

S/M No. :DLX32D1001

Service Manual

LCD TV

Model: DLX-32D1SMSB

✓ Caution

: In this Manual, some parts can be changed for improving, their performance without notice in the parts list. So, if you need the latest parts information, please refer to PPL(Parts Price List) in Service Information Center

DAEWOO 
ELECTRONICS

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1. Safety Precaution.

1-1. important safety for you and TV set.

Your product has been manufactured and tested with your safety in mind. However, improper use can result in potential electrical shock or fire hazards. To avoid defeating the safeguards that have been built into your new product, please read and observe the following safety points when installing and using your new product, and save them for future reference.

Observing the simple precautions discussed in this booklet can help you get many years of enjoyment and safe operation that are built into your new product.

■ Read Instructions.

All the safety and operating instructions should be read before the product is operated.

■ Follow Instructions.

All operating and use instructions should be followed.

■ Retain Instructions.

The safety and operating instructions should be retained for future reference.

■ Heed Warnings.

All warnings on the product and in the operating instructions should be adhered to.

■ Water and Moisture.

Do not use this product near water, for example, near a bath tub, wash bowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool. The apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.

■ Accessories, Carts, and Stands.

Do not place this product on a slippery or tilted surface, or on an unstable cart, stand, tripod, bracket, or table. The product may slide or fall, causing serious injury to a child or adult, and serious damage to the product. Use only with a cart, stand, tripod, bracket, or table recommended by the manufacturer, or sold with the product. Any mounting of the product should follow the manufacturer's instructions, and should use a mounting accessory recommended by the manufacturer.

■ Transporting Product.

A product and cart combination should be moved with care.

Quick stops, excessive force, and uneven surfaces may cause the product and cart combination to overturn.



■ Attachments.

Do not use attachments not recommended by the product manufacturer as they may cause hazards.

■ Ventilation.

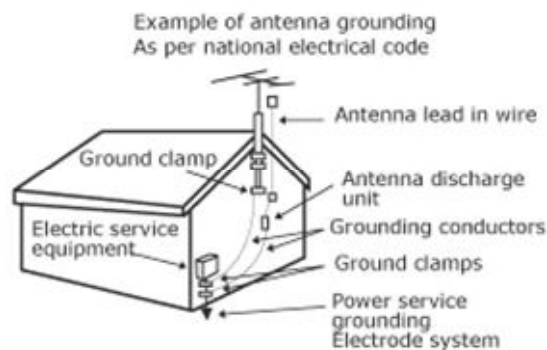
Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the product and to protect it from overheating, and these openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. This product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to. Separate the product from the wall, and keep a distance of more than 10cm.

■ Power Sources.

This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home, consult your product dealer or local power company. For products intended to operate from battery power, or other sources, refer to the operating instructions.

■ Outdoor Antenna Grounding.

If an outside antenna or cable system is connected to the product, be sure the antenna or cable system is grounded so as to provide some protection against voltage surges and built-up static charges.



■ Lightning.

For added protection for this product (receiver) during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the product due to lightning and power-line surges.

■ Power Lines.

An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits as contact with them might be fatal.

■ **Overloading.**

Do not overload wall outlets and extension cords as this can result in a risk of fire or electric shock.

■ **Heat.**

The product should be situated away from heat sources such as radiators, heat registers, stoves, or other products (including amplifiers) that produce heat.

■ **Cleaning.**

Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a dry cloth for cleaning.

■ **Servicing.**

Do not attempt to service this product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

■ **Damage Requiring Service.**

Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:

- When the power-supply cord or plug is damaged.
- If liquid has been spilled, or objects have fallen into the product.
- If the product has been exposed to rain or water.
- If the product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to its normal operation.
- If the product has been dropped or the cabinet has been damaged in any way.
- When the product exhibits a distinct change in performance.

■ Whenever you connect all external A/V equipment to your television, ensure that all equipments are switched off. Also refer to the user manual supplied with your A/V equipment for detail connection instructions and associated safety precaution.

■ The mains plug is used as the disconnect device. The disconnect device shall remain readily operable.

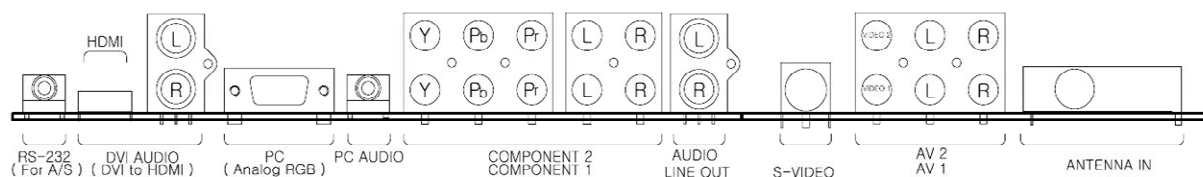
** The socket-outlet shall be installed near the apparatus and shall be easily accessible.*

1-2. Safety precautions for service.

- When moving or laying down a TV set, at least two people must be working. Avoid any impact towards the TV set.
- Do not leave the broken TV set on for a long time. To prevent any further damages, after check the broken set s condition, make sure to turn the power (AC) off.
- When opening the back cover, turn off the power (AC) to prevent electric shock. When a TV set is on, high voltage and high current exist inside the set.
- When loosening screws, check the connecting position and type of the screw. Sort out the screws and store them separately. Because screws holding PCB are working as electric circuit grounding, make sure to check if any screw is missing when assembling.
- A TV set contains different kind of connector cables. When connected or disconnected connector cables, check the direction and position of the cable beforehand.
- When disconnecting connectors, unplug the connectors slowly with care.
- Connectors are designed so that if the number of pins or the direction does not match, connectors will not fit. When having problem in plugging the connectors, make sure to check their kind, position, and direction.

2. Set Specifications.

2-1. General Specifications.



Model		DLX-32D1SMSB
Specifications		
LCD	Panel	32inches TFT LCD
	Resolution	1366 X 768 (WXGA)
	Screen Size	697.68(H) x 392.26(V)
Dimension	Width	985.5
	Height	654.5
	Depth	106
Aspect ratio		16:9
Weight		25kg
TV	System	3System (NTSC-M, PAL-M, PAL-N)
	Tuning	FS
	Cable	125 Channels
Speaker		Up to 10Wx2 (6Ω Speaker)
Power Consumption		175W
Input Source	Video 1/2	RCA 2 / Stereo L/R
	Component 1/2	RCA (Y Pb Pr) 2, RCA Stereo (L/R)
	PC	Analog RGB (15 Pin D-Sub)
	HDMI	HDMI (Type A), RCA Stereo (L/R)
	Antenna	75ohm Coaxial Cable/F-Connector
Remote Controller		DDR-2020000
Power		AC 110~240V, 50/60Hz

2-2. Full Specifications.

Category				Dimension	
Panel	LCD	Type		LCD Panel	
		Vendor		Samsung	
		Aspect Ratio		16 : 9	
		Refresh Rate		50Hz, 60Hz	
		Supported Pixel Rate		1366 x 768	
		Interface		LVDS	
Signals Supported	TV	US	Analog	NTSC-M	
				PAL-M	
				PAL-N	
	CVBS / S-Video			NTSC-3.58 / PAL-M / PAL-N	
	Component 1/2			480i , 480p , 720p, 1080i	
	PC	H. Frequency Range		20 ~ 72 kHz	
		V. Frequency Range		55 ~ 90 Hz	
		MAX. Resolution		1360 x 768 @60Hz *1)	
		MAX. Pixel Rate		110 MHz	
		DTV mode Support		480p, 720p, 1080i	
	HDMI (DVI)	VIDEO		RGB (8 bit per Channel)	
				Y/Cb/Cr (Uncompressed)	
				Max pixel input: 1920 x 1080i	
		AUDIO		@2 Channels: 32 ~ 48kHz / Channel	
	Data Protection		HDCP v.1.1		
	DVI Sound In			RCA Audio Stereo Input (Applicable when using DVI to HDMI Cable)	
Connections	MAIN BOARD (Universal)	RS-232 (for A/S)		Stereo Jack Type	
		HDMI(DVI)		HDMI Jack (Type A)	
				HDMI Audio (RCA Stereo L/R Input for DVI) (Applicable when using DVI to HDMI Cable)	
		PC (RGB)		Analog RGB (15 Pin D-Sub)	
				Stereo Audio-In Jack	
		Component1		3 RCA (Y Pb Pr)	
				RCA Stereo (L/R)	
		Component 2		3 RCA (Y Pb Pr)	
				RCA Stereo (L/R)	
	Speaker Out *2) (Internal Connector)		Up to 15Wx2 (4Ω Speaker, 1KHz, d=10%)		
			Up to 10Wx2 (8Ω Speaker, 1KHz, d=10%)		
	AUDIO Line-Out		RCA Stereo L/R Out		
	SUB BOARD (NTSC)	AV 1		S-Video or Video, and RCA Stereo L/R	
AV 2		Video & RCA Stereo L/R			
TV Antenna		Antenna In (75ohm Coaxial)/(F-connector)			
TV	SUB BOARD (NTSC)	RF Frequency Range		55.25MHz ~ 801.25 MHz	
		Video System (NTSC)		NTSC-M, PAL-M, PAL-N	
		Sound System (NTSC)		MTS (Mono, Stereo, SAP)	
				BTSC	

*1) PC Input doesn't support 1360 x768 resolution in some VGA card.

*2) Normal Audio AMP Power Voltage is 24V.

Category		Dimension
On Screen Display (OSD)	Color	8bit Color (256 Color Palette from 16bit Color)
	Type	Graphical & Text User Interface
	Language	English, French, Spanish, Portuguese
	OSD Size	703 X 422
	Image Setting (Video & Graphic)	Contrast / Brightness / Sharpness / Color / Tint
		5 Color Tone Temperature Modes (Normal/Warm1/Warm2/Cool1/Cool2)
		5 Picture Modes (Standard/dynamic/Mild/Movie/Custom)
		5 Aspect Ratio Modes (Wide / Panorama / Zoom / 14:9 / 4:3) (Up/down Scroll function in Zoom & 14:9 Mode)
	Sound	Volume / Balance
		5 band equalizer
		Mono / Stereo / MTS
		Auto Volume Level
		5 Sound Modes (Custom / Standard / Music / Movie / Speech)
	PC Function	Auto Adjustment
		Frequency Adjustment
		Phase Adjustment
		Position Adjustment
		Aspect ratio Change (Wide / Real / 4:3)
	PIP & PBP	Graphic vs. Video ^{*3)} (Not support G vs. G & V vs. V)
		Sub Picture Source Select
		Sub Picture Size (Small / Double1 / Double2)
		Sub Picture Position
		Picture Swap
	V-chip / CC (US)	Supported
	Timer	Sleep (Off / 30 / 60 / 90 /120 / 150 / 180 min)
		Wake up ON & Power OFF Reservation
		On Time Channel & Volume Set
	Miscellaneous	Blue Screen Function
		Blue Back Screen
		Last Power State Save
		Remember the last state before power-off
		Picture still
		Pause moving image
		HDMI & HDCP
		High Digital Multimedia Interface High-Bandwidth Digital Content Protection
		DNR
		Digital Noise Reduction of Image
		Pixel Shift
		Pixel Burning Protection
		Key Lock
		Disable all the buttons on TV set.
		Wiper
		Clear & Refresh whole screen.

*3) PIP & POP Support Table.

MAIN \ SUB	TV	AV1	S-Video	AV2	DTV	Component 1	Component 2	PC	HDMI
TV	X	X	X	X	X	O	O	O	O
AV1	X	X	X	X	O	O	O	O	O
S- Video	X	X	X	X	O	O	O	O	O
AV2	X	X	X	X	O	O	O	O	O
DTV	X	O	O	O	X	X	X	X	X
Component 1	O	O	O	O	X	X	X	X	X
Component 2	O	O	O	O	X	X	X	X	X
PC	O	O	O	O	X	X	X	X	X
HDMI	O	O	O	O	X	X	X	X	X

*Video = TV, AV Input

*Graphic = DTV, Component, Analog RGB, HDMI.

2-3. Resolution.

2-3-1. PC Resolution.

