des composants Sony dont le numéro de pièce est indiqué dans le présent manuel ou dans des suppléments publiés par Sony. Les réglages de circuit dont l'importance est critique pour la sécurité du fonctionnement sont identifiés dans le présent manuel. Suivre ces procédures lors de chaque remplacement de composants critiques, ou lorsqu'un mauvais fonctionnement suspecte.

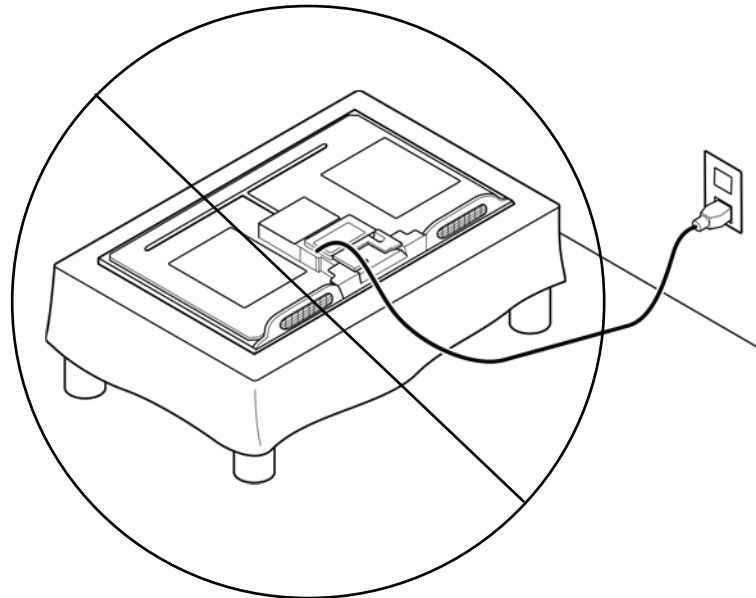
SAFETY-RELATED WARNING

USE CAUTION WHEN HANDLING THE LCD PANEL

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

When installing the LCD panel on a 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 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).
- 10) During the repair, DO NOT leave the Power On for more than 1 hour while the TV is face down on a cloth.



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.

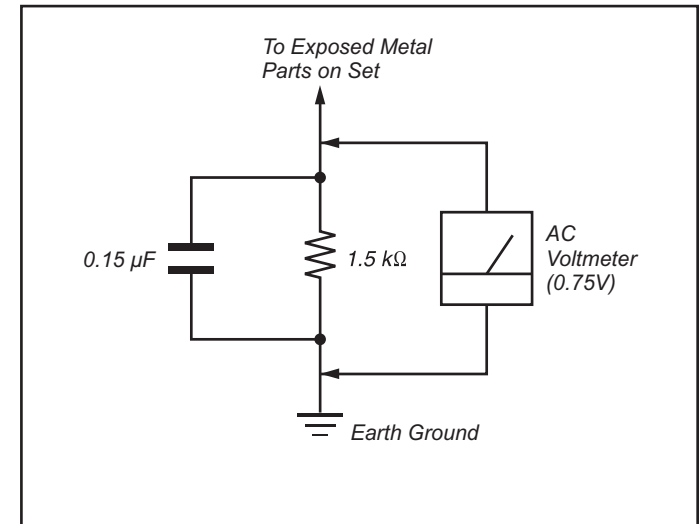


Figure A. Using an AC voltmeter to check AC leakage.

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).

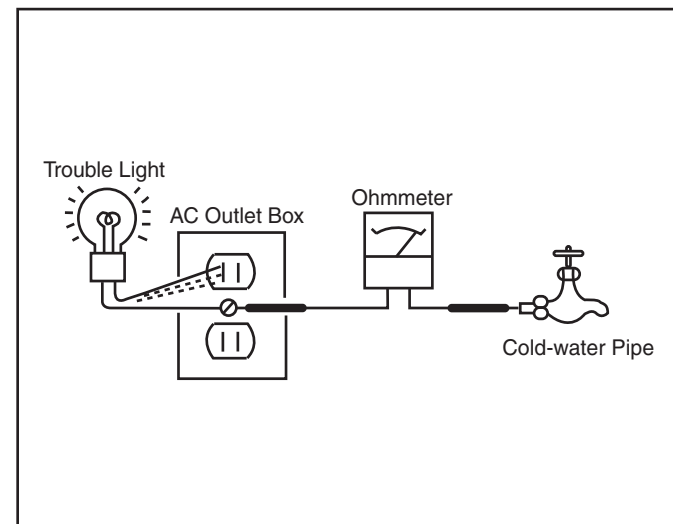


Figure B. Checking for earth ground.

SELF DIAGNOSIS FUNCTIONS



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

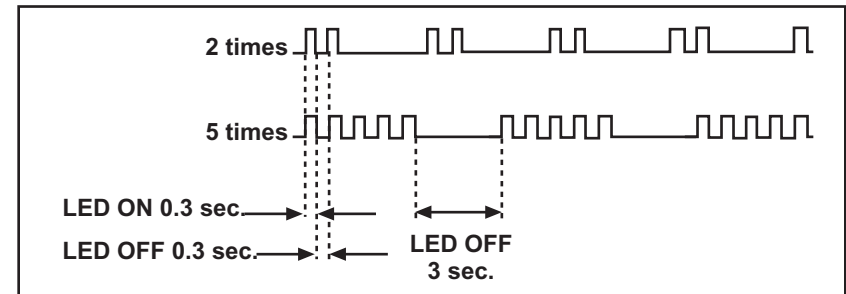
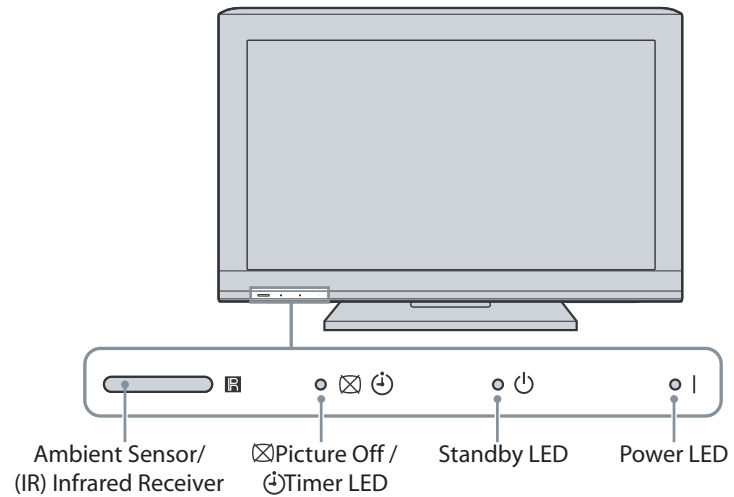
When an error occurs, the STANDBY LED will flash a set number of times to indicate the possible cause of the problem. If there is more than one error, the LED will identify the first of the problem areas. Result for all of the following diagnostic items are displayed on screen.

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

Diagnostic Item Description	Number of times Standby LED blinks	Possible Location
Main Power Error	2	G5E (Power) Board (KDL-55EX500/55EX501 Only) G8S (Power) Board (KDL-60EX500 Only)
Audio Error	3	A (Main) Board
Balancer	4	LCD Panel
TCON Error	5	LCD Panel TCON Control MT Board
HFR Error	5	LCD Panel
Backlight Error	6	LCD Panel
Temperature Error	7	A (Main) Board

SELF DIAGNOSIS FUNCTIONS

STANDBY LED FLASH COUNT



SELF DIAGNOSIS FUNCTIONS

VIEWING THE SELF CHECK DIAGNOSTIC LIST

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 a failure for confirmation on the Self Check diagnostic screen:

1. TV must be in standby mode. (Power off).
2. Press the following buttons on the Remote Commander within a second of each other:

DISPLAY → Channel **5** → Volume **-** → **POWER**.

↑ * NOTE: This differs from accessing Service Adjustments Mode (Volume +)

SELF CHECK			
Back		<<	
002	MAIN_POWE	001	← 001 indicates an error was detected
003	AUD_PORT	000	← 000 indicates no error was detected
003	DC_ALERT	000	
004	BALANCER	000	
005	TCON_ERR	000	
005	HFR_ERR	000	
005	P_ID_ERR	000	
005	PANEL_POWE	000	
006	BACKLITE	000	
007	TEMP_ERR	000	
00000	00010	00000	[Menu] Exit
↑	↑	↑	
Total Operation Time by Hour (max 99999)	Boot Count (max 99999)	Panel Operation Time by Hour (max 99999)	

SELF DIAGNOSIS FUNCTIONS

CLEARING THE SELF CHECK DIAGNOSTIC LIST

Since the diagnostic results displayed on the screen are not automatically cleared, always check the self-diagnostic screen after you have completed the repairs to be sure you have cleared the result display to "0".

