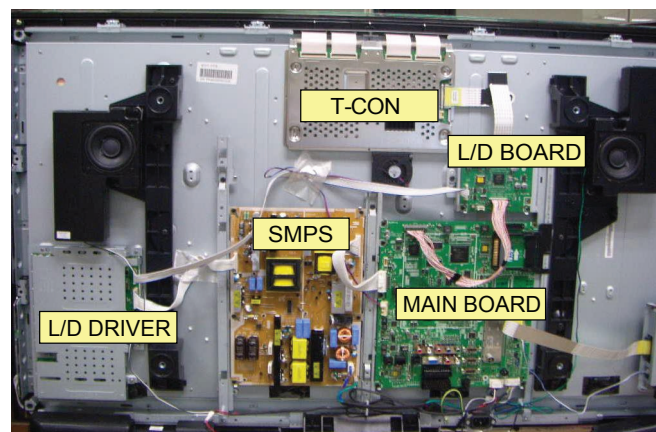


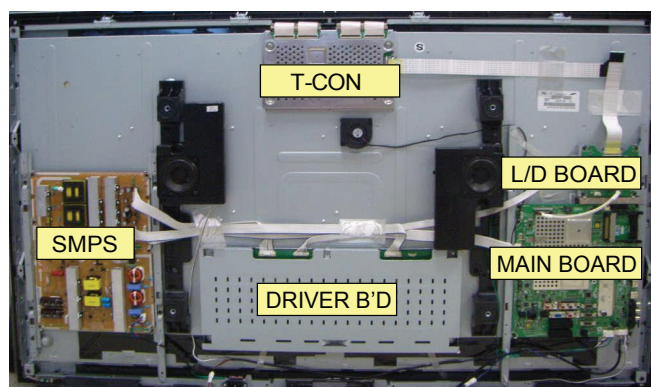
4. Troubleshooting

4-1. Troubleshooting

1. Check the various cable connections first.
 - Check to see if there is a burnt or damaged cable.
 - Check to see if there is a disconnected or loose cable connection.
 - Check to see if the cables are connected according to the connection diagram.
2. Check the power input to the Main Board.
3. Check internal pattern of FBE3 if there is some picture noise.
FBE3 : Factory mode(mute 1-8-2 power on when TV is on standby.) -> 0-2-1-4-exit -> Press right arrow of Remote control -> Menu -> FBE3 -> Pattern sel -> Press right arrow of Remote control

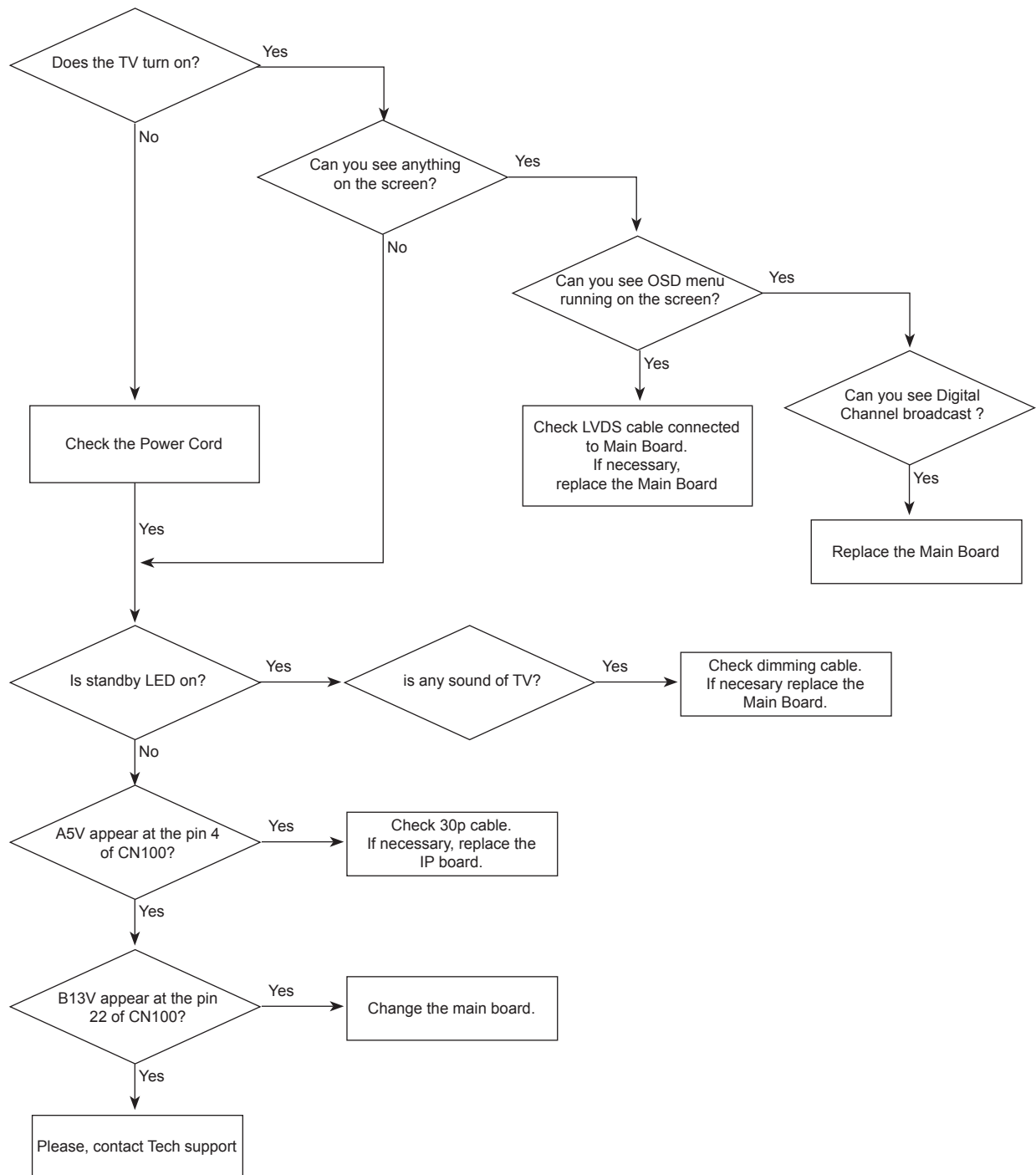


< 46" >



< 55" >

■ Simple flow chart of malfunction



■ Troubleshooting about new functions

I tried to set up BGM in Wiselink. I can select a file but I cannot configure the Mood settings.	An explanation of WISELINK	The BGM shuffle and Mood settings are only available when the Music DB configuration is complete. Enter the Music category and complete the Music DB configuration first.
I cannot enter Photos or Music after running Wiselink.	An explanation of WISELINK	Check if the USB memory contains MP3 or JPEG files.
Photo thumbnails are not displayed in the Photo category.	An explanation of WISELINK	This may occur when the photo format is not supported by the TV or the JPEG files do not include thumbnails.
Video thumbnails are not displayed in the Movie category.	An explanation of WISELINK	A video thumbnail is only displayed when the video has been played at least once.
The JPEG files on the USB memory are not in the list.	An explanation of WISELINK	Files with a path longer than 256 characters will not be displayed.
I have connected a digital camera, but I cannot browse the folders.	An explanation of WISELINK	When a device is connected in PTP mode, a browsing folder is not supported.
I cannot play the currently highlighted file.	An explanation of WISELINK	Check if another file is selected (checked). The selected file will be played
I want to know about supported photo color formats.	An explanation of WISELINK	The RGB, YUV, YCbCr, CMYK, YCCK, GRAY formats are supported.
I want to know about the maximum supported photo resolution.	An explanation of WISELINK	The maximum resolution is 15360x8640 pixels.
I want to know about supported music sampling frequencies.	An explanation of WISELINK	Supported frequencies are 8, 11.025, 12, 16, 22.05, 24, 32, 44.1, 48 Khz
I cannot play MP3 files downloaded from websites. (Paid MP3 download sites such as Melon)	An explanation of WISELINK	Playing DRM files (used to protect content) is not supported.
I want to know about supported USB devices.	An explanation of WISELINK	The TV only supports devices that do not support the Mass Storage Class or PTP Class. Devices are not supported when they are connected to the TV via a USB hub. Supporting USB devices that require external power such as an external-type HDD is not guaranteed. Supporting USB devices that require an additional device driver installation is not guaranteed.
The supported photo play is slow.	An explanation of WISELINK	Since the TV does not use caching unlike for a PC, it takes some time to display a high-resolution photo.
I cannot play paid MP3 files.	An explanation of WISELINK	If the MP3 file is a DRM (Copy Protected) file, the file will not be played.
I cannot play a digital camera that supports PTP.	An explanation of WISELINK	Check the PTP mode of the digital camera. It will not work in Printer Connection mode.
I cannot use the morning call function with a digital camera that supports PTP.	An explanation of WISELINK	A morning call cannot be set with a PTP device.
I have changed the device settings to MSC connection mode after connecting PTP or during an operation, but the device is not recognized.	An explanation of WISELINK	Switching the connection mode between MSC and PTP after a connection is made or during an operation is not supported. You can only change the digital camera connection mode after disconnecting it.
The WLAN does not work.	An explanation of WISELINK	Equipment other than the WLAN USB stick supplied by Samsung Electronics (as a bundle) will not work. The sharer must support IEEE 801.11 g/b. IEEE 801.11 n is not supported.