Section	Resolution	H Frequency (KHz)	V Frequency (Hz)	Pixel Frequency (MHz)	Comment
PC	640x400	37.861	85.08	31.5	
	640x350	31.469	70.087	25.175	
		37.861	85.08	31.5	
	640x480	31.469	59.94	25.175	
		37.861	72.809	29.765	
		37.500	75.0	31.5	
		43.269	85.008	36.0	
		45.540	90.0	37.889	
		50.900	100	43.163	Out of range
	720 X 400	31.469	70.087	28.322	
		37.927	85.039	35.5	
	800x600	35.156	56.25	36.0	
		37.879	60.317	40.0	
		43.764	70.020	45.5	
		48.077	72.188	50.0	
		46.875	75.0	49.5	
		53.674	85.061	56.25	
		56.880	90.0	60.065	
		62.5	100	66	Out of range
	1024 X 768	48.780	60.001	64.11	
		48.363	60.004	65.0	
		56.476	70.069	75.0	
		60.030	75.029	78.75	
		60.241	74.927	80	
		68.677	84.997	94.5	
		72.810	90.0	100.187	
		81.845	100.795	110	Out of range
	1152 X 864	53.700	60	81.6	
		62.932	69.924	96.6	
	1152 X 864	67.500	75.0	104.993	
	1152 X 900	61.846	66.0	94.787	
		72.713	76.047	105.561	
	1280 X 768	47.700	60.0	80.136	
	1280 X 960	60.000	60.0	102.104	
	1280 X1024	63.337	59.978	108.18	
		63.981	60.02	108.0	
		64.754	60.060		Out of range
		74.405	69.995	125	Out of range
		74.664	70.032		Out of range
		78.125	72.005	135	Out of range
		79.976	75.025	135	Out of range
		91.146	85.024		Out of range
		91.375	85.0		Out of range
	1360 X 768		60		Only nVidia

* Shade Box is Not Support or requires compatibility Test.

2-3-2. DTV Resolution.

Section	Resolution	H Frequency (KHz)	V Frequency (Hz)	Pixel Frequency (MHz)	Comment
DTV	720 X 480	31.469	59.94	25.175	
	720 X 480	31.5	60	27.027	
	720 X 576	31.250	50.0	26.566	
	1280 X 720	44.964	59.94	74.176	
	1280 X 720	45	60	74.25	
	1920x1080	33.750	60.0	74.25	
	1920x1080	33.176	59.94	74.176	
	1920x1080	28.125	50.0	74.25	
	1920x1080	31.25	49.96	74.25	

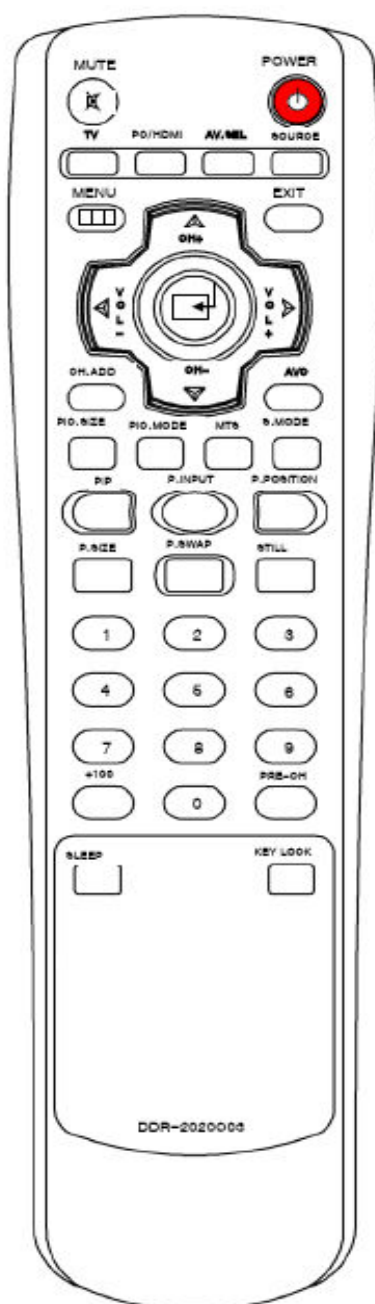
*DVI doesn't support PC resolutions, it only support DTV resolutions!

3. General Panel Specification.

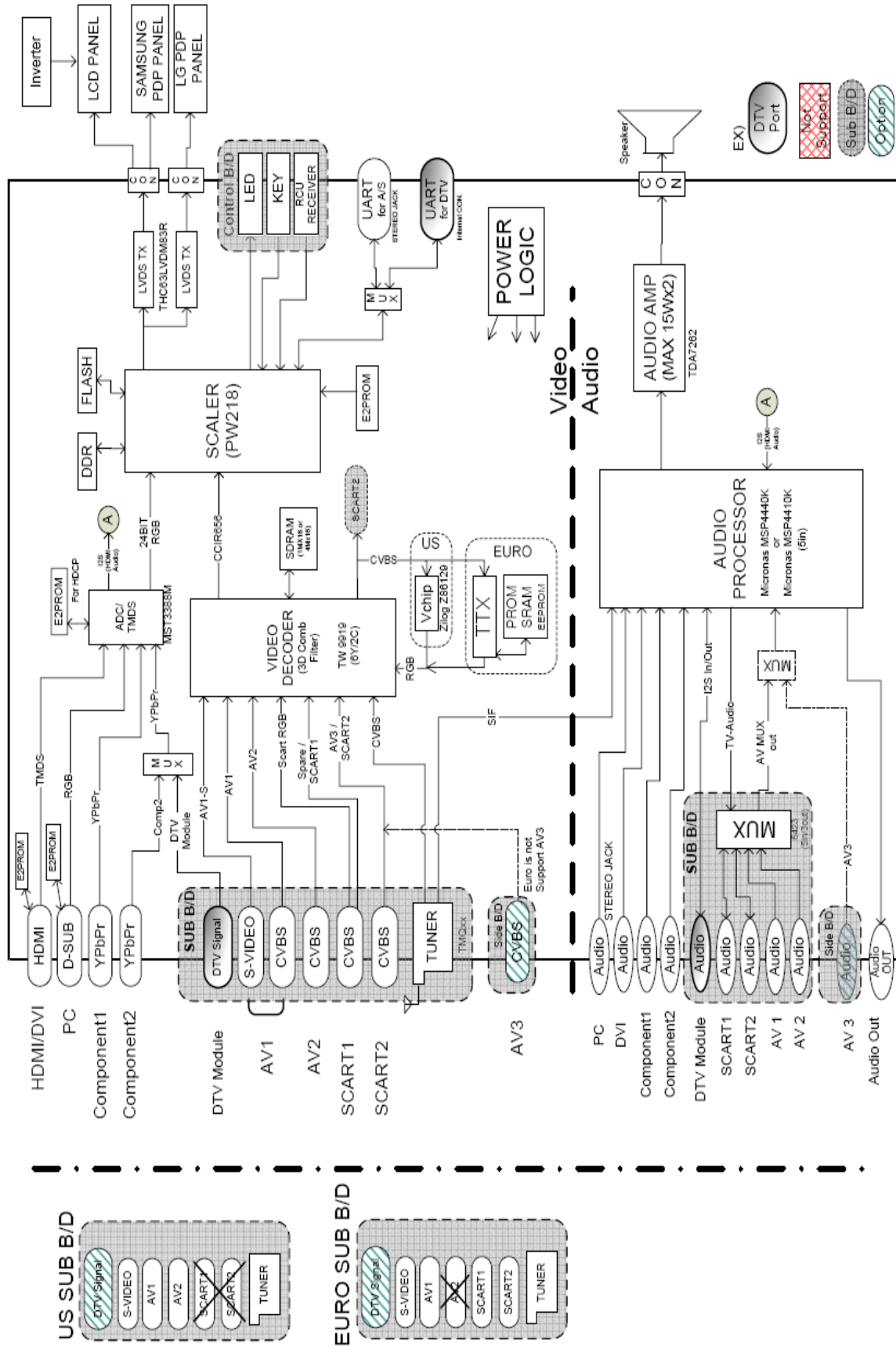
	Min	Max
Screen Size(mm)	697.68(H) x 392.256(V)	
Pixel Pitch(mm)	0.51075(H) x 0.51075(W)	
Luminance/Brightness	450cd/m ²	500cd/m ²
Contrast Ratio	700 : 1	1200 : 1
Viewing Angle	170(Degrees)	178(Degrees)

- Because Standard of reject is decided according to outgoing inspection criteria and approval of panel maker, Defect panel should be referred to panel maker or its documents.

4. Remote Controller.

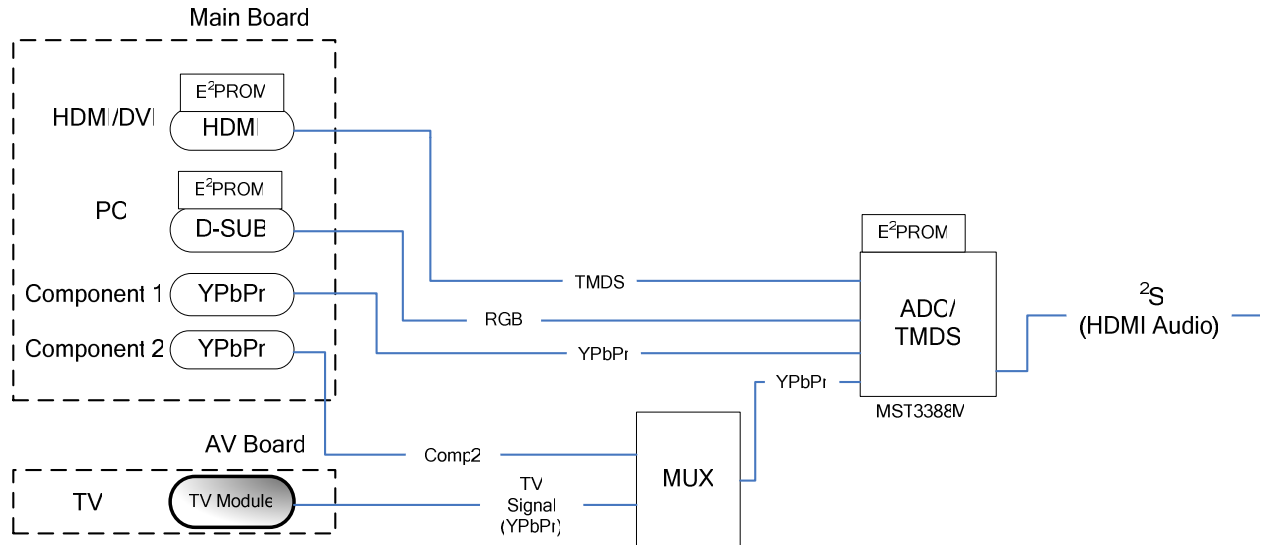


5. Block Diagram.



6. Description of each Block.

6-1. Graphic Signal Process according to Input Source.

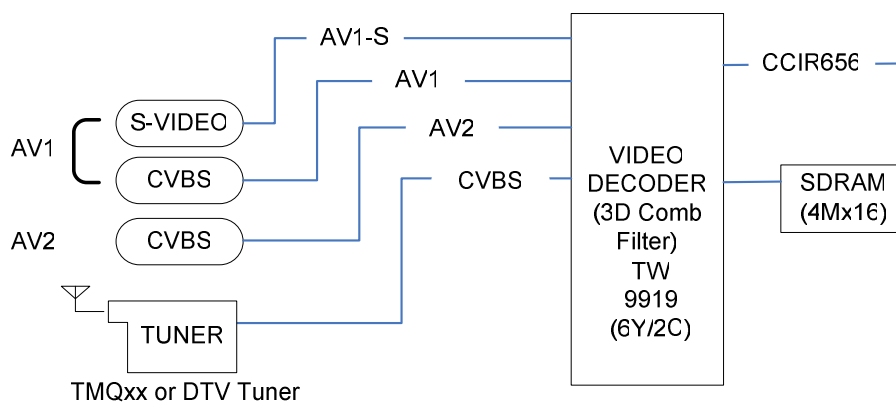


Graphic signal is processed from each source input to ADC/TMDS as a bellows,

- 1) HDMI(DVI) Input Signal : Pin 108, 109, 111, 112, 114,115, 117, 118, 124,125.
 - 2) D-SUB Input Signal : Pin 2, 3, 6, 7, 8, 9, 10, 11, 12.
 - 3) Component 1 Input Signal : Pin 15, 16, 17, 18, 19, 20, 21.
 - 4) Component 2 Input signal : Pin 1,3,5.
- Component Output : From Pin 15, 19, 21 of MUX to Pin 22, 23, 24, 25, 26, 27, 28 of ADC.

