T260 / T240

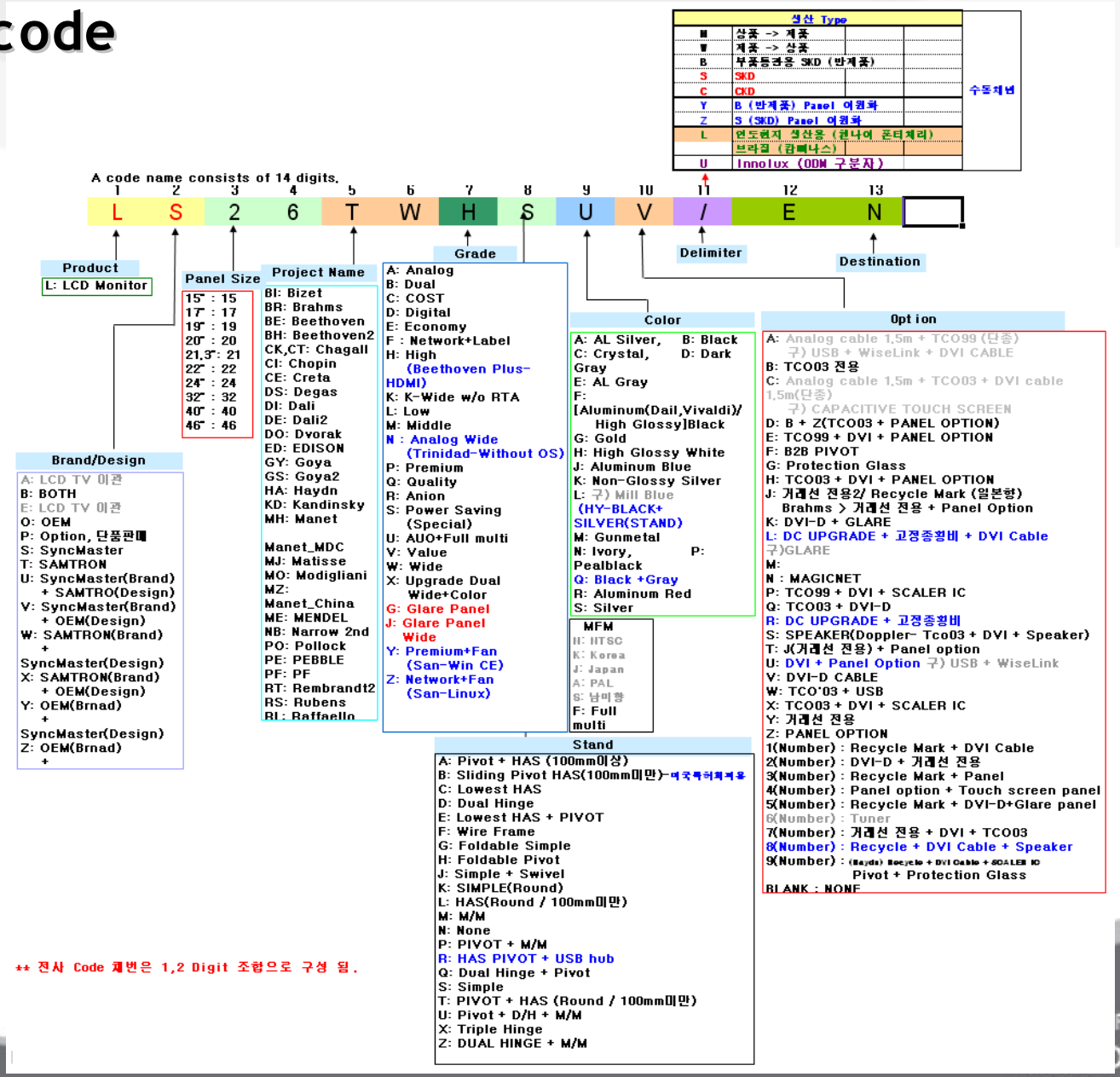
TFT LCD Monitor

Samsung Electronics
Visual Display Div. R&D team

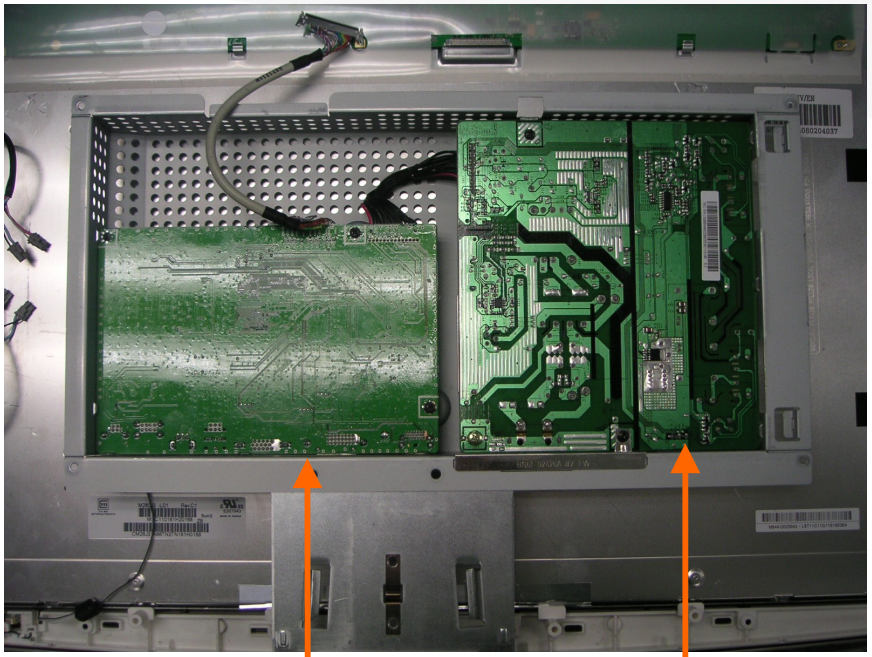
SAMSUNG
CHAMP IN DIGITAL DISPLAY
Visual Display Division