4. Troubleshooting

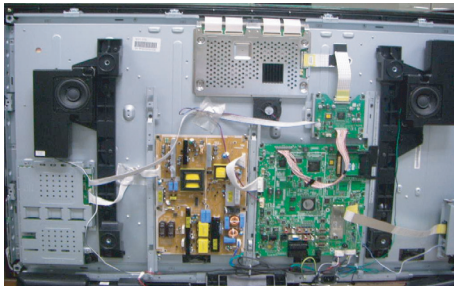
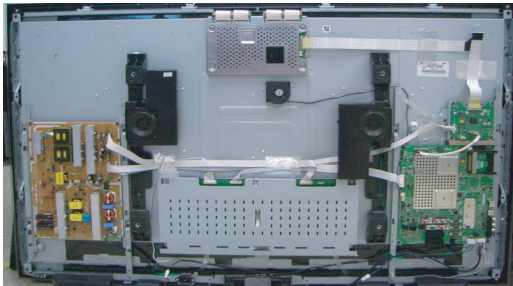
I cannot find Internet Sharer in the Wlan settings menu.	An explanation of WISELINK	Only InfraStructure mode of the sharer is supported. Ad-Hoc mode is not supported. If multiple sharers are being used, configure them so that they do not use the same channel. Set up the sharer to not control the ICMP so that it answers the Ping test.
The WLAN data rate is slow.	An explanation of WISELINK	If the distance from the sharer is too far, the operation may slow or the sharer may not be found. If there is an obstacle, wall or electronic device between the TV and the sharer, the operation may slow or the sharer may not be found due to a difficulty in communication.
The DLNA server that I could see on the TV has suddenly disappeared. What should I do?	PC Share Manager Search	1.Check if the PC is turned off. 2. Check if the Samsung TV is set to reject connections in the access control menu of the Samsung PC Share Manager. If so, change the setting to allow connections. 3.Check if the LAN cable is connected to the PC and the TV.
Although the Samsung PC server is on, a message pops up informs you that the Samsung server is off.	PC Share Manager Search	When the shared folder of the server is reconfigured, the DLNA server function stops temporarily and then resumes after the reconfiguration is completed. When the server is renamed, the DLNA server function also temporarily stops and then resumes .
I have registered a file with the Samsung PC Share Manager to watch it on the TV, but I cannot find the file on the TV. What should I do?	Content Sharing	1. The Share function is not provided for every file. Files in a format that is not supported by DLNA are not displayed on the TV even if they are displayed on a PC. Please accept our apologies, we are working on this. 2. Check if the folder with the files registered to Samsung PC Share Manager is shared. The folder should be also shared. 3. Check if you have clicked the Apply button after sharing the folder including the file. If you are unsure about this, please click the button again and recheck if the file is displayed after a while.
I can see the folders shared through the PC Share Manager, but I cannot see the files.	Content Sharing	Since it shows only files corresponding to the Image, Music, and Movie categories, files that do not correspond to these categories may not be displayed.
The 2x and 3x Fast Forward video function on the PC connected to the network does not work.	DLNA Video Play	The function that supports playing a video on a PC connected over the network does not support the 2x and 3x Fast Forward functions.
Video is played intermittently.	DLNA Video Play	Check if the network is stable. Check if the network cable is properly connected and if the network is not overloaded. If there is a wireless network section between the server and the DTV, the communications environment may be unstable.
Pressing the Pause key while a video or music file is playing does not work. The Seek function does not work either.	DLNA Video Play	The Pause function may not be supported depending on the content provided by the DLNA server or the server. The Seek function is also not supported.
I cannot move folders and files or cannot copy them by Dragging & Dropping them in the PC Share Manager program.	PC Share Manager function	The PC Share Manager program provides file sharing with a PC and the TV and does not provide those functions.
I changed L750 Ruby DTV replacing older one. However, after changing the DTV, I can not discover PC Server, though I use same IP address which I used before.	Access control function runs based solery on MAC address of target device.	You should set new DTV as "accept" in PC share manager Menu->SHARE->Set Device Policy
I cannot play a video file.	DLNA Video Play	Only videos recorded by specific Samsung camcorders and digital cameras can be played. Other videos may or may not be played depending on the resolution and format.
I can see visuals but I cannot hear audio when playing a video.	DLNA Video Play	If the audio format is not supported or the file is a non-interleaved file, only video is played.

I cannot play files with the wmv or flv extension.	DLNA Video Play	The video play function is not supported for files with these extensions.
I cannot use the 20 second Seek function while playing at 2x Fast Forward.	DLNA Video Play	To use the Seek function while playing at 2x Fast Forward, press the Play button to first make the playing speed normal. After that, you will be able to use the Seek function.
Although I can play some files, I cannot play others even if they have the same resolution and format.	DLNA Video Play	For unsupported videos, some videos at a certain resolution and format may be played.
I can run Trick and Seek with a USB device, but I cannot run Trick and Seek with DLNA.	DLNA Video Play	For DNLA, Trick is not supported. And only Seek is supported for PS and TS.
How can I show captions?	DLNA Video Play	Only the first language of the smi caption file is displayed.
When I enter InfoLink, the "Connecting to the service..." warning message box appears where I can select either Retry or Cancel, and I cannot enter InfoLink. (The Panel Bar is not displayed.)	An explanation of INFOLINK	This happens when normal information is not received from the InfoLink after purchasing the TV. In this case, connect the Internet cable and then try again.
Although I can enter InfoLink, I cannot connect to the service.	An explanation of INFOLINK	This happens when InfoLink has been properly connected at least once but the Internet is not currently connected. In this case, connect the Internet cable and try again.
When the network is connected, I cannot connect to some of the information.	An explanation of INFOLINK	This happens when the CP sends incomplete information. In this case, reconnect to the Internet and try again.
The CP (currently USA Today) logo does not appear.	An explanation of INFOLINK	→ This may happen when the Internet is not connected. → This may happen when the Internet is connected but the CP server does not provide the CP (MSN) logo.
Photos are not displayed or are displayed intermittently in the Detailed News View.	An explanation of INFOLINK	This may occur due to a slow Internet speed. Retry and ask your Internet Service Provider about the low data rate problem.
The Mode information of the News changes. (E.g. 'Entertainment' was in the News mode list, but it has been removed from the list.)	An explanation of INFOLINK	The Mode information of the News is simply displayed as it is provided by the CP and is not relevant to the TV.
The displayed stock price is different from the current price.	An explanation of INFOLINK	The corresponding information is supplied by CP and is not relevant to the TV. The information provided by the CP is delayed information and the announcement informing the viewer that the information is delayed information is displayed in the service.
When I enter InfoLink, the "Connecting to the service..." warning message box appears where I can select either Retry or Cancel, and I cannot enter InfoLink. (The Panel Bar is not displayed.)	An explanation of INFOLINK	This happens when normal information is not received from the InfoLink after purchasing the TV. In this case, connect the Internet cable and then try again.
Although I can enter InfoLink, I cannot connect to the service.	An explanation of INFOLINK	This happens when the InfoLink has been properly connected at least once but the Internet is not currently connected. In this case, connect the Internet cable and then try again.
When the network is connected, I cannot connect to some of the information.	An explanation of INFOLINK	This happens when the CP sends incomplete information. In this case, reconnect to the Internet and then retry.
The CP (currently USA Today) logo does not appear.	An explanation of INFOLINK	→ This may occur when the Internet is not connected. → This may occur when the Internet is connected but the CP server does not provide the CP (MSN) logo.
Photos are not displayed or are displayed intermittently in the Detailed News View.	An explanation of INFOLINK	This may occur due to slow Internet speed. Retry and ask your Internet Service Provider about the low data rate problem.

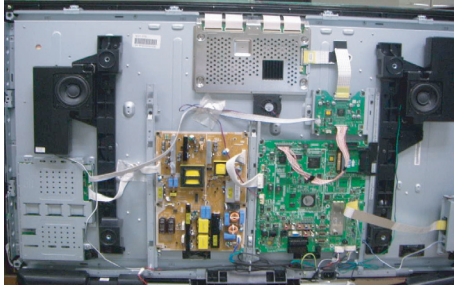
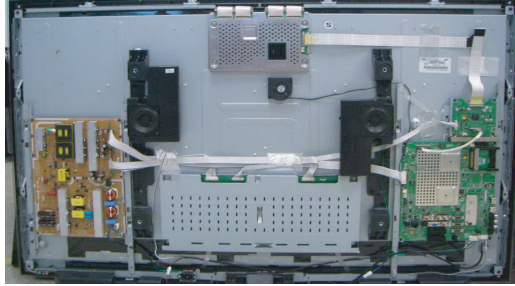
4. Troubleshooting