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

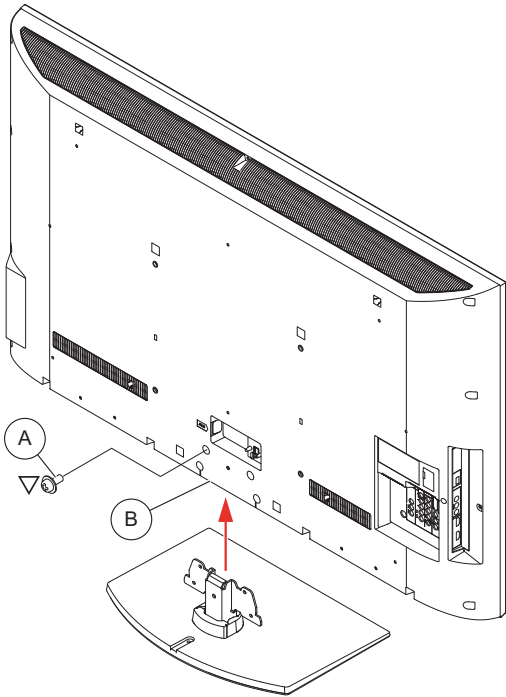
EXITING THE SELF CHECK DIAGNOSTIC SCREEN

1. 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.

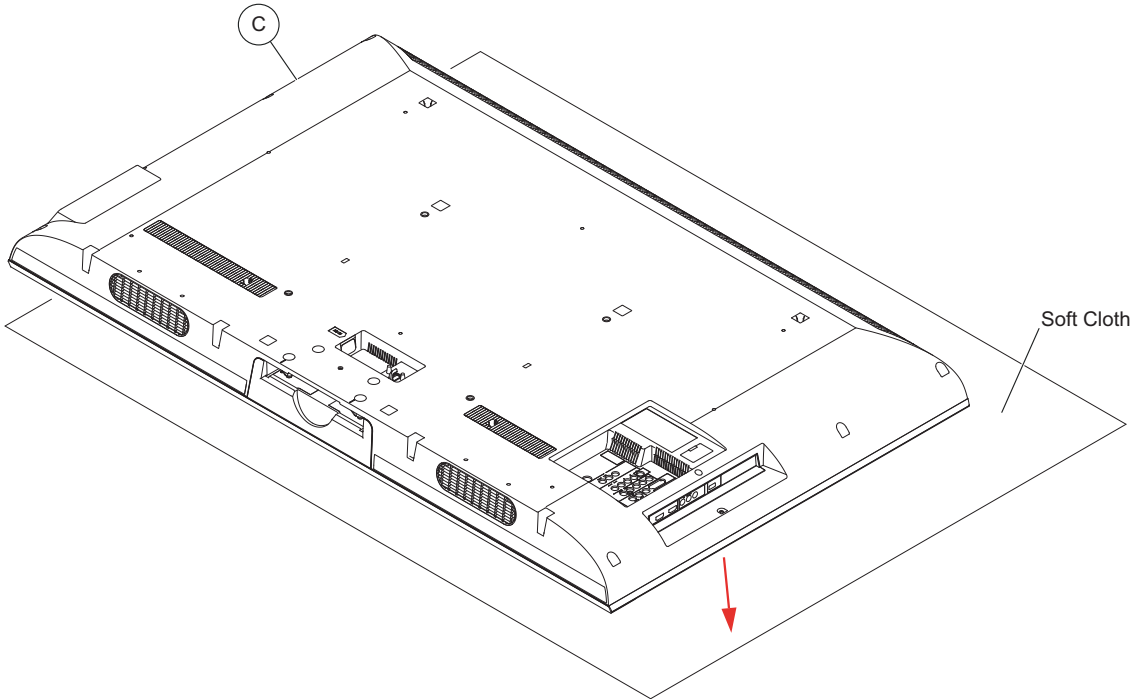
SEC 1. DISASSEMBLY/PART NUMBER INFORMATION

1-1. TABLE-TOP STAND ASSEMBLY REMOVAL

- A Remove 4 screws from Table-Top Stand Assembly
- B Lift up TV set to detach from Table-Top Stand Assembly




- C Gently place the TV set face down onto a soft cloth





Components not identified by a part number or description are not stocked because they are seldom required for routine service.

The component parts of an assembly are indicated by the reference numbers in the far right column of the parts list and within the dotted lines of the diagram.

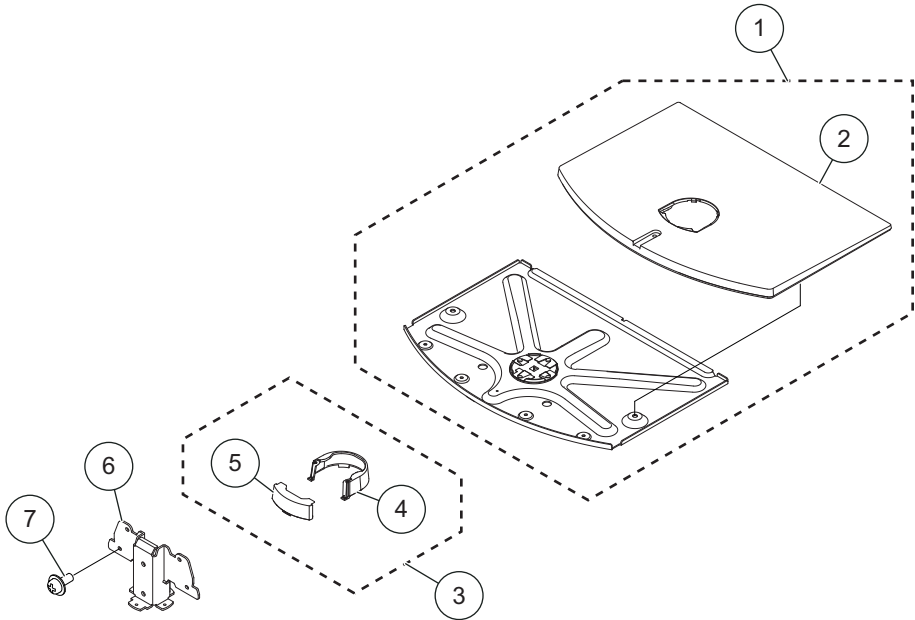
* Items marked with an asterisk are not stocked since they are seldom required for routine service. Expect some delay when ordering these components.


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

NOTE: Les composants identifiés par un trame et une marque  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

NOTE: The components identified by a red outline and a  mark contain confidential information. Specific instructions must be adhered to whenever these components are repaired and/or replaced. See Appendix A: Encryption Key Components in the back of this manual.

(Check the [Sony Electronics Service Information](#) website for any additional service related issues for this model.)