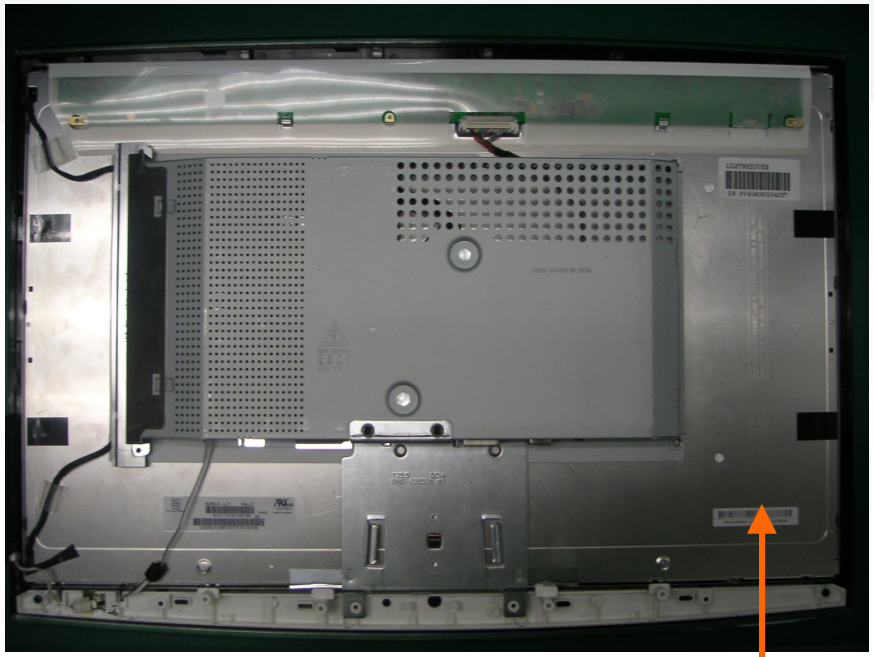
Contents

* Rules of getting the model code

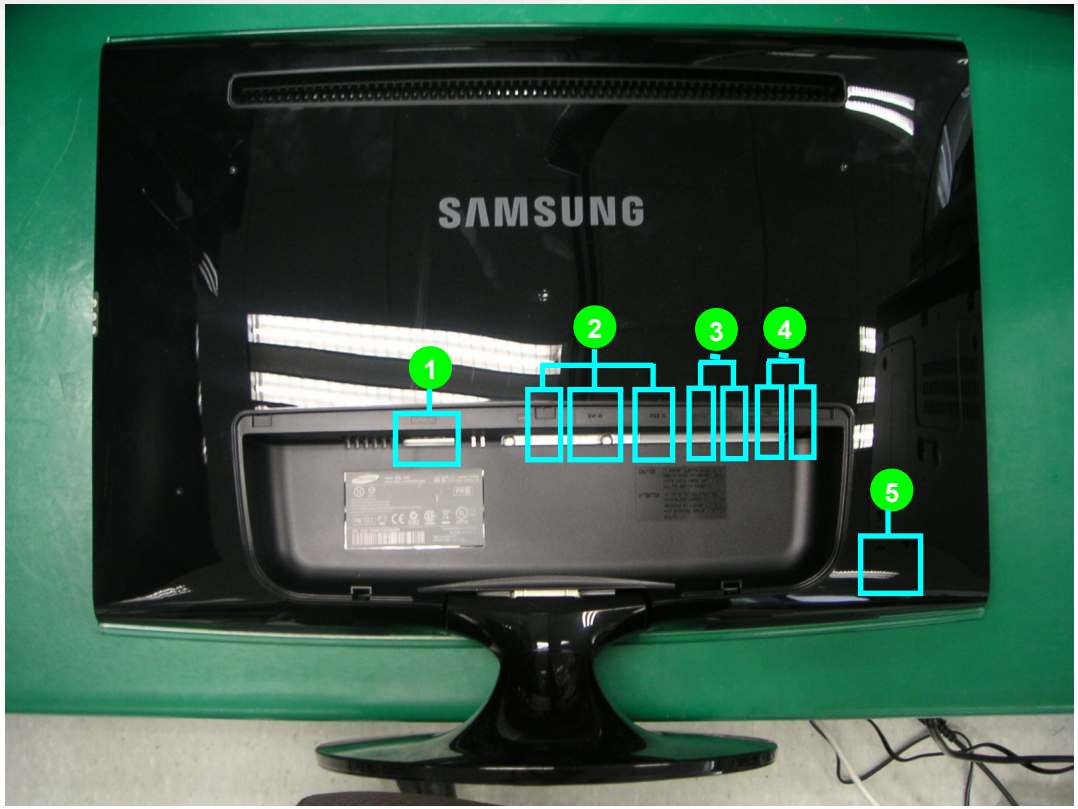


1. LCD Monitor Structure



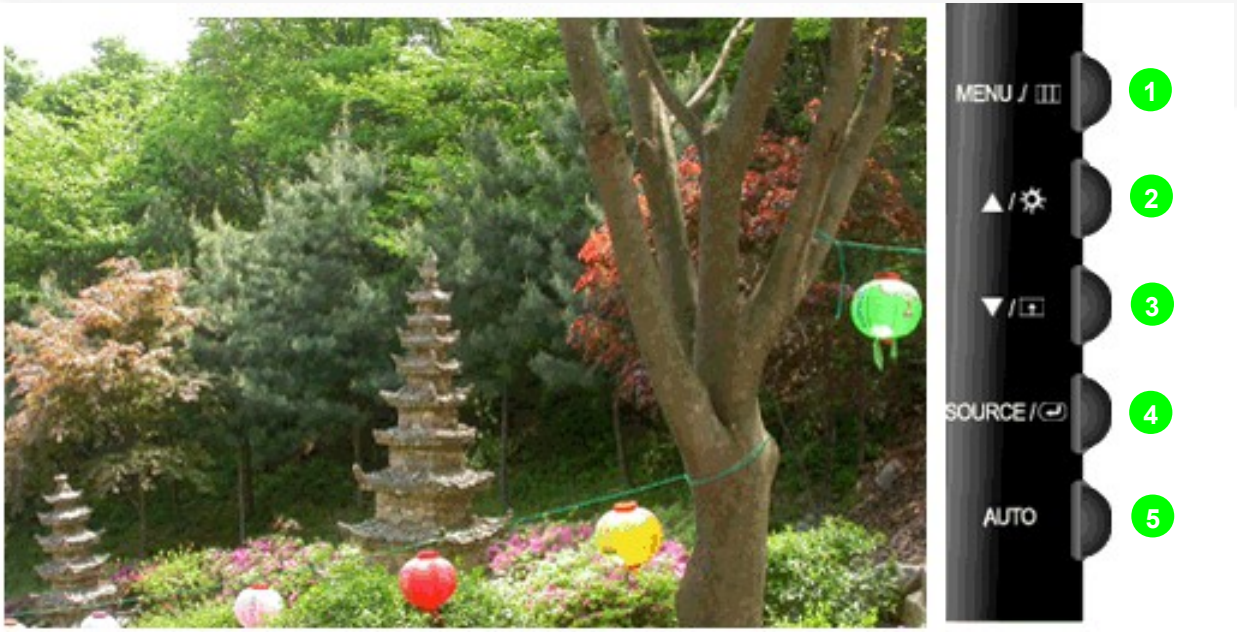


2. T260 / T240 Structures (1)



1) POWER IN
2) HDMI IN, DVI IN, RGB IN
3) Analog AUDIO OUT / Optical AUDIO OUT
4) USB UP / DOWN
5) Locking Parts

2. T260 / T240 Structures (2)



1) MENU Switch : Open OSD Menu / Exit OSD Menu / Exit to upper level Menu
2) Brightness (Analog/DVI), Volume (HDMI) Control / UP switch
3) Customized Key (MagicBright / Live Color / Color Effect / Image Size) / DOWN switch
4) SOURCE / ENTER Touch Switch : Change the Input signal / Select the OSD Menu
5) AUTO Switch : Auto image control switch

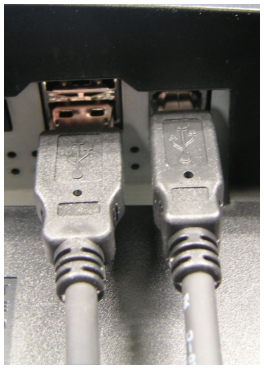
2. T260 / T240 Structures (3)

OWER
OWER IN
Connect the Power Cord

C B A

t In
GB – Connect the D-Sub Cable
VI(HDCP) – Connect the DVI Cable
DMI – Connect the HDMI Cable

3) Audio OUT / Digital Audio Out
- Support the HDMI sound Output



4) USB Up/Down
- Support USB 2.0 Hub(1 Up, 2 Down)

3. Specification (1)

Model	T260/T240

- Support PC / DVI / HDMI/Optical Sound
- Apply 5ms, DC 20000:1
- DPMS<2W
- MagicBright3, MagicTune, Windows Vista Certified
- USB 2.0 Hub (1 up, 2 down)
- DVI with HDCP
- Support fixed image size
- Support the camera mode

  : Grayscale / Green / Aqua / Sepia
- Power Consumption under the 0.3 Watts(Typ.)

  when its power is off.

3. Specification (2)

Model	T260 / T240

Specification	
Panel Size	550.08(H) x 343.8(V) (25.5 inch diagonal) / 518.40(H) x 324.0(V) (24 inch diagonal)
Maximum Resolution	1920 x 1200 @ 60Hz (RB)
Colors	16.7M
Brightness	300cd/m^2
Dynamic Contrast Ratio	20000:1
Horizontal Frequency	30~81kHz
Vertical Frequency	56~75Hz
Applicable Max Frequency	164MHz
Viewing Angle	160° / 160°
Response Time	5ms
Signal Input	Analog / Digital (15pin D-sub / DVI-D (single link)) / HDMI
Power Consumption	On working 60 Watts(26"Max), 65 Watts(24" Max) / DPMS 2 Watts (Max) / Power Off 0.4 Watts (Max)
Panel Size	USB 2.0 Hub (1 UP, 2 Down), Analog Sound, Optical Sound

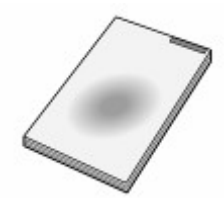
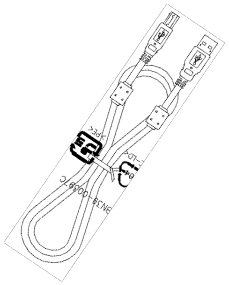
3. Specification (3)

Key Specifications	
Size	T260 : 610 x 502.5 x 245 mm (W X H X D), 610 x 435 x 78 (Without Stand) T240 : 572.5 x 477 x 245mm (W X H X D), 572.5 x 409.0 x 78 (Without Stand)
Stand	Simple STAND
Tilt (forward / backward)	-1° / 21°
Swivel (left / right)	-175° / 175°
Power Supply	IP-Board (SEMCO)
Wall-Mountable	X
Custom-Mountable	O
Mac & Linux Compatibility	O