The Mode information of the News changes. (E.g. 'Entertainment' was in the News mode list, but it has been removed from the list.)	An explanation of INFOLINK	The Mode information of the News is just displayed as it is provided by the CP and is not relevant to the TV.
The displayed stock price is different from the current price.	An explanation of INFOLINK	The corresponding information is supplied by the CP and is not relevant to the TV. The information provided by the CP is delayed information and the announcement informing the viewer that the information is delayed information is displayed in the service.
I want to know how to enter the main screen.	An explanation of Content Library	Press the [Menu] button, move to [Application] and select [Contents Library] from the sub menu to enter the main screen. Alternatively, press the [CONTENT] button from among the remote control hot keys to enter the main screen of the corresponding service.
I want to know how to delete, copy or move the contents saved on the TV to an external device.	An explanation of Content Library	Deleting, Copying and Moving the default built-in contents is not supported.
I have heard that the TV has a built-in 1GB Flash memory. How can I access the memory?	An explanation of Content Library	The built-in flash memory within the TV is only installed to support various TV features, and is not installed for users to save content. However, you can connect an external-type USB memory device to the TV and play the contents on the USB memory.
I want to perform a SlideShow with personal photos using the Gallery function. How can I do this?	An explanation of Content Library	Images provided by Samsung.com or a 3rd party content provider linked to Samsung.com will not be played in the [Contents Library]. However, you can use the SlideShow function of WiseLink Pro.
When I play a game for the second time, I want to resume from the last scene in the previous run. How can I do this?		The built-in games in the [Contents Library] are basic casual games that do not support the game saving function.
Pressing a remote control button while playing content terminates the current service and shows the TV Source screen.		Pressing a channel related button on the remote control shows the TV Source screen. Take care to not press the Ch Up/Down, Ch List, Guide, Pre. Ch, and Fav. Ch buttons by mistake.
I have heard that the default built-in content is played by the Adobe flash player. Therefore, I have downloaded Flash content from the Internet and tried to play it from the USB memory device, but it does not play. What is the problem?		The [Contents Library] does not support playing files other than the files authorized for playback by Samsung Electronics or files officially provided by a 3rd party content provider authorized by Samsung Electronics.
I want to know how to download and play new content other than the default built-in content.	An explanation of Content Library	New content will be supplied via Samsung.com. The content supplied by a 3rd party content provider will be supplied under the responsibility of the corresponding content provider.
I have downloaded content onto a USB memory device and inserted the USB memory into the TV to play the content, but the TV does not work at all.	An explanation of Content Library	Check if the USB device has been properly connected. If nothing appears on the screen even if the connection has been properly connected, enter the main screen of the Contents Library and move to the USB content search screen by pressing the "Red" color button. If the TV fails to recognize the USB device, turn the TV off and then on again, reinsert the USB memory and repeat the above procedures.
Playing fails while playing content on an external-type USB memory device.	An explanation of Content Library	Check the USB connection and try again.
I can see tiny amounts of alien substances when I look at the product edge closely.	An explanation of appearance	This product has been designed so that the color appears faint by coating the blank edges with transparent matter. The substances you see is due to the design and is not a defect of the product.

4-1-1. No Power

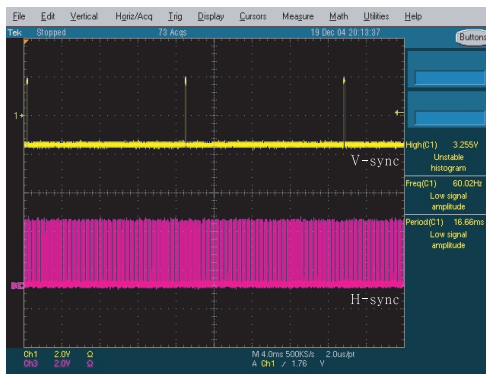
Symptom	- The LEDs on the front panel do not work when connecting the power cord. - The IP relay does not work when connecting the power cor. (46,52 except 40) % The IP of 40 set is no relay sound. - The units appears to be dead.
Major checkpoints	The IP relay or the LEDs on the front panel does not work when connecting the power cord if the cables are improperly connected or the Main Board or IP is not functioning. In this case, check the following: - Check the internal cable connection status inside the unit. - Check the fuses of each part. - Check the output voltage of IP. - Replace the Main Board.
Caution	Make sure to disconnect the power before working on the IP board.
Diagnostics	  < 46" > < 55" > <pre> graph TD Q1[Lamp(Backlight) Off, power indicator LED on?] -- No --> A1[Check a connection power cable. P/N: BN39-00802B] Q1 -- Yes --> Q2[Does proper Stand-By DC A5V appear at the pin 4 of CN100?] Q2 -- No --> A2[Change the Main Power assembly Location number : M0714] Q2 -- Yes --> Q3[Does proper Main DC B12VS, B5V,B13V appear at the pin 7-8, pin 13-16, pin 20-22?] Q3 -- No --> A2 Q3 -- Yes --> Q4[Does proper Inverter DC 120V appear at PD801S in IP?] Q4 -- No --> A2 Q4 -- Yes --> Q5[Does proper DC A3.3V appear at the Pin 2 of IC105?] Q5 -- No --> A3[Check IC105 change the Main assy Location number : M0714] Q5 -- Yes --> Q6[Dose proper DC B3.3V, B8V appear at C155, C106?] Q6 -- No --> A4[Check IC103, IC100 Change the Main assy Location number : M0714] Q6 -- Yes --> Q7[Dose proper A1 core 1.2V, 3.3V,1.8V appear at C142, C150, C132?] Q7 -- No --> A5[Check IC102 Change the Main Assy Location number : M0714] Q7 -- Yes --> Q8[A power is supplied to panel appear at C2082?] Q8 -- No --> A6[Check a other function (No picture part) Replace a LCD Panel Location number : M0215] </pre>

4-1-2. No Video (Analog PC signal)

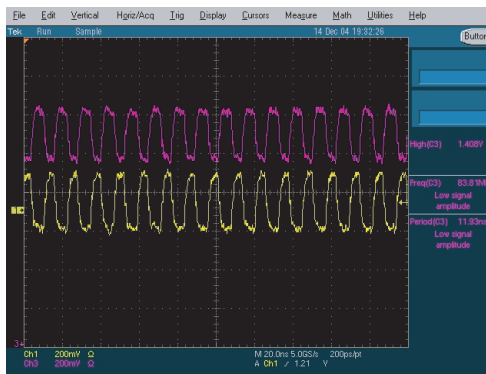
Symptom	– Audio is normal but no picture is displayed on the screen.
Major checkpoints	– Check the PC source – Check the IC2000(A1B) – This may happen when the LVDS cable connecting the Main Board and the Panel is disconnected.
Caution	Make sure to disconnect the power before working on the IP board.
Diagnostics	 < 46" >  < 55" > <pre> graph TD Start[Power Indicator is off. Lamp(Backlight) Off, no video] -- Yes --> Q1{Check the PC source and check the connection of DSUB?} Q1 -- No --> A1[Input an analog PC signal. Check the connected cable.] Q1 -- Yes --> Q2{1 Does the signal appear at #4,#5,#8,#9,#11 (H,V,B,G,R) of IC105?} Q2 -- No --> A2[Check JA300, PC cable. Change the PC cable. Change the main PCB assembly] Q2 -- Yes --> Q3{2 Dose the digital data appear at output of R651,R652,R635,R636,R646,R647 (R). R633,R634,R2,R2,R655,R656(G). R631,R632,R601,R602,R653,R654(B)? (MST336)} Q3 -- No --> A3[Check IC500 Change the main PCB assembly] Q3 -- Yes --> Q4{Check the LVDS cable? Replace the LCD panel?} Q4 -- No --> A4[Please, contact Tech support] </pre>

WAVEFORMS

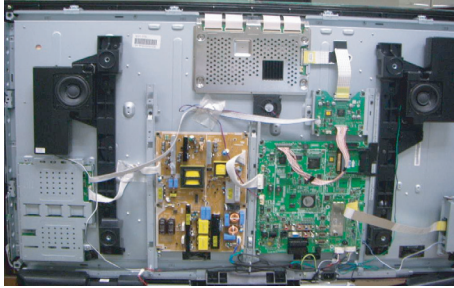
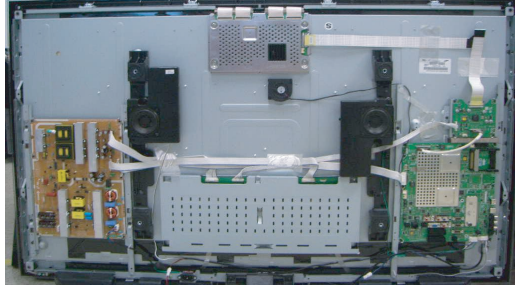
1 2 PC Input (V-Sync, H-Sync)



3 LVDS Out (CLK + / -)



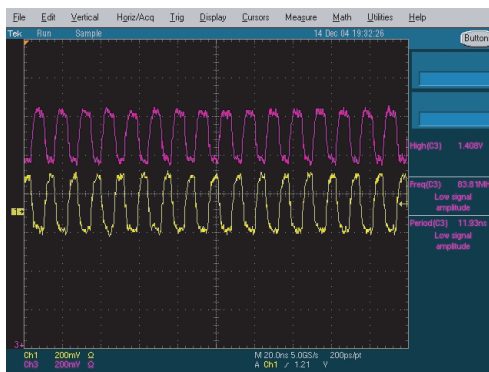
4-1-3. No Video (HDMI - Digital Signal)

Symptom	Audio is normal but no picture is displayed on the screen.
Major checkpoints	- Check the HDMI source - Check the IC2000(A1B) - This may happen when the LVDS cable connecting the Main Board and the Panel is disconnected.
Caution	Make sure to disconnect the power before working on the IP board.
Diagnostics	 < 46" >  < 55" > <pre> graph TD Start[Power Indicator is off. Lamp(Backlight) Off, no video] -- Yes --> Q1{Check the HDMI source and check the connection of HDMI cable?} Q1 -- No --> A1[Input an HDMI signal. Check the connected cable.] Q1 -- Yes --> Q2{4 Does the signal appear at R683~R685(data), R683, R684 (clk+/-)?(HDMI1,2,3) or does the signal appear at R693~R698 (data), R697, R698(clk+/-)? HDM4} Q2 -- No --> A2[heck JA301, JA303, JA305(HDMI1,2,3) side HDMI assy or JA401(HDMI4). Change the HDMI cable, Chagne the main PCB assembly.] Q2 -- Yes --> Q3{5 Dose the digital data appear at output of R651, R652, R635, R636, R646, R647 (R). R633, R634, R2, R655, R656(G). R631, R632, R601, R602, R653, R654(B)?(MST336)} Q3 -- No --> A3[Check IC500 Change the main PCB assembly] Q3 -- Yes --> Q4{7 Does the digital data appear at pin 10~42 of CN2002?} Q4 -- No --> A4[Check IC2000 Change the main PCB assembly] Q4 -- Yes --> Q5[Check the LVDS cable? Check the T-con board? Replace the LCD panel?] Q5 -- No --> A5[Please, contact Tech support] </pre>

