JVC

SERVICE MANUAL

WIDE LCD PANEL TELEVISION

LT-26A61BJ, LT-26A61BU, LT-26A61BU/C, LT-26A61SJ, LT-26A61SU, LT-26A61SU/C, LT-32A61BJ, LT-32A61BU, LT-32A61BU/C, LT-32A61SJ, LT-32A61SU, LT-32A61SU/C

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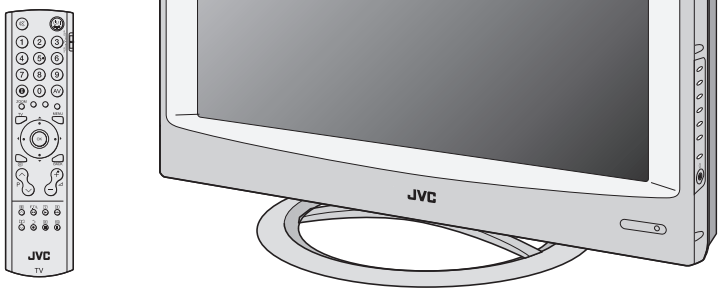

InteriArt

T-V LINK

HD ready

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No.YA369
2005/12

SPECIFICATION

Items		Contents	
		LT-26A61BJ LT-26A61BU LT-26A61SJ LT-26A61SU	**LT-32A61BJ LT-32A61BU LT-32A61SJ LT-32A61SU**
Dimensions (W × H × D)		68.6 cm × 52.5 cm × 26.9 cm [Included stand] 68.6 cm × 47.4 cm × 12.1 cm [TV only]	82.0 cm × 60.2 cm × 26.9 cm [Included stand] 82.0 cm × 55.1 cm × 12.7 cm [TV only]
Mass		14.9 kg [Included stand] 12.3 kg [TV only]	18.8 kg [Included stand] 15.4 kg [TV only]
Power Input		AC110V - AC240 V, 50 Hz / 60 Hz	
Power Consumption		158 W (Standby: 2.1 W)	
TV RF System		CCIR (B/G, I, D/K, L)	
Colour System		PAL, SECAM, NTSC 3.58/4.43 [EXT only]	
Stereo System		NICAM (B/G, I, D/K, L), A2 (B/G, D/K)	
Teletext System		FLOF (Fastext level 2.5), TOP, WST(World Standard system)	
Receiving Frequency		VHF: 47MHz - 470MHz UHF: 470MHz - 862MHz	
Intermediate Frequency	VIF	38.9MHz (B/G, I, D/K, L)	
	SIF	33.4MHz (5.5MHz :B/G) 32.9MHz (6.0MHz :I) 32.4MHz (6.5MHz :D/K)	
Colour Sub Carrier Frequency	PAL SECAM NTSC	4.43MHz 4.40625MHz / 4.25MHz 3.58MHz / 4.43MHz	
LCD panel		26V-inch wide aspect (16 : 9)	32V-inch wide aspect (16 : 9)
Screen Size		Diagonal : 66 cm (H: 57.6 cm × V: 32.4 cm)	Diagonal : 80 cm (H: 69.7 cm × V: 39.2 cm)
Display Pixels		Horizontal : 1366 dots × Vertical : 768 dots (W-XGA)	
Audio Power Output		5 W + 5 W	
Speaker		6.6 cm, round type × 2 (Oblique corn)	
Aerial terminal (VHF/UHF)		75 Ω unbalanced, coaxial	
EXT-1 / EXT-2 (Input / Output)		21-pin Euro connector (SCART socket) × 2	
EXT-3 (Input)	S-Video	Mini-DIN 4 pin × 1 Y: 1 V (p-p), Positive (Negative sync provided), 75 Ω C: 0.286 V (p-p) (Burst signal), 75 Ω	
	Video	1 V (p-p), Positive (Negative sync provided), 75 Ω, RCA pin jack × 1	
	Audio	500 mV (rms), High impedance, RCA pin jack × 2	
EXT-4 (Input)	Component Video	RCA pin jack × 3	
	1125i/750p	Y : 1 V (p-p) (Sync signal: ±0.35V(p-p), 3-value sync.), 75Ω Pb/Pr : ±0.35V(p-p), 75 Ω	
	625p / 525p / 625i / 525i	Y : 1 V (p-p), Positive (Negative sync provided), 75 Ω Cb/Cr : 0.7V(p-p), 75 Ω	
DIGITAL Input		DVI-D signal link 19pin connector × 1(Digital-input terminal is not compatible with computer signal)	
Headphone		3.5 mm stereo mini jack × 1	
Remote Control Unit		RM-C1816S (AA/R6 dry cell battery × 2)	

Design & specifications are subject to change without notice.

SECTION 1
PRECAUTION

1.1 SAFETY PRECAUTIONS [EXCEPT FOR UK]

(1) The design of this product contains special hardware, many circuits and components specially for safety purposes. For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Service should be performed by qualified personnel only.

(2) Alterations of the design or circuitry of the products should not be made. Any design alterations or additions will void the manufacturer's warranty and will further relieve the manufacturer of responsibility for personal injury or property damage resulting therefrom.

(3) Many electrical and mechanical parts in the products have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the parts list of Service manual. **Electrical components having such features are identified by shading on the schematics and by (⚠) on the parts list in Service manual**. The use of a substitute replacement which does not have the same safety characteristics as the recommended replacement part shown in the parts list of Service manual may cause shock, fire, or other hazards.

(4) **Don't short between the LIVE side ground and ISOLATED (NEUTRAL) side ground or EARTH side ground when repairing.**
Some model's power circuit is partly different in the GND. The difference of the GND is shown by the LIVE : (⊥) side GND, the ISOLATED (NEUTRAL) : (⏚) side GND and EARTH : (⏚) side GND.
Don't short between the LIVE side GND and ISOLATED (NEUTRAL) side GND or EARTH side GND and never measure the LIVE side GND and ISOLATED (NEUTRAL) side GND or EARTH side GND at the same time with a measuring apparatus (oscilloscope etc.). If above note will not be kept, a fuse or any parts will be broken.

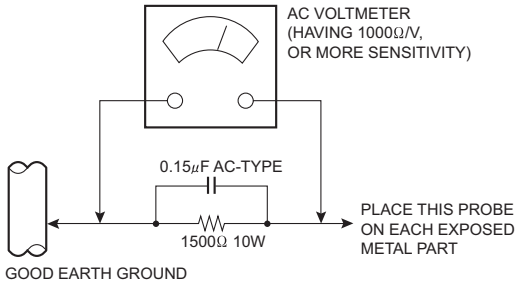
(5) When service is required, observe the original lead dress. Extra precaution should be given to assure correct lead dress in the high voltage circuit area. Where a short circuit has occurred, those components that indicate evidence of overheating should be replaced. Always use the manufacturer's replacement components.

(6) **Isolation Check (Safety for Electrical Shock Hazard)**
After re-assembling the product, always perform an isolation check on the exposed metal parts of the cabinet (antenna terminals, video/audio input and output terminals, Control knobs, metal cabinet, screw heads, earphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock.

a) **Dielectric Strength Test**
The isolation between the AC primary circuit and all metal parts exposed to the user, particularly any exposed metal part having a return path to the chassis should withstand a voltage of 3000V AC (r.m.s.) for a period of one second. (. . . Withstand a voltage of 1100V AC (r.m.s.) to an appliance rated up to 120V, and 3000V AC (r.m.s.) to an appliance rated 200V or more, for a period of one second.)
This method of test requires a test equipment not generally found in the service trade.

b) **Leakage Current Check**
Plug the AC line cord directly into the AC outlet (do not use a line isolation transformer during this check.). Using a "Leakage Current Tester", measure the leakage current from each exposed metal part of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground (water pipe, etc.). Any leakage current must not exceed 0.5mA AC (r.m.s.).
However, in tropical area, this must not exceed 0.2mA AC (r.m.s.).