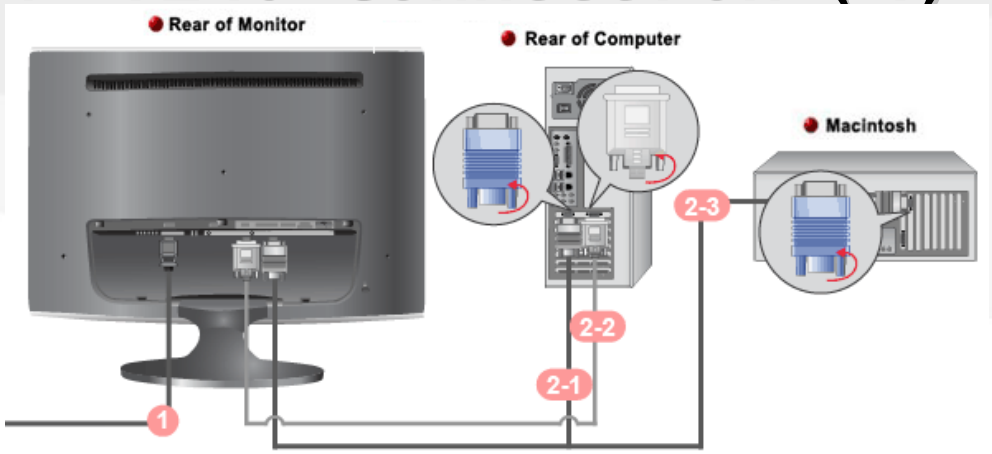
LCD Panel	
Display Area	T260 : 560.16(H) x 350.10(V) (25.5 inch diagonal) T240 : 518.40(H) x 324.0(V) (24 inch diagonal)
Display Element	a-si TFT active matrix
Model	M260J3(CMO 25.5") LTM240CT04(AMLCD 24")

3. Specification

(4) Accessories

Item	Item Name	Item	Item Name	Item	Item Name
	Quick Setup Guide		Warranty Card (Not available in all locations)		Power Cord
	User's Guide, Monitor Driver, Natural Color software, MagicTune™ software		USB Cable		D-Sub(15 Pin) Cable

4. T260 / T240 Connection (1)



1. Connect the power cord for your monitor to the power port on the back of the monitor. Plug the power cord for the monitor into a nearby outlet.

2. Connecting to the PC

2-1) Using the D-sub (Analog) connector on the video card : Connect the signal cable to the 15-pin, D-sub connector on the back of your monitor.

2-2) Using the DVI (Digital) connector on the video card : Connect the DVI cable to the DVI port on the back of your monitor.

2-3) Connecting to Macintosh : Connect the signal cable to the 15-pin, D-sub connector on the Macintosh.

3. Turn on your computer and monitor. If your monitor displays an image, installation is complete.

- You may get a blank screen depending on the type of video card you are using, if you connect simultaneously both the D-Sub and DVI cables to one computer.
- If you properly connect your monitor using the DVI connector but get a blank screen, check to see if the monitor status is set to

analog. Press Source Button to have the monitor double-check the input signal source.

4. T260 / T240 Connection (2)

HDMI / HDCP

- **Features of HDMI**
  - HDMI (High-Definition Multimedia Interface) is the first interface that can transmit non-compressed full digital Video/Audio data.
  - It supports 8 channel digital audio with sufficient bandwidth and all ATSC HDTV transmission is possible.

- **Good points of HDMI**
  - HDMI is a popular format that can obtain high resolution contents with good quality of non-compressed and lossless digital data.
  - Its connection between devices is very easy and simple, and control of the whole system is also possible.
  - It can be provided variety of contents from the major film productions because of protecting their copyrights by HDCP.

- **HDCP**
  - HDCP (High-bandwidth Digital Content Protection) is embedded copy-protection system for HD display contents. HD contents including HDCP can be displayed only after decoding by HDCP key of the play device. If the player does not support HDCP or does not satisfy the standard, the output resolution is only about ¼ of original contents.

4. T260 / T240 Connection(3)

HDMI Revision

HDMI revision	1.0	1.1	1.2/1.2a	1.3/1.3a/1.3b
Maximum signal bandwidth (MHz)	165	165	165	340
Maximum TMDS bandwidth (Gbit/s)	4.95	4.95	4.95	10.2
Maximum video bandwidth (Gbit/s)	3.96	3.96	3.96	8.16
Maximum audio bandwidth (Mbit/s)	36.86	36.86	36.86	36.86
Resolutions possible over single link HDMI at 24bits per pixel	1920x1080p60	1920x1080p60	1920x1080p60	2560x1600p60
RGB	Yes	Yes	Yes	Yes
YCbCr	Yes	Yes	Yes	Yes
xvYCC	No	No	No	Yes
Deep Color	No	No	No	Yes
Maximum Color Depth (bits per pixel)	24	24	24	48*
Consumer Electronic Control (CEC)**	Yes	Yes	Yes	Yes
Updated list of CEC commands***	No	No	No	No (1.3a-yes)
Auto lip-sync	No	No	No	Yes
8channel/192 kHz/24-bit audio capability	Yes	Yes	Yes	Yes
DVD-A support	No	Yes	Yes	Yes
SACD (DSD) support ****	No	No	Yes	Yes
TrueHD bitstream capable	No	No	No	Yes
DTS-HD Master Audio bitstream capable	No	No	No	Yes
Blu-ray/HD DVD video and audio at full resolution*****	Yes	Yes	Yes	Yes

5. OSD Control (1)

(1) Picture
(2) Color
(3) Image
(4) OSD
(5) Setup
(6) Information

5. OSD Control (2)

1) Picture

Brightness → 0~100
Contrast → 0~100
MagicBright → Custom / Text / Internet / Game / Sports / Movie / Dynamic CR

2) Color

MagicColor → Off / Demo / Full / Intelligent
Color Tone → Cool / Normal / Warm / Custom
Color Control → Red / Green / Blue Gain Adjustment
Color Effect → Off / Grayscale / Green / Aqua / Sepia
Gamma → Mode1 / Mode2 / Mode3

3) Image

Coarse / Fine / Sharpness / H-Position / V-Position
* These can be selected when input source is D-sub except for sharpness.

4) OSD

Language : Support 9 languages
H-Position / V-Position : Set OSD position
Transparency : Transparency On/Off
Display Time : 5sec / 10sec / 20sec / 200sec

***. Displayed OSD information may be different based on SOURCE.**

5. OSD Control (3)

(5) Setup

Auto Source : Find the source signal automatically (On / Off)
Reset : No / Yes
Off Timer : Off / On (Support minimum 1h ~ maximum 23h)
Customized Key : MagicBright / Live color / Color Effect / Image Size
Image Size : Be able to control when it is not the wide resolution.
HDMI Black Level : Normal / Low
(When input signal is RGB signal, let black level of the screen lower one grade for 16 gray color standard.)
AV mode : On / Off
(When input signal is video timing, let the screen be overscan and Hotplug function turn on.)

***. HDMI Black Level and AV mode can be seen when the mode is only DVI and HDMI.**

***. OSD are changed when both input signal is DVI or HDMI and AV mode is On.**
Setup -> Image Size : 4:3 / Wide / Just Scan
Picture -> Picture mode : Dynamic / Standard / Movie / Custom

***. Just Scan Mode**

1) Full screen is displayed without losing the data on the left and right side when just scan mode is 'On' after connecting to HDMI 1080i. But the garbage part can be appeared on the top and bottom side of the screen because monitor panel is 16:10 panel unlike the TV panel.
2) It can be seen enlarged screen to entire panel without losing the data on the left and right side when just scan mode is 'On' after connecting to HDMI 720p.
3) Just Scan mode is not worked under the 720p mode.

(6) Information

Source, Frequency, Resolution Display

5. OSD Control (4)

. OSD and other function

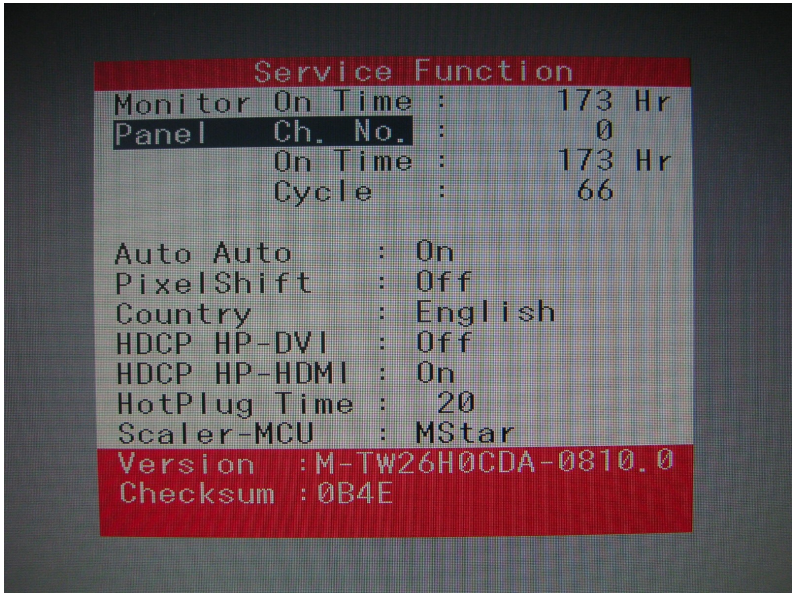
1) OSD Lock : To create a OSD LOCK with pushing the Function menu key for 5 seconds.