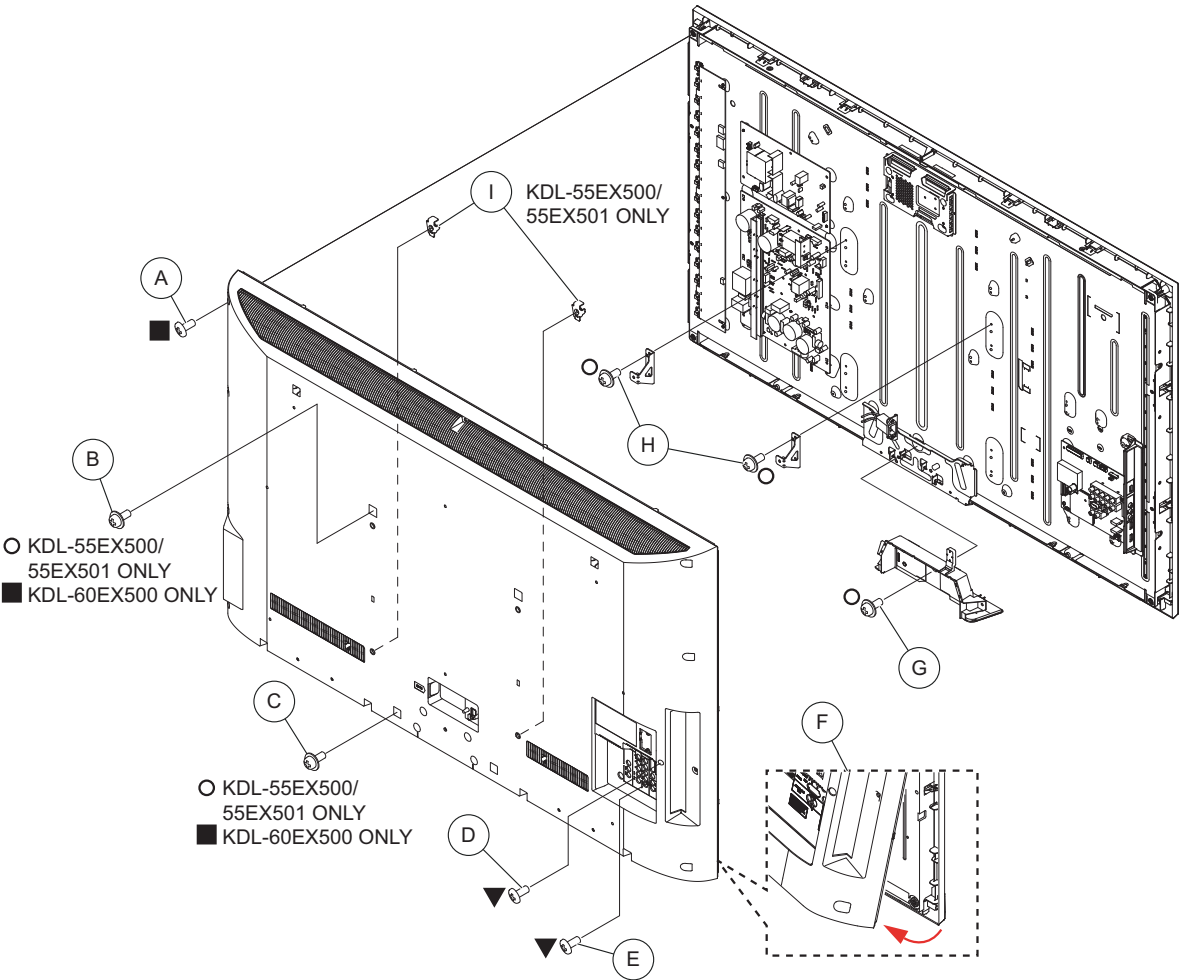


REF. NO.	PART NO.	DESCRIPTION	[ASSEMBLY INCLUDES]	REF. NO.	PART NO.	DESCRIPTION	[ASSEMBLY INCLUDES]
1	X-2514-983-1	BASE (LL3) ASSEMBLY (KDL-55EX500/55EX501 ONLY)	[2]	5	4-158-403-01	COVER, NECK (LL3 REAR) (KDL-55EX500/55EX501 ONLY)	
1	X-2514-984-1	BASE (LLL3) ASSEMBLY (KDL-60EX500 ONLY)	[2]	5	4-158-404-01	COVER, NECK (LLL3 REAR) (KDL-60EX500 ONLY)	
2	4-158-387-01	COVER, STAND (LL3) (KDL-55EX500/55EX501 ONLY)		6	4-158-351-01	NECK (LL3) (KDL-55EX500/55EX501 ONLY)	
2	4-158-388-01	COVER, STAND (LLL3) (KDL-60EX500 ONLY)		6	4-158-352-01	NECK (LLL3) (KDL-60EX500 ONLY)	
3	X-2546-542-1	COVER (LL3) ASSEMBLY (KDL-55EX500/55EX501 ONLY)	[4-5]	7	2-580-608-01	SCREW, +PSW M5X16 (SCREWS TO ATTACH TABLE-TOP STAND TO LCD TV) For product protection and safety reasons, Sony strongly recommends that you use the screws provided with the TV CAUTION: These screws cannot be used to secure the TV to the Wall Mount Brackets	
4	4-158-397-01	COVER, NECK (LL3 FRONT) (KDL-55EX500/55EX501 ONLY)			2-580-608-01	SCREW, +PSW M5X16	
4	4-158-398-01	COVER, NECK (LLL3 FRONT) (KDL-60EX500 ONLY)					

DISASSEMBLY/PART NUMBER INFORMATION

1-2. REAR COVER, UNDER COVER, AND VESA BRACKETS REMOVAL

- Ⓐ Remove screws from Rear Cover
 - 13 from KDL-55EX500/55EX501 ONLY
 - 12 from KDL-60EX500 ONLY
- Ⓑ Remove 2 screws from Rear Cover Top-Center
- Ⓒ Remove 2 screws from Rear Cover Bottom-Center
- Ⓓ Remove 1 screw from Side Jack position
- Ⓔ Remove 1 screw from Terminal position
- Ⓕ Lift up Rear Cover from bottom to remove from Bezel Assembly
- Ⓖ Remove 1 screw from Under Cover Position and lift up Under Cover to detach from Bottom Frame
- Ⓗ Remove screws to detach Vesa Brackets from Panel
 - 2 from KDL-55EX500/55EX501 ONLY
 - 4 from KDL-60EX500 ONLY
- Ⓘ Lift up Vesa Bracket (S) to detach from Rear Cover (KDL-55EX500/55EX501 ONLY)

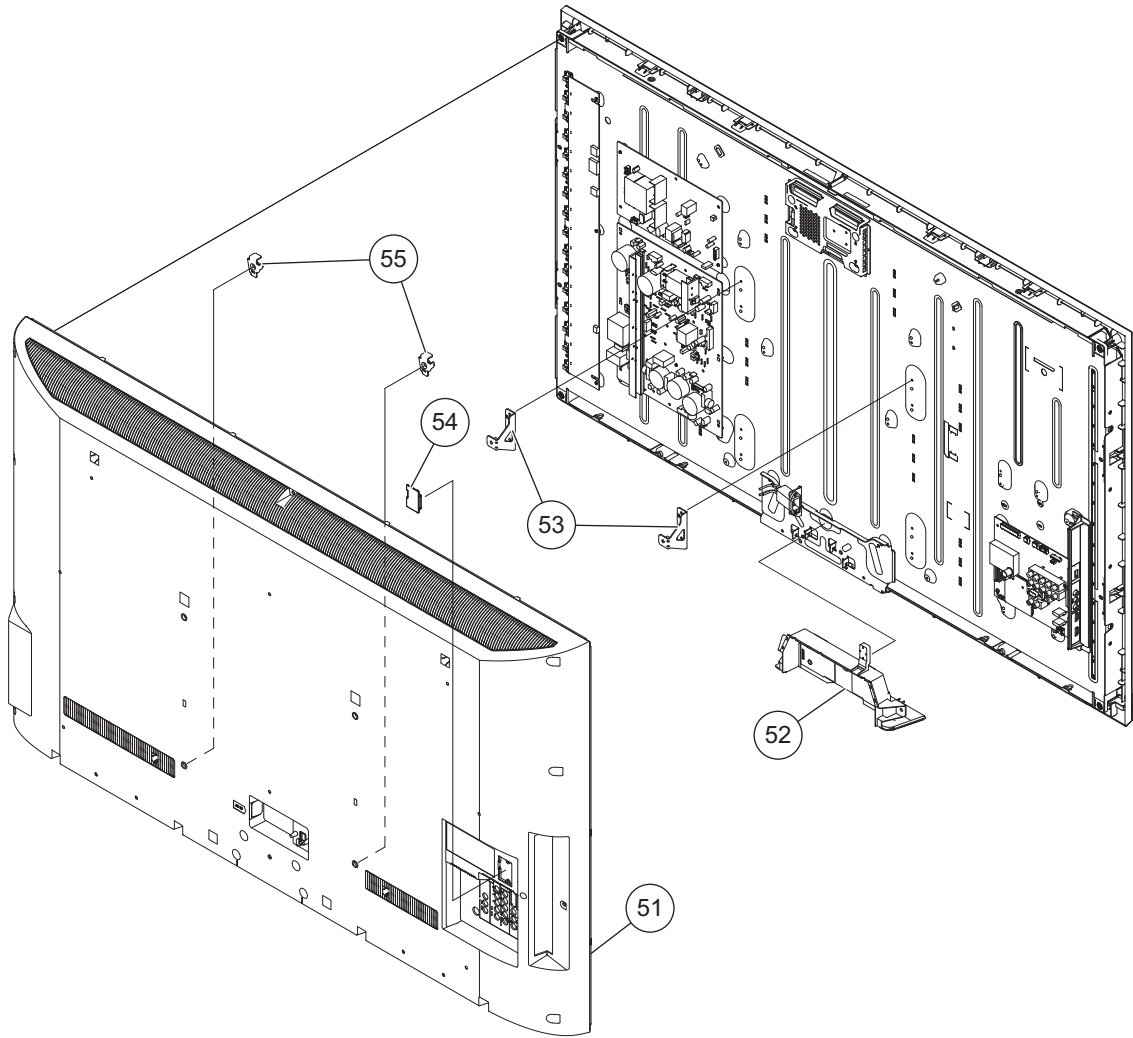


NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifiés par un trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

NOTE: The components identified by a red outline and a 🔒 mark contain confidential information. Specific instructions must be adhered to whenever these components are repaired and/or replaced. See Appendix A: Encryption Key Components in the back of this manual.

(Check the [Sony Electronics Service Information](#) website for any additional service related issues for this model.)