Alternate Check Method
Plug the AC line cord directly into the AC outlet (do not use a line isolation transformer during this check.). Use an AC voltmeter having 1000Ω per volt or more sensitivity in the following manner. Connect a 1500Ω 10W resistor paralleled by a 0.15μF AC-type capacitor between an exposed metal part and a known good earth ground (water pipe, etc.). Measure the AC voltage across the resistor with the AC voltmeter. Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and measure the AC voltage across the resistor. Now, reverse the plug in the AC outlet and repeat each measurement. Any voltage measured must not exceed 0.75V AC (r.m.s.). This corresponds to 0.5mA AC (r.m.s.).
However, in tropical area, this must not exceed 0.3V AC (r.m.s.). This corresponds to 0.2mA AC (r.m.s.).



1.2 SAFETY PRECAUTIONS [FOR UK]

(1) The design of this product contains special hardware and many circuits and components specially for safety purposes. For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Service should be performed by qualified personnel only.

(2) Alterations of the design or circuitry of the product should not be made. Any design alterations or additions will void the manufacturer's warranty and will further relieve the manufacturer of responsibility for personal injury or property damage resulting therefrom.

(3) Many electrical and mechanical parts in the product have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessary be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the Parts List of Service Manual. Electrical components having such features are identified by shading on the schematics and by (⚠) on the Parts List in the Service Manual. The use of a substitute replacement which does not have the same safety characteristics as the recommended replacement part shown in the Parts List of Service Manual may cause shock, fire, or other hazards.

(4) The leads in the products are routed and dressed with ties, clamps, tubing's, barriers and the like to be separated from live parts, high temperature parts, moving parts and / or sharp edges for the prevention of electric shock and fire hazard. When service is required, the original lead routing and dress should be observed, and it should be confirmed that they have been returned to normal, after re-assembling.

WARNING

(1) The equipment has been designed and manufactured to meet international safety standards.
(2) It is the legal responsibility of the repairer to ensure that these safety standards are maintained.
(3) Repairs must be made in accordance with the relevant safety standards.
(4) It is essential that safety critical components are replaced by approved parts.
(5) If mains voltage selector is provided, check setting for local voltage.

1.3 INSTALLATION

1.3.1 HEAT DISSIPATION

If the heat dissipation vent behind this unit is blocked, cooling efficiency may deteriorate and temperature inside the unit will rise. The temperature sensor that protects the unit will be activated when internal temperature exceeds the pre-determined level and power will be turned off automatically.Therefore, please make sure pay attention not to block the heat dissipation vent as well as the ventilation outlet behind the unit and ensure that there is room for ventilation around it.

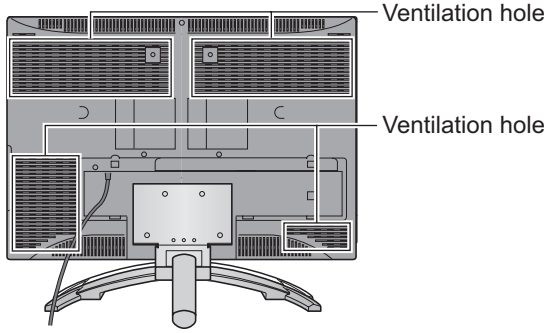


*Diagram differs from actual appearance.

1.3.2 INSTALLATION REQUIREMENTS

Ensure that the minimal distance is maintained, as specified below, between the unit with and the surrounding walls, as well as the floor etc.Install the unit on stable flooring or stands.Take precautionary measures to prevent the unit from tipping in order to protect against accidents and earthquakes.

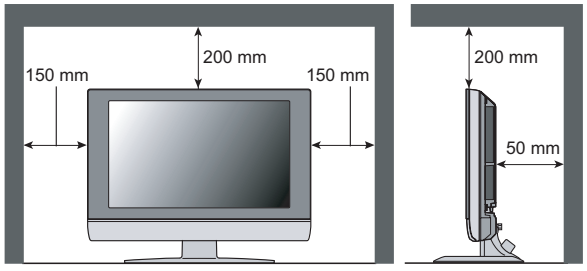


*Diagram differs from actual appearance.

1.3.3 INSTALLATION REQUIREMENTS

To ensure safety in an emergency such as an earthquake, and to prevent accidents, ensure that measures are taken to prevent the TV dropping or falling over.

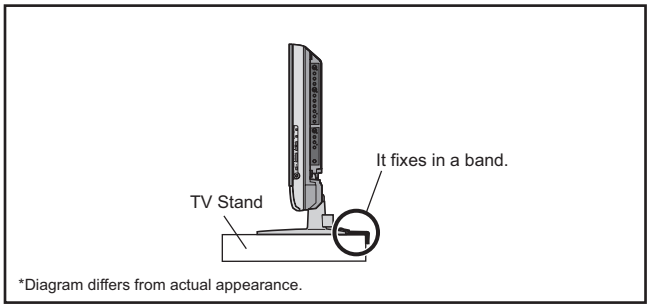


*Diagram differs from actual appearance.

1.3.4 NOTES ON HANDLING

(1) WHEN TAKING UNIT OUT OF A PACKING CASE

When taking the unit out of a packing case, do not grasp the upper part of the unit. If you take the unit out while grasping the upper part, the LCD PANEL may be damaged because of a pressure. Instead of grasping the upper part, put your hands on the lower backside or sides of the unit.

(2) AS FOR PRESSING OR TOUCHING A SPEAKER

Be careful not to press the opening of the speaker in the lower part of the unit and around them since the decorative sheet on the surface of the openings may be deformed.

1.4 HANDLING LCD PANEL

1.4.1 PRECAUTIONS FOR TRANSPORTATION

When transporting the unit, pressure exerted on the internal LCD panel due to improper handling (such as tossing and dropping) may cause damages even when the unit is carefully packed. To prevent accidents from occurring during transportation, pay careful attention before delivery, such as through explaining the handling instructions to transporters.

Ensure that the following requirements are met during transportation, as the LCD panel of this unit is made of glass and therefore fragile:

(1) USE A SPECIAL PACKING CASE FOR THE LCD PANEL
When transporting the LCD panel of the unit, use a special packing case (packing materials). A special packing case is used when a LCD panel is supplied as a service spare part.

(2) ATTACH PROTECTION SHEET TO THE FRONT
Since the front (display part) of the panel is vulnerable, attach the protection sheet to the front of the LCD panel before transportation. Protection sheet is used when a LCD panel is supplied as a service spare part.

(3) AVOID VIBRATIONS AND IMPACTS
The unit may be broken if it is toppled sideways even when properly packed. Continuous vibration may shift the gap of the panel, and the unit may not be able to display images properly. Ensure that the unit is carried by at least 2 persons and pay careful attention not to exert any vibration or impact on it.

(4) DO NOT PLACE EQUIPMENT HORIZONTALLY
Ensure that it is placed upright and not horizontally during transportation and storage as the LCD panel is very vulnerable to lateral impacts and may break. During transportation, ensure that the unit is loaded along the traveling direction of the vehicle, and avoid stacking them on one another. For storage, ensure that they are stacked in 2 layers or less even when placed upright.

1.4.2 OPTICAL FILTER (ON THE FRONT OF THE LCD PANEL)

(1) Avoid placing the unit under direct sunlight over a prolonged period of time. This may cause the optical filter to deteriorate in quality and COLOUR.

(2) Clean the filter surface by wiping it softly and lightly with a soft and lightly fuzz cloth (such as outing flannel).

(3) Do not use solvents such as benzene or thinner to wipe the filter surface. This may cause the filter to deteriorate in quality or the coating on the surface to come off. When cleaning the filter, usually use the neutral detergent diluted with water. When cleaning the dirty filter, use water-diluted ethanol.

(4) Since the filter surface is fragile, do not scratch or hit it with hard materials. Be careful enough not to touch the front surface, especially when taking the unit out of the packing case or during transportation.

1.4.3 PRECAUTIONS FOR REPLACEMENT OF EXTERIOR PARTS

Take note of the following when replacing exterior parts (REAR COVER, FRONT PANEL, etc.):

(1) Do not exert pressure on the front of the LCD panel (filter surface). It may cause irregular COLOUR.