The Magic bright , Brightness and Contrast can be adjusted in OSD LOCK condition.

To push a menu key for 5 seconds in order to remove a Lock .

2) Factory MODE : To push a menu key for 5 seconds with minimum Brightness / Contrast ,

Then can go to factory mode. Below OSD looking can be displayed



6. Specification Comparison

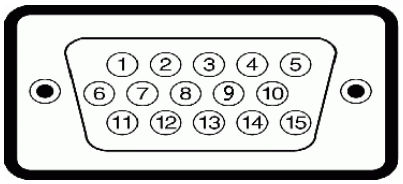
□□□	T260/240	2693HM
Picture		
Screen Size	25.5” / 24”	25.5”
Brightness	300 □ / □	400 □ / □
Contrast	1000:1	1000:1
DCR	20000:1	3000:1
Response Time	5ms	5ms
Input Signal	Analog/Digital/HDMI	Analog/Digital/HDMI
Magic Pivot	X	O
Magic Tune	Premium	Premium
Magic Tune	7 steps (Text / Internet / Game / Sports / Movie / Dynamic CR / Custom)	7 steps (Text / Internet / Game / Sports / Movie / Dynamic CR / Custom)
Magic Bright	3 steps Mode1 / Mode2 / Mode3	3 steps Mode1 / Mode2 / Mode3
Gamma	4 steps Cool / Normal / Warm / Custom	4 steps Cool / Normal / Warm / Custom

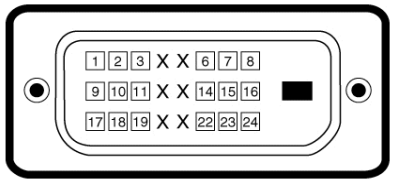
7. Signal Connections and Pin Assignments

the monitor signal cable is disconnected, the monitor starts the 'Self-Test' function

1. 15pin D-sub connector

Pin Number	Monitor Side of the 15-Pin Side Signal Cable
1	Video-Red
2	Video-Green
3	Video-Blue
4	GND
5	DDC-return
6	GND-R
7	GND-G
8	GND-B
9	DDC +5V
10	GND-sync/self-test
11	GND
12	DDC data
13	H-sync
14	V-sync
15	DDC clock





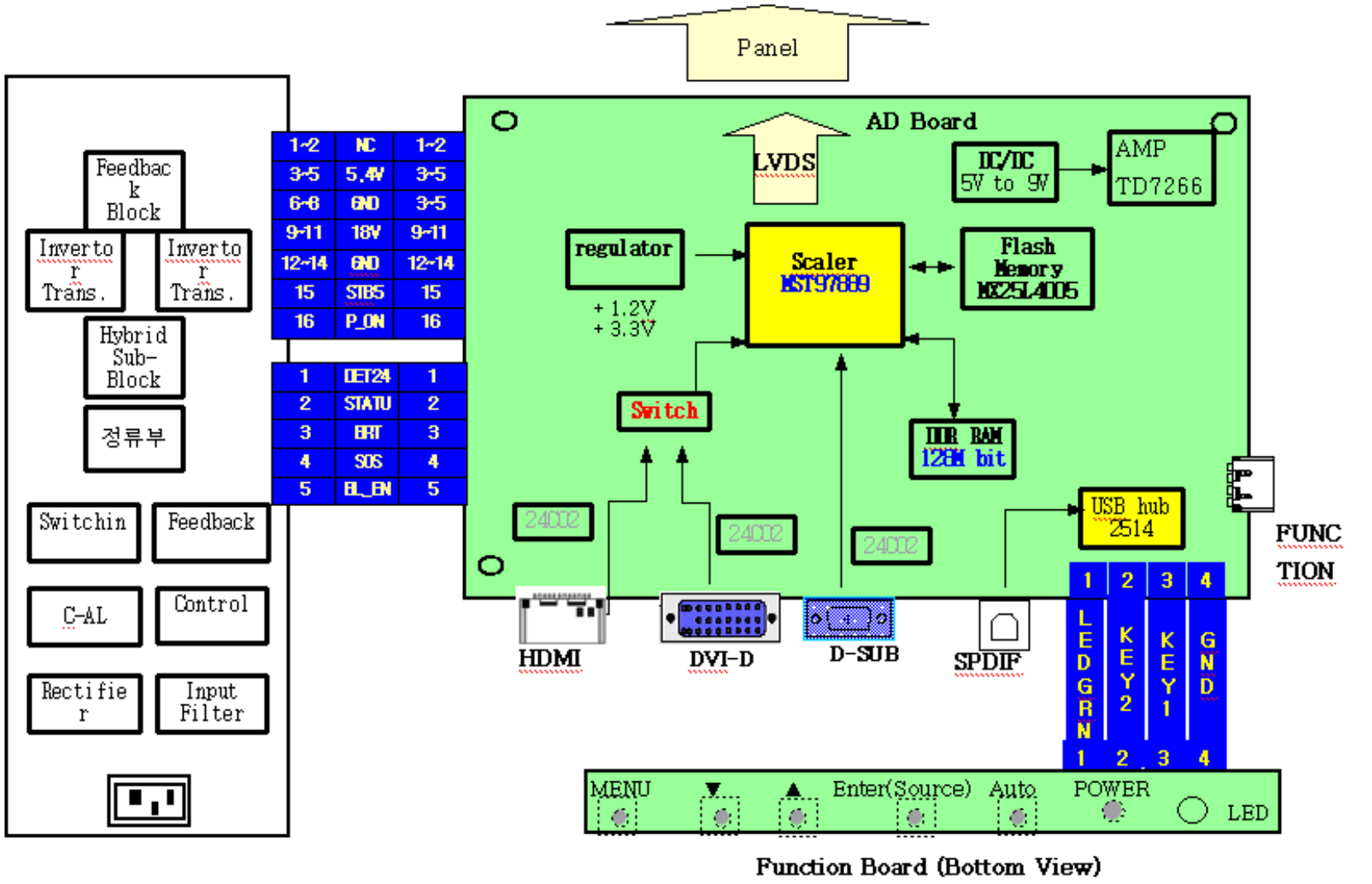
2. DVI-D connector

Pin	Signal Assignment	Pin	Signal Assignment	Pin	Signal Assignment
1	T.M.D.S. Data 2-	9	T.M.D.S. Data 1-	17	T.M.D.S. Data 0-
2	T.M.D.S. Data 2+	10	T.M.D.S. Data 1+	18	T.M.D.S. Data 0+
3	T.M.D.S. Data 2 Shield	11	T.M.D.S. Data 1 Shield	19	T.M.D.S. Data 0 Shield
4	No Pin	12	No Pin	20	No Pin
5	No Pin	13	No Pin	21	No Pin
6	DDC Clock	14	+5V Power	22	T.M.D.S. Clock Shield
7	DDC Data	15	Ground (for +5V)	23	T.M.D.S. Clock +
8	No Connect	16	Hot Plug Detect	24	T.M.D.S. Clock -