WAVEFORMS

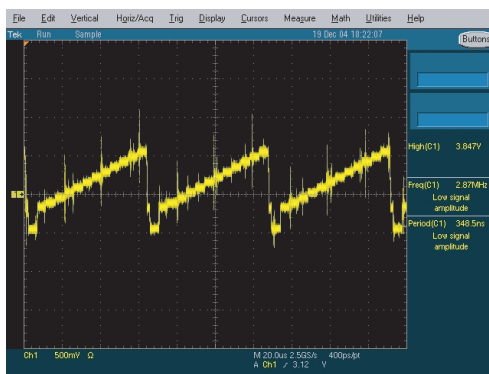
4 5

HDMI Input (CLK + / -)



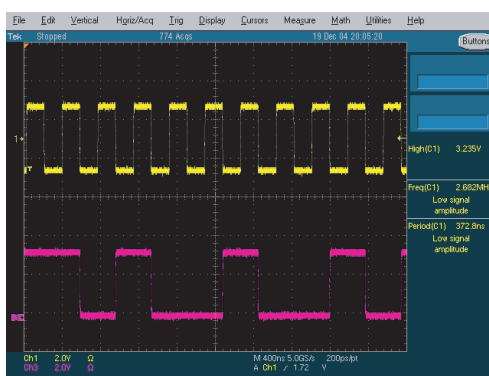
6

Tuner CVBS Out (Pattern: Grey Bar)

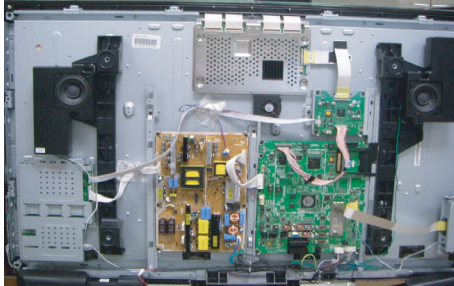
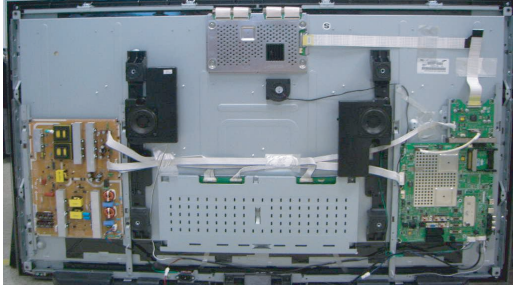


7

TS DATA Out (Clk, Data [0])

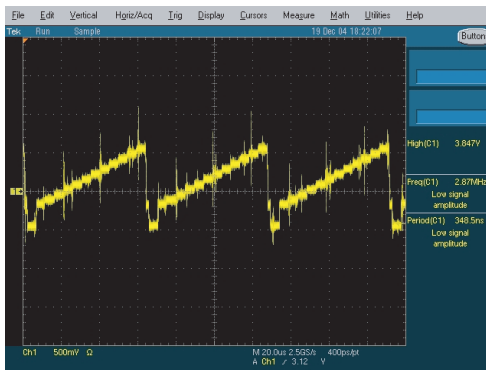


4-1-4. No Video (Tuner_CVBS)

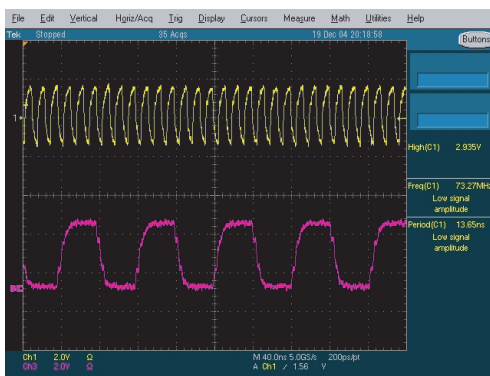
Symptom	Audio is normal but no picture is displayed on the screen.
Major checkpoints	- Check the Tuner CVBS source - Check the IC2000(A1F) - This may happen when the LVDS cable connecting the Main Board and the Panel is disconnected.
Caution	Make sure to disconnect the power before working on the IP board.
Diagnostics	  < 46" > < 55" > <pre> graph TD Start[Power Indicator is off. Lamp(Backlight) Off, no video] -- Yes --> Q1{Check the RF source and check the connection of RF cable?} Q1 -- No --> A1[Input the RF signal. Check the connected cable.] Q1 -- Yes --> Q2{6 Does the signal appear at TU701?} Q2 -- No --> A2[Check TU701. Change the main PCB assembly or tuner.] Q2 -- Yes --> Q3{5 Does the digital data appear at output of R1308 ~R1321, R1323~R1336?} Q3 -- No --> A3[Check IC1001 Change the main PCB assembly] Q3 -- Yes --> Q4{Does the digital data appear at output of FLB_CLKA/B, FLF_CLKA/B, FRB_CLKA/B, FRF_CLKA/B, BLB_CLKA/B, BLF_CLKA/B, BRB_ CLKA/B, BRF_CLKA/B (On FRCM Board)?} Q4 -- No --> A4[Check IC7 Change the FRCM Board assembly] Q4 -- Yes --> Q5{Check the LVDS cable? Replace the LCD panel?} Q5 -- No --> A5[Please, contact Tech support] </pre>

WAVEFORMS

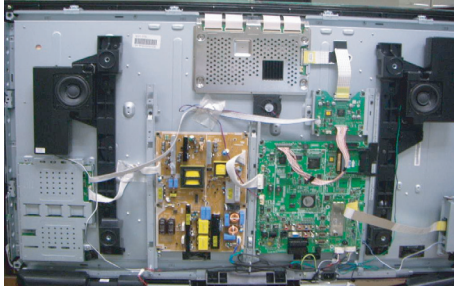
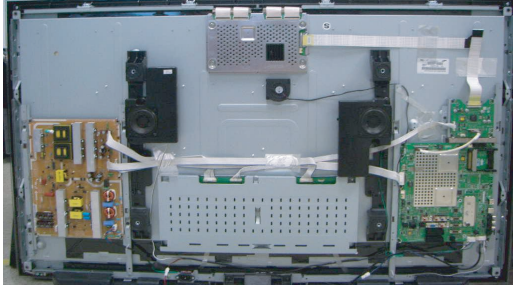
5 Tuner CVBS Out (Pattern: Grey Bar)



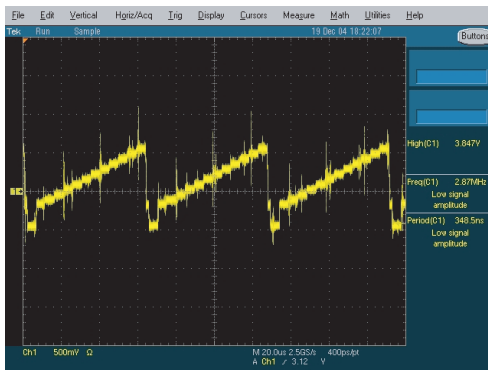
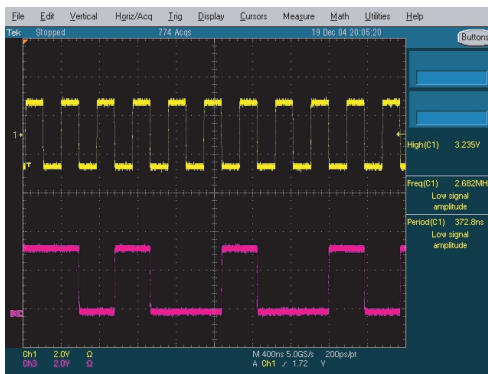
6 Eagle+ Out (Clk, H-Sync)



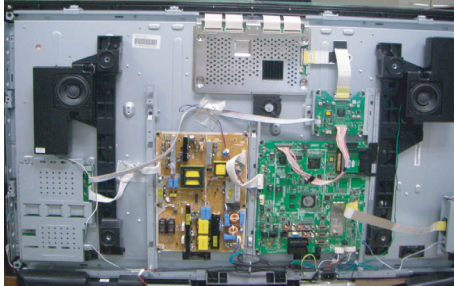
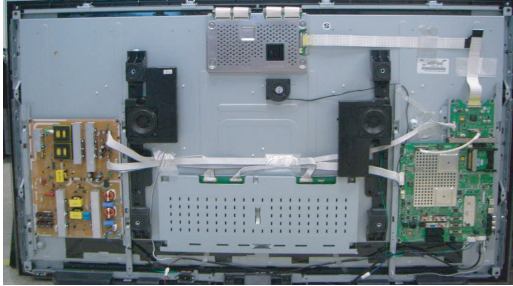
4-1-5. No Video (Tuner DTV)

Symptom	– Audio is normal but no picture is displayed on the screen.
Major checkpoints	– Check the DTV source – Check the IC2000(A1F) – This may happen when the LVDS cable connecting the Main Board and the Panel is disconnected.
Caution	Make sure to disconnect the power before working on the IP board.
Diagnostics	  < 46" > < 55" > <pre> graph TD Start[Power Indicator is off. Lamp(Backlight) Off, no video] -- Yes --> Q1{Check the RF source and check the connection of RF cable?} Q1 -- No --> A1[Input the RF signal. Check the connected cable.] Q1 -- Yes --> Q2{7 Does the digital data appear at C705 (IF_out +) C727 (IF_out -)} Q2 -- No --> A2[Check TU701 Change the main PCB assembly or tuner.] Q2 -- Yes --> Q3{5 Does the digital data appear at output of R1308 ~R1321, R1323~R1336?} Q3 -- No --> A3[Check IC1001 Change the main PCB assembly] Q3 -- Yes --> Q4{Does the digital data appear at output of FLB_CLKA/B, FLF_CLKA/B, FRB_CLKA/B, FRF_CLKA/B, BLB_CLKA/B, BLF_CLKA/B, BRB_ CLKA/B, BRF_CLKA/B (On FRCM Board)?} Q4 -- No --> A4[Check IC7 Change the FRCM Board assembly] Q4 -- Yes --> Q5{Check the LVDS cable? Replace the LCD panel?} Q5 -- No --> A5[Please, contact Tech support] </pre>