(2) Pay careful attention not to scratch or stain the front of the LCD panel (filter surface) with hands.

(3) When replacing exterior parts, the front (LCD panel) should be placed facing downward. Place a mat, etc. underneath to avoid causing scratches to the front (filter surface).

SECTION 2
SPECIFIC SERVICE INSTRUCTIONS

2.1 FEATURES

T-V LINK

When you have a T-V LINK compatible VCR connected to the EXT-2 Terminal on the TV,it is easier to set up the VCR and to view videos.

PICTURE MODE

This function can adjust the picture settings automatically.

ZOOM

This function can change the screen size according to the picture aspect ratio.

DIGITAL VNR

This function cuts down the amount of noise in the original picture.

2.2 MAIN DIFFERENCE LIST

Item	LT-26A61BJ	LT-26A61BU	LT-26A61BU/C	LT-26A61SJ	LT-26A61SU	LT-26A61SU/C
PAINT COLOUR	BLACK	BLACK	BLACK	SILVER	SILVER	SILVER
LCD PANLEL UNIT	QLD0408-001-JUK	←	QLD0370-002-JUK	←	←	QLD0408-001-JUK
MAIN PWB	QAL0823-001	←	QAL0822-001	←	←	QAL0823-001

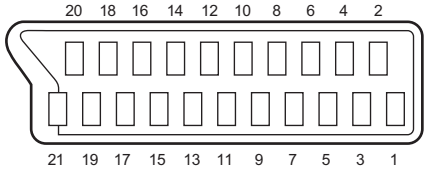
Item	LT-32A61BJ	LT-32A61BU	LT-32A61BU/C	LT-32A61SJ	LT-32A61SU	LT-32A61SU/C
PAINT COLOUR	BLACK	BLACK	BLACK	SILVER	SILVER	SILVER
LCD PANLEL UNIT	QLD0409-001-JUK	←	QLD0371-001-JUK	←	←	QLD0409-001-JUK
MAIN PWB	QAL0825-001	←	QAL0824-001	←	←	QAL0825-001

2.3 21-PIN EURO CONNECTOR (SCART) : EXT-1 / EXT-2

Pin No.	Signal designation	Matching value	EXT-1	EXT-2
1	AUDIO R output	500mV(rms) (Nominal), Low impedance	Used (TV OUT)	Used (LINE OUT)
2	AUDIO R input	500mV(rms) (Nominal), High impedance	Used (R1)	Used (R2)
3	AUDIO L output	500mV(rms) (Nominal), Low impedance	Used (TV OUT)	Used (LINE OUT)
4	AUDIO GND		Used	Used
5	GND (B)		Used	Used
6	AUDIO L input	500mV(rms) (Nominal), High impedance	Used (L1)	Used (L2)
7	B input	$700mV_{(B-W)}$, 75Ω	Used	Used
8	FUNCTION SW (SLOW SW)	Low : 0V-3V High : 8V-12V, High impedance	Used	Used
9	GND (G)		Used	Used
10	SCL / T-V LINK		Not used	Used (SCL2 / TV-LINK)
11	G input	$700mV_{(B-W)}$, 75Ω	Used	Used
12	SDA		Not used	Used (SDA2)
13	GND (R)		Used	Used
14	GND (YS)		Used	Not used
15	R / C input	R : $700mV_{(B-W)}$, 75Ω C : $300mV_{(P-P)}$, 75Ω	Used (R)	Used (C2/R)
16	Ys input (FAST SW)	Low : 0V-0.4V, High : 1V-3V, 75Ω	Used	Used
17	GND (VIDEO output)		Used	Used
18	GND (VIDEO input)		Used	Used
19	VIDEO output	$1V_{(P-P)}$ (Negative sync), 75Ω	Used (TV OUT)	Used (LINE OUT)
20	VIDEO / Y input	$1V_{(P-P)}$ (Negative sync), 75Ω	Used	Used
21	COMMON GND		Used	Used

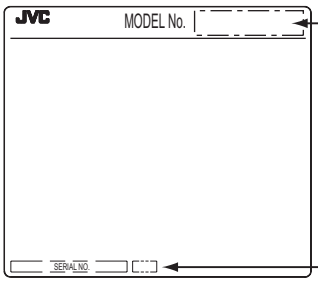
(P-P= Peak to Peak, B-W= Blanking to white peak)

[Pin assignment]



2.4 HOW TO IDENTIFY MODELS

BJ, BU, SJ and SU models : "AE" is added to the serial No. after at the Rating label.
BU/C and SU/C models : "CE" is added to the serial No. after at the Rating label.



LT-26A60BJ	LT-32A60BJ
LT-26A60BU	LT-32A60BU
LT-26A60SJ	LT-32A60SJ
LT-26A60SU	LT-32A60SU

AE
CE

Indicated

2.5 TECHNICAL INFORMATION

2.5.1 LCD PANEL

This unit uses the flat type panel LCD (Liquid Crystal Display) panel that occupies as little space as possible, instead of the conventional CRT (Cathode Ray Tube), as a display unit.
Since the unit has the two polarizing filter that are at right angles to each other, the unit adopts "normally black" mode, where light does not pass through the polarizing filter and the screen is black when no voltage is applied to the liquid crystals.

2.5.1.1 SPECIFICATIONS

The following table shows the specifications of this unit.

Item	Specifications			
	26V-TYPE LCD PANEL UNIT		32V-TYPE LCD PANEL UNIT	
	QLD0370-002-JUK	QLD0408-001-JUK	QLD0371-001-JUK	QLD0409-001-JUK
Maximum dimensions (W × H × D)	626 mm × 373 mm × 52 mm	626 mm × 373 mm × 47.5 mm	760 mm × 450 mm × 50 mm	760 mm × 450 mm × 45 mm
Weight	4.7 kg	4.2 kg	7.0 kg	7.2 kg
Effective screen size	Diagonal: 660 mm (H: 576 mm × V: 324 mm)		Diagonal: 800 mm (H: 697 mm × V: 392 mm)	
Aspect ratio	16 : 9			
Drive device / system	a-Si-TFT active matrix system			
Resolution	Horizontally 1366 × Vertically 768 × RGB < W-XGA > 3147264 dots in total			
Pixel pitch (pixel size)	Horizontally: 0.4215 mm, Vertically: 0.4215mm		Horizontally: 0.51075 mm, Vertically: 0.51075mm	
Displayed colour	16777216 colours 256 colours for R G and B			
Brightness	500cd/m2			
Contrast ratio	1000 : 1	800 : 1	1000 : 1	800 : 1
Response time	less than 22 ms	less than 35 ms	less than 22 ms	less than 20 ms
View angle (Horizontally)	178°	170°		
View angle (Vertically)	178°	170°		
Surface polarizer	Anti-Glare type Low reflective coat			
Colour filter	Vertical stripe			
Backlight	U-type Cold cathode fluorescent lamp × 8		Direct-type Cold cathode fluorescent lamp ×16	
Power supply voltage in LCD	6.5 V	5 V	6.5 V	5 V
Power supply voltage in inverter	24 V			
Panel interface system	LVDS (Low Voltage Differential Signaling)			

2.5.1.2 PIXEL FAULT

There are three pixel faults - bright fault , dark fault and flicker fault - that are respectively defined as follows.

■ **BRIGHT FAULT**

In this pixel fault, a cell that should not light originally is lighting on and off.
For checking this pixel fault, input ALL BLACK SCREEN and find out the cell that is lighting on and off.

■ **DARK FAULT**

In this pixel fault, a cell that should light originally is not lighting or lighting with the brightness twice as brighter as originally lighting.
For checking this pixel fault, input 100% of each R/G/B colour and find out the cell that is not lighting.

■ **FLICKER FAULT**

In the pixel fault, a cell that should light originally or not light originally is flashing on and off.
For checking this pixel fault, input ALL BLACK SCREEN signal or 100% of each RGB colour and find out the cell that is flashing on and off.