And each graphic input signal is transmitted to scaler IC of 24-bit RGB signal, HDMI audio signal is transmitted from ADC to audio processor.

6-2. Video Input Process.

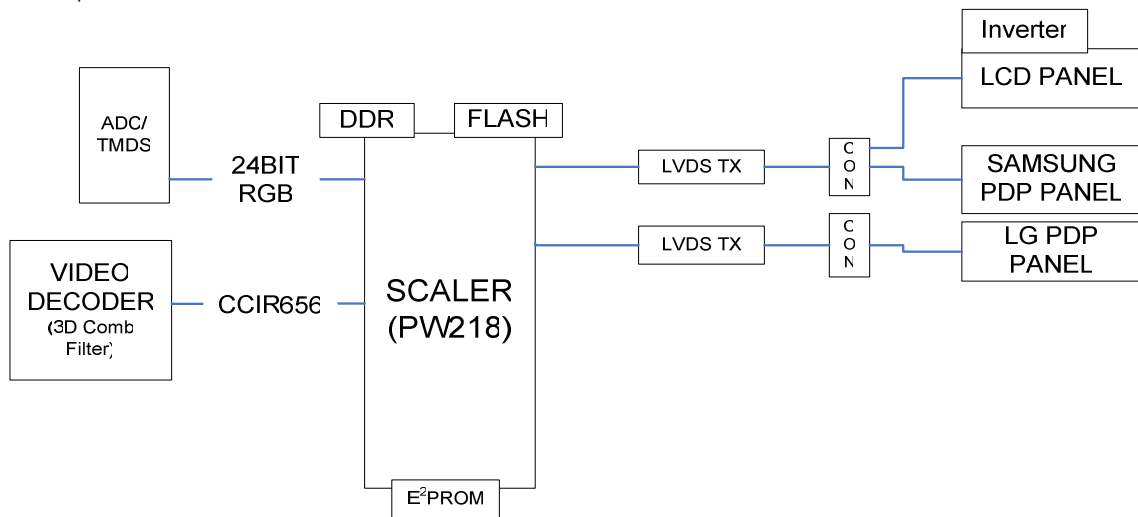


Processing From video input port to video decoder as a bellows,

- 1) AV1 Input Signal : Decoder Pin 58 from CVBS signal.
- 2) AV2 : Decoder Pin 57 from AV2 CVBS signal.
- 3) TUNER : Decoder Pin 59 CVBS signal of Tuner.

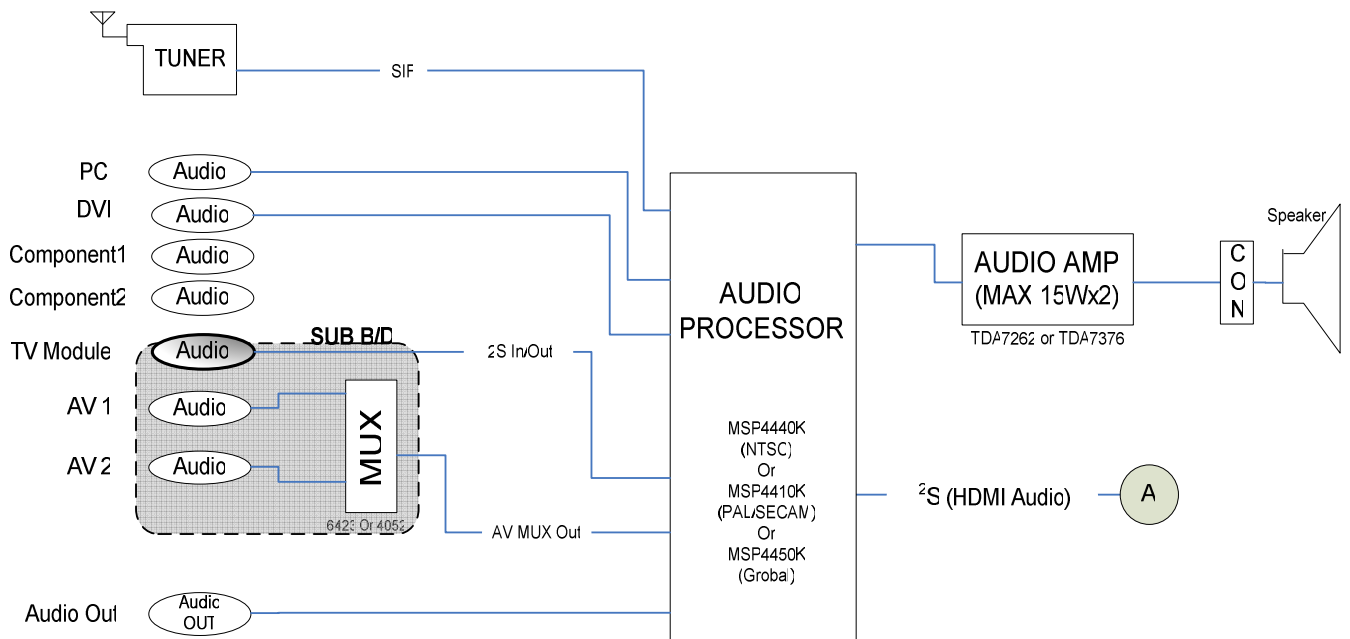
Video signal from CVBS and Y, C signal of decoder is transmitted to scaler with 8Bit CCIR656 format.

6-3. Video Output Process.



Signal from ADC and video decoder is transmitted to Scaler PW218, actually displaying on the screen, output signal through LVDS interface is displayed on LCD or PDP panel.

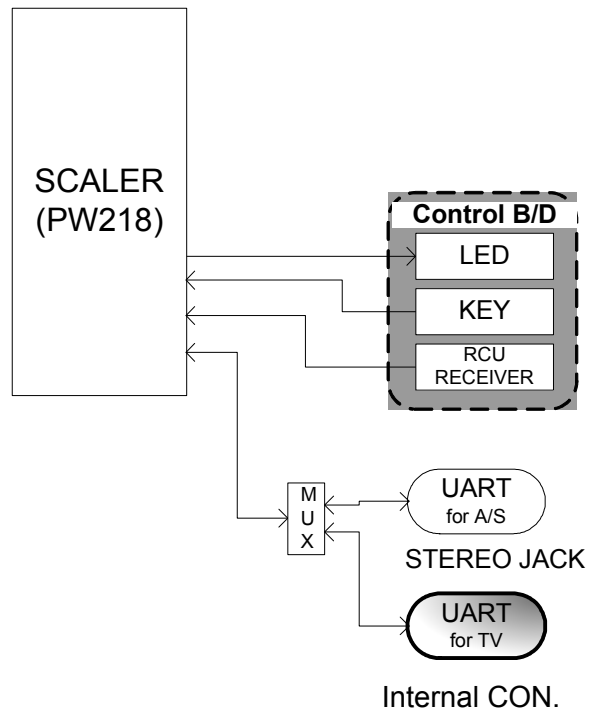
6-4. Audio Input & Output process.



Audio signal from Audio Processor is processed from audio AMP to speaker as a bellows,

- 1) Tuner Input : Pin 67 of audio processor from tuner SIF signal.
- 2) PC Input : Pin 53, 54 of audio processor from PC audio signal.
- 3) DVI Input : Pin 56, 57 of audio processor from DVI audio signal.
- 4) Component 1 : Pin 50, 51 of audio processor from component 1 signal.
- 5) Component 2 : Pin 47, 48 of audio processor from component 2 signal.
- 6) AV 1/2 : Pin 59,60 of audio processor through MUX audio signal from AV 1/2.
- 7) HDMI : Pin 19,20,22 of audio processor from HDMI I²S(Inter-IC Sound) of ADC pin 96, 97, 98.
- 8) Audio Line Out : Pin 33, 34 of audio processor.

6-5. Operating parts & Update Process.



- 1) Key : Signal of Key board is transmitted directly to pin port B0~B6 of scaler.
- 2) IR : Signal of IR board is transmitted directly to IRRCVR0 of scaler.
- 3) LED : LED signal is outputted from IN1B4, IN1B5 to control pin 1, 2 of scaler.
- 4) Update : UART Port signal of Main board from serial port of PC is transmitted to RXD, TXD of scaler.

7. Connector Description.

7-1. Main Board & its Pin Assignment:

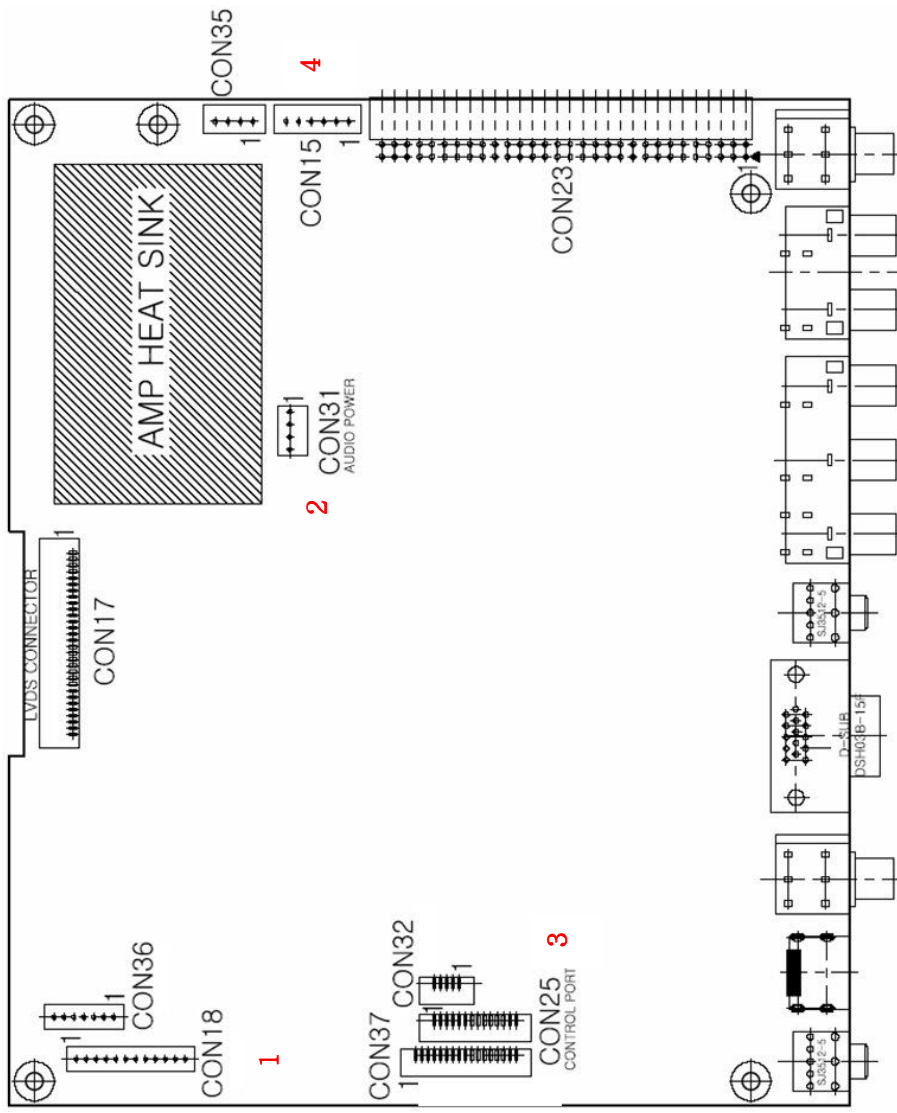


Table No. 1 – Terminal PIN Assignment of Main Board.