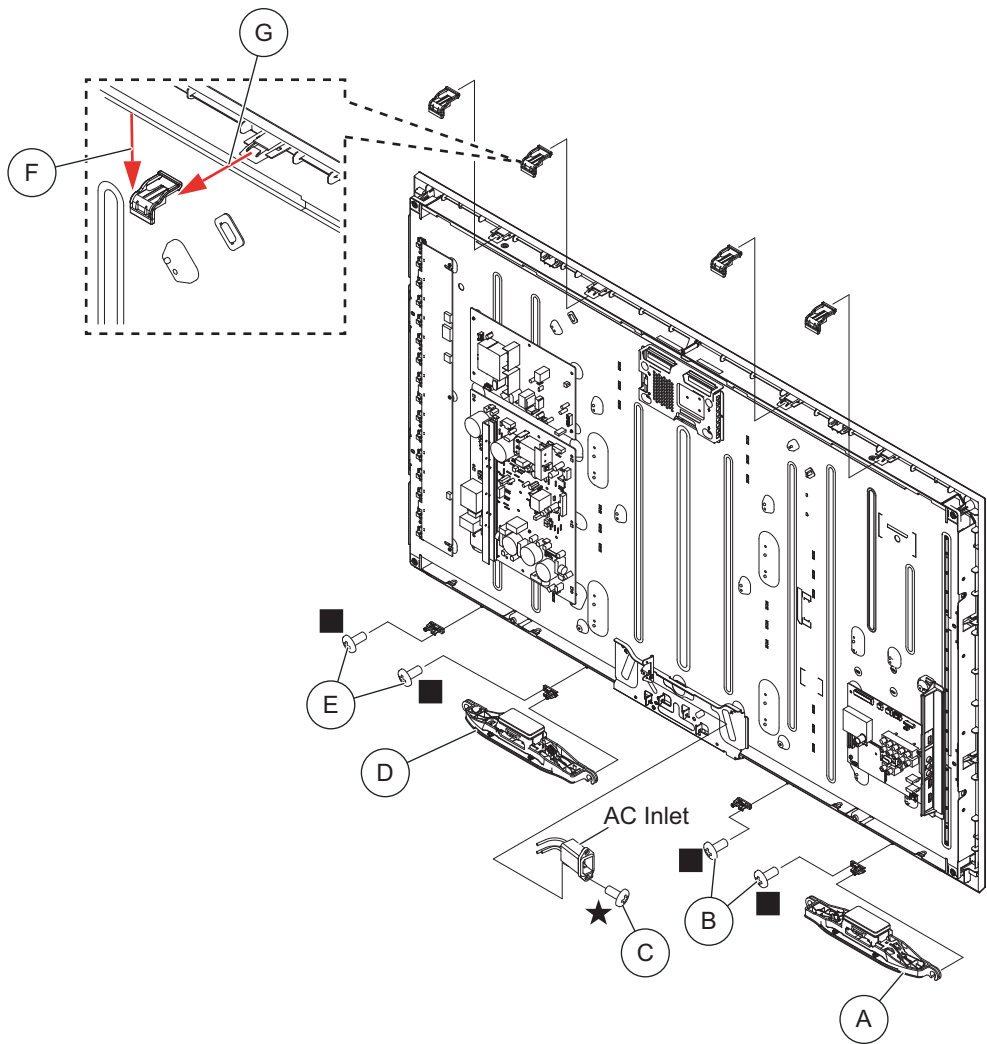


REF. NO.	PART NO.	DESCRIPTION	[ASSEMBLY INCLUDES]	REF. NO.	PART NO.	DESCRIPTION	[ASSEMBLY INCLUDES]
51	4-166-855-01	REAR COVER (55) (KDL-55EX500/55EX501 ONLY)		53	4-168-273-01	BRACKET,VESA(XL) (KDL-55EX500/55EX501 ONLY)	
51	4-156-223-01	REAR COVER (60) (KDL-60EX500 ONLY)		53	4-156-947-01	BRACKET, VESA (XXL) (KDL-60EX500 ONLY)	
52	4-157-979-02	COVER, UNDER (55) (KDL-55EX500/55EX501 ONLY)		54	3-297-324-02	COVER, ECS	
52	4-157-980-01	COVER, UNDER (60) (KDL-60EX500 ONLY)		55	4-168-272-01	BRACKET,VESA(S) (KDL-55EX500/55EX501 ONLY)	
				■	2-580-640-01	SCREW, +BVTP 4X16 TYPE2 IT-3	
				▼	7-685-648-79	SCREW, +BVTP 3X12 TYPE2 IT-3	
				○	4-159-298-01	SCREW, +PSW M4X10	

DISASSEMBLY/PART NUMBER INFORMATION

1-3. SPEAKERS, SPEAKER SPACERS, AC INLET, AND PANEL SUPPORTS REMOVAL

- Ⓐ Lift up left-side Loudspeaker to remove from Bezel Assembly (KDL-55EX500/55EX501 ONLY)
Lift up left-side Speaker Box Assembly to remove from Bezel Assembly (KDL-60EX500 ONLY)
- Ⓑ Remove 2 screws from left-side Speaker Spacers to detach from Bezel Assembly
- Ⓒ Remove screws from AC Inlet
1 to detach from AC Inlet Bracket (KDL-55EX500/55EX501 ONLY)
1 to detach from Bottom Frame (KDL-60EX500 ONLY)
- Ⓓ Lift up right-side Loudspeaker to remove from Bezel Assembly (KDL-55EX500/55EX501 ONLY)
Lift up right-side Speaker Box Assembly to remove from Bezel Assembly (KDL-60EX500 ONLY)
- Ⓔ Remove 2 screws from right-side Speaker Spacers to detach from Bezel Assembly
- Ⓕ Press down on Panel Support
- Ⓖ Slide out Panel Support to remove from Bezel Assembly

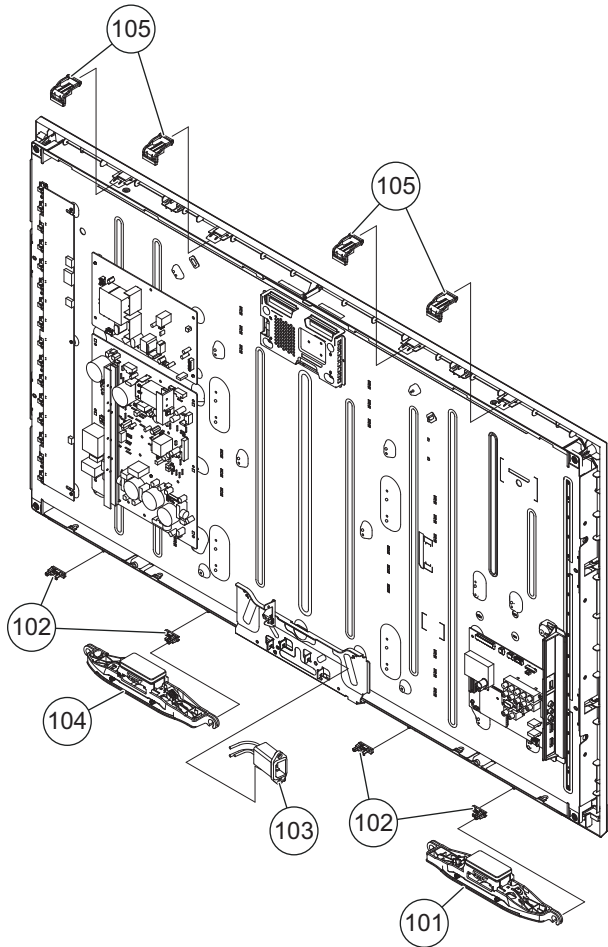


NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifiés par un trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

NOTE: The components identified by a red outline and a Ⓜ mark contain confidential information. Specific instructions must be adhered to whenever these components are repaired and/or replaced. See Appendix A: Encryption Key Components in the back of this manual.

(Check the [Sony Electronics Service Information](#) website for any additional service related issues for this model.)