2.5.2 MAIN CPU PIN FUNCTION [U302 : MAIN PWB]

Pin	Pin name	I/O	Function	Pin	Pin name	I/O	Function
1	D1	I/O	Program ROM data for CPU	51	NC2	-	Not used
2	D4	I/O	Program ROM data for CPU	52	XTAL2	O	6MHz for system clock
3	D2	I/O	Program ROM data for CPU	53	XTAL1	I	6MHz for system clock
4	D3	I/O	Program ROM data for CPU	54	NC3	-	Not used
5	XROM	O	This pin must be pulled low to access external ROM.	55	VSSA	-	GND
6	VDD 2.5	I	2.5V	56	VDDA 2.5	I	2.5V
7	VSS	-	GND	57	R	O	R for teletext
8	VDD 3.5	I	3.5V	58	G	O	G for teletext
9	P0.0	I/O	Address/Data for scaler IC	59	B	O	B for teletext
10	P0.1	I/O	Address/Data for scaler IC	60	BLANK/COR	O	Ys for Teletext
11	P0.2	I/O	Address/Data for scaler IC	61	NC4	-	Not used
12	P0.3	I/O	Address/Data for scaler IC	62	P1.7	O	Reset for Scaler IC [H=Reset]
13	P0.4	-	Not used	63	NC5	-	Not used
14	P0.5	O	Address latch Enable	64	WR	O	Write for memory
15	P0.6	-	Not used	65	RD	O	Read for memory
16	P0.7	-	Not used	66	NC6		Not used
17	ENE	-	Not used	67	A19	O	Program ROM address for CPU
18	STOP	-	Not used	68	A18	O	Program ROM address for CPU
19	OCF	-	Not used	69	A16	O	Program ROM address for CPU
20	EXTIF	-	Not used	70	A17	O	Program ROM address for CPU
21	CVBS	I	Video for teletext	71	A15	O	Program ROM address for CPU
22	VDDA 2.5	I	2.5V	72	FL_PGM	-	Test purpose
23	VSSA	-	GND	73	VDD 2.5	I	2.5V
24	P2.0	I	Scart2 ID [H=Detect]	74	VSS	-	GND
25	P2.1	I	key scan data 1	75	VDD 3.3	I	3.3V
26	P2.2	I	key scan data 2	76	A14	O	Program ROM address for CPU
27	P2.3	I	Scaet1 ID [H=Detect]	77	A12	O	Program ROM address for CPU
28	NC1	-	Not used	78	A13	O	Program ROM address for CPU
29	HS/SSC	I	Horizontal sync	79	A7	O	Program ROM address for CPU
30	VS	I	Vertical sync	80	FL_RST	-	Test purpose
31	P3.0	O	Data Read for Scaler IC	81	A8	O	Program ROM address for CPU
32	P3.1	O	Comunication for adjustment [H=TXD]	82	A6	O	Program ROM address for CPU
33	P3.2	I	TV-Link in	83	A9	O	Program ROM address for CPU
34	P3.3	I	Remote control	84	A5	O	Program ROM address for CPU
35	P3.4	I/O	I2C bus Data(for EEPROM)	85	A11	O	Program ROM address for CPU
36	P3.5	O	I2C bus Clock(for EEPROM)	86	A4	O	Program ROM address for CPU
37	P3.6	O	Data Write for Scaler IC	87	ALE	O	Address Latch Enable
38	P3.7	I	Comunication for adjustment [H=RXD]	88	PSEN	O	Program Store Enable
39	VSS	-	GND	89	A3	O	Program ROM address for CPU
40	VDD 3.3	I	3.3V	90	A10	O	Program ROM address for CPU
41	P1.0	O	RGB Select [L=SCART1, H=SCART2]	91	VSS	-	GND
42	P1.1	I	Headphone Ident [L=Detect]	92	VDD 3.3	I	3.3V
43	P1.2	I/O	I2C bus Data(for inter IC)	93	A2	O	Program ROM address for CPU
44	P1.3	O	I2C bus Clock(for inter IC)	94	A1	O	Program ROM address for CPU
45	P1.4	O	Reset for inter IC [L=Reset]	95	FL_CE	-	Test purpose
46	P1.5	I	PC Detect [L=Detect]	96	D7	I/O	Program ROM data for CPU
47	P1.6	O	Memory Pack I2C S/W [L=Detect]	97	A0	O	Program ROM address for CPU
48	P4.2	O	Main power control [L=ON, H=OFF]	98	D6	I/O	Program ROM data for CPU
49	P4.3	O	TV-Link out	99	D0	I/O	Program ROM data for CPU
50	RST	O	Reset [L=Reset]	100	D5	I/O	Program ROM data for CPU

SECTION 3
DISASSEMBLY

3.1 DISASSEMBLY PROCEDURE

CAUTION AT DISASSEMBLY:

- Make sure that the power cord is disconnected from the outlet.
- Pay special attention not to break or damage the parts.
- When removing each board, remove the connectors as required. Taking notes of the connecting points (connector numbers) makes service procedure manageable.
- Make sure that there is no bent or stain on the connectors before inserting, and firmly insert the connectors.

3.1.1 REMOVING THE STAND

(1) Remove the JACK COVER.
(2) Remove the STAND COVER by sliding it in the direction of an arrow.
(3) Remove the 2 screws **[A]**, then remove the STAND COVER.
(4) Remove the 2 screws **[B]** and 2 screws **[C]**, then remove the STAND.

3.1.2 REMOVING THE REAR COVER

- Remove the STAND.
  (1) Remove the 8 screws **[D]**, 1 screw **[E]** and 2 screws **[F]**, then remove the REAR COVER.

3.1.3 REMOVING THE POWER PWB

- Remove the STAND.
- Remove the REAR COVER.
  (1) Remove the 4 screws **[G]** and 1 screw **[H]**, then remove the TERMINAL BASE.
  (2) Remove the 8 screws **[J]**, then remove the BACK BRACKET.
  (3) Remove the 6 screws **[K]**, then remove the POWER PWB SHIELD.
  (4) Remove the 5 screws **[L]**, then remove the POWER PWB.

3.1.4 REMOVING THE MAIN PWB

- Remove the STAND.
- Remove the REAR COVER.
- Remove the TERMINAL BASE.
- Remove the BACK BRACKET.
- Remove the POWER PWB SHIELD.
  (1) Remove the 7 screws **[M]** and 2 screws **[N]**, then remove the MAIN PWB SHIELD.
  (2) Remove the 6 screws **[P]**, then remove the MAIN PWB.

3.1.5 REMOVING THE KEY PWB

- Remove the STAND.
- Remove the REAR COVER.
  (1) Remove the 2 screws **[Q]**, then remove the KEY PWB.

3.1.6 REMOVING THE LED PWB

- Remove the STAND.
- Remove the REAR COVER.
  (1) Remove the 2 screws **[R]**, then remove the LED PWB.

3.1.7 REMOVING THE SPEAKER

- Remove the STAND.
- Remove the REAR COVER.
  (1) Remove the 6 screws **[S]**, then remove the SPEAKER (L/R).