8. □□□□□ □□

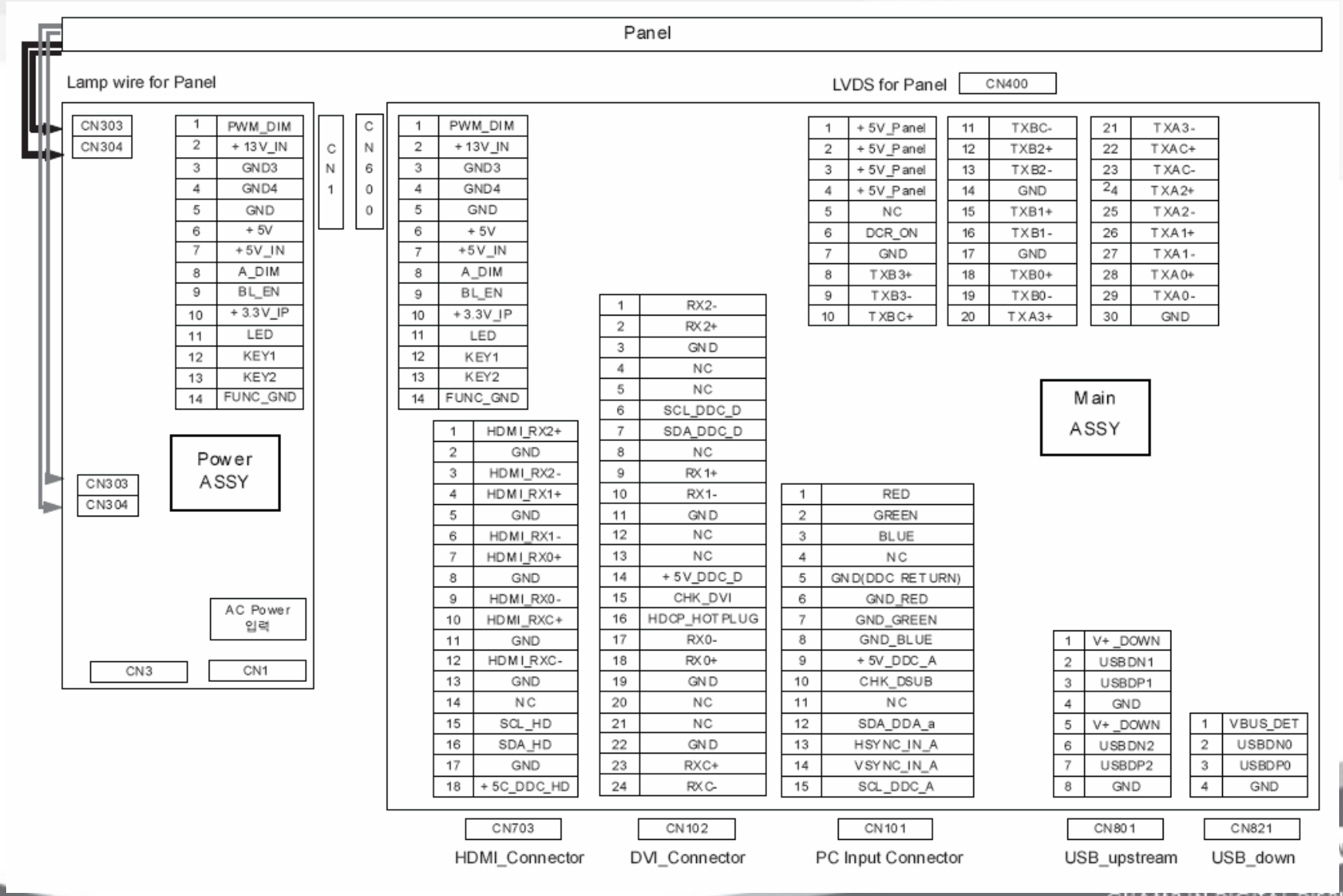
Supported Display Mode		Horizontal Frequency (kHz)	Vertical Frequency (Hz)	Pixel Clock (MHz)	Sync Polarity (H/V)
VESA 1920/60Hz(RB)	1920x1200	74.038	59.950	154.000	+/-
IBM VGA1	640x350	31.469	70.086	25.175	+/-
IBM VGA2	720x400	31.469	70.087	28.322	-/+
IBM VGA3	640x480	31.469	59.940	25.175	-/-
Mac 640/67Hz	640x480	35.000	66.667	30.240	-/-
VESA 640/72Hz	640x480	37.861	72.809	31.500	-/-
VESA 640/75Hz	640x480	37.500	75.000	31.500	-/-
VESA 800/56Hz	800x600	35.156	56.250	36.000	+/+
VESA 800/60Hz	800x600	37.879	60.317	40.000	+/+
VESA 800/72Hz	800x600	48.077	72.188	50.000	+/+
VESA 800/75Hz	800x600	46.875	75.000	49.500	+/+
Mac 832/75Hz	832x624	49.726	74.551	57.284	-/-
VESA 1024/60Hz	1024x768	48.363	60.004	65.000	-/-
VESA 1024/70Hz	1024x768	56.476	70.069	75.000	-/-
VESA 1024/75Hz	1024x768	60.023	75.029	78.750	+/+
VESA 1152/75Hz	1152x864	67.500	75.000	108.000	+/+
Mac 1152/75Hz	1152x870	68.681	75.062	100.000	-/-
VESA 1280/60Hz	1280x960	60.000	60.000	108.000	+/+
VESA 1280/75Hz	1280x1024	79.976	75.025	135.000	+/+
VESA 1600/60Hz	1600x1200	75.000	60.000	162.000	+/+

9. Block Diagram



Function Board (Bottom View)

10. Chassis Layout



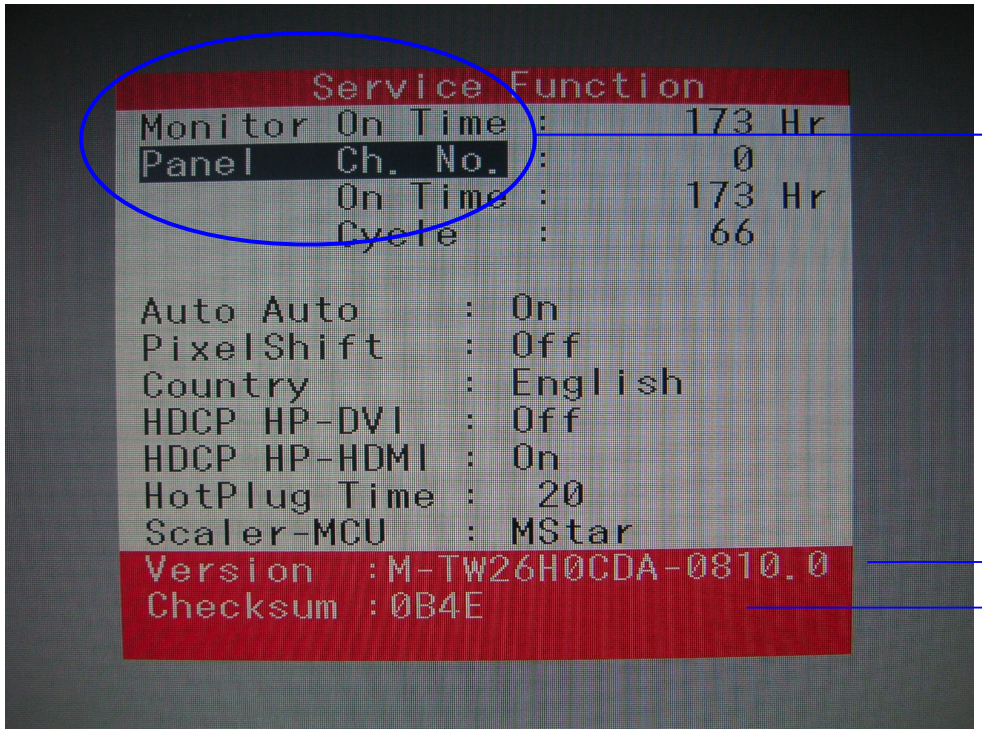
11. T260 / T240 Features

No	Feature	Description	Operating method
1	**Auto Adjustment**	If T260 / T240 turns on in some resolution for the first time, it can execute Auto adjustment automatically for the high Quality.	
2	**Auto Power on/off**	T260 / T240 can check the change of source automatically and change the source to the active Input.	
3	**Gamma & Color temperature Fine Adjust.**	T260 / T240 supports 3-Step Fine Adjustment for Gamma & Color temperature.	Magictune Premium
4	**MagicBright**	T260 / T240 supports 7 different Brightness Modes. Text, Internet, Game, Sports, Movie, Dynamic CR, Custom.	Press Magic Bright key. Select Picture → Magic Bright on OSD,
5	**MagicColor**	Off : MagicColor function off Demo : Function to display in store Magic Color On in left side, Magic Color Off in right side Full : All color tones are appeared. Intelligent : Reduce only skin color tone from Full mode.	MagicColor on OSD
6	**Ergonomics Point**	Apply Tilt	
7	**HDMI**	Make use of the latest Game Console and Multimedia Contents with supporting HDMI.	
8	**Support camera mode**	Grayscale / Green / Aqua / Sepia	Set Safety Screen on OSD.
9	**Support USB 2.0 Hub**	Apply USB 2.0 Hub (1 Up 2 Down)	
10	**Apply Optical Sound**	It is applied for Optical Sound Jack. So, you can hear the Digital Sound.	