WAVEFORMS

5**Tuner CVBS Out (Pattern: Grey Bar)****7****TS DATA Out (Clk, Data [0])**

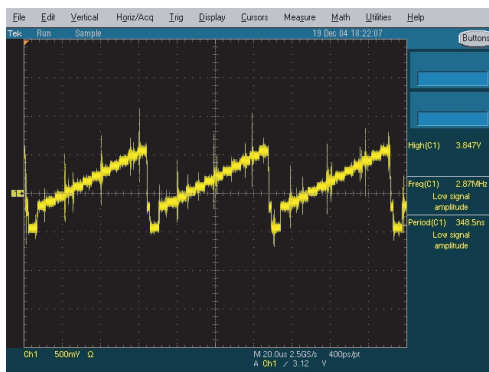
4-1-6. No Video (Video CVBS 1, 2)

Symptom	– Audio is normal but no picture is displayed on the screen.
Major checkpoints	– Check the Video CVBS source – Check the IC2000(A1F) – This may happen when the LVDS cable connecting the Main Board and the Panel is disconnected.
Caution	Make sure to disconnect the power before working on the IP board.
Diagnostics	  < 46" > < 55" > <pre> graph TD Start[Power Indicator is off. Lamp(Backlight) Off, no video] -- Yes --> Q1[Check the video source and check the connection of video cable?] Q1 -- No --> A1[Input a video signal. Check the connected cable.] Q1 -- Yes --> Q2[5 Does the signal appear at R253 (CVBS1) R323B (CVBS2 for 40" 52") R515S (CVBS2 for 46")?] Q2 -- No --> A2[Check CN201 or Side-AV Change the main PCB ass'y or Side-AV Ass'y] Q2 -- Yes --> Q3[5 Does the digital data appear at output of R1308 ~R1321, R1323~R1336?] Q3 -- No --> A3[Check IC1001 Change the main PCB assembly] Q3 -- Yes --> Q4[Does the digital data appear at output of FLB_CLKA/B, FLF_CLKA/B, FRB_CLKA/B, FRF_CLKA/B, BLB_CLKA/B, BLF_CLKA/B, BRB_ CLKA/B, BRF_CLKA/B (On FRCM Board)?] Q4 -- No --> A4[Check IC7 Change the FRCM Board assembly] Q4 -- Yes --> Q5[Check the LVDS cable? Replace the LCD panel?] Q5 -- No --> A5[Please, contact Tech support] </pre>

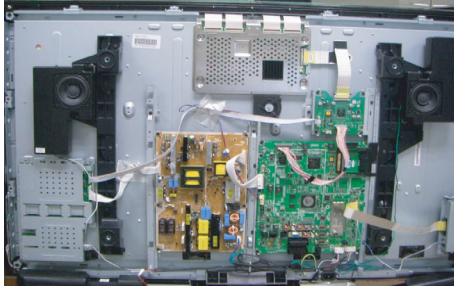
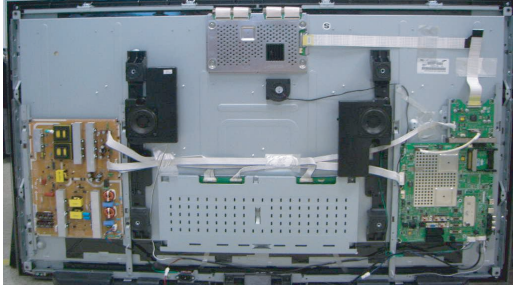
WAVEFORMS

5

Tuner CVBS Out (Pattern: Grey Bar)

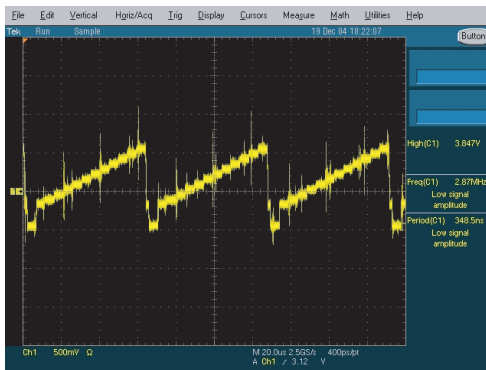


4-1-7. No Video (S-Video)

Symptom	– Audio is normal but no picture is displayed on the screen.
Major checkpoints	– Check the S-Video source – Check the IC2000(A1F) – This may happen when the LVDS cable connecting the Main Board and the Panel is disconnected.
Caution	Make sure to disconnect the power before working on the IP board.
Diagnostics	  < 46" > < 55" > <pre> graph TD Start[Power Indicator is off. Lamp(Backlight) Off, no video] -- Yes --> Q1{Check the video source and check the connection of video cable?} Q1 -- No --> A1[Input a video signal. Check the connected cable.] Q1 -- Yes --> Q2{8 Does the signal appear at R321B, R322B (for 40" 52") R517S, R518S (for 46")?} Q2 -- No --> A2[Check CN303B or Side-AV Change the main PCB ass'y or Side-AV assembly] Q2 -- Yes --> Q3{5 Does the digital data appear at output of R1308 ~R1321, R1323~R1336?} Q3 -- No --> A3[Check IC1001 Change the main PCB assembly] Q3 -- Yes --> Q4{Does the digital data appear at output of FLB_CLKA/B, FLF_CLKA/B, FRB_CLKA/B, FRF_CLKA/B, BLB_CLKA/B, BLF_CLKA/B, BRB_ CLKA/B, BRF_CLKA/B (On FRCM Board)?} Q4 -- No --> A4[Check IC7 Change the FRCM Board assembly] Q4 -- Yes --> Q5{Check the LVDS cable? Replace the LCD panel?} Q5 -- No --> A5[Please, contact Tech support] </pre>

WAVEFORMS

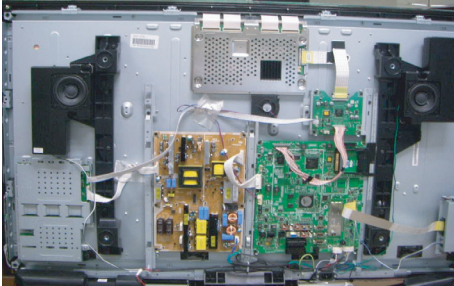
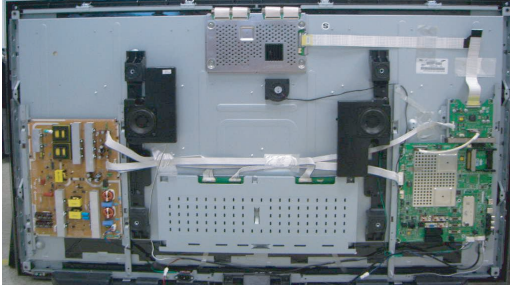
5 Tuner CVBS Out (Pattern: Grey Bar)



8 S-VIDEO Input (Y/C)

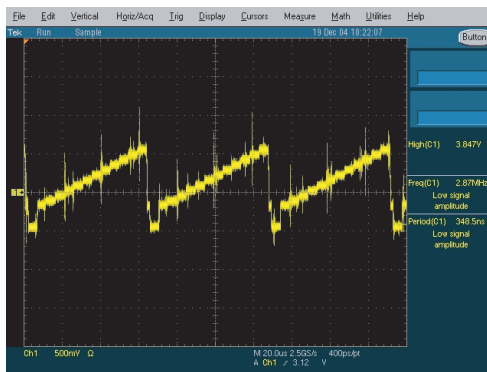


4-1-8. No Video (Component 1, 2)

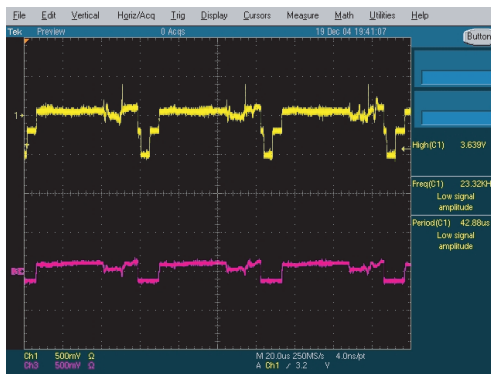
Symptom	– Audio is normal but no picture is displayed on the screen.
Major checkpoints	– Check the Component source – Check the MST336CCLK, Check the IC2000(A1F) – This may happen when the LVDS cable connecting the Main Board and the Panel is disconnected.
Caution	Make sure to disconnect the power before working on the IP board.
Diagnostics	  < 46" > < 55" > <pre> graph TD Start[Power Indicator is off. Lamp(Backlight) Off, no video] -- Yes --> Q1{Check component source and check the connection of component cable ?} Q1 -- No --> A1[Input a component signal. Check the connected cable.] Q1 -- Yes --> Q2{9 Does the signal appear at R248, R249, R250 (Comp1) R208, R209, R210 (Comp2) (Y, Pb, Pr)?} Q2 -- No --> A2[Check CN201 Change the main PCB ass'y] Q2 -- Yes --> Q3{Does the digital data appear at RA605, RA606, RA646, RA647(Rout) RA603, RA604, RA633, RA634(Gout) RA601, RA602, RA631, RA632(Bout)?} Q3 -- No --> A3[Check IC601 Change the main PCB assembly] Q3 -- Yes --> Q4{5 Does the digital data appear at output of R1308 ~R1321, R1323~R1336?} Q4 -- No --> A4[Check IC1001 Change the main PCB assembly] Q4 -- Yes --> Q5{Does the digital data appear at output of FLB_CLKA/B, FLF_CLKA/B, FRB_CLKA/B, FRF_CLKA/B, BLB_CLKA/B, BLF_CLKA/B, BRB_ CLKA/B, BRF_CLKA/B (On FRCM Board)?} Q5 -- No --> A5[Check IC7 Change the FRCM Board assembly] Q5 -- Yes --> Q6{Check the LVDS cable? Replace the LCD panel?} Q6 -- No --> A6[Please, contact Tech support] </pre>