CAUTION:

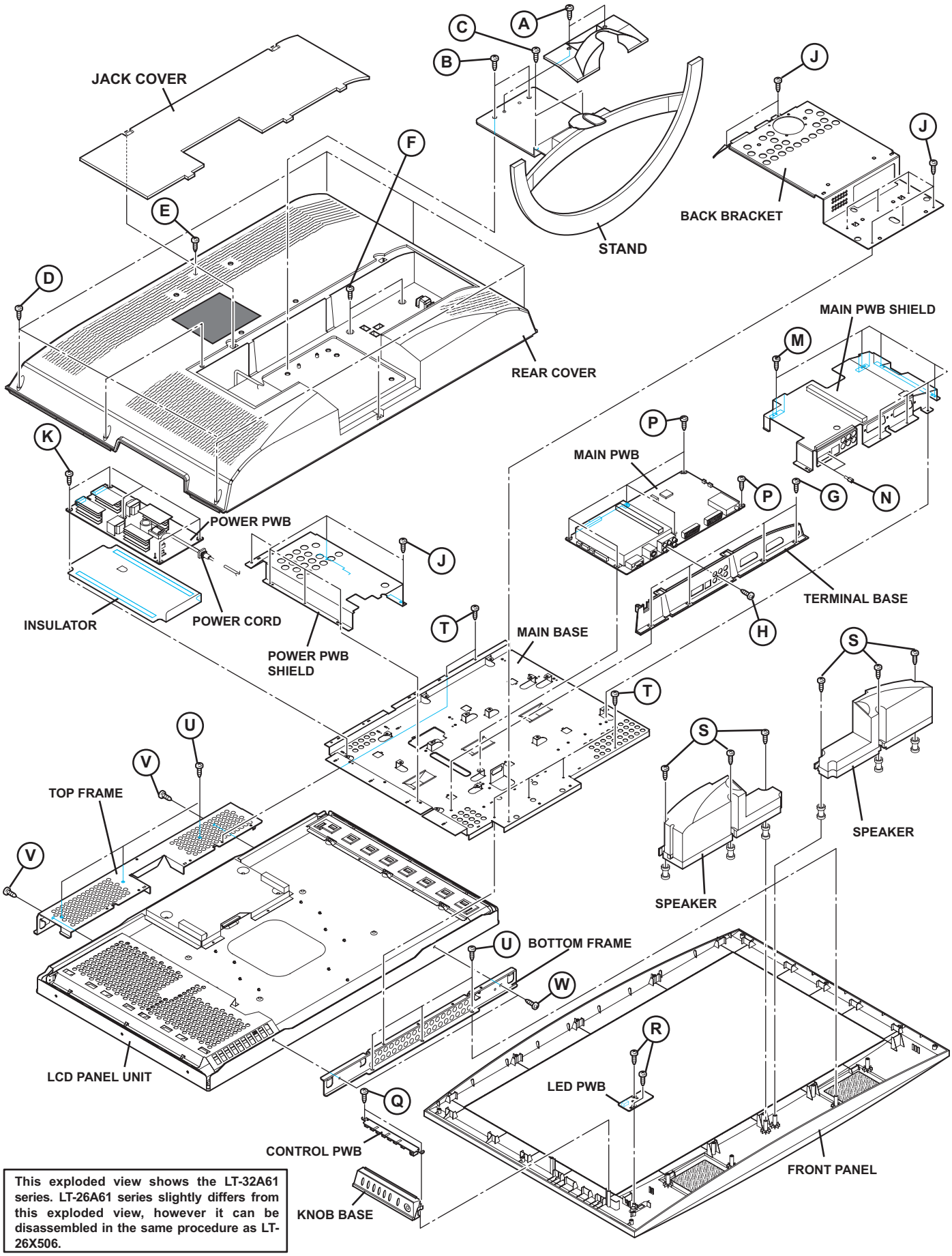
Please do not disassembly the SPEAKER.
When the speaker is decomposed, the performance cannot be kept.

3.1.8 REMOVING THE LCD PANEL UNIT

- Remove the STAND.
- Remove the REAR COVER.
- Remove the TERMINAL BASE.
- Remove the BACK BRACKET.
  (1) Remove the 6 screws **[T]**, then remove the MAIN BASE.
  (2) Remove the 6 screws **[U]**, then remove the FRONT PANEL.
  (3) Remove the 2 screws **[V]**, then remove the TOP FRAME.
  (4) Remove the 2 screws **[W]**, then remove the BOTTOM FRAME.

NOTE:

- Pay special attention not to break or damage on the FRONT PANEL.
- The LCD PANEL UNIT is fixed to the FRONT PAMEL (at the back side)by using double-side adhesive tapes. To remove the LCD PANEL UNIT, remove the adhesive tape on the FRONT PANEL slowly.



This exploded view shows the LT-32A61 series. LT-26A61 series slightly differs from this exploded view, however it can be disassembled in the same procedure as LT-26X506.

Fig.1

3.2 MEMORY IC REPLACEMENT

- This model uses the memory IC.
- This memory IC stores data for proper operation of the video and drive circuits.
- When replacing, be sure to use an IC containing this (initial value) data.

3.2.1 MEMORY IC REPLACEMENT PROCEDURE

1. Power off
Switch off the power and disconnect the power plug from the AC outlet.

2. Replace the memory IC
Be sure to use the memory IC written with the initial setting values.

3. Power on
Connect the power plug to the AC outlet and switch on the power.

4. Receiving channel setting
Refer to the OPERATING INSTRUCTIONS and set the receive channels (Channels Preset) as described.

5. User setting
Check the user setting items according to the given in page later. Where these do not agree, refer to the OPERATING INSTRUCTIONS and set the items as described.

6. SERVICE MODE setting
Verify what to set in the SERVICE MODE, and set whatever is necessary (Fig.1). Refer to the SERVICE ADJUSTMENT for setting.

3.2.2 SERVICE MODE SETTING

■SERVICE MODE SCREEN

NOTE:
As self check feature is not used in this TV, **"2.SELF_CHECK"** cannot be selected (screen display only).

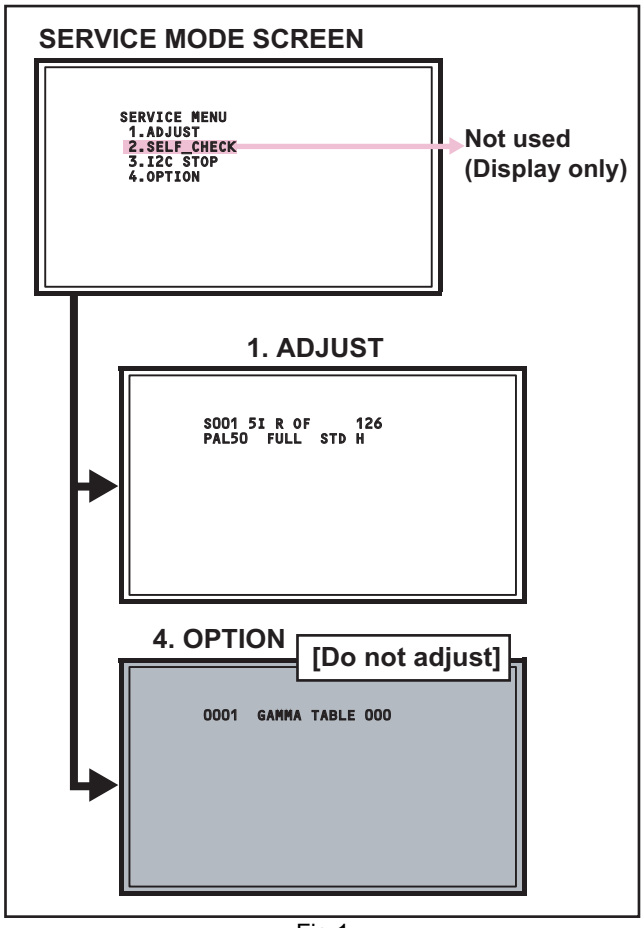


Fig.1

■SETTING ITEM

Setting items	Setting items	Settings	Item No.
1.ADJUST	Video system setting -1	Adjust	S001 - S043
	Video system setting -2	Fixed	M001 - M009
	Audio System Setting	Fixed	A001 - A003
	Video system setting -3	Fixed	D001 - D051
	Video system setting -4	Fixed	SD01 - SD15
	Video system setting -5	Fixed	DD07 - DD31
1.OPTION	Option Setting	Fixed	0001 - 0004

3.2.3 SETTINGS OF FACTORY SHIPMENT

3.2.3.1 BUTTON OPERATION

Setting item	Setting position
POWER	Off
CHANNEL	PR1
VOLUME	10
TV/AV	TV

3.2.3.2 REMOTE CONTROL DIRECT OPERATION

Setting item	Setting position
CHANNEL	PR1
VOLUME	10
ZOOM	PANORAMIC
3D SOUND	OFF

3.2.3.3 REMOTE CONTROL MENU OPERATION

(1) PICTURE

Setting item		Setting position
PICTURE MODE		BRIGHT
COLOUR TEMP.		COOL
FEATURES		
DIGITAL VNR		AUTO (LOW)
COLOUR SYSTEM	TV	Depends on PR/CH
	EXT	AUTO
4:3 AUTO ASPECT		PANORAMIC