Loc. / No	1 – Con18	2 – Con31	3 – Con25	4 – Con15
Name	Power	Audio Power	IR & Key	Speaker
Pin Number	12	4	14	6
Pin No	Con18	Con31	Con25	Con15
1	12V	V_amp	LED_G	Left-
2	12V	V_amp	LED_R	Left+
3	NC	GND	GND	Left+_SW
4	GND	GND	Key_Ch+	Right-
5	5V		Key_Ch-	Right+
6	5V		Key_Vol-	Right+_SW
7	Stby5V		Key_Vol+	
8	GND		Key_pwr	
9	BRI-ADJ		GND	
10	GND		Key_Menu	
11	BLU On		Key_Input	
12	SMPS ON		IR IN	
13			3V3	
14			GND	

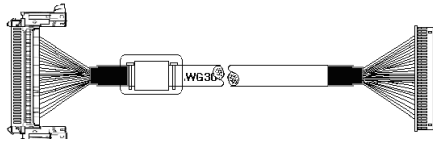
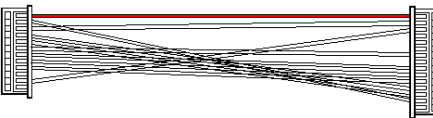
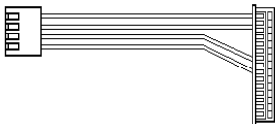
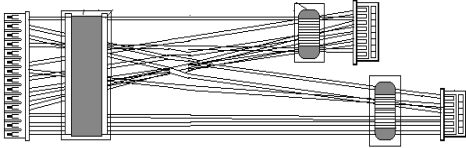
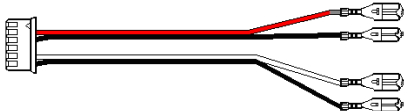
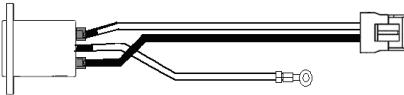
- ✓ NC = Not Connection
- ✓ V_amp (Power for Audio AMP.) = 12 ~ 30V, (Normally 24V (at least) for Enough Audio Power)
- ✓ Not used connector : CON36, CON37, CON32, CON35.
- ✓ CON17 is used as a LVDS connector.

7-2. Terminal PIN Assignment of Main Board and Sub Board Connector.

Location No.		CON 23	
Function		SUB B/D(or SUB Module) Connection	
No. of pin		60pin (pin1~40 is for Analog TV)	
Type		SH1605-230 (female)	

Pin No.	Pin Name	Pin No.	Pin Name
1	FS_G	16	S-Video_Y
2	FS_B	17	AV2_CVBS
3	FS_R	18	GND
4	FS_FB	19	AV2_DET
5	GND	20	S-Video_C
6	GND	21	5V_ Standby
7	HS_CVBS	22	GND
8	FS_CVBS	23	GND
9	HS_ID	24	Tuner_CVBS
10	FS_ID	25	Tuner_SIF
11	AV1_DET	26	GND
12	HS_CVBS_OUT	27	GND
13	AV1_CVBS	28	9V_MUX
14	GND	29	TV_R_out
15	S-Video_DET	30	TV_L_out

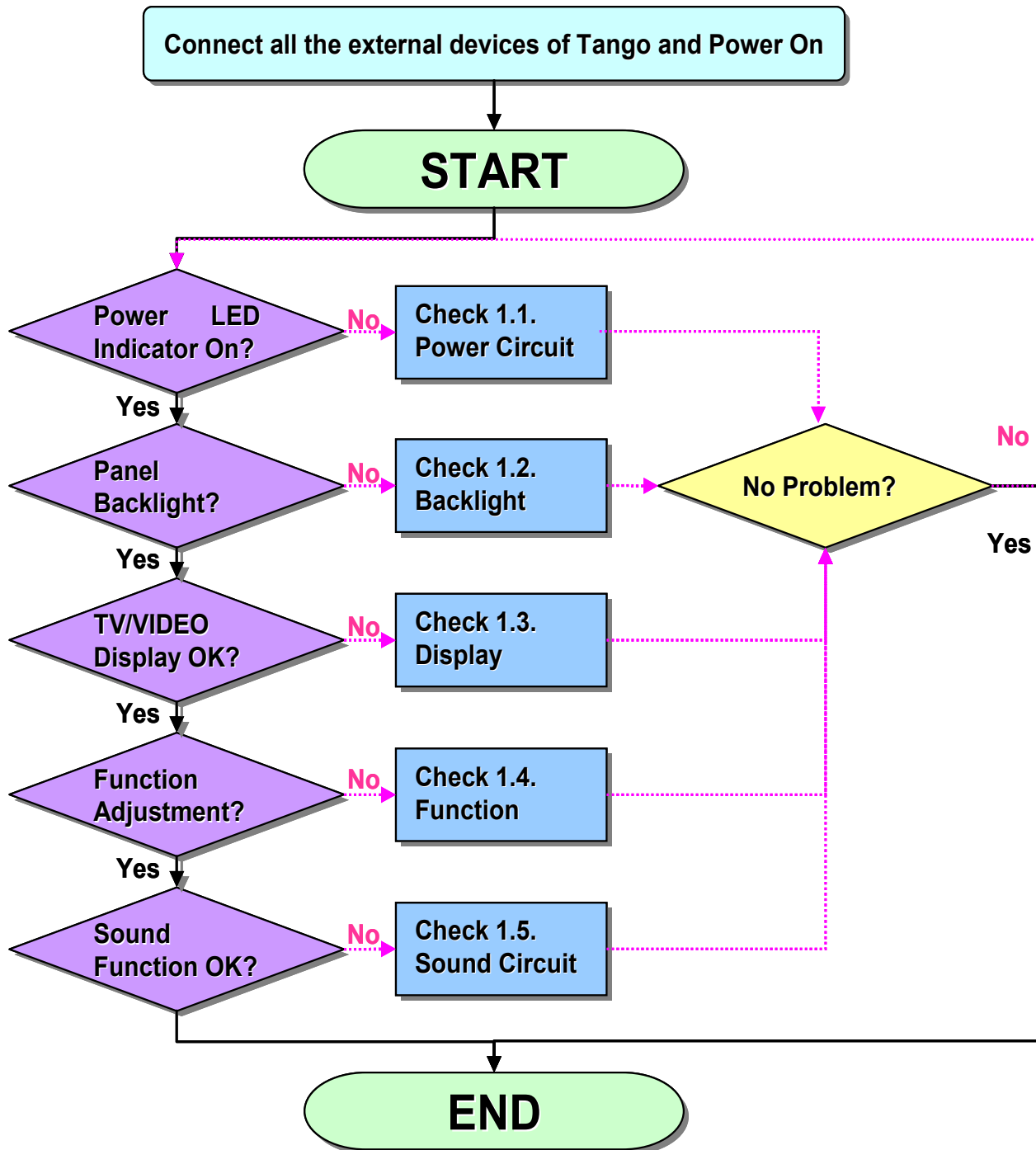
8. Cable/Wire List.

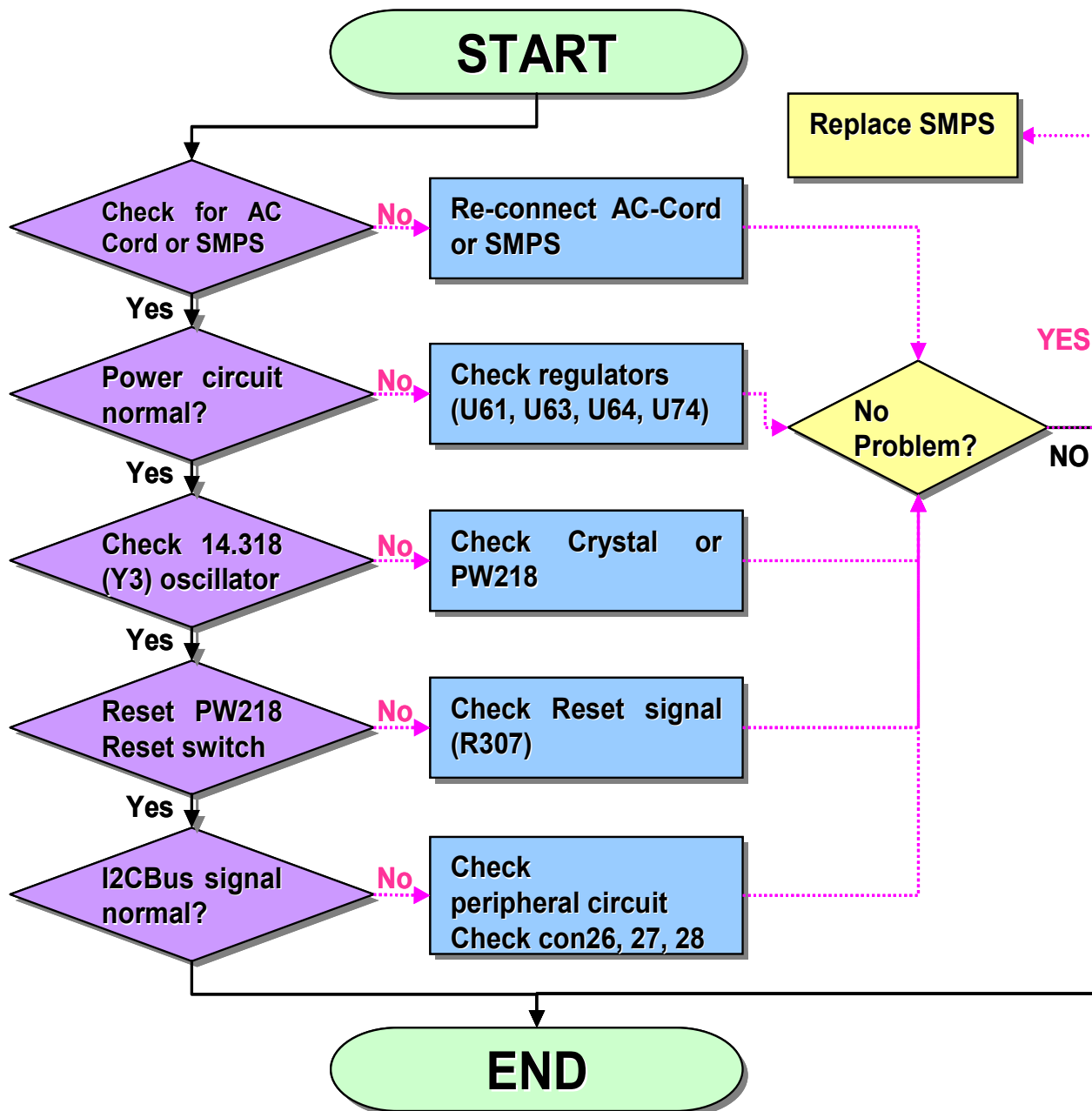
No	Part Code	Part Name	Part Specification	Part Appearance
1	DD-L32LVD-40	LVDS Cable	30P*30P*260mm	
2	DD-L32ADP-40	AD POWER Cable	12P*15P*300mm	
3	DD-L32INV-20	INVERTER Cable	14P*15P*400mm	
4	DD-L32AMP-40	AMP POWER Cable	4P*15P*250mm	
5	DD-L32KEYIR-40	KEY-IR Cable	14P*8P*6P*400*500mm	
6	DD-L32SPK-40	SPEAKER Cable	6P*LUG(A,B)*550mm	
7	DD-L32MPN-30	NOISE FILTER	2P*350mm+GND	
8	DDL32GND--40	GROUND WIRE	1P*1P*200mm	

9. Trouble Shooting.

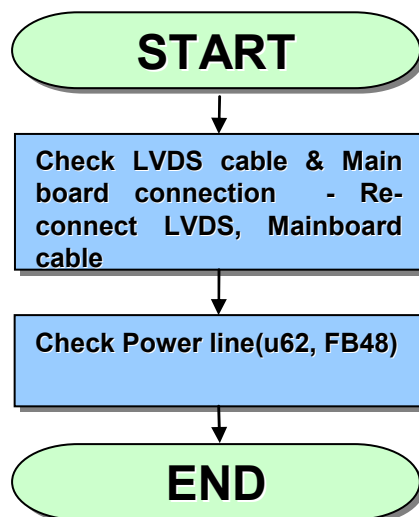
In this chapter, you are guided how to check, find the hardware problem points and get a repairing ideas.