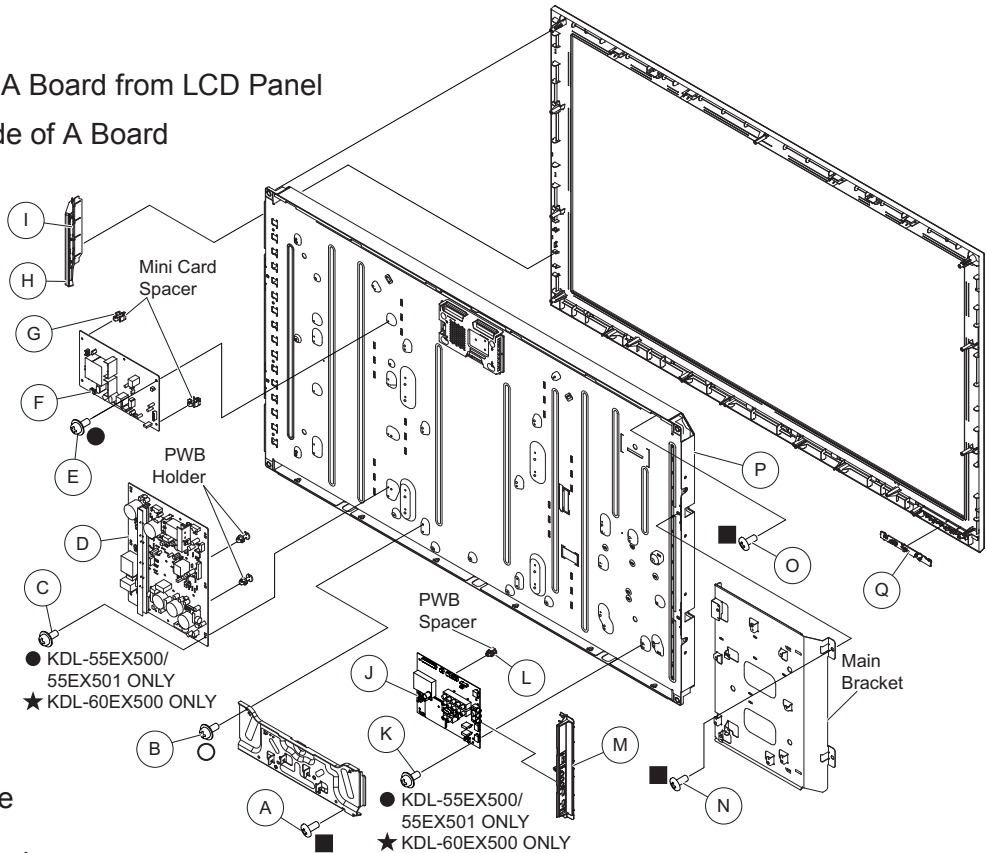
REF. NO.	PART NO.	DESCRIPTION	[ASSEMBLY INCLUDES]	REF. NO.	PART NO.	DESCRIPTION	[ASSEMBLY INCLUDES]
101	1-858-354-11	LOUDSPEAKER LEFT (KDL-55EX500/55EX501 ONLY)		104	1-858-354-21	LOUDSPEAKER RIGHT (KDL-55EX500/55EX501 ONLY)	
101	1-858-355-11	SP BOX ASSEMBLY LEFT (KDL-60EX500 ONLY)		104	1-858-355-21	SP BOX ASSEMBLY RIGHT (KDL-60EX500 ONLY)	
102	4-166-135-01	SPACER, SPEAKER (KDL-55EX500/55EX501 ONLY)		105	NA	SUPPORT, PANEL FOR ALL PANEL SUPPORT PART NUMBER INFORMATION REFER TO THE LCD PANELS SERVICE MANUAL	
102	4-166-135-11	SPACER, SPEAKER (KDL-60EX500 ONLY)					
⚠ 103	1-842-009-11	AC INLET FILTER		■	2-580-640-01	SCREW, +BVTP 4X16 TYPE2 IT-3	
				★	2-580-629-01	SCREW, +BVST 3X8	

DISASSEMBLY/PART NUMBER INFORMATION

1-4. BOTTOM FRAME, G5E/G8S (POWER) BOARDS, D1 BOARD, SWITCH UNIT, A BOARD, SIDE JACK BRACKET, LCD PANEL, AND HRK BOARD REMOVAL

- Ⓐ Remove 2 screws from Bottom Frame to detach from Bezel Assembly
- Ⓑ Remove screws from Bottom Frame to detach from LCD Panel
2 from KDL-55EX500/55EX501 ONLY
6 from KDL-60EX500 ONLY
- Ⓒ Remove 4 screws from G5E/G8S (Power) Boards
- Ⓓ Disconnect 5 connectors from G5E/G8S (Power) Boards
- Ⓔ Remove 2 screws from D1 Board (KDL-55EX500/55EX501 ONLY)
- Ⓕ Disconnect 5 connectors from D1 Board (KDL-55EX500/55EX501 ONLY)
- Ⓖ Remove 2 Mini Card Spacers to detach D1 Board from LCD Panel (KDL-55EX500/55EX501 ONLY)
- Ⓗ Lift up Switch Unit to remove from Bezel
- Ⓘ Disconnect 1 connector from Switch Unit
- Ⓙ Disconnect 6 connectors from A Board
- Ⓚ Remove 4 screws from A Board
- Ⓛ Remove 1 PWB Spacer to detach A Board from LCD Panel
- Ⓜ Slide Side Jack Bracket to right side of A Board to detach from position
- Ⓝ Remove 2 screws from Main Bracket to detach from Bezel Assembly (KDL-60EX500 ONLY)
- Ⓞ Remove 3 screws from Panel to detach from Bezel Assembly (KDL-60EX500 ONLY)
- Ⓟ Carefully Lift up Panel to remove from Bezel Assembly
- Ⓠ Disconnect 1 connector from HRK Board and release from LED Guide

NOTE: The Mini Card Spacers, PWB Spacer, and PWB Holders are not included with the Boards and must be replaced when replacing the Boards. The G Frame and Main Frame are not included with the Panel and must be replaced when replacing the Panel.

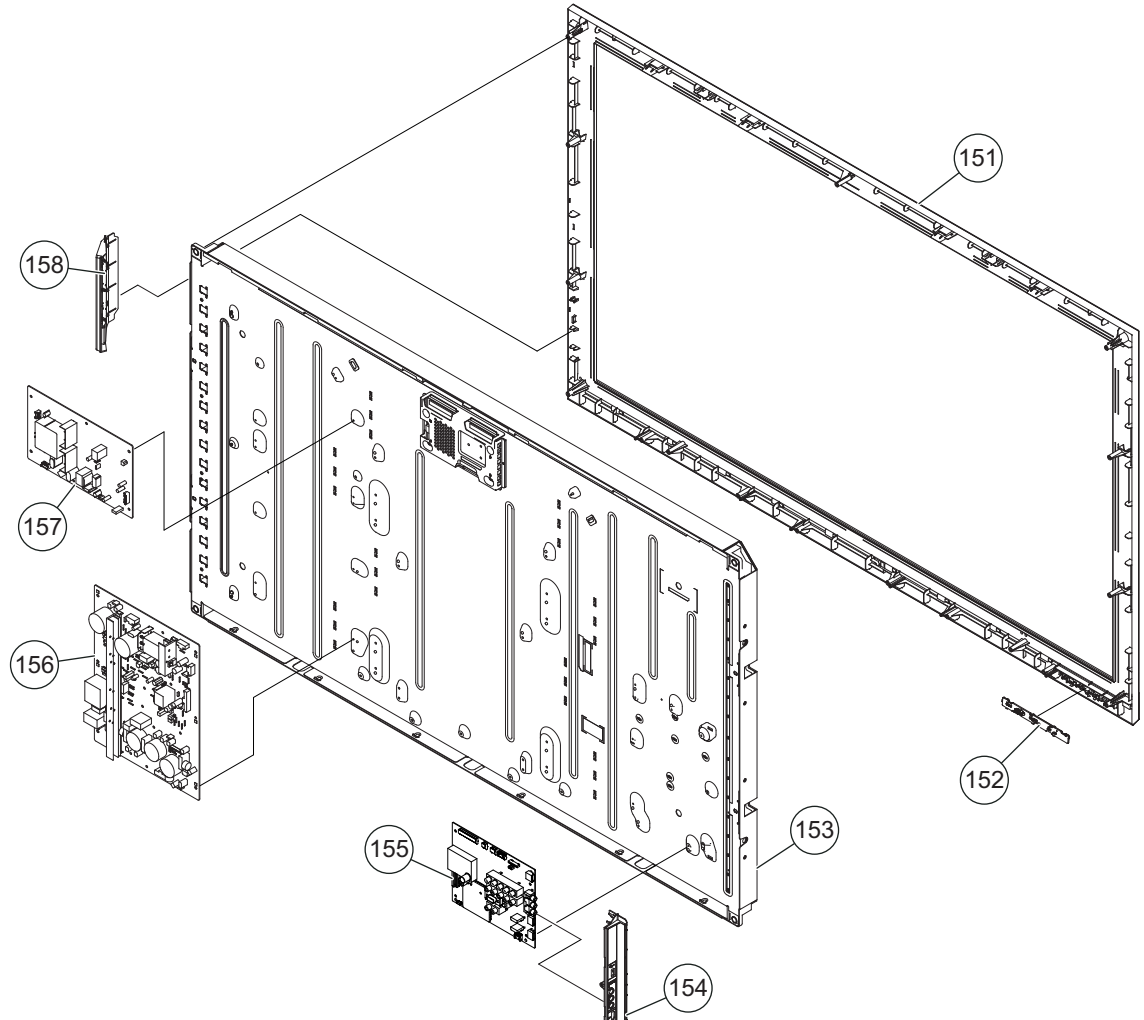


NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifiés par un trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

NOTE: The components identified by a red outline and a 🔒 mark contain confidential information. Specific instructions must be adhered to whenever these components are repaired and/or replaced. See Appendix A: Encryption Key Components in the back of this manual.

(Check the [Sony Electronics Service Information](#) website for any additional service related issues for this model.)