(2) SOUND

Setting item	Setting position
STEREO / I•II	Stereo sound
BASS	Centre
TREBLE	Centre
BALANCE	Centre
3D SOUND	OFF

(4) FEATURES

Setting item	Setting position
SLEEP TIMER	OFF
CHILD LOCK	ID NO.0000, All CH off
APPEARANCE	TYPE D
BLUE BACK	ON
FAVOURITE SETTING	Reset

(5) SET UP

Setting item	Setting position
AUTO PROGRAM	TV channel automatically set
EDIT/MANUAL	PRESET CH only
LANGUAGE	ENGLISH
DECODER (EXT-2)	OFF
EXT SETTING	
S-IN	BLANK
ID	BLANK
DUBBING	EXT-1 → EXT-2

3.3 REPLACEMENT OF CHIP COMPONENT

3.3.1 CAUTIONS

(1) Avoid heating for more than 3 seconds.
(2) Do not rub the electrodes and the resist parts of the pattern.
(3) When removing a chip part, melt the solder adequately.
(4) Do not reuse a chip part after removing it.

3.3.2 SOLDERING IRON

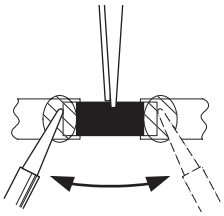
(1) Use a high insulation soldering iron with a thin pointed end of it.
(2) A 30w soldering iron is recommended for easily removing parts.

3.3.3 REPLACEMENT STEPS

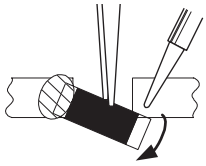
1. How to remove Chip parts

[Resistors, capacitors, etc.]

(1) As shown in the figure, push the part with tweezers and alternately melt the solder at each end.



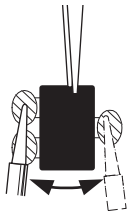
(2) Shift with the tweezers and remove the chip part.



[Transistors, diodes, variable resistors, etc.]

(1) Apply extra solder to each lead.

(2) As shown in the figure, push the part with tweezers and alternately melt the solder at each lead. Shift and remove the chip part.



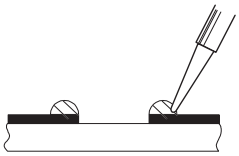
NOTE :

After removing the part, remove remaining solder from the pattern.

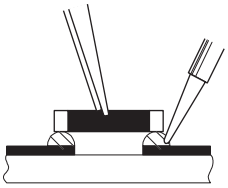
2. How to install Chip parts

[Resistors, capacitors, etc.]

(1) Apply solder to the pattern as indicated in the figure.

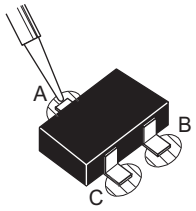


(2) Grasp the chip part with tweezers and place it on the solder. Then heat and melt the solder at both ends of the chip part.

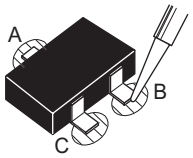


[Transistors, diodes, variable resistors, etc.]

(1) Apply solder to the pattern as indicated in the figure.
(2) Grasp the chip part with tweezers and place it on the solder.
(3) First solder lead **A** as indicated in the figure.



(4) Then solder leads **B** and **C**.



SECTION 4
ADJUSTMENT

4.1 ADJUSTMENT PREPARATION

(1) **The adjustment using the REMOTE CONTROL UNIT is made on the basis of the initial setting values. The setting values which adjust the screen to the optimum condition can be different from the initial setting values.**
(2) Make sure that connection is correctly made AC to AC power source.
(3) Turn on the power of the TV and measuring instruments for warming up for at least 30 minutes before starting adjustments.
(4) If the receive or input signal is not specified, use the most appropriate signal for adjustment.
(5) Never touch the parts (such as variable resistors, transformers and condensers) not shown in the adjustment items of this service adjustment.

4.2 PRESET SETTING BEFORE ADJUSTMENTS

Unless otherwise specified in the adjustment items, preset the following functions with the REMOTE CONTROL UNIT.

Setting item	Settings position
PICTURE MODE	STANDARD
PICTURE adjustments	Centre
COLOUR TEMP.	NORMAL

4.3 MEASURING INSTRUMENT AND FIXTURES

- Signal generator (Pattern generator)[PAL]
- Remote control unit

4.4 ADJUSTMENT ITEMS

4.5 BASIC OPERATION OF SERVICE MODE

4.5.1 HOW TO ENTER THE SERVICE MODE

(1) Press **[INFORMATION]** key and **[MUTING]** key on the remote control unit simultaneously to enter the SERVICE MODE SCREEN. (Fig.1)

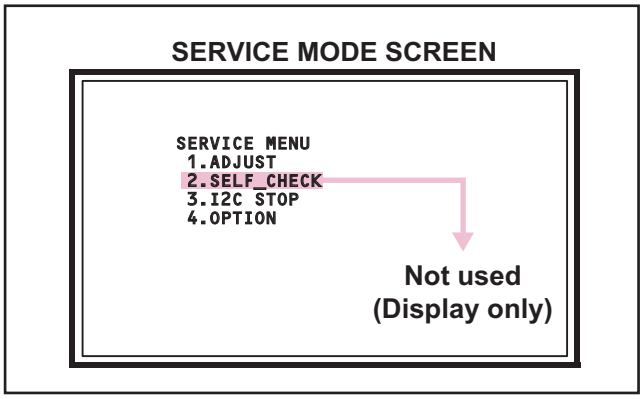


Fig.1

NOTE:

- As self check feature is not used in this TV, **"2.SELF_CHECK"** cannot be selected (screen display only).
- Before entering the SERVICE MODE, confirm that the setting of VCR/TV/DVD switch is at the "**TV**" side. If the switches have not been properly set, you cannot enter the SERVICE MODE.

4.5.2 HOW TO EXIT THE SERVICE MODE

Press the **[MENU]** key to exit the Service mode.

4.5.3 CHANGE AND MEMORY OF SETTING VALUE

SELECTION OF SETTING ITEM

- **[FUNCTION ▲/▼]** key.
  For scrolling up / down the setting items.

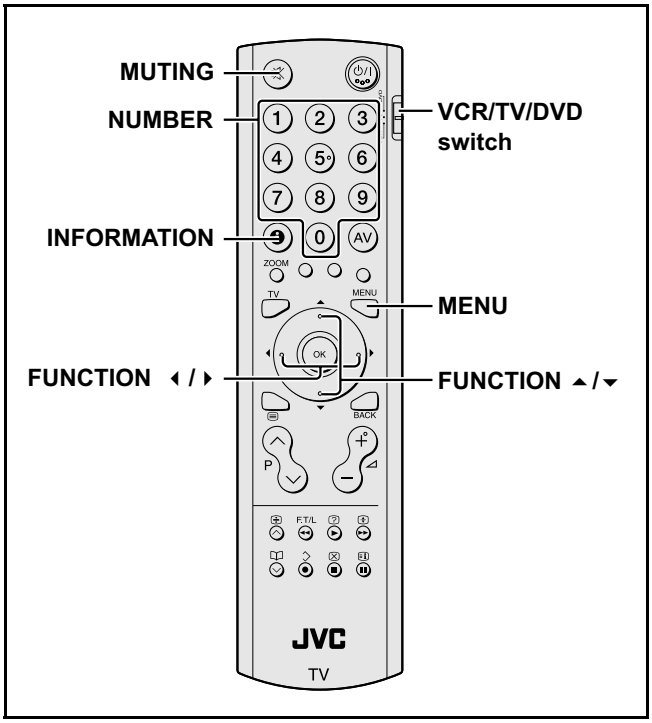
CHANGE OF SETTING VALUE (DATA)

- **[FUNCTION ◀ / ▶]** key.
  For scrolling up / down the setting values.