12. Service (Hot key) Function list (1)

1. Set both the brightness and contrast to 0.
2. Hold down the <Button>(Enter, Source) button for five (5) seconds.
3. The SVC Function OSD will appear.

* To exit the SVC Function OSD, you have to turn off the power.

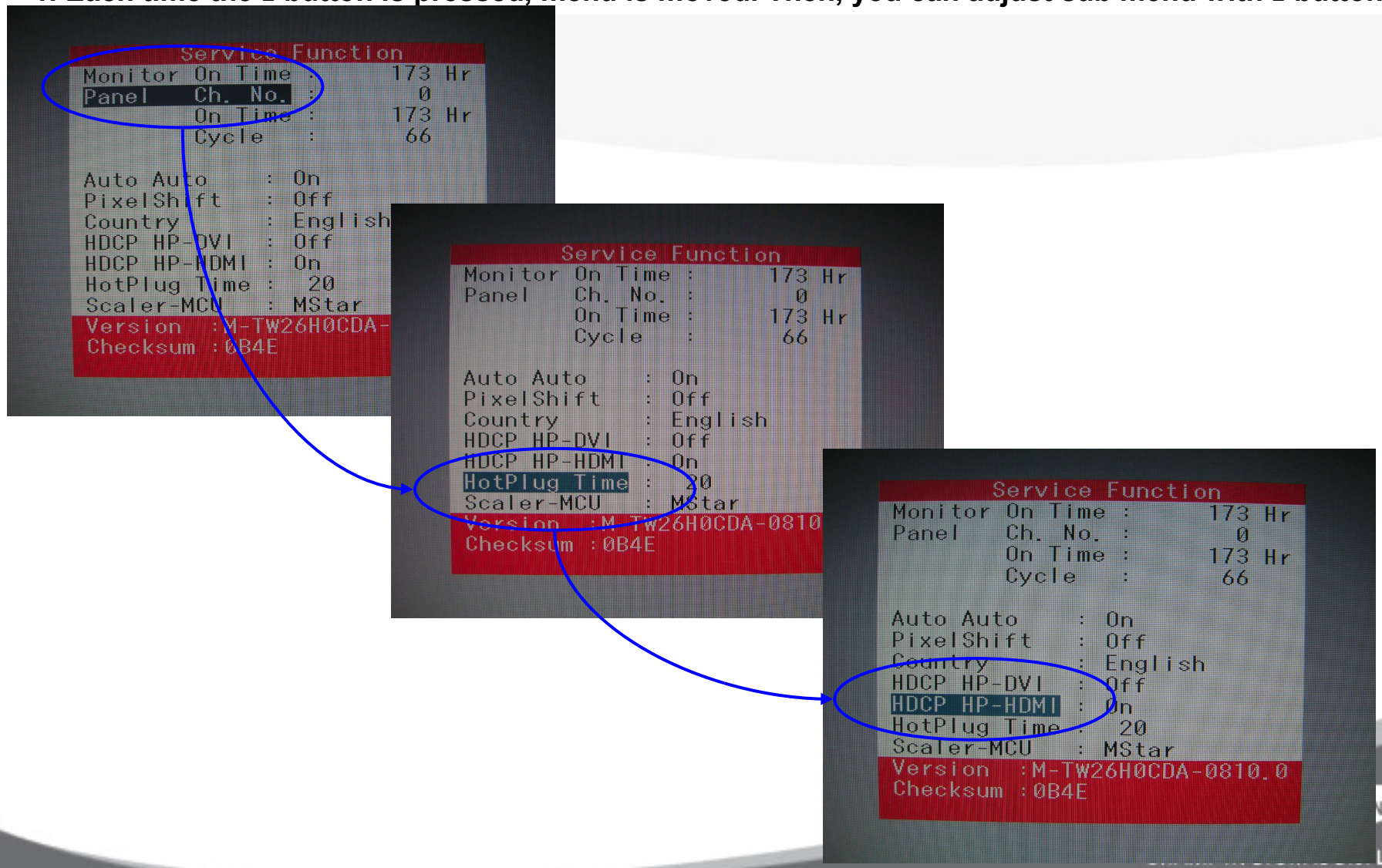


The SVC Function OSD consists of a 103 (width) X 82 (height) grid.

The SVC Function OSD shows the information, software version and Micom checksum.

12. Service (Hot key) Function list

1. Each time the button is pressed, menu is moved. Then, you can adjust sub menu with button.

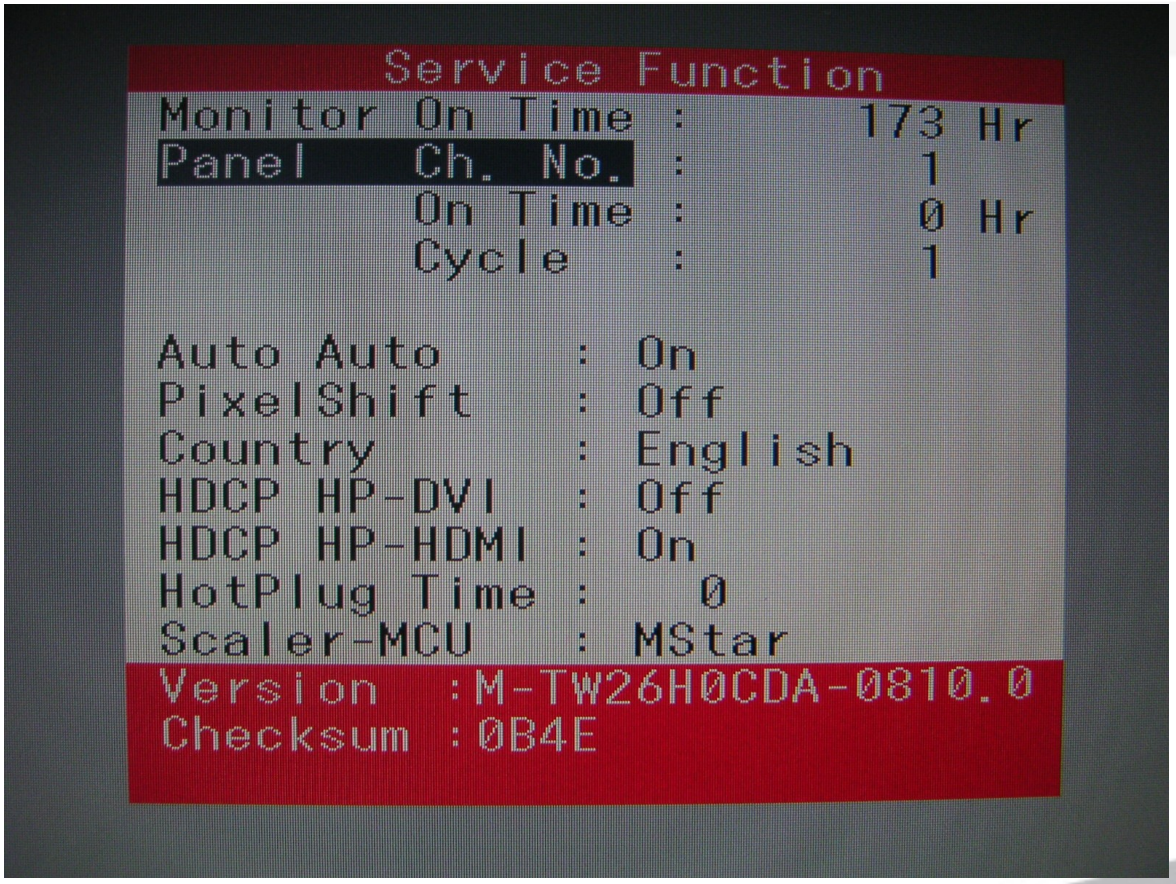


12. Service (Hot key) Function list (3)

- **When replacing the panel**

After replacing the panel, select the Panel item and then hold down the Menu button for five (5) seconds.

The Ch. No. of the panel will increase by one (1) and the time information will change to 0.