REF. NO.	PART NO.	DESCRIPTION	[ASSEMBLY INCLUDES]	REF. NO.	PART NO.	DESCRIPTION	[ASSEMBLY INCLUDES]
151	X-2546-673-1	BEZEL ASSEMBLY (TR55 GM) (KDL-55EX500 ONLY)		156	1-474-203-11	G5E (POWER) BOARD, COMPLETE (KDL-55EX500/55EX501 ONLY)	
151	X-2546-681-1	BEZEL ASSEMBLY (TR55 B) (KDL-55EX501 ONLY)		156	1-474-207-11	G8S (POWER) BOARD, COMPLETE (KDL-60EX500 ONLY)	
151	X-2546-674-1	BEZEL ASSEMBLY (TR60 GM) (KDL-60EX500 ONLY)		157	1-474-206-11	D1 BOARD, COMPLETE (KDL-55EX500/55EX501 ONLY)	
152	A-1758-163-A	HRK BOARD, MOUNTED		158	1-487-736-11	SWITCH UNIT	
153	NA	LCD PANEL					
		FOR ALL LCD PANEL PART NUMBER INFORMATION REFER TO THE LCD PANELS SERVICE MANUAL					
154	4-166-286-11	BRACKET, SIDE JACK					
155	A-1758-161-A	A BOARD, COMPLETE					
155	A-1787-382-A	A BOARD, COMPLETE (FOR BUSINESS TO BUSINESS MODELS ONLY)					

- 2-580-640-01 SCREW, +BVTP 4X16 TYPE2 IT-3
- 2-580-592-01 SCREW, +PSW M3X8
- 4-159-298-01 SCREW, +PSW M4X10
- ★ 2-580-629-01 SCREW, +BVST 3X8 (KDL-60EX500 ONLY)


1-5. CLEANING THE LCD PANEL


CAUTION: When cleaning the TV, be sure to unplug the power cord to avoid any chance of electric shock.


Clean the cabinet of the TV with a dry soft cloth.

Wipe the LCD screen gently with a soft cloth.

- ◆ Stubborn stains may be removed with a cloth slightly moistened with a solution of mild soap and warm water.
- ◆ If using a chemically pretreated cloth, please follow the instruction provided on the package.
- ◆ Never use strong solvents such as a thinner, alcohol or benzine for cleaning.
- ◆ Periodic vacuuming of the ventilation openings is recommended to ensure to proper ventilation.

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







NOTE: Les composants identifiés per un trame et une marque  sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

NOTE: The components identified by a red outline and a  mark contain confidential information. Specific instructions must be adhered to whenever these components are repaired and/or replaced. See Appendix A: Encryption Key Components in the back of this manual.







(Check the [Sony Electronics Service Information](#) website for any additional service related issues for this model.)

1-6. SCREW LEGEND

KDL-55EX500 / 55EX501

P/N	DESCRIPTION	REMARKS	TOTAL
 2-580-640-01	SCREW, +BVTP 4X16 TYPE2 IT-3	RC(13), BTM FRM to BEZ ASSY(2), SPKR SPACERS to BEZ ASSY(4)	19
 7-685-648-79	SCREW, +BVTP 3X12 TYPE2 IT-3	RC to SIDE JACK(1), RC to TRMNL AREA(1)	2
 2-580-608-01	SCREW, +PSW M5X16	TABLE-TOP STAND(4)	4
 2-580-592-01	SCREW, +PSW M3X8	G5E(4), D1(2), A(4)	10
 4-159-298-01	SCREW, +PSW M4X10	RC TOP-CENTER(2), RC BTM-CENTER(2), UC to BTM FRM(1), BTM FRM to PNL(2), VESA BRKT to PNL(2)	9
 2-580-629-01	SCREW, +BVST 3X8	AC INLET to AC BRKT(1)	1

KDL-60EX500

P/N	DESCRIPTION	REMARKS	TOTAL
 2-580-640-01	SCREW, +BVTP 4X16 TYPE2 IT-3	RC(16), BTM FRM to BEZ ASSY(2), PNL to BEZ ASSY(3), SPKR SPACERS to BEZ ASSY(4)	25
 7-685-648-79	SCREW, +BVTP 3X12 TYPE2 IT-3	RC to SIDE JACK(1), RC to TRMNL AREA(1)	2
 2-580-608-01	SCREW, +PSW M5X16	TABLE-TOP STAND(4)	4
 2-580-592-01	SCREW, +PSW M3X8	MAIN BRKT to PNL(2)	2
 4-159-298-01	SCREW, +PSW M4X10	BTM FRM to PNL(6), UC to BTM FRM(1), VESA BRKT to PNL(2), VESA BRKT to BTM FRM(2)	11
 2-580-629-01	SCREW, +BVST 3X8	G8S(4), A(4), AC INLET to BTM FRM(1)	9

1-7. CONNECTORS

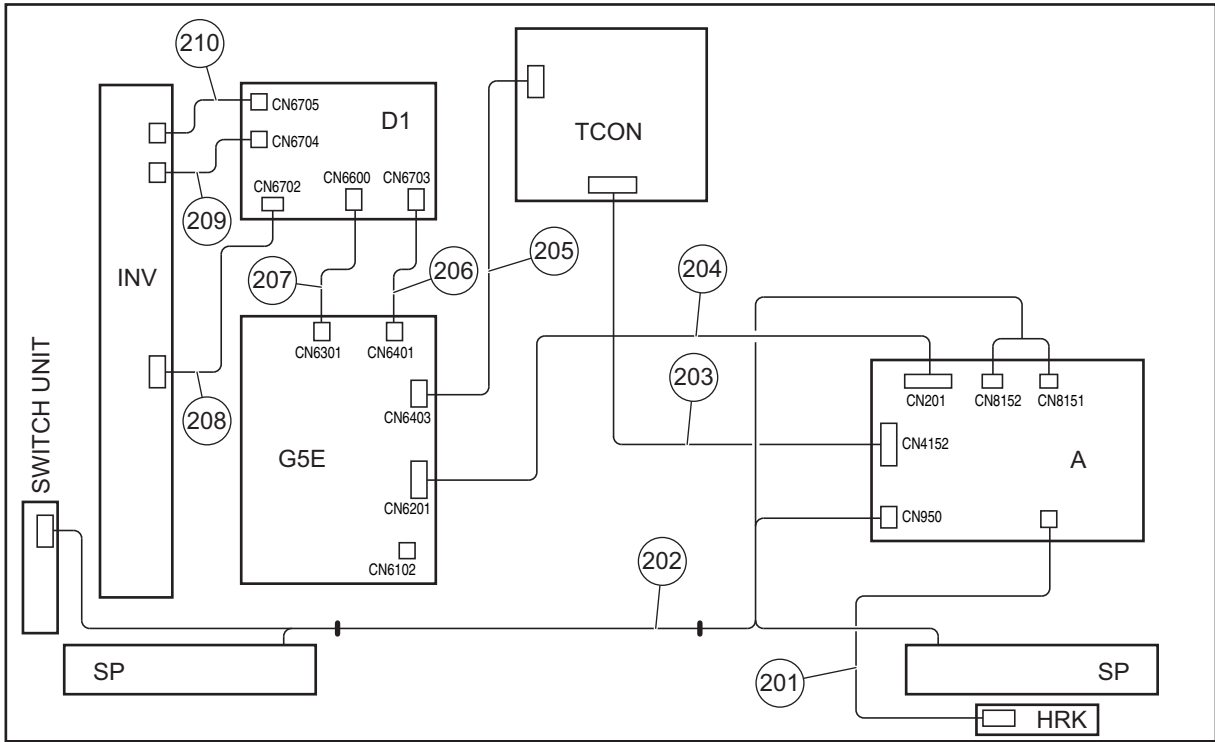
NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifiés par un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

NOTE: The components identified by a red outline and a ⓘ mark contain confidential information. Specific instructions must be adhered to whenever these components are repaired and/or replaced. See Appendix A: Encryption Key Components in the back of this manual.