MEMORY OF SETTING VALUE (DATA)

Changed setting value is memorized by pressing **[MUTING]** key.

4.5.4 SERVICE MODE SELECT KEY LOCATION



4.5.5 ADJUSTMENT MODE

This mode is used to adjust the VIDEO CIRCUIT.

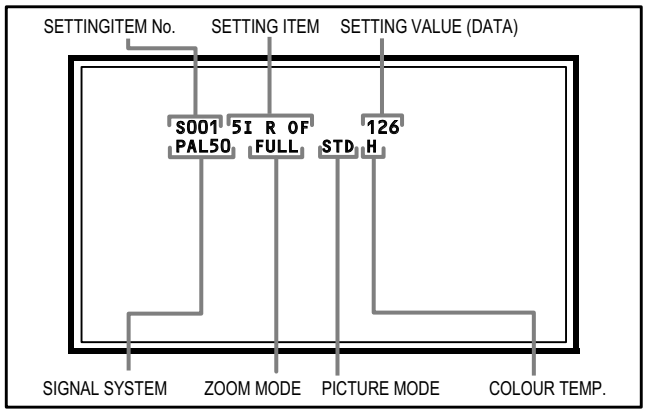
4.5.5.1 HOW TO ENTER THE ADJUSTMENT MODE

When the SERVICE MENU SCREEN of SERVICE MODE is displayed, press **[1]** key to enter the ADJUSTMENT MODE (Fig.2).

NOTE:

- When a number key other than the **[1]** key is pressed in the SERVICE MODE SCREEN, the other relevant screen may be displayed.
  This is not used in the adjustment procedure. Press the **[MENU]** key to return to the SERVICE MODE SCREEN.

4.5.5.2 DESCRIPTION OF STATUS DISPLAY



(1) SIGNAL SYSTEM

The signal displayed on the screen is displayed.

PAL50	: PAL50Hz (Composite / S-video)
PAL60	: PAL60Hz (Composite / S-video)
SECAM	: SECAM
NTSC3	: NTSC3.58
NTSC4	: NTSC4.43
525I	: 525i (Component)
525P	: 525p
625I	: 625i (Component)
625P	: 625p
750P6	: 750p 60Hz
PCVGA	: PC (VGA)
PCXGA	: PC (XGA)

(2) ZOOM MODE

State of the screen mode is displayed.

NOTE:

In ADJUSTMENT MODE, the screen mode can be set only to **"FULL"**. When it is entered to ADJUSTMENT MODE, it is automatically changed to **"FULL"**, even if the setting is in other screen mode.

(3) PICTURE MODE

State of the picture mode is displayed.

NOTE:

In ADJUSTMENT MODE, the picture mode can be set only to **"STANDARD"**. When it is entered to ADJUSTMENT MODE, it is automatically changed to **"STANDARD"**, even if the setting is in other picture mode.

(4) WHITE BALANCE

State of the colour temperature is displayed.

NOTE:

In ADJUSTMENT MODE, the colour temperature can be set only to **"NORMAL"**. When it is entered to ADJUSTMENT MODE, it is automatically changed to **"NORMAL"**, even if the setting is in other colour temperature.

(5) SETTING ITEM NAME

Setting item name are displayed. The setting item numbers to be displayed are listed below.

Item No.	Setting item
S001 - S043	Video system setting -1
M001 - M009	Video system setting -2
A001 - A003	Audio System Setting
D001 - D051	Video system setting -3
SD01 - SD15	Video system setting -4
DD07 - DD31	Video system setting -5

(6) SETTING ITEM NO.

Setting item numbers are displayed. For the setting item names to be displayed, refer to "INITIAL SETTING VALUES IN THE SERVICE MODE".

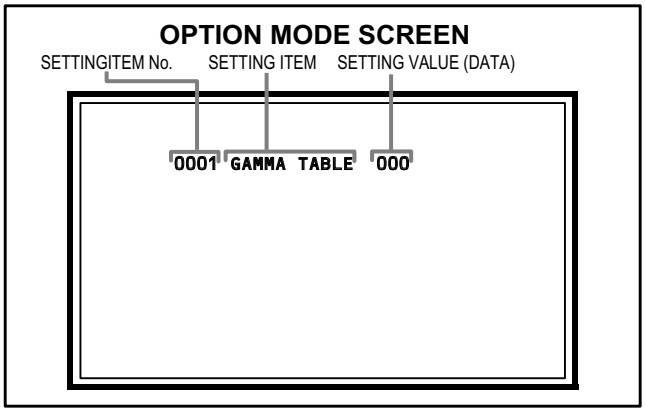
(7) SETTING VALUE (DATA)

The SETTING VALUE is displayed.

4.5.6 OPTION MODE [Do not adjust]

Display of optin data setting.

4.5.6.1 DESCRIPTION OF STATUS DISPLAY



(1) SETTING ITEM NAME

Setting item name are displayed. The setting item numbers to be displayed are listed below.

Item No.	Setting item
0001 - 0004	optin data setting **[Do not adjust]**

(2) SETTING ITEM NO.

Setting item numbers are displayed. For the setting item names to be displayed, refer to "INITIAL SETTING VALUES IN THE SERVICE MODE".

(3) SETTING VALUE (DATA)

The SETTING VALUE is displayed.

4.6 INITIAL SETTING VALUES IN THE SERVICE MODE

- Perform fine-tuning based on the "initial values" using the remote control when in the Service mode.
- The "initial values" serve only as an indication rough standard and therefore the values with which optimal display can be achieved may be different from the default values. But, don't change the values that are not written in "ADJUSTMENT PROCEDURE". They are fixed values.

4.6.1 ADJUSTMENT MODE

4.6.1.1 VIDEO SYSTEM SETTING -1

Item No.	Item name	Variable range	Setting value
S001	5I R OF	000 - 255	127
S002	5I G OF	000 - 255	127
S003	5I B OF	000 - 255	126
S004	5P R OF	000 - 255	127
S005	5P G OF	000 - 255	127
S006	5P B OF	000 - 255	126
S007	HD75 R OF	000 - 255	127
S008	HD75 G OF	000 - 255	127
S009	HD75 B OF	000 - 255	126
S010	HD25 R OF	000 - 255	127
S011	HD25 G OF	000 - 255	127
S012	HD25 B OF	000 - 255	126
S013	R DRIVE	000 - 255	150
S014	G DRIVE	000 - 255	126
S015	B DRIVE	000 - 255	117
S016	HD R DR	-32 - 31	00
S017	HD G DR	-32 - 31	00
S018	HD B DR	-32 - 31	00
S019	CL R DR	-32 - 31	01
S020	CL G DR	-32 - 31	01
S021	CL B DR	-32 - 31	08
S022	WM R DR	-32 - 31	00
S023	WM G DR	-32 - 31	-7
S024	WM B DR	-32 - 31	-16
S025	HD CL R DR	-32 - 31	01
S026	HD CL G DR	-32 - 31	00
S027	HD CL B DR	-32 - 31	00
S028	HD WM R DR	-32 - 31	00
S029	HD WM G DR	-32 - 31	-2
S030	HD WM B DR	-32 - 31	-1
S031	PC R OF	000 - 255	115
S032	PC G OF	000 - 255	127
S033	PC B OF	000 - 255	127
S034	PC R DR	-32 - 31	-23
S035	PC G DR	-32 - 31	00
S036	PC B DR	-32 - 31	00
S037	PC CL R DR	-32 - 31	00
S038	PC CL G DR	-32 - 31	03
S039	PC CL B DR	-32 - 31	09
S040	PC WM R DR	-32 - 31	00
S041	PC WM G DR	-32 - 31	-6
S042	PC WM B DR	-32 - 31	-15
S043	PC AUTO WB	0 - 1	0

4.6.1.2 VIDEO SYSTEM SETTING -2 (Fixed values)

Item No.	Item name	Variable range	Setting value
M001	MV CON	000 - 255	105
M002	MV SHA	00 - 63	09
M003	MV COL	000 - 255	147
M004	MV TIN	000 - 255	051
M005	AGC GAIN	000 - 255	120
M006	ERR Limit	000 - 127	022
M007	PC R GAIN	000 - 255	099
M008	PC G GAIN	000 - 255	099
M009	PC B GAIN	000 - 255	101