9-1. General Set Check Procedure.

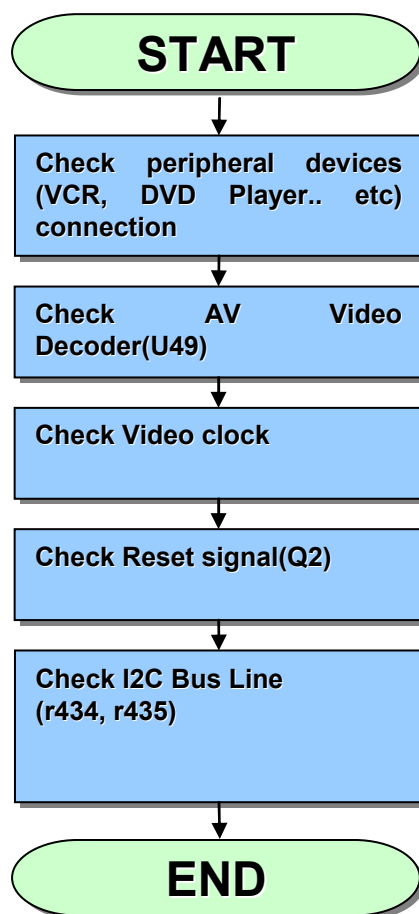




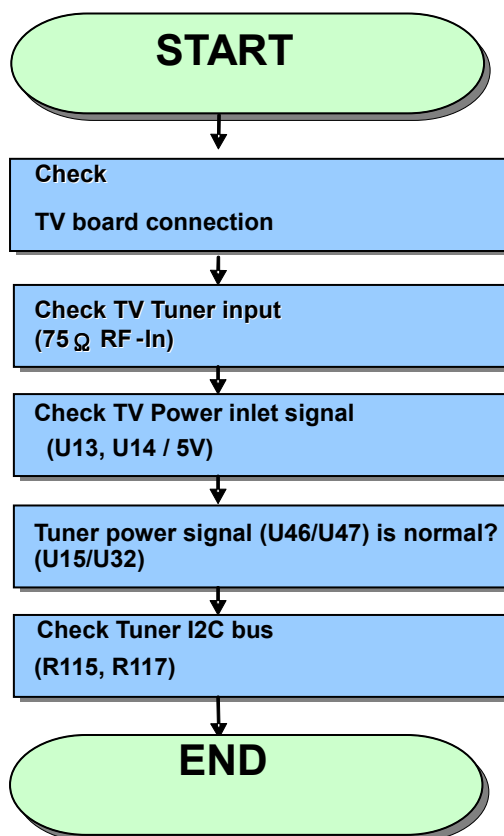
9-3. Picture on the screen Check Procedure.



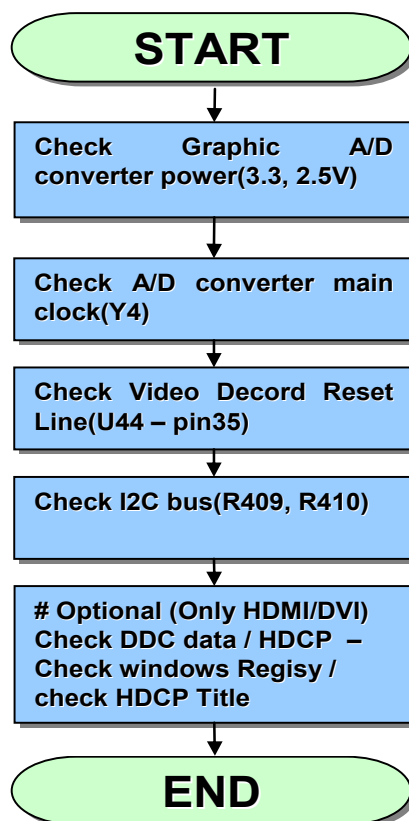
9-4. S-Video, AV1/2 Check Procedure.



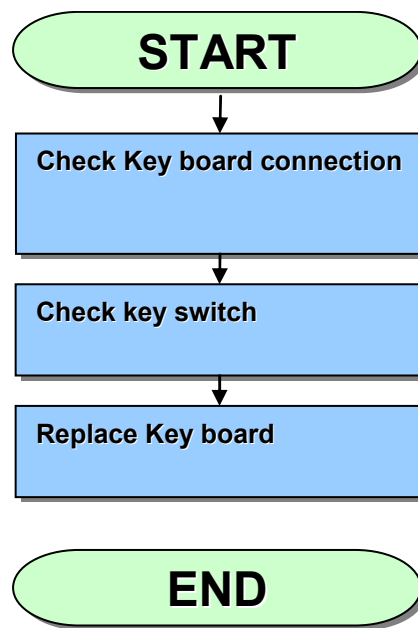
9-5. TV Check Procedure.



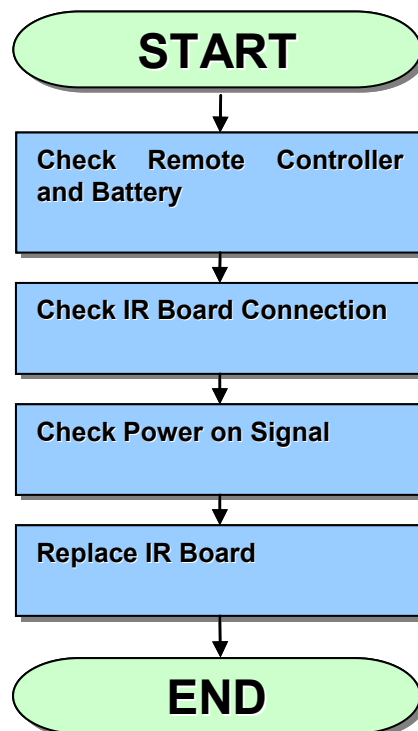
9-6. PC, HDMI, Component Check Procedure.

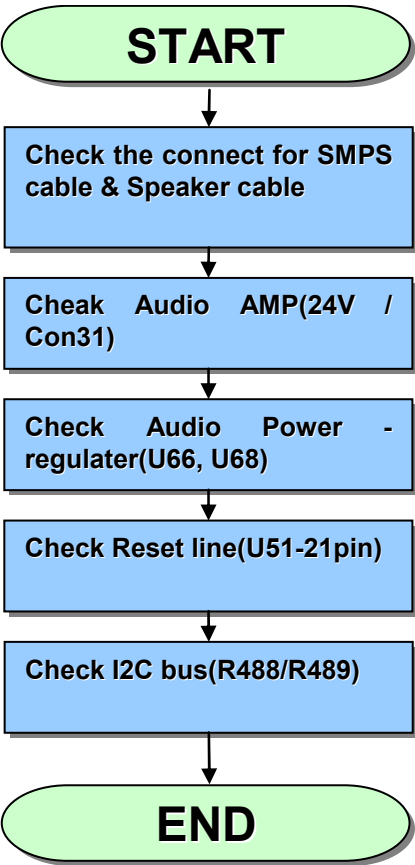


9-7. Key Function Check Procedure.



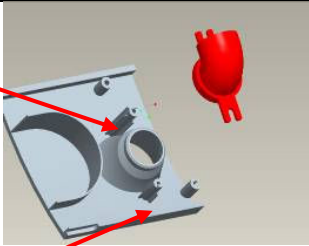
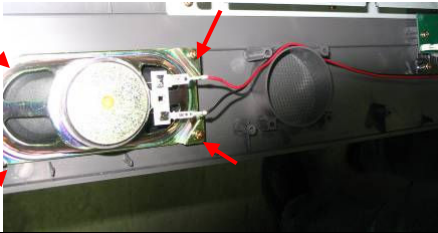
9-8. Remote Controller Check Procedure.



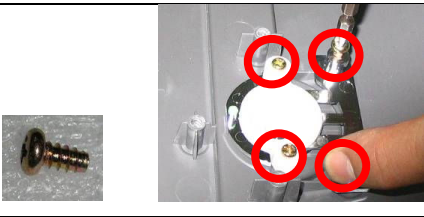
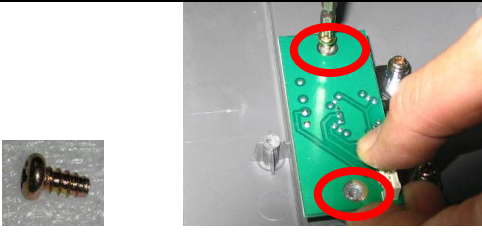


10. Set Assembly.

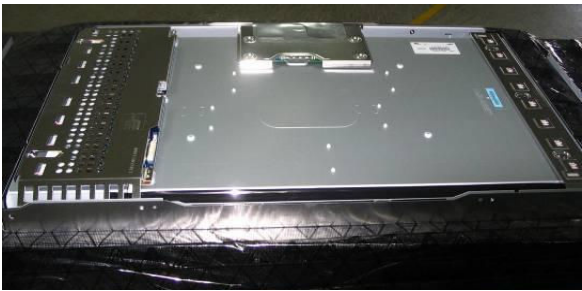
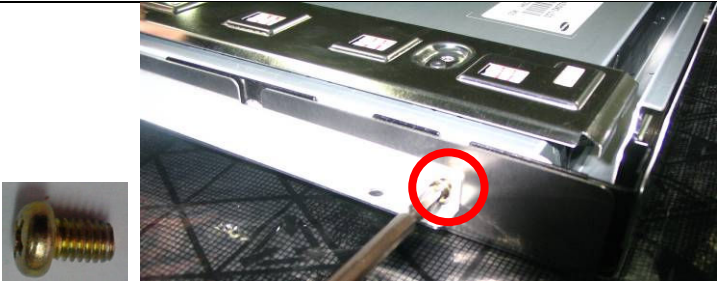
10-1. Assembly of Front Parts.

Step 1 Put down the front	
Step 2 Assemble Speaker elbow Use the Screw No.1 (4EA)	 
Step 3 Assemble L/R Speaker Unit Use the Screw No.2 (8EA)	 

10-2. Assemblage of IR

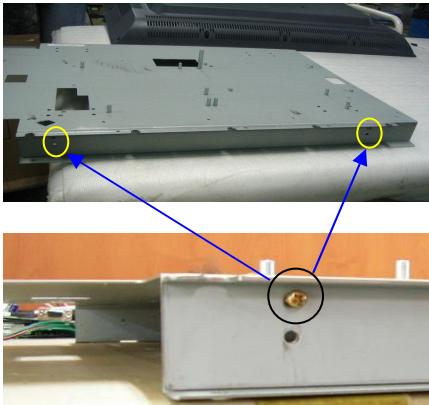
Step 1 Assemble Window IR	
Step 2 Assemble Knob Stand-by Use the Screw No. 2 (4EA)	
Step 3 Assemble Window Plate	
Step 4 Assemble Key IR Use the Screw No. 2 (2EA)	

10-3. Assemblage of Panel Sub.

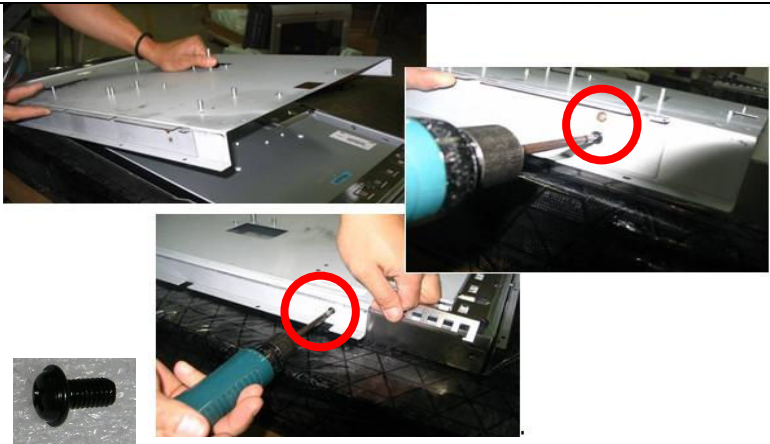
Step 1 Open the Box & Put down the Panel	
Step 2 Assemble Panel Bracket Samsung Use the Screw No. 3 (6EA)	

10-4. Assemblage of Panel Cover.