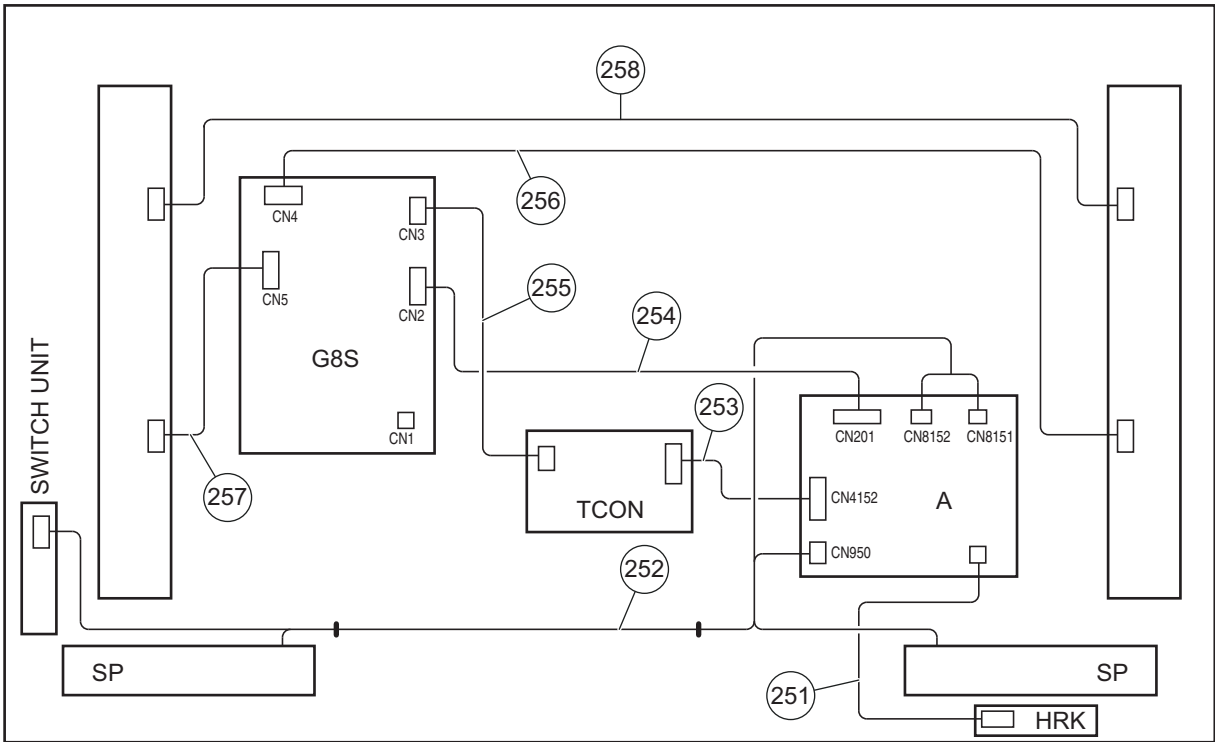
(Check the [Sony Electronics Service Information](#) website for any additional service related issues for this model.)

1-7-1. CONNECTORS (KDL-55EX500/55EX501 ONLY)



REF. NO.	PART NO.	DESCRIPTION	[ASSEMBLY INCLUDES]	REF. NO.	PART NO.	DESCRIPTION	[ASSEMBLY INCLUDES]
* 201	1-910-060-59	CONNECTOR ASSY 12P		* 206	1-910-060-26	CONNECTOR ASSY 7P	
* 202	1-910-060-62	HARNESS ASSY		* 207	1-910-060-24	CONNECTOR ASSY 5P	
203	1-837-720-11	(LVDS) LEAD WIRE WITH CONNECTOR		208	1-836-742-11	CONNECTOR ASSY	
* 204	1-910-060-57	CONNECTOR ASSY 15P		* 209	1-837-324-21	CONNECTOR ASSY	
* 205	1-910-060-25	CONNECTOR ASSY 6P		* 210	1-837-322-21	CONNECTOR ASSY	

1-7-2. CONNECTORS (KDL-60EX500 ONLY)




REF. NO.	PART NO.	DESCRIPTION	[ASSEMBLY INCLUDES]	REF. NO.	PART NO.	DESCRIPTION	[ASSEMBLY INCLUDES]
* 251	1-910-060-64	CONNECTOR ASSY 12P		* 255	1-910-060-31	CONNECTOR ASSY 6P	
* 252	1-910-060-67	HARNESS ASSY		* 256	1-910-060-30	CONNECTOR ASSY 10P	
253	1-837-721-11	(LVDS) LEAD WIRE WITH CONNECTOR		* 257	1-910-060-29	CONNECTOR ASSY 14P	
* 254	1-910-060-63	CONNECTOR ASSY 15P		* 258	N/A	CONNECTOR ASSY	
				NOTE: Connector Assembly is included with the Replacement Panel. DO NOT REMOVE THIS CONNECTOR.			

DISASSEMBLY/PART NUMBER INFORMATION

1-8. ACCESSORIES AND PACKAGING

	A-1763-685-A	ACCESSORY ASSY (KDL-55EX500/60EX500 ONLY)
	3-299-071-03	FLYER, SAFETY
*	4-175-275-11	GUIDE, QUICK SET UP (ENGLISH VERSION)
*	4-175-275-21	GUIDE, QUICK SET UP (FRENCH VERSION)
*	4-175-275-31	GUIDE, QUICK SET UP (SPANISH VERSION)
*	2-639-807-01	JOINT
	4-175-274-12	MANUAL, INSTRUCTION (ENGLISH VERSION)
	4-175-274-22	MANUAL, INSTRUCTION (FRENCH VERSION)
	4-175-274-32	MANUAL, INSTRUCTION (SPANISH VERSION)
*	4-180-032-11	SUPPLEMENT(STAND INSTALLATION) (KDL-55EX500/55EX501 ONLY)

1-9. MISCELLANEOUS

	A-1787-320-A	HOTEL ASSEMBLY
	1-835-143-11	POWER-SUPPLY CORD
	4-635-966-01	SCREW (HEX)
	X-2348-140-3	SUPPORT BELT KIT
	4-170-314-01	SUPPORT PLATE (KDL-60EX500 ONLY)
	7-632-452-24	TAPE (NO.303) 18MMX35M YEL (KDL-55EX500/55EX501 ONLY)

1-10. REMOTE COMMANDER

1-487-830-11	REMOTE COMMANDER (RM-YD034)
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SEC 2. SERVICE ADJUSTMENTS

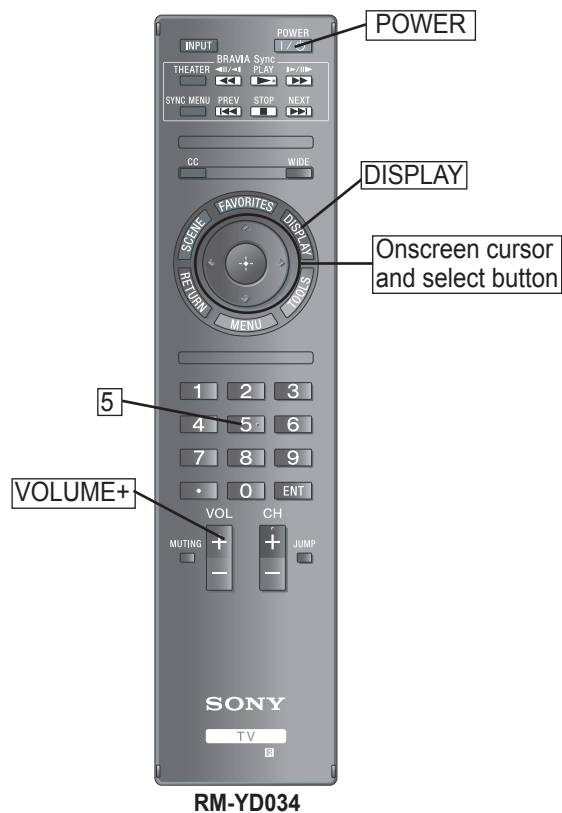
2-1. ACCESSING SERVICE ADJUSTMENT MODE

There are 2 modes that can be accessed for service. The **Service Mode** screen is for informational purposes and will be covered in the training manual for these models. The **Factory Mode** screen, is similar to 2009

2-1-1. ACCESSING SERVICE MODE

1. TV must be in standby mode. (POWER off).
2. Press the following buttons on the Remote Commander within a second of each other:

DISPLAY → Channel **5** → Volume **+** → **POWER**.



RM-YD034

Service Mode			
Sound Adjust...		>>	
Wide Band Tuning		>>	
Range Scan...		>>	
Self daignosis history		>>	
Status Information...		>>	
LVDS Spectrum(%0)	<[20]>
DPMS	<[Off]>
Low of HPD	<[5]>
TVD_MCDONE_CNT	<[20]>
Demo Special		>>	
Bypass AVI Info Detect	<[Off]>
Panel Selection	<[No Define]>
[</>]Set [Menu] Exit			

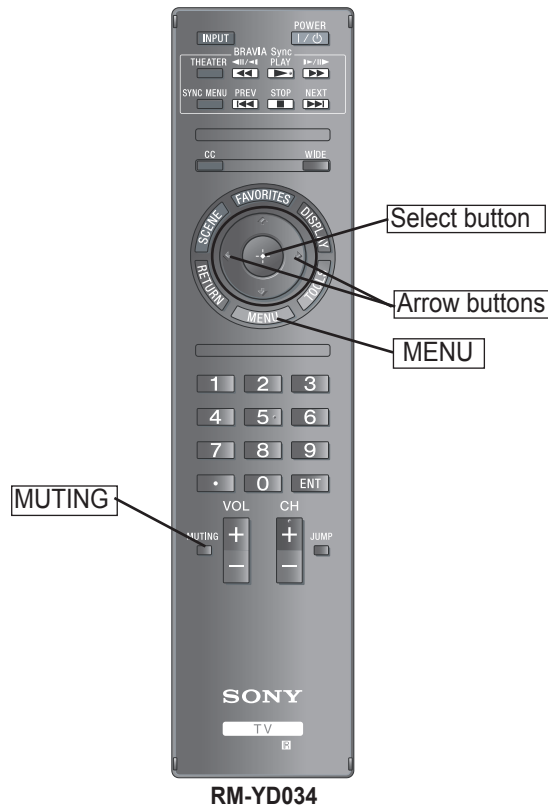
NOTE: The Service Mode information will be covered in the training manual for these models.