4.6.1.3 AUDIO SYSTEM SETTING (Fixed values)

Item No.	Item name	Variable range	Setting value
A001	S BASS	00 - 16	8
A002	S TRE	00 - 16	8
A003	3D LEVEL	00 - 63	31

4.6.1.4 VIDEO SYSTEM SETTING -3 (Fixed values)

Item No.	Item name	Variable range	Setting value
D001	S CON	00 - 63	20
D002	S BRI	00 - 63	47
D003	S SHA	00 - 15	0
D004	S COL	00 - 63	35
D005	S TIN	00 - 63	32
D006	RGB S COL	000 - 127	085
D007	5I S CON	00 - 63	25
D008	5I S BRI	00 - 63	35
D009	5I S SHA	00 - 63	46
D010	5I S COL	00 - 63	53
D011	5I S TIN	00 - 63	35
D012	5P S CON	00 - 63	24
D013	5P S BRI	00 - 63	35
D014	5P S SHA	00 - 63	18
D015	5P S COL	00 - 63	51
D016	5P S TIN	00 - 63	35
D017	HD75 S CON	00 - 63	29
D018	HD75 S BRI	00 - 63	32
D019	HD75 S SHA	00 - 63	30
D020	HD75 S COL	00 - 63	52
D021	HD75 S TIN	00 - 63	34
D022	HD25 S CON	00 - 63	29
D023	HD25 S BRI	00 - 63	32
D024	HD25 S SHA	00 - 63	30
D025	HD25 S COL	00 - 63	52
D026	HD25 S TIN	00 - 63	34

Item No.	Item name	Variable range	Setting value
D027	PC S CON	00 - 63	25
D028	PC S BRI	00 - 63	35
D029	TXT S CON	000 - 127	024
D030	TXT S BRI	000 - 127	016
D031	RGB S CON	000 - 127	040
D032	RGB S BRI	000 - 127	062
D033	STD BRI1	00 - 31	025
D034	STD CON	00 - 31	016
D035	STD BRI2	00 - 31	16
D036	STD SHA	00 - 31	16
D037	STD COL	00 - 31	16
D038	STD TIN	00 - 31	16
D039	SFT BRI1	00 - 31	16
D040	SFT CON	00 - 31	16
D041	SFT BRI2	00 - 31	16
D042	SFT SHA	00 - 31	16
D043	SFT COL	00 - 31	16
D044	SFT TIN	00 - 31	16
D045	BRI BRI1	00 - 31	31
D046	BRI CON	00 - 31	21
D047	BRI BRI2	00 - 31	14
D048	BRI SHA	00 - 31	21
D049	BRI COL	00 - 31	16
D050	BRI TIN	00 - 31	16
D051	PWM	00 - 31	5

4.6.1.5 VIDEO SYSTEM SETTING -4 (Fixed values)

Item No.	Item name	Variable range	Setting value
SD01	5I R DR	00 - 63	30
SD02	5I G DR	00 - 63	26
SD03	5I B DR	00 - 63	30
SD04	5P R DR	00 - 63	30
SD05	5P G DR	00 - 63	26
SD06	5P B DR	00 - 63	30
SD07	HD75 R DR	00 - 63	30
SD08	HD75 G DR	00 - 63	26
SD09	HD75 B DR	00 - 63	30
SD10	HD25 R DR	00 - 63	30
SD11	HD25 G DR	00 - 63	26
SD12	HD25 B DR	00 - 63	30
SD13	PC R DR	00 - 63	5
SD14	PC G DR	00 - 63	5
SD15	PC B DR	00 - 63	5

4.6.1.6 VIDEO SYSTEM SETTING -5 (Fixed values)

Item No.	Item name	Variable range	Setting value
DD07	5I S CON	00 - 63	31
DD08	5I S BRI	00 - 63	10
DD09	5I S SHA	00 - 63	35
DD10	5I S COL	00 - 63	52
DD11	5I S TIN	00 - 63	32
DD12	5P S CON	00 - 63	31
DD13	5P S BRI	00 - 63	10
DD14	5P S SHA	00 - 63	30
DD15	5P S COL	00 - 63	52
DD16	5P S TIN	00 - 63	32
DD17	HD75 S CON	00 - 63	31
DD18	HD75 S BRI	00 - 63	10
DD19	HD75 S SHA	00 - 63	45
DD20	HD75 S COL	00 - 63	52
DD21	HD75 S TIN	00 - 63	32
DD22	HD25 S CON	00 - 63	31
DD23	HD25 S BRI	00 - 63	10
DD24	HD25 S SHA	00 - 63	45
DD25	HD25 S COL	00 - 63	52
DD26	HD25 S TIN	00 - 63	32
DD27	PC S CON	00 - 63	35
DD28	PC S BRI	00 - 63	0
DD29	PC S SHA	00 - 63	40
DD30	PC S COL	00 - 63	52
DD31	PC S TIN	00 - 63	32

4.6.2 OPTION MODE

4.6.3 OPTION SETTING (Fixed values)

Item No.	Item name	Variable range	Setting value
0001	GAMMA TABLE	000 - 005	001
0002	DIMMING	000 -002	000
0003	HPD SW	000 - 001	000
0004	HPD DELAY	000 - 255	010
0005	DVI MCLK	000 - 255	090

4.7 ADJUSTMENT PROCEDURE

4.7.1 VIDEO CIRCUIT

<table>
<tr><th>Item</th><th>Measuring instrument</th><th>Test point</th><th>Adjustment part</th><th>Description</th></tr>
<tr><td>WHITE BALANCE (HIGHLIGHT)</td><td>Remote control unit

Signal generator</td><td></td><td>[1.ADJUST]
S013: R DRIVE (Red drive)
S015: G DRIVE (Green drive)
S017: B DRIVE (Blue drive)</td><td rowspan="2">(1) Receive a PAL 75% all white signal.
(2) Set PICTURE MODE to "STANDARD".
(3) Set ZOOM to "FULL".
(4) Set COLOUR TEMP. to "NORMAL".
(5) Select "1.ADJUST" from the SERVICE MODE.
(6) Set < S013 > (R DRIVE), < S015 > (G DRIVE) and < S017 > (B DRIVE) to setting values of left table.
(7) Adjust to Keep one of < S030 > (Red drive), < S031 > (Green drive) or < S032 > (Blue drive) unchanged, then lower the other two so that the all-white screen is equally white throughout.
NOTE:
Set one or more of < S013 >, < S015 >, and < S017 > to setting values of left table.
(8) Check that white balance is properly tracked from low light to high light. If the white balance tracking is deviated, adjust to correct it.
(9) Press the [MUTING] key to memoirze the set value.</td></tr>
<tr><td colspan="4">26V-inch
<table><tr><th>Models</th><th>Setting Value</th></tr><tr><td>LT-26A61BJ</td><td>146</td></tr><tr><td>LT-26A61BU</td><td>146</td></tr><tr><td>LT-26A61BU/C</td><td>140</td></tr><tr><td>LT-26A61SJ</td><td>140</td></tr><tr><td>LT-26A61SU</td><td>140</td></tr><tr><td>LT-26A61SU/C</td><td>146</td></tr></table>32V-inch
<table><tr><th>Models</th><th>Setting Value</th></tr><tr><td>LT-32A61BJ</td><td>146</td></tr><tr><td>LT-32A61BU</td><td>146</td></tr><tr><td>LT-32A61BU/C</td><td>140</td></tr><tr><td>LT-32A61SJ</td><td>150</td></tr><tr><td>LT-32A61SU</td><td>150</td></tr><tr><td>LT-32A61SU/C</td><td>146</td></tr></table></td></tr>
</table>

SECTION 5
TROUBLESHOOTING

This service manual does not describe TROUBLESHOOTING.

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(No.YA369)

Printed in Japan
VPT