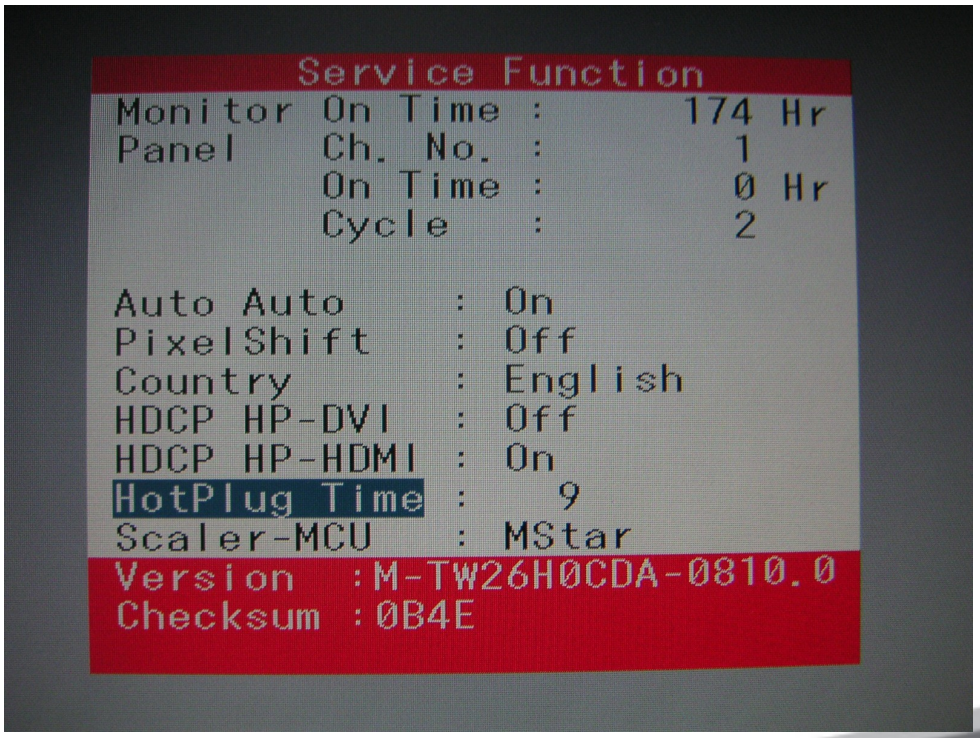
12. Service (Hot key) Function list (4)

-. HDCP Hotplug : used when HDCP Video contents are not displayed. In case that monitor is connected to some bad device which does not comply with standard.

-. HotPlug Time : If Hotplug is turn on, when monitor power off/on or changing to the DVI, hotplug pin goes to the low. This function controls this time duration.

Though Hotplug is turn on monitor can't displayed, adjust this time duration

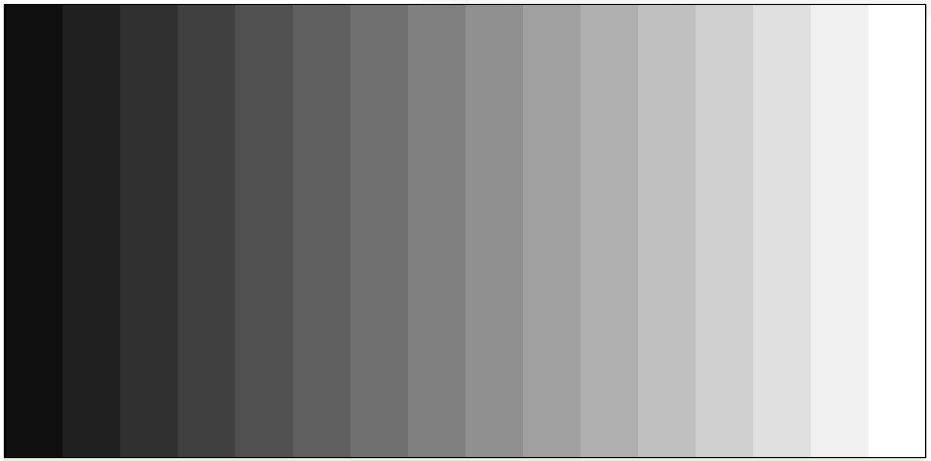
-. Default is 5(means 0.5 sec), can control 5 to 50.



12. Service (Hot key) Function list (5)

Auto Color

PC analog (1920X1200 at 60 Hz): Tools to use: MSPG-3240L



PC Analog Control Pattern(16 GRAY)

Select Language English on the OSD menu and then hold down the Menu button for five (5) seconds.

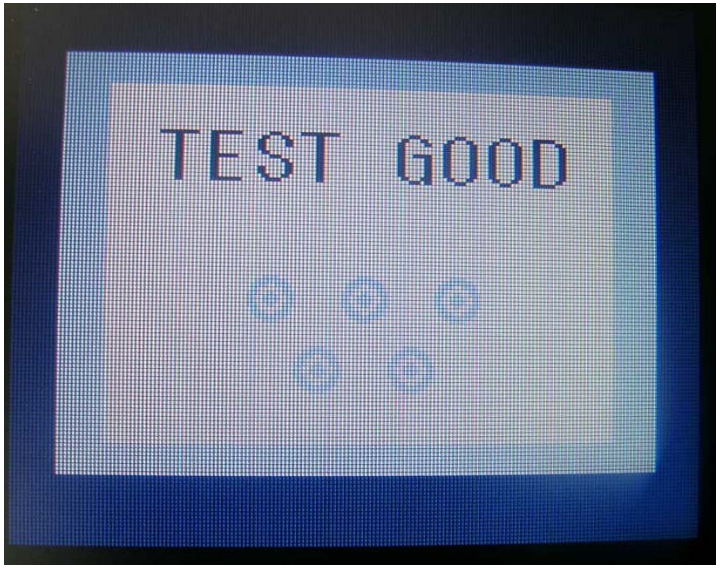
12. Service (Hot key) Function list (6)

- **The Purpose and Function of the Self-Test**

  - A Self-Test has been added to easily recognize whether the monitor has a fault or not and consequently to minimize customer claims for non-malfunctions of the product.

- **How to Perform a Self-Test**

  - Press the **Menu** button in the **DPMS** state, and determine whether the monitor is normal or not.

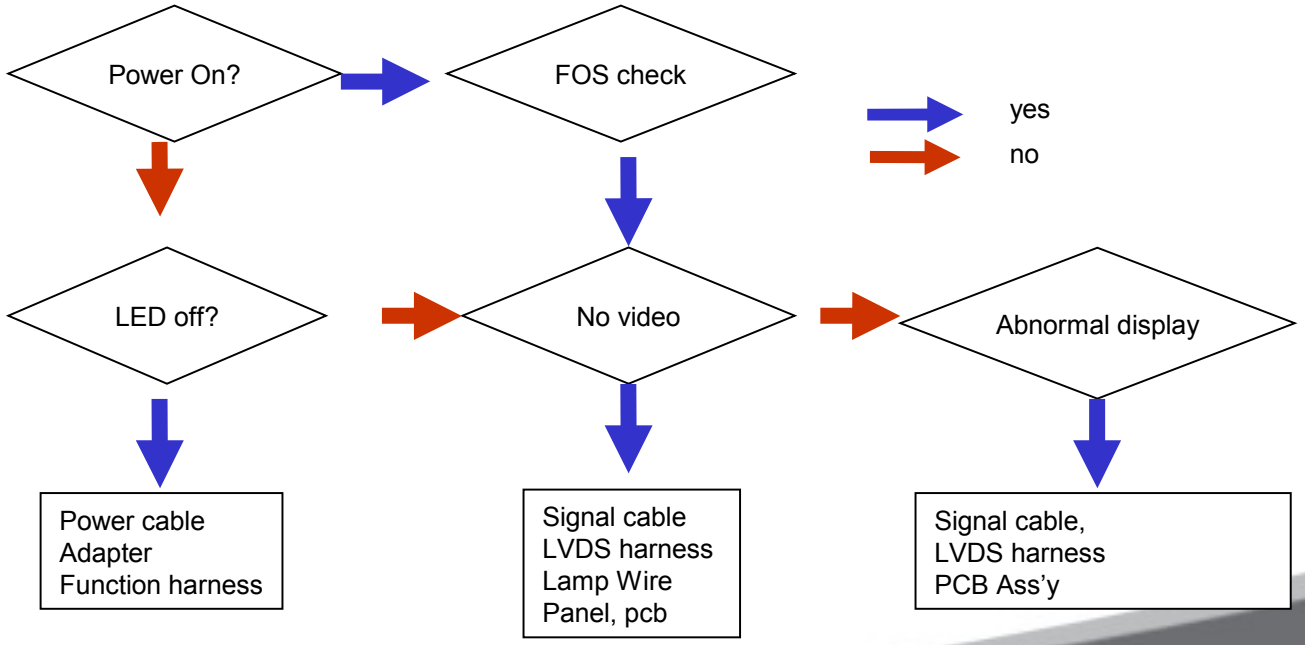


No screen	Determine according to the output message.
Focus fault	Determine according to dimming level of the "TEXT GOOD" message.
Screen trembling	Determine according to trembling level of the message window.