Step 1
Assemble Stand Support
Use the Screw No.2 (2EA)



Step 2
Assemble Panel Cover Ass'y
Use the Screw No.4 (4EA)



10-5. Assemblage of Front & Panel Assembly.

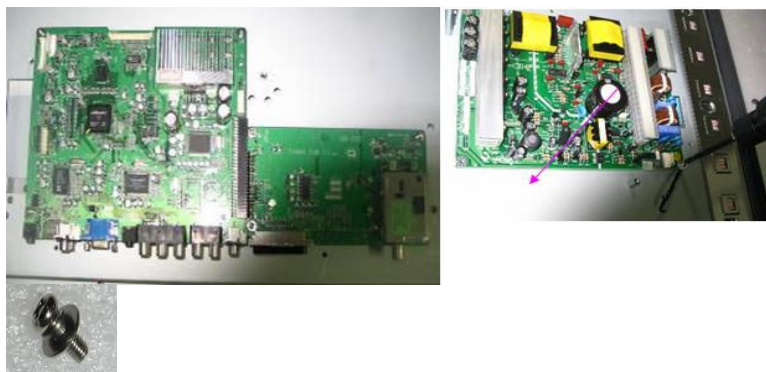
Step 1
Assemble Front & Panel Ass'y
Use the Screw No.2
15ea- Top 4EA, Bottom 5EA,
L/R 6EA)



10-6. Assemblage of Board.

Step 1

Assemble 218 Board
Use the Screw No. 5 (12EA)

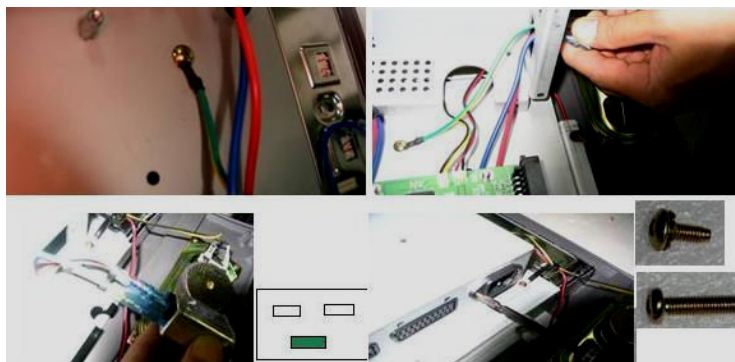


Step 2

Assemble Noise filter
-Assemble Earth bolt
Use the Screw No. 6(1EA)

-Assemble Noise filter
Use the Screw No. 7(2EA)

-Assemble Cable
(Bottom Position Green)



10-7. Assemblage of PCB Cover.

Step 1

Assemble PCB Cover
Use the Screw No.2 (12EA),
No.3 (2EA)

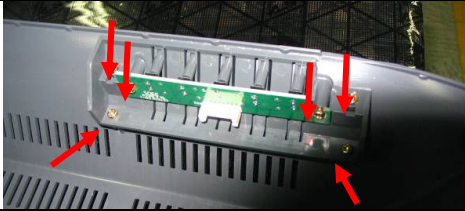
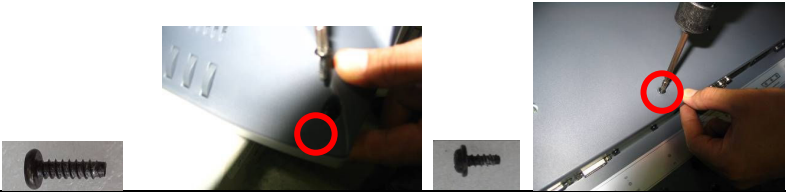


Step 2

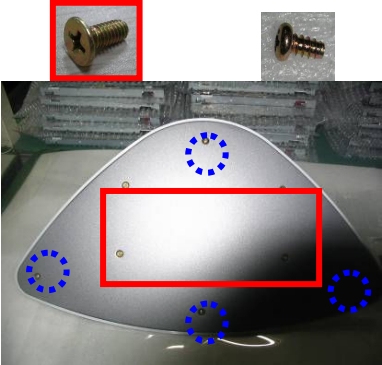
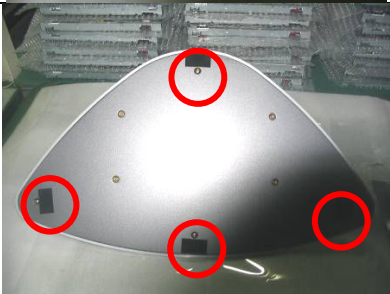
Assemble PCB Cover
Use the Screw No.4 (1EA) ,
No.8 (7EA) ,
No.9 (2EA)



10-8. Assembly of Rear Cover.

Step 1 Assemble Knob Control Use the Screw No.7 (6EA)	 
Step 2 Assemble Rear Cover Use the Screw No. 10 (13EA) Use the Screw No. 1 (1EA)	

10-9. Assemblage of Stand.

Step 1 Assemble Stand Cover	
Step 2 Assemble Stand Base Use the Screw No.11 (4EA) No.2 (4EA)	
Step 3 Assemble Rubber	
Step 4 Assemble Stand Ass'y Use the Screw No.12 (6EA)	

10-10. Screw Specifications.

NO.	IMAGE	SORT	NAME / SPEC
1		Tapite + Washer + Panhead	TWP 3*6 Black
2		Tapite + Panhead	T/T-BP+4*8
3		Machine Screw + Panhead	P+4*6
4		Machine Screw + Washer+ Panhead	WP+4*8 Black
5		Machine Screw + Plain Washer + Spring Washer	SW/PW BP+3*8
6		Machine Screw + Panhead + External Teeth Washer	T/T CT BB+4*10
7		Machine Screw + Panhead	BP+3*10
8		Tapite + Bindhead	T/T-BB+3*8
9		Hexa Nut	HEXA NUT
10		Tapite + Bindhead	T/S 2B+4*14 Black
11		Machine Screw	OVEL + M4*10
12		Machine Screw + Trusshead	T+4*16 Black

11. Firmware Update

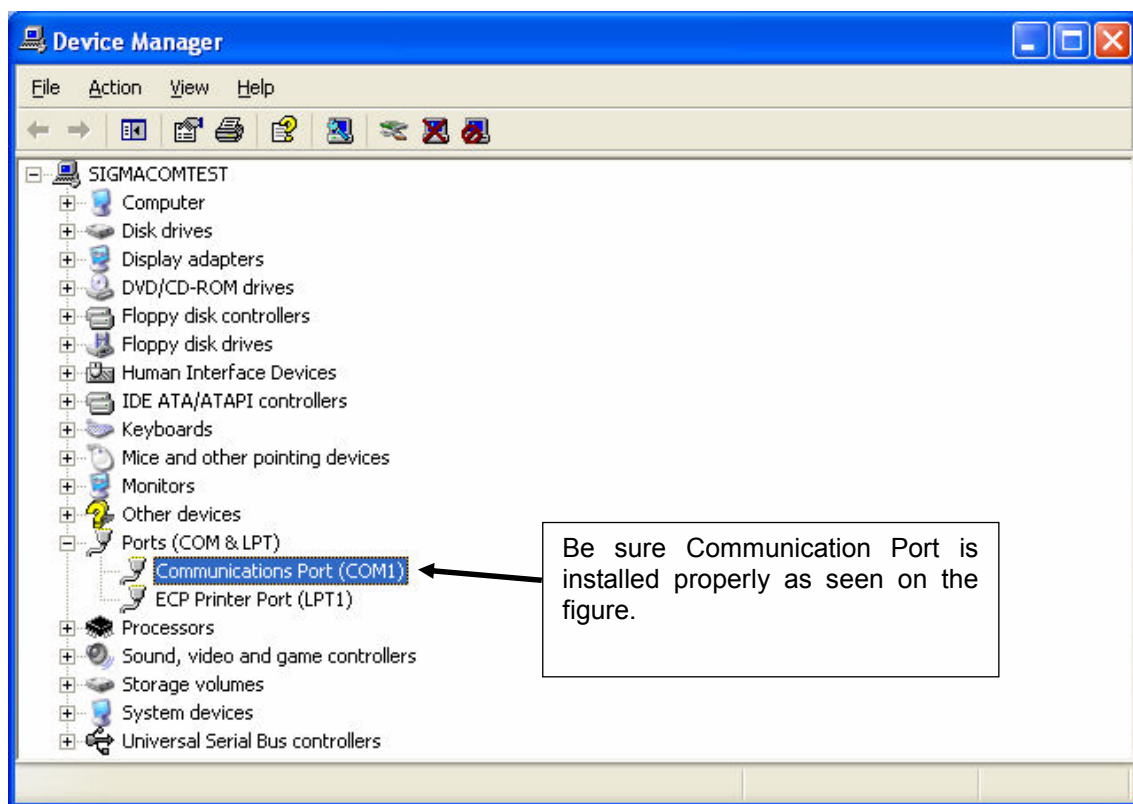
11-1. Preparation.

- ✓ . LCD/PDP TV Set.
- ✓ . Update Cable (RS-232C to Stereo Phone Cable).
- ✓ . IBM Compatible PC.

11-2. System Configuration.

- ✓ . PC Configuration

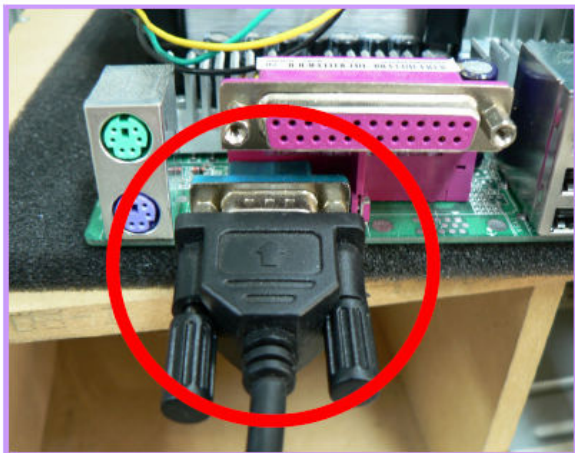
Because the update requires RS-232C port of PC, all the configuration of Serial Port (COM1/COM2) should be done before proceed.



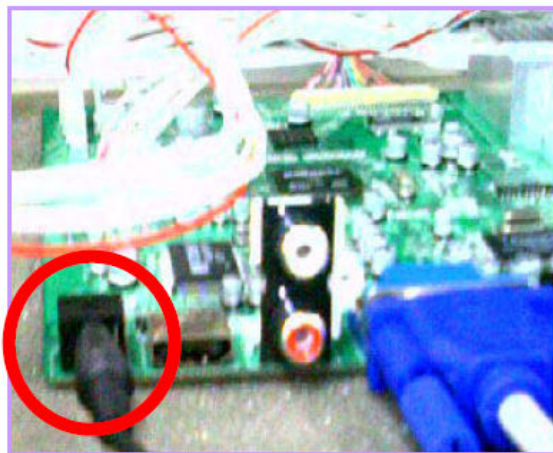
If Communication (Serial) Port is not installed, check your CMOS (Computer System Menu) and activate Serial Port in it.

11-3. Cable Connection.

Connect Serial Port of PC to Update Port of TV through RS-232C to Phone Cable.