3. To exit service mode, turn the POWER off.

SERVICE ADJUSTMENTS

2-1-2. ACCESSING FACTORY MODE

1. TV must be turned ON. (POWER On).
2. Press the following buttons on the Remote Commander within a second of each other:



RM-YD034

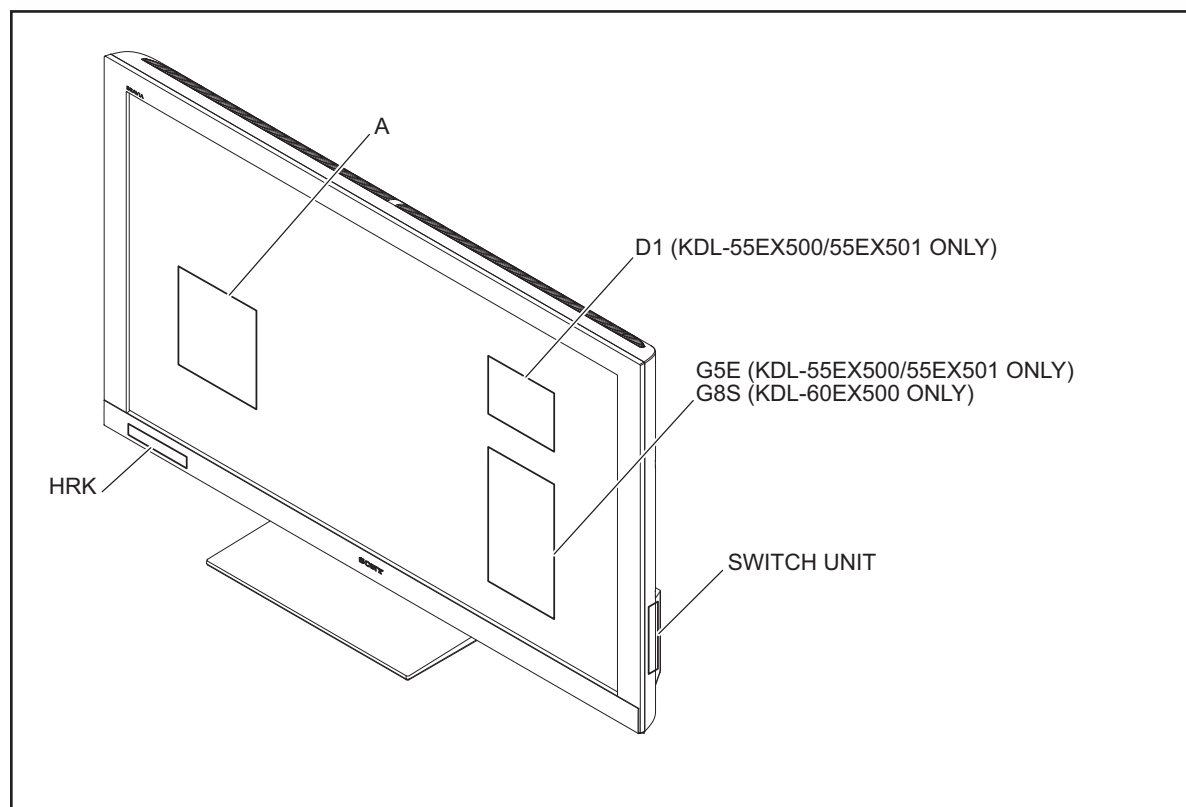
Factory Mode		Off
Input Source	<[Video 1]>	
Aging Mode	<[Off]>	
Internal Pattern	<[Off]>	
EDID WP	<[Protection]>	
Site Air Channels	<[Off]>	
Site Cable Channels	<[Off]>	
White Balance	<[Off]>	
Color Temp	>>	
ADC Calibration	>>	
Factory Reset (limited)	<[Off]>	
Auto Phase	<[Off]>	
Factory Reset (default)	<[Off]>	
System FW	1	
Model Name	KDL-40EX400	
Serial number	See rear or side of TV	
Picture Quality	PQ0.5000	
Audio Quality	AQ1.000	
MCU Version	SM1.00W00AA	
Panel Info	MT001.0000.0000?LT	
EDID Version	79	
[</>]Set [Menu] Exit		

NOTE: The Factory Mode information will be covered in the training manual for these models.

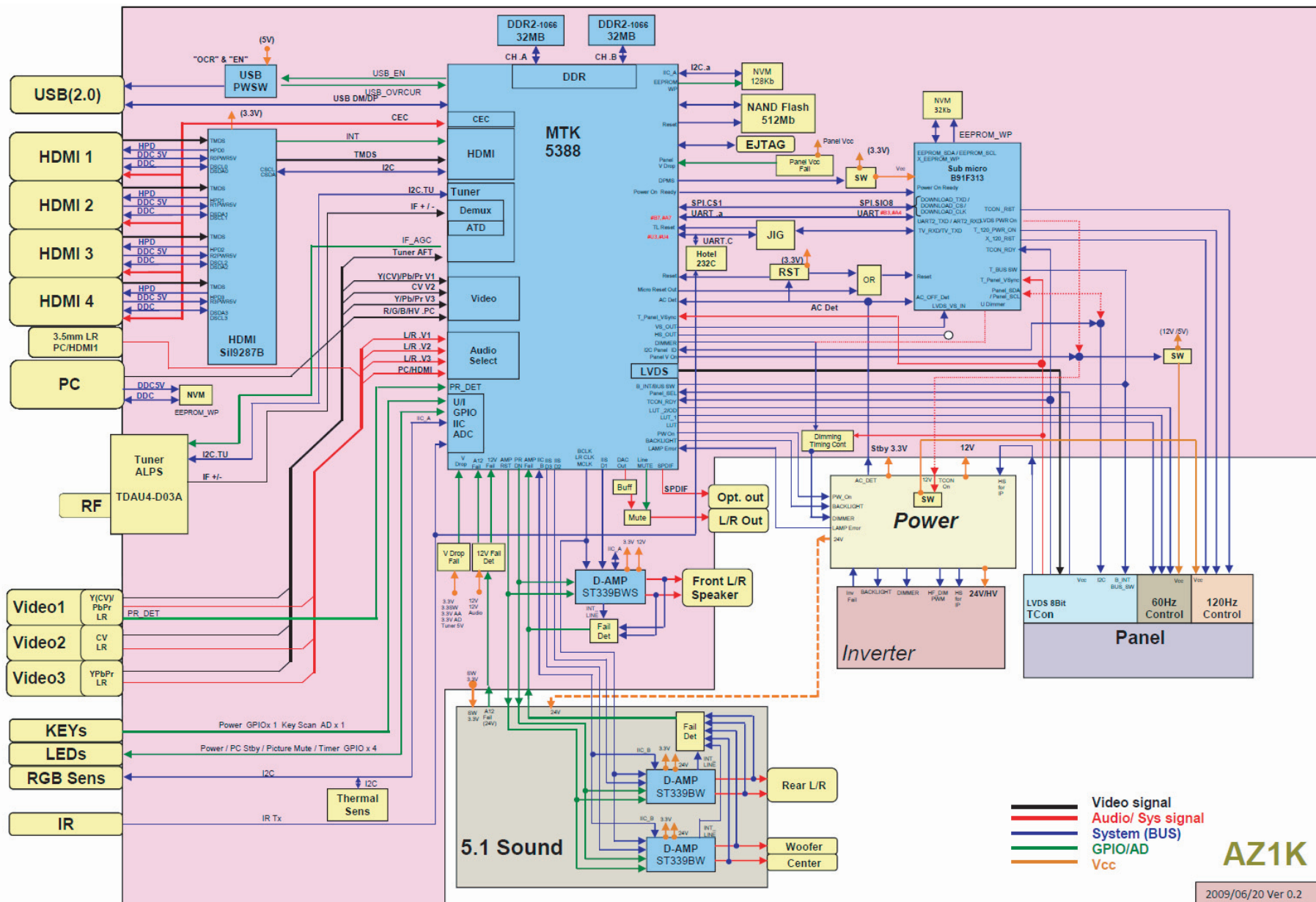
3. To exit service mode, turn the POWER off.


SEC 3. DIAGRAMS

3-1. CIRCUIT BOARDS LOCATION



3-2. BLOCK DIAGRAM





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KDL-55EX500/55EX501/60EX500

23