WAVEFORMS

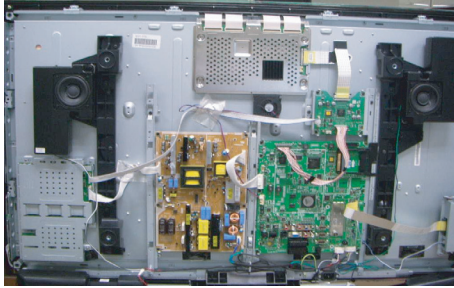
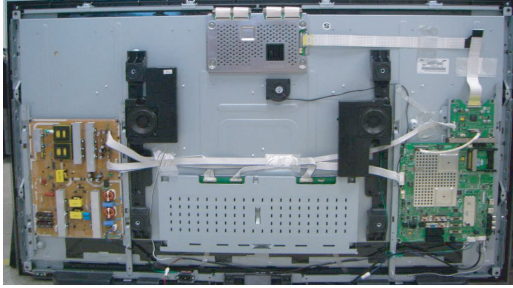
5 Tuner CVBS Out (Pattern: Grey Bar)



9 Component Input (Y/Pb)

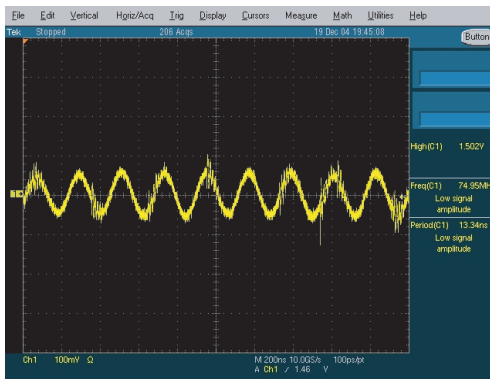


4-1-9. No Sound

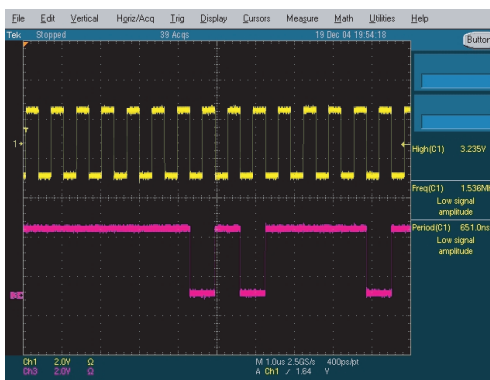
Symptom	– Video is normal but there is no sound..
Major checkpoints	– When the speaker connectors are disconnected or damaged. – When the sound processing part of the Main Board is not functioning. – Speaker defect..
Caution	Make sure to disconnect the power before working on the IP board.
Diagnostics	  < 46" > < 55" > <pre> graph TD Start[Lamp(Backlight) Off, no sound.] -- Yes --> Q1{Check the sound source and check the connection of sound cable?} Q1 -- No --> A1[Input a sound signal. Check the connected cable.] Q1 -- Yes --> Q10{10 Does the signal appear at C1565, C1566 (S-Video R/L), C1567, C1568 (Comp1 R/L), C1569, C1570 (Comp2 R/L), C1571, C1572 (DVI R/L), C1573, C1574 (PC R/L)?} Q10 -- No --> A10[Check CN201 or Side-AV. Change the main PCB ass'y or side-AV assembly] Q10 -- Yes --> Q11{11 Does the digital data appear at R1547, R1548, R1549, R1550 (Mclk, Sclk, LRclk, data)?} Q11 -- No --> A11[Check IC1502 Change the main PCB assembly] Q11 -- Yes --> Q12{12 Does the signal appear at L1501, L1502 (L/R output)?} Q12 -- No --> A12[Check IC1501 Change the main PCB assembly] Q12 -- Yes --> Q13{Check the LVDS cable? Replace the speaker?} Q13 -- No --> A13[Please, contact Tech support] </pre>

WAVEFORMS

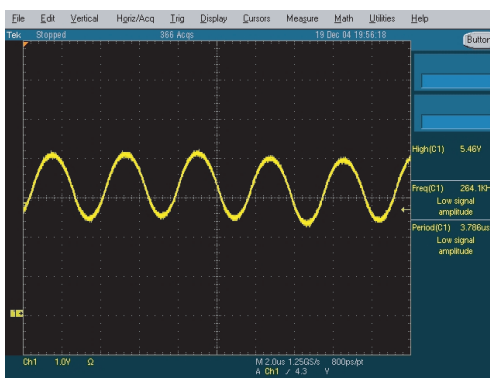
10 Audio Input (Sign Wave)



11 I2S Input (Clk, Data)



12 Audio Amp Out (Sign Wave)



4-2. Alignments and Adjustments

4-2-1. General Alignment instruction

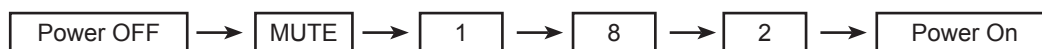
1. Usually, a color LCD-TV needs only slight touch-up adjustment upon installation.
Check the basic characteristics such as height, horizontal and vertical sync.
2. Use the specified test equipment or its equivalent.
3. Correct impedance matching is essential.
4. Avoid overload. Excessive signal from a sweep generator might overload the front-end of the TV. When inserting signal markers, do not allow the marker generator to distort test result.
5. Connect the TV only to an AC power source with voltage and frequency as specified on the backcover nameplate.
6. Do not attempt to connect or disconnect any wire while the TV is turned on. Make sure that the power cord is disconnected before replacing any parts.
7. To protect against shock hazard, use an isolation transformer.

4-3. Factory Mode Adjustments

4-3-1 Entering Factory Mode

To enter 'Service Mode' Press the remote -control keys in this sequence :

- If you do not have Factory remote - control



4-3-2 How to Access Service Mode

Using the Customer Remote

1. Turn the power off and set to stand-by mode
2. Press the remote buttons in this order; POWER OFF-MUTE-1-8-2-POWER ON to turn the set on.
3. The set turns on and enters service mode. This may take approximately 20 seconds.
4. Press the Power button to exit and store data in memory.
- If you fail to enter service mode, repeat steps 1 and 2 above.
5. Initial SERVICE MODE DISPLAY State

MODE : ATV, RES : NOSIGNAL

OPTION	Sound	T-DMDAUSC-XXXX
ADC	Hotel Option	T-DMDAUSS-XXXX
ADC Target	LED Option	SDAL3.5.1-YYMMDD-XX-XX
ADC Result	FRCM Option	RFS
White Balance	FRCM ADV	2008-XX-XX
WB Movie	EDID	PANEL : XXA LED
EPA Standard	Expert Setting	LNXXA950D1FXZA
A1B_VDEC	Expert D-Settings	EDID W ALL O : PC O
MST336C	Expert Gray Scale	HDMI1 O
A1B_DP	Expert C-Space	HDMI2 O
NR	Expert Others	HDMI3 O
Sharpness	CHECKSUM	HDMI4 O
FBE3	View Log	Option :
Dynamic Contrast	Font Data Viewer	CALIB: AV O COMP O PC O HDMI O
LNA Plus		DTP-COMP-XXXX
		DTP-LM-XXXX-XX
		Date of purchase : 00/00/0000

**The items which contain the word "Expert" are only for buyer. It's buyer's option.
Therefore, only buyer can control them.**

1. Buttons operations withn Service Mode

Menu	Full Menu Display/Move to Parent Menu
Direction Keys ▲/▼	Item Selection by Moving the Cursor
Direction Keys ◀/▶	Data Increase / Decrease for the Selected Item
Source	Cycles through the active input source that are connected to the unit

4-3-3 Factory Data

Option	RESET		HDMI2 EQ	Middle	Expert Adj	OFF
	Type	46A LED	HDMI3 EQ	Middle	N/D Adj	OFF
	Model	A950	HDMI4 EQ	Middle	Optical Link	OFF
	MUTE TIME(VIDEO)	2	Get Time	6	USB Demo On T(sec)	180
	PROTECT	ON	HDMI AV Mute Time	40	USB Demo Off T(sec)	300
	WATCH DOG	OFF	Lvds Tx Fmt	JEIDA	VisualTEST	Disable
	WD COUNT	0	Lvds TB	2	Tiara Factory(Exit)	OFF
	DBG/RS232 SEL	DEBUG	Gamma	OFF	WB Reset	OFF
	Shop Mode	OFF	7.5 IRE	OFF	EER Reset	
	DVI/HDMI Sound	Auto	7.5 IRE Offset	60		
	HotPlug off Hold Time	1500ms	Spread Spectrum	2		
	HDMI Lose Time	1	KS1411_TUNER	1411_SEC		
	HDMI_PC Lose Time	1	Side AV	ON		
	PC Lose Time	1	Dimming Select	EXT_PWM		
	HDMI1 EQ	Middle	Panel Display Time	38Hr		

ADC	AV Calibration	Success
	Comp Calibration	Success
	PC Calibration	Success
	Hdmi Calibration	Success

ADC Target	1st_AV_Low	16	2nd_PC_Low	1
	1st_AV_High	220	2nd_PC_High	235
	1st_AV_Delta	1	2nd_PC_Delta	1
	1st_Comp_Low	16	2nd_HDMI_Low	1
	1st_Comp_High	235	2nd_HDMI_High	235
	1st_Comp_Delta	1	2nd_HDMI_Delta	1
	1st_PC_Low	1		
	1st_PC_High	235		
	1st_PC_Delta	1		
	2nd_AV_Low	1		
	2nd_AV_High	235		
	2nd_AV_Delta	1		
	2nd_Comp_Low	1		
	2nd_Comp_High	235		
	2nd_Comp_Delta	1		