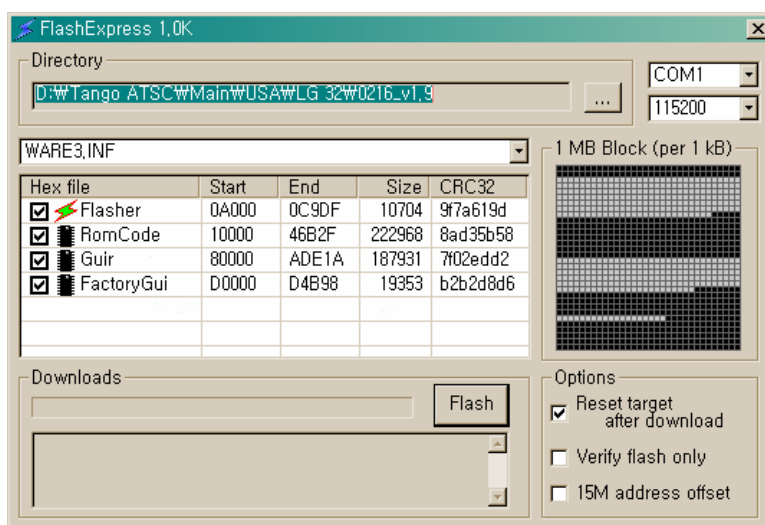
(Communication Port of PC)



(Update Port of LCD/PDP Set)

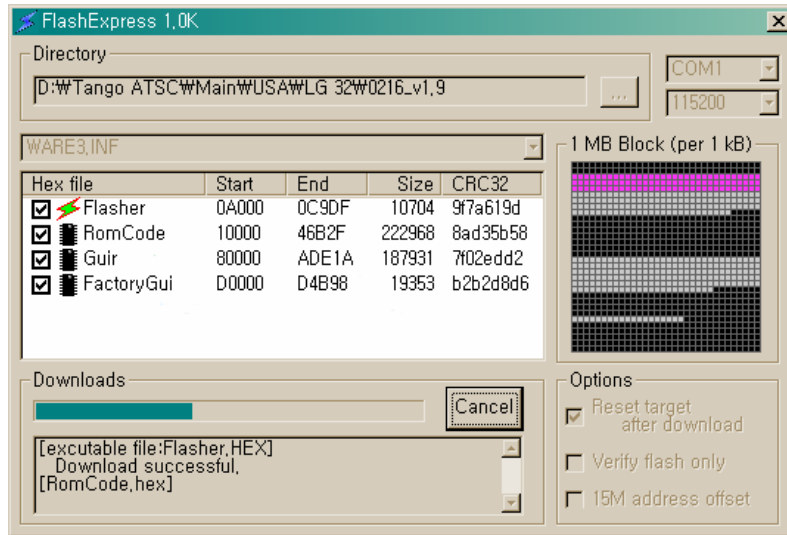
11-4. Update Procedure.

- ✓ . Main Power off (Unplug the power cord).
- ✓ . Unzip Firmware File attached together and execute "FlashExpress_nologo.exe" in the folder.



(Update Application Window)

- ✓ . Set Serial Port (COM1 or COM2) properly and the Update speed to '115200'
- ✓ . Be sure "WARE3.INF" is shown as the above figure and click Flash.
- ✓ . Main Power on (Plug the power cord)

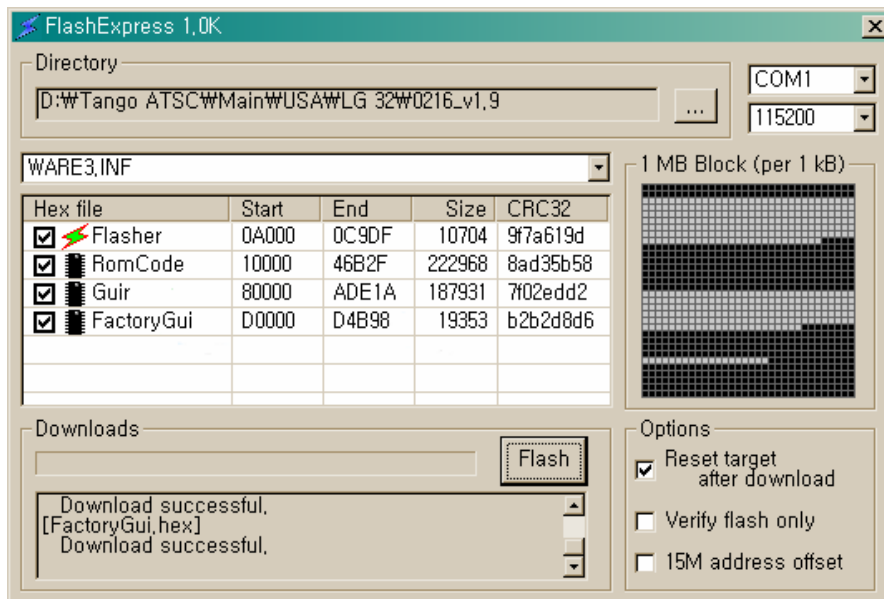


(Firmware Update in Progress)

✓. F/W Update is automatically started once power is on. You can see the progress bar as the above figure.

☞ Be sure to check the COM1/COM2 is selected right if it does not start.

✓. Please wait till all the process is done. (It will take around 30 seconds to be done.)



(Firmware Update is completed.)

✓. After all the update process is done, do Factory Reset.

☞ To enter Factory Mode, push the buttons as following within 2 seconds.)

(1 → MUTE → Enter → MUTE)

✓. In Factory Menu, Select "7. Reset" and Push Enter.

12. Factory Mode.

12-1. Calibration. (Not Used.)

12-2. Option Table.

✓. Sound Mute Set

✓. Default Language Set.

12-3. Color Control.

✓. R, G, B color offset and gain set.

12-4. Device Adjust.

12-4-1. PW218.

✓. Input Mode set to work Pixel Shift.

✓. Pixel Number Set.

✓. Pixel Shift Interval Set.

✓. Wiper Interval Set.

✓. Wiper Speed Set.

12-4-2. PW-Deinterlace.

✓. Set Internal Register of PW218 Scaler.

12-4-3. PW-Enhancer.

✓. Set Internal Register of PW218 Scaler.

12-4-4. ADC.

✓. Set offset and gain of MST3388 ADC.

12-4-5. TW9919.

✓. Set Internal Register of TW9919 Video Decoder.

12-5. HeatRun.

✓. Output engine of Scaler and Test pattern display.

12-6. Version.

✓. Check Version, released date, etc. as a bellows,

Model	Tango – Tri _ D2
Version	<u>M 06 05 19 V01</u>
1 st digit	M : MP (Mass Product)
2 nd & 3 rd digit	06 : Year
4 th & 5 th digit	05 : Month
6 th & 7 th digit	19 : Day
8 th ~ 10 th digit	V01 : Update Number
Release Day:	Date debugged F/W
Release Time:	Time debugged F/W
Panel Used Time:	Time used Panel
Panel Name:	Panel Name of Set

12-7. Reset.

✓. E²PROM Data Clear

12-8. CH Test.

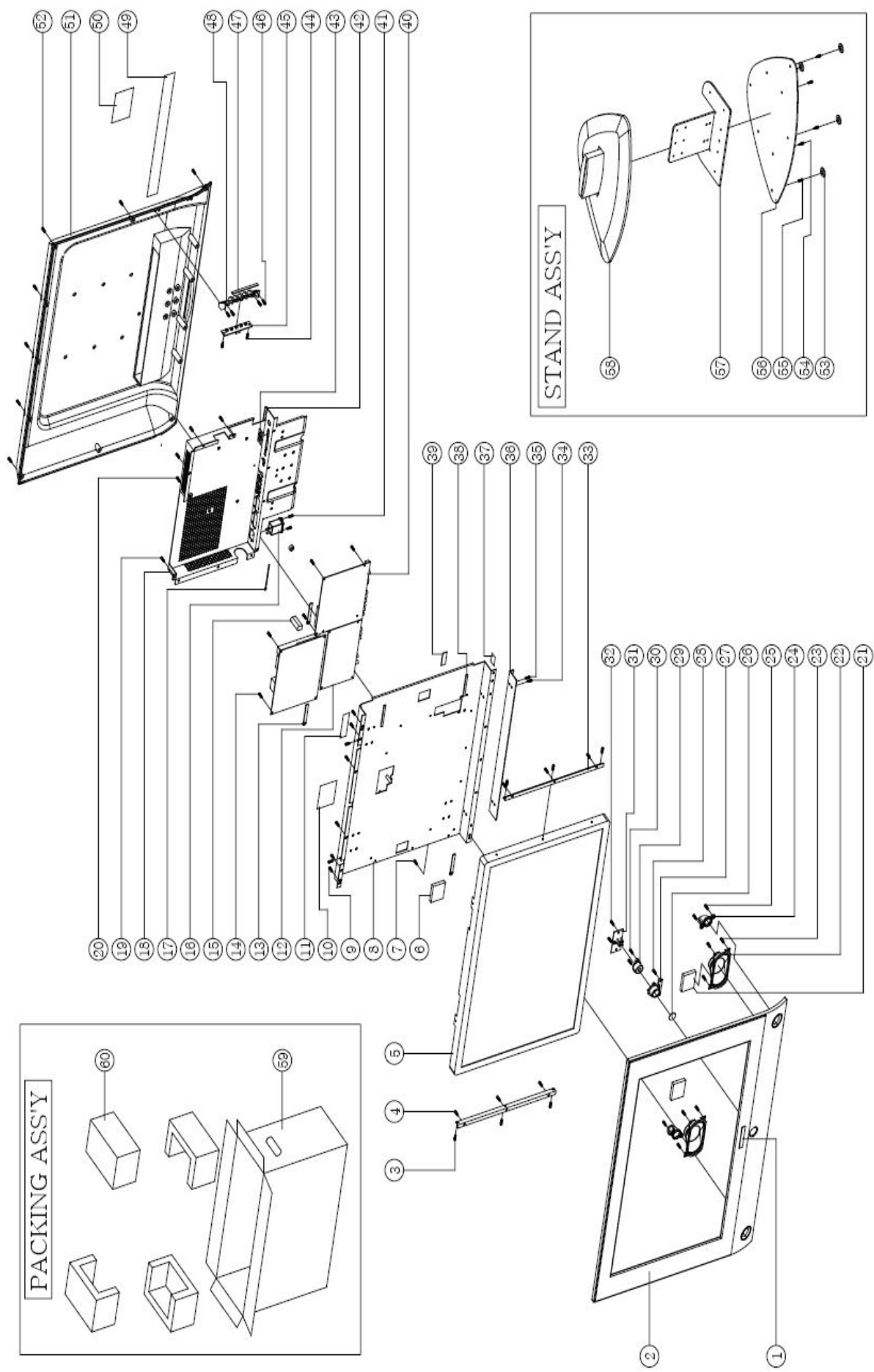
✓. Test Tuner using set frequency. (Euro Only)

13. Parts List.

No	Part Code	Part Name	Part Specification	Qty.
1	DL320W2-L03J	Panel 32-SS	LTA320W2	1
2	K125B071-----	SPEAKER UNIT/PAIR	K125B071,(6Ω*10W)*2	1
3	PAS-SIG6LIXA	IR&LED Board	IR&LED Board Ass'y, PCB Silk : PCBLD32IR005	1
4	LR-T11CLM----	LR-T11CLM	IR Receiver with Amp, 38KHz,SI5315-H/SI5314-H	1
5	WSMW200--06P	SMW200--06P	Straight, 2mm, 6pin, SMW200-06	1
6	LEDRB1R3204C	LEDRB1R3204C	LED BLUE/ RED	4
7	MCR03-101J--	Resistor Chip	100 ohm (1608)	8
8	MCR03-331J--	Resistor Chip	330 ohm(1608)	2
9	MCR03-000J--	Resistor Chip	0 ohm(1608)	3
10	TR2SC2412KB-	2SC2412K	NPN Transistor, SOT-23	1
11	PCBLD32IR005	PCB	T=1.6*100*20/2L, IR&LED	1
12	CCA1HX7R560J	C Chip	56pF, 1608Size,	1
13	CCA1HX7R104J	C Chip	100nF, 1608Size	1
14	SKHV10910A--	TACT SWITCH	Push-On, Tact, DIP, 2pin	1
15	PAS-SIGKEYA	Key Board	Key Board Ass'y, PCB Silk : PCBLD32BU002	1
16	WSMW200--08P	SMW200--08P	Straight, 2mm, 8pin, SMW200-08	1
17	SKHV10910A--	TACT SWITCH	Push-On, Tact, DIP, 2pin	5
18	CCAX-1H104K-	Capacitor	100nF, Axial Type	5
19	PCBLD32BU002	PCB	T=1.6*74*33.4/2L, Button	1
20	PASS32USD3SD	AD Board(3System)	SS 32" Panel, 218 AD & 3 System	1
21	PASS32USD3SV	AV Board(3System)	SS 32" Panel, 218 AV & 3 System	1
22	PASS32PWR2	POWervalley 32" POWER	LVDS 5V/3.5A, LD-3200T PowerValley	1
23	DD-L32ADP-40	AD POWER	12P*15P*300MM	1
24	DD-L32AMP-40	POWER	4P*15P*250MM	1
25	DDL32KEYIR40	KEY-IR	14P*8P*6P*400MM*500mm	1
26	DD-L32SPK-40	SPEAKER	6P*LUG(A,B)*550MM	1
27	DD-L32LVD-40	LVDS	30P*30P*260MM	1
28	DD-L32INV-20	INVERTER	14P*15P*400MM	1
29	DDL32GND--40	Ground wire	Ring Washer *200mm	1
30	DD-L32MPN-30	POWER NOISE FILTER	NOISE FILTER*2P+GND(ID-1022-S)	1
31	RE-BLSIDWEA1	REMOCON-LCD/PDP 3SYS	DEAWOO/BLACK	1
32	DPACC0000-12	POWER CORD-USA	125V 10A 1.8M	1
33	DPACC0000-13	Power Cord-Italy	250V 10A 1.8M	1
34	MA-BDWL--3S1	MANUAL LCD/218	DAEWOO/3SYS/ENGLISH	1
35	DPC9700000A	Battery	AAA	2
36	DL3260M150A2	COVER FRONT-326-DW	MOLD/ABS/2TONE	1
37	DL3280M160BA	COVER REAR-326-DW	MOLD/ABS/BLACK	1
38	DL3280M181BA	KNOB CONTROL-3280-DW	MOLD/ABS/BLACK	1
39	DL3280M190CA	KNOB STANBY-3280	MOLD/ABS/Cr	1
40	DL3280M200A	WINDOW IR-3280	MOLD/PA	1
41	DL3280M210A	WINDOW PLATE-3280	MOLD/ACRYL/1.2T	1
42	DL3280P304A	PANEL COVER-3280-NT	PRESS/EGI/1.2T/218NT/3S	1
43	DL3280P314A	PCB COVER-3280-NT	PRESS/EGI/1.6T/218NT/3S	1
44	DL3280P350B	STAND SUPPORT-3280	PRESS/EGI/2.0T	1
45	DL3280P390A	BK'T PANEL-SS-3280	PRESS/EGI/1.0T	2
46	DP4260M113A	SPEAKER ELBO-4260	MOLD/ABS/2.0T/SILVER	2
47	DL3280S690A	GASKET TUNER	D#/L50*15W*18T	1
48	DL3280S700A	GASKET D-SUB	W36*H18*2.0T	1

No	Part Code	Part Name	Part Specification	Qty.
49	DL3280S680A	GASKET LVDS	AL/W110*H80	1
50	DL3260S640A	FRONT CUSHION-L	SPONGE FORM/5W*L719*1.0T/35KG	2
51	DL3260S650A	FRONT CUSHION-S	SPONGE FORM/5W*L403*1.0T/35KG	2
52	DL3260S700A	PCB COVER CUSHION	SPONGE FORM/5W*L480*1.0T/35KG	1
53	DL3260S660A	PANEL CUSHION	SPONGE FORM/8W*L100*5.0T/35KG	2
54	DP4260S690A	CUSHION NOISE	SPONGE FORM/5W*L85*1.0T/35KG	1
55	DL3260S670A	REAR INSULATION SHEET-L	non-woven fabric/5W*L860*0.5T	2
56	DL3260S680A	REAR INSULATION SHEET-S	non-woven fabric/5W*L480*0.5T	2
57	DP4200S654A	INSULATION SHEET-S	non-woven fabric/0.8T/15W*45L	6
58	DACT100-2.5	TIE CABLE-100	NY/100mm	1
59	DARC-4	COIL RETAINER/42-61	IDΦ5.1, L=75	2
60	DL326-DW-01	BOX PACKING-3260	DAEWOO/MEXICO	1
61	LBL3260DAE-01	BACK LABEL-3260	DAEWOO/LATIN AMERICA	1
62	DL3260B614C	LABEL AV-32"~37"LCD	DAEWOO/LATIN AMERICA	1
63	P-MB-30-0150	MARK BRAND/32"~37"	METAL/DAEWOO DE	1
64	DL3280S672A	POLY-BAG-3280	LDPE 0.5T*1010*960	1
65	999000001200	ACCESSORY BAG	VINYL/0.3T*245*360	1
66	DL3280S641A	PAD TOP/L-3280	EPS	1
67	DL3280S642A	PAD TOP/R-3280	EPS	1
68	DL3280S643A	PAD BOTTOM/L-3280	EPS	1
69	DL3280S644A	PAD BOTTOM/L-3280	EPS	1
70	DL3280M170A2	COVER STAND-326-DW	MOLD/ABS/SILVER	1
71	DL3280P320A	STAND BASE-3280	PRESS/CR/3.0T	1
72	DL3280P330A	STAND BK'T-A-3280	PRESS/EGI/4.0T	1
73	DL3280TR673A	RUBBER STAND-3280	EVA75%/ Φ34* Φ12*2T	4
74	SM002	SCREW MECHINE 4	WP+4*8	4
75	SM003	SCREW MECHINE 4	T/T-CT+4*10	1
76	SM004	SCREW MECHINE 3	P+3*10	2
77	SM006	SCREW MECHINE 4	P+4*6	6
78	SM013	SCREW MECHINE 3	S/W P/W P+3*8	12
79	ST107	SCREW TAPTITE 3	TWP+3*6	1
80	ST108	SCREW TAPTITE 3	TWP+3*8	12
81	ST101	SCREW TAPTITE 3	T/T-BP+3*8	8
82	ST104	SCREW TAPTITE 4	T/T-BP+4*8	47
83	SN301	NUT 4	M4-NUT/3T	4
84	ST105	SCREW TAPTITE 4	T/S-2B+4*14	13
85	ST104	SCREW TAPTITE 4	T/T-BP+4*8	4
86	SM27	SCREW MECHINE 4	FLAT-C+4*10 Zn	4
87	SM011	SCREW MECHINE 4	T+4*12	6

14. Exploded view.



No.	PART CODE	PART NAME	Qty	MATERIAL	REMARKS
1	P-MB-30-0150	MARK BRAND/32~37"	1	METAL/DAEWOO DE	
2	DL3260M150A1	COVER FRONT-326-DW	1	MOLD/ABS/ITONE	
3	SM006RO	SCREW MACHINE 4	6	P+4*6/ROHS	
4	ST104RO	SCREW TAPTITE 4	6	T/T-BP+4*8/ROHS	
5	DL320W2-L03J	PANEL 32-SS	1	LTA320W2-L03-J	
6	DP3260S710A	CUSHION CORE	1	SPONGE FORM/40W*L80*5.0T/35KG	
7	SM003RO	SCREW MACHINE 4	1	T/T-CT+4*10/ROHS	
8	DL3280P304A	PANEL COVER-NT(3S)	1	PRESS/EGI/1.2T/218/NT(3S)	
9	ST104RO	SCREW TAPTITE 4	13	T/T-BP+4*8/ROHS	
10	DL3280S680A	GASKET LVDS	1	AL/W110*H80	
11	-	S/N	1	-	
12	PASS32USD3SV	AV BOARD(NT)	1	SS 32" PANEL,218 AV(NT)	
13	DARC-4	COIL RETAINER/42-61	3	ID\$5.1,L=75	
14	SM013RO	SCREW MACHINE 3	12	S/W P/W P+3*8/ROHS	
15	DL3280S690A	GASKET TUNER	1	D*/L50*15W*18T	
16	DD-L32MPN-30	POWER NOISE FILTER	1	NOISE FILTER*2P+GND(ID-1022-S)	
17	DACT100-2.5	TIE CABLE-100	1	NY/100mm	
18	DL3280P314A	PCB COVER-3280-NT(3S)	1	PRESS/EGI/1.6T/218/NT(3S)	
19	ST104RO	SCREW TAPTITE 4	14	T/T-BP+4*8/ROHS	
20	SM002RO	SCREW MACHINE 4	1	WP+4*8/ROHS	
21	DP4260S750A	CUSHION SPEAKER	2	5.0T*40W*45L/35KG	
22	K125B071---	SPEAKER UNIT/PAIR	2	K125B071(6ohm/10W)*2	
23	ST104RO	SCREW TAPTITE 4	8	T/T-BP+4*8/ROHS	
24	DP4260M112A	SPEAKER ELBO	2	MOLD/ABS/2.0T/BLACK	
25	ST108RO	SCREW TAPTITE 3	2	TWP+3*8/ROHS	
26	DL3280M210A	WINDOW PLATE	1	MOLD/ACRYL/1.2T	
27	DL3280M190CA	KNOB STANBY	1	MOLD/ABS/Cr	
28	ST104RO	SCREW TAPTITE 4	2	T/T-BP+4*8/ROHS	
29	DL3280M200A	WINDOW IR-3280	1	MOLD/PA	
30	ST108RO	SCREW TAPTITE 3	2	TWP+3*8/ROHS	
31	PCBLD32BU002	IR&LED BOARD	1	T=1.6*74*33.4/2L, BUTTON	
32	ST104RO	SCREW TAPTITE 4	2	T/T-BP+4*8/ROHS	
33	DL3280P390A	BKT PANEL-SS	2	PRESS/EGI/1.0T	
34	SM002RO	SCREW MACHINE 4	2	WP+4*8/ROHS	
35	ST104RO	SCREW TAPTITE 4	4	T/T-BP+4*8/ROHS	
36	DL3280P350B	STAND SUPPORT	1	PRESS/EGI/2.0T	
37	DL3280S710A	GASKET CABLE	1	AL/W30*H30	
38	DL3260S660A	PANEL CUSHION	2	SPONGE FORM/8W*L100*5.0T/35KG	
39	DP4200S654A	INSULATION SHEET-S	10	FELT/0.8T/15W*45L	
40	PASS32USD3SD	AD BOARD(NT)	1	SS 32" PANEL,218 AD(NT)	
41	SM004RO	SCREW MACHINE 3	2	P+3*10/ROHS	
42	DL3260S700A	PCB COVER CUSHION	1	SPONGE FORM/5W*L480*1.0T/35KG	
43	DL3280S700A	GASKET D-SUB	1	W36*H18*2.0T	
44	ST108RO	SCREW TAPTITE 3	2	TWP+3*8/ROHS	
45	PCBLD32IR005	KEY BOARD	1	T=1.6*100*20/2L, IR&LED	
46	ST108RO	SCREW TAPTITE 3	4	TWP+3*8/ROHS	
47	DP4260S690A	CUSHION NOISE	1	SPONGE FORM/5W*L85*1.0T/35KG	
48	DL3280M181BA	KNOB CONTROL-DW	1	MOLD/ABS/BLACK	
49	DL3260B614C	LABEL AV-32"LCD	1	DAEWOO/LATIN AMERICA	
50	LBL326DAE-01	BACK LABEL	1	DAEWOO/LATIN AMERICA	
51	DL3280M160BA	COVER REAR-DW	1	MOLD/ABS/BLACK	
52	ST105RO	SCREW TAPTITE 4	13	T/S-2B+4*14/ROHS	
53	DL3280TR673A	RUBBER STAND	4	EVA75%/ \$34* \$12*2T	
54	SM027RO	SCREW MACHINE 4	4	FLAT-C+4*10/ROHS	
55	ST104RO	SCREW TAPTITE 4	4	T/T-BP+4*8/ROHS	
56	DL3280P320A	STAND BASE	1	PRESS/CR/3.0T	
57	DL3280P330A	STAND BKT-A	1	PRESS/EGI/4.0T	
58	DL3280M170A1	COVER STAND-DW	1	MOLD/ABS/BLACK	
59	DL326-DW-05	BOX PACKING	1	DAEWOO/KOREA	
60	DL3280S641A	PAD TOP/L	1	EPS	
60-3	DL3280S644A	PAD BOTTOM/R	1	EPS	
60-2	DL3280S643A	PAD BOTTOM/L	1	EPS	
60-1	DL3280S642A	PAD TOP/R	1	EPS	