ADC Result	1st_AV_Gain	124	2nd_B_Gain	107
	1st_AV_Offset	1		
	1st_Comp_Gain	192		
	1st_Comp_Offset	94		
	1st_PC_R_Gain	172		
	1st_PC_G_Gain	172		
	1st_PC_B_Gain	172		
	1st_PC_R_Offset	128		
	1st_PC_G_Offset	128		
	1st_PC_B_Offset	128		
	2nd_R_Offset	136		
	2nd_G_Offset	136		
	2nd_B_Offset	136		
	2nd_R_Gain	107		
	2nd_G_Gain	107		

White Balance	Sub Brightness	128
	R_Offset	512
	G_Offset	512
	B_Offset	512
	Sub Contrast	128
	R_Gain	512
	G_Gain	512
	B_Gain	512
	Movie R-Offset	508
	Movie B-Offset	515
	Movie R-Gain	545
	Movie B-Gain	419

WB_Movie	W/B MOVIE On/Off	OFF	NOR_ROffset
	Mode		NOR_BOffset
	Color Tone		C2_RGain
	MSub Brightness		C2_BGain
	MSub Contrast		C2_ROffset
	W2_RGain		C2_BOffset
	W2_BGain		Movie Contrast
	W2_ROffset		Movie Bright
	W2_BOffset		Movie Color
	W1_RGain		Movie Sharpness
	W1_BGain		Movie Tint
	W1_ROffset		Movie Backlight
	W1_BOffset		Movie Gamma
	NOR_RGain		
	NOR_BGain		

WB_Movie

name	Range(OSD)	STEP	TV/AV/S_VHS	Component	DVI/HDMI	Analog PC
W/B MOVIE	0~1	1	1	1	1	1
ON/OFF	Dynamic/Movie		Dynamic	Dynamic	Dynamic	Dynamic
MODE	"Cool2/Cool1/Normal/		Cool1	Cool1	Cool1	Cool1
Color Tone	Warm1/Warm2"					
MSub Brightness	0~255	1	128	128	128	128
MSub Contrast	0~255	1	128	128	128	128
W2_Rgain	511~512	1	0	0	0	0
W2_Bgain	511~512	1	0	0	0	0
W2_Roffset	511~512	1	0	0	0	0
W2_Boffset	511~512	1	0	0	0	0
W1_Rgain	511~512	1	0	0	0	0
W1_Bgain	511~512	1	0	0	0	0
W1_Roffset	511~512	1	0	0	0	0
W1_Boffset	511~512	1	0	0	0	0
NOR_Rgain	511~512	1	0	0	0	0
NOR_Bgain	511~512	1	0	0	0	0
NOR_Roffset	511~512	1	0	0	0	0
NOR_Boffset	511~512	1	0	0	0	0
C2_Rgain	511~512	1	0	0	0	0
C2_Bgain	511~512	1	0	0	0	0
C2_Roffset	511~512	1	0	0	0	0
C2_Boffset	511~512	1	0	0	0	0
Movie Contrast	0~100	1	80	80	80	80
Movie Bright	0~100	1	45	45	45	45
Movie Color	0~100	1	50	50	50	50
Movie Sharpness	0~100	1	20	20	20	20
Movie Tint	-50 ~ 50	1	0	0	0	0
Movie Backlight	0~10	1	5	5	5	5
Movie Gamma						

EPA Standard	Standard Contrast	95
	Standard Bright	45
	Standard Sharpness	50
	Standard Color	50
	Standard Tint	50
	Standard Backlight	7

MST336C	RED CUTOFF	D_R_offset
	GREEN CUTOFF	D_G_offset
	BLUE CUTOFF	D_B_offset
	PHASE	D_CALDLYC
	RED GAIN	D_SMPDLY
	GREEN GAIN	D_SMPDURCV
	BLUE GAIN	CAL_CTRL0
	SOGMID_GTRL	
	SEP_THR	
	PRECST	
	ADC_BWR	
	ADC_BWG	
	ADC_BWB	
	SOG_BW	

NR	OFF_Y	8	HIGH_FADER	125
	OFF_C	4		
	OFF_YMAX	128		
	OFF_FADER	200		
	LOW_Y	80		
	LOW_C	20		
	LOW_YMAX	150		
	LOW_FADER	128		
	MED_Y	85		
	MED_C	20		
	MED_YMAX	160		
	MED_FADER	128		
	HIGH_Y	90		
	HIGH_C	20		
	HIGH_YMAX	170		

Sharpness	sharp75	75	Pre_LTIV	2
	Pre_GainH1_E	20	Post_LTIH	4
	Pre_GainH2_E	30	Post_LTIV	2
	Pre_GainH3_E	10	PRE_CORING	3
	Pre_GainV1_E	15	POST_CORING	3
	Pre_GainV2_E	20	Sub Color	53
	Pre_GainV3_E	10	Mixed Film	ON
	Post_GainH1_E	25		
	Post_GainH2_E	30		
	Post_GainH3_E	10		
	Post_GainV1_E	15		
	Post_GainV2_E	30		
	Post_GainV3_E	10		
	CTI_Gain	15		
	Pre_LTIH	4		

Sharpness

Name	Range	RF	AV/S-VHS	COMP	
				480i/p	720p/1080i/ 1080p
sharp75	0~100(DEC)	75	75	75	75
Pre_GainH1_E	0~FF	15	0	0	30
Pre_GainH2_E	0~FF	40	60	60	30
Pre_GainH3_E	0~FF	70	60	60	20
Pre_GainV1_E	0~FF	15	0	0	20
Pre_GainV2_E	0~FF	15	15	15	20
Pre_GainV3_E	0~FF	15	60	60	10
Post_GainH1_E	0~FF	40	0	0	50
Post_GainH2_E	0~FF	0	40	40	60
Post_GainH3_E	0~FF	30	60	60	40
Post_GainV1_E	0~FF	0	0	0	60
Post_GainV2_E	0~FF	25	70	70	60
Post_GainV3_E	0~FF	0	0	0	10
CTI_Gain	0~F	15	15	14	7
Pre_LTIH	0~F	3	3	1	6
Pre_LTIV	0~F	3	3	1	4
Post_LTIH	0~F	3	3	9	8
Post_LTIV	0~F	3	3	7	8
PRE_CORING	0~FF	0	0	0	0
POST_CORING	0~FF	2	2	2	0
Sub Color	30~80	60	60	60	60

Name	Range	DTV	WISELINK	PC, HDMI-PC
		ALL		
sharp75	0~100(DEC)	75	75	0
Pre_GainH1_E	0~FF	10	0	0
Pre_GainH2_E	0~FF	15	45	45
Pre_GainH3_E	0~FF	15	45	45
Pre_GainV1_E	0~FF	15	0	0
Pre_GainV2_E	0~FF	15	10	10
Pre_GainV3_E	0~FF	15	45	45
Post_GainH1_E	0~FF	40	0	0
Post_GainH2_E	0~FF	3	24	24
Post_GainH3_E	0~FF	30	48	48
Post_GainV1_E	0~FF	30	0	0
Post_GainV2_E	0~FF	30	50	50
Post_GainV3_E	0~FF	30	0	0
CTI_Gain	0~F	7	14	0
Pre_LTIH	0~F	2	1	0
Pre_LTIV	0~F	2	1	0
Post_LTIH	0~F	6	9	0
Post_LTIV	0~F	4	7	0
PRE_CORING	0~FF	0	0	0
POST_CORING	0~FF	0	2	2
Sub Color	30~80	60	60	55

FBE3	Pattern_sel	0	M-Skin-UV	138
	B-Slope gain	60	M-Sub-Color	128
	B-Tilt min	40		
	B-Tilt max	100		
	LFunc-basis	60		
	Hfunc-basis	70		
	Mean-Offset1	30		
	Mea-Offset2	235		
	Mean-Slope	112		
	ACR-Offset	10		
	ACR-th1	10		
	ACR-th2	110		
	Skin-Enable	ON		
	Skin-UV	135		
	Sub color	128		

Sound	[A1F]Delay_ATV	60	[STA]AMP Vol	0x29
	[A1F]Delay_DTV	70	[STA]Limiter Attack	0x09
	[A1F]spdif_Delay	ON	[STA]Limiter Release	0x0f
	SAP Pilot high	24	[STA]Post Scale	0x7f
	SAP Pilot low	9	[STA]SpeakerEQ	ON
	Stereo Pilot high	35		
	Stereo Pilot low	16		
	MELODY-OFF VOL.	7		
	Speaker Type	K3		
	Amp Pwr(W)	10W		
	Carrier Mute)	ON		
	Hi-Deviation	OFF		
	SQTH	112		
	CETH	16		
	Audio Delay	1		

Hotel Option	Hotel Mode	OFF
	Power On Channel	3
	Power On Band	Air
	Power On Volume	10
	Max Volume	100
	Panel Button Lock	OFF
	Power On Source	TV

LED Option	IES-TH	0x00c6	ABL_LEVEL	0x00e6
	IES_COEFF	0x00cc	LIMIT_COE	0x00ff
	PATT_SEL	0x0000	L3DD_ON	0x0001
	LVDS_RX_FMT	0x0001	L3DD_RATIO	0x0008
	LVDS_RX_BIT	0x0001	L3DD_LD2_OR_LD3	0x0001
	LVDS_TX_FMT	0x0001	L3DD_SATURATION	0x0006
	LVDS_TX_BIT	0x0001	LED_R_SCAN1_X	0x0006
	LED_LEVEL	0x0008	LED_R_SCAN1_Y	0x0145
	SF_ON	0x0001	LED_R_SCAN2_X	0x0006
	SF_Option	0x0001	LED_R_SCAN2_Y	0x0377
	TF1_ON	0x0001		
	TF2_ON	0x0000		
	Thr_TF2_Ratio	0x0004		
	Thr_TF1_Ratio	0x0004		
	ABL_ON	0x0000		

FRCM_Option	SSC_OnOff	1	Film_Medi_SD_22	3
	SSC_Width[%]	20	Film_Medi_SD_32	3
	SSC_Freq[KHz]	60	Film_Medi_HD_22	3
	PATT_BeforeDDR	0	Film_Medi_HD_32	3
	PATT_AfterDDR	0	Film_High_SD_22	0
	FMD_Demo	0	Film_High_SD_32	0
	Video_Judder_Off	32	Film_High_HD_22	0
	Video_Judder_Low	10	Film_High_HD_32	0
	Video_Judder_Med	5	DDRHangupDetect	1
	Video_Judder_High	0		
	Film_Off_Judder	32		
	Film_Low_SD_22	12		
	Film_Low_SD_32	12		
	Film_Low_HD_22	12		
	Film_Low_HD_32	12		

**PATT_BeforeDDR and PATT_AfterDDR are needed for checking that where the problem occurs between before and after DDR. **

FRCM ADV	ADV On/Off	ON	H_verLimit	8
	ENMCFallBack	ON	L_horMCoff	28
	HorVerSel	0	M_horMCoff	28
	mcFallBackVis	OFF	H_horMCoff	28
	L_horStart	8	L_verMCoff	28
	M_horStart	8	M_verMCoff	28
	H_horStart	8	H_verMCoff	28
	L_verStart	4	L_horHyster	6
	M_verStart	4	M_horHyster	6
	H_verStart	4	H_horHyster	6
	L_horLimit	15	L_verHyster	6
	M_horLimit	20	M_verHyster	6
	H_horLimit	8	H_verHyster	6
	L_verLimit	15	horLimitVideo	15
	M_verLimit	15	verLimitVideo	20

EDID	EDID ON/OFF	OFF
	EDID W ALL	Success
	EDID W PC	Success
	EDID W HDMI1	Success
	EDID W HDMI2	Success
	EDID W HDMI3	Success
	EDID W HDMI4	Success
	EMDID VERSION	HDMI1 1.3

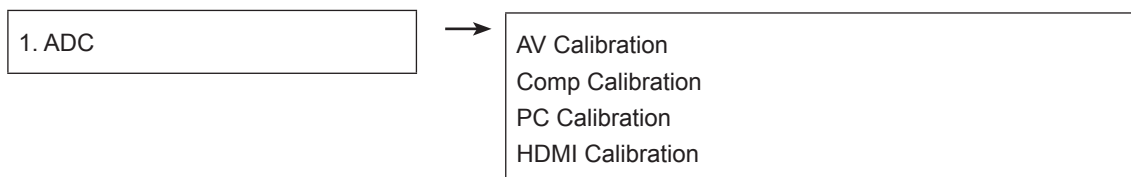
CHECKSUM	MAIN: xxxxxxxx Back : Press Menu Key
----------	---

View Log	Select Log Type View Log Delete Log	DEFECT
----------	---	--------

Font Data Viewr	Press Enter-key to Start
-----------------	--------------------------

4-4. White Balance - Calibration

4-4-1 White Balance -Calibration

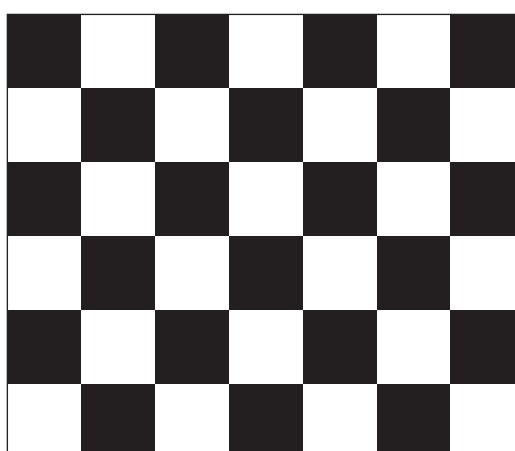


4-4-2 Service Adjustment - You must perform Calibration in the Lattice Pattern before adjusting the White Balance.

■ Color Calibration

Adjust spec.

1. Source : HDMI
2. Setting Mode : 1280*720@60Hz
3. Pattern : Pattern #24 (Chess Pattern)



(Chess Pattern)

4. Use Equipment : CA210 & Master MSPG925 Generator

- Use other equipment only after comparing the result with that of the Master equipment.

Input mode	Calibration	Pattern
CVBS IN (Model_#1)	Perform in NTSC B&W Pattern #24	Lattice
Component IN (Model_#6)	Perform in 720p B&W Pattern #24	Lattice
PC Analog IN (Model_#21)	Perform in VESA XGA (1024x768) B&W Pattern #24	Lattice
HDMI IN	Perform in 720p B&W Pattern #24	Lattice

<Table 1>

■ Method of Color Calibration (AV)

- 1) Apply the NTSC Lattice (N0. 3) pattern signal to the AV IN 1 port
- 2) Press the Source key to switch to "AV1" mode
- 3) Enter Service mode
- 4) Select the "ADC" menu
- 5) Select the "AV Calibration" menu.
- 6) In "AV Calibration Off" status, press the "▶" key to perform Calibration.
- 7) When Calibration is complete, it returns to the high-level menu.
- 8) You can see the change of the "AV Calibration" status from Failure to Success.

■ Method of Color Calibration (Component)

- 1) Apply the 720p Lattice (N0. 6) pattern signal to the Component IN 1 port
- 2) Press the Source key to switch to "Component1" mode
- 3) Enter Service mode
- 4) Select the "ADC" menu
- 5) Select the "Comp Calibration" menu.
- 6) In "Comp Calibration Off" status, press the "▶" key to perform Calibration.
- 7) When Calibration is complete, it returns to the high-level menu.
- 8) You can see the change of the "Comp Calibration" status from Failure to Success.

■ Method of Color Calibration (PC)

- 1) Apply the VESA XGA Lattice (N0. 21) pattern signal to the PC IN port
- 2) Press the Source key to switch to "PC" mode
- 3) Enter Service mode
- 4) Select the "ADC" menu
- 5) Select the "PC Calibration" menu.
- 6) In "PC Calibration Off" status, press the "▶" key to perform Calibration.
- 7) When Calibration is complete, it returns to the high-level menu.
- 8) You can see the change of the "PC Calibration" status from Failure to Success.

■ Method of Color Calibration (HDMI)

- 1) Apply the 720p Lattice (N0. 6) pattern signal to the HDMI1/DVI IN port
- 2) Press the Source key to switch to "HDMI1" mode
- 3) Enter Service mode
- 4) Select the "ADC" menu
- 5) Select the "HDMI Calibration" menu.
- 6) In "HDMI Calibration Off" status, press the "▶" key to perform Calibration.
- 7) When Calibration is complete, it returns to the high-level menu.
- 8) You can see the change of the "HDMI Calibration" status from Failure to Success.

4-4-3 White Balance - Adjustment

	(low light)	(hight light)
5. W/B	Sub Bright R offset G offset B offset	Sub Contrast R gain G gain B gain

(W/B adjustment Condition refer next page)

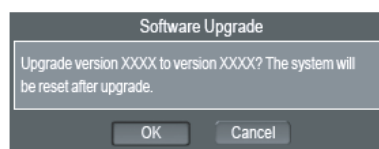
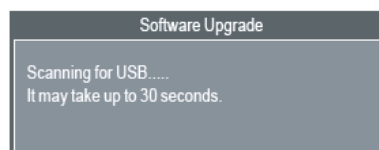
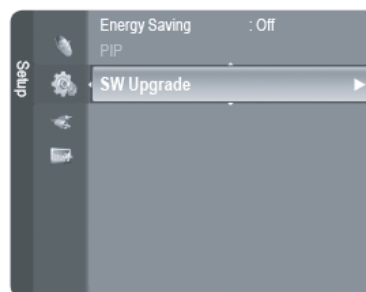
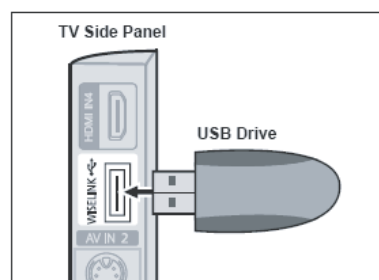
4-5. Servicing Information

4-5-1 Upgrading the Software

Samsung may offer upgrades for TV's firmware in the future. Please contact the Samsung call center at 1-800-SAMSUNG (726-7864) to receive information about downloading upgrades and using a USB drive. Upgrades will be possible by connecting a USB drive to the USB port located on your TV.

1. Insert a USB drive containing the firmware upgrade into the WISELINK port on the side of the TV.
2. If pop up is showed, press the exit or or press the No button.
3. Press the **MENU** button to display the menu.
Press the **▲** or **▼** button to select "Setup", then press the **ENTER** button.
4. Press the **▲** or **▼** button to select "SW Upgrade", then press the **ENTER** button.
5. Press the **ENTER** button.
The message "Scanning for USB... It may take up to 30 seconds." is displayed.
6. The message "Upgrade version XXXX to version XXXX?" is displayed.
The system will be reset after upgrade.
Press the **◀** or **▶** to select the "OK", then press the **ENTER** button.

Please be careful to not disconnect the power or remove the USB drive while upgrades are being applied. The TV will turn off and turn on automatically after completing the firmware upgrade. Please check the firmware version after the upgrades are complete. When software is upgraded, video and audio settings you have made will return to their default (factory) settings. We recommend you write down your settings so that you can easily reset them after the upgrade.



Memo