13. Troubleshooting

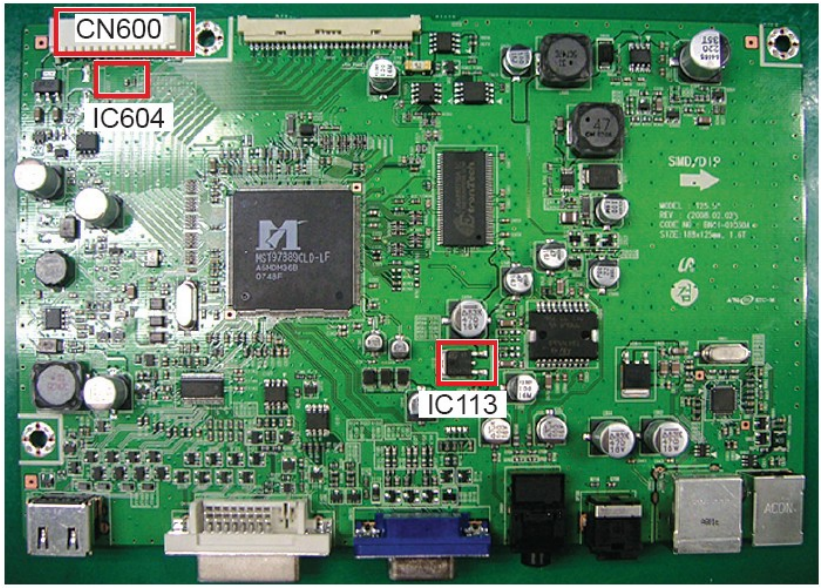
1. Before troubleshooting, setup the PC's display as below.
   - Resolution : 1920 x 1200
   - H-frequency : 75kHz
   - V-frequency : 60Hz
1. If no picture appears, make sure the power cord is correctly connected.
2. Check the following circuits.
   - No raster appears : Function PBA. Main PBA. IP-Board
   - 5V develop but no screen : Main PBA
   - 13V, 5V does not develop : IP-Board, Main PBA

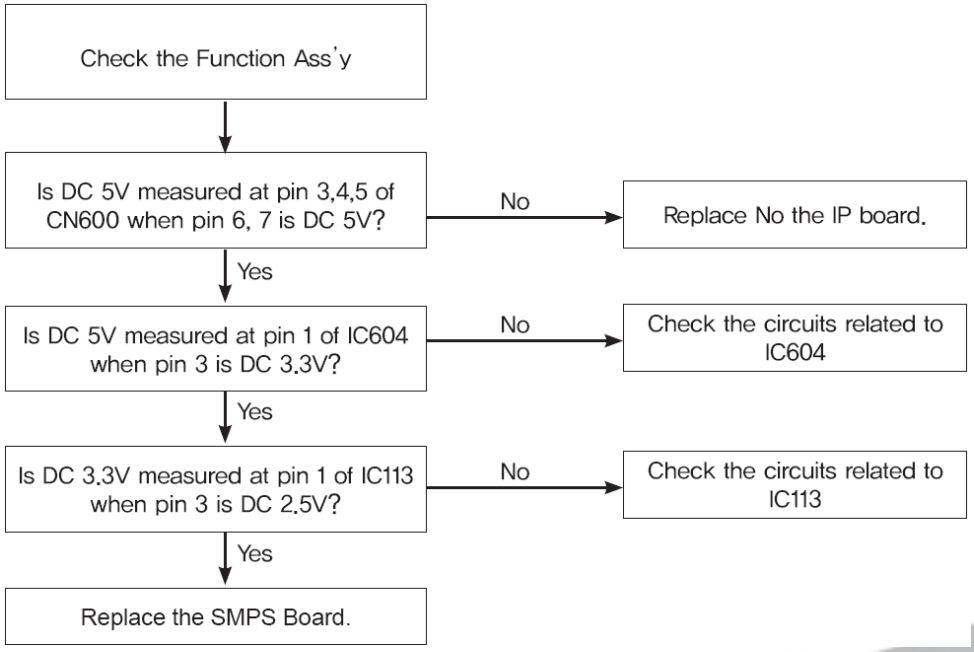
Problem Checking Process



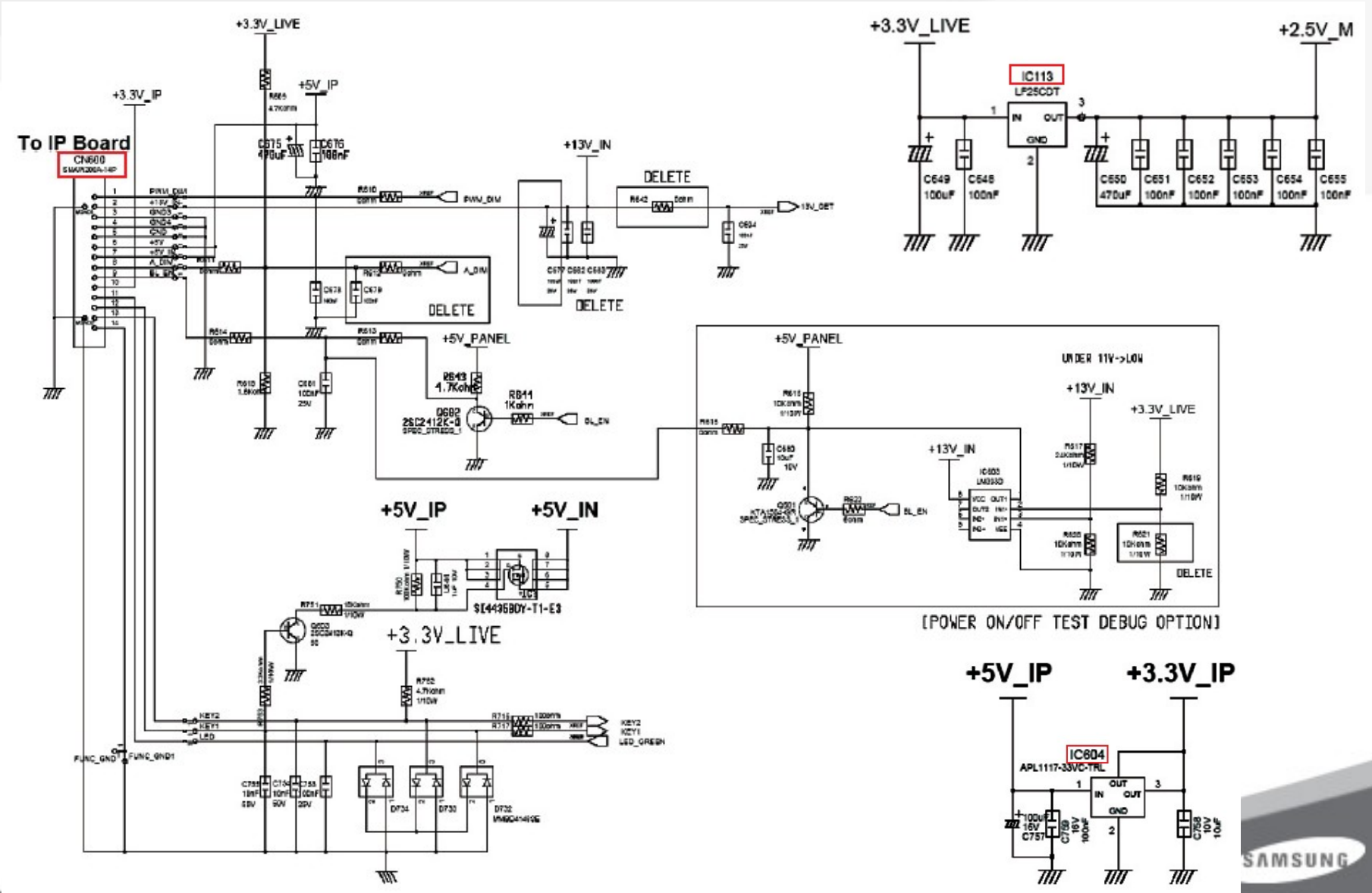
NO POWER

Symptom	**- When turning on the Power button after connecting the power, the LED at the front of the monitor does not operate.**
Major checkpoints	**- Check whether the Power Switch at the back of the monitor is turned on.** **- Check IP-Board fuse and IP-Board output power.** **- Check the connections for IP-Board and Main board inside the monitor.** **- Check Main board power part and check also whether there is any abnormal output at other output terminals**
Caution	**Make sure to disconnect the power before working on IP-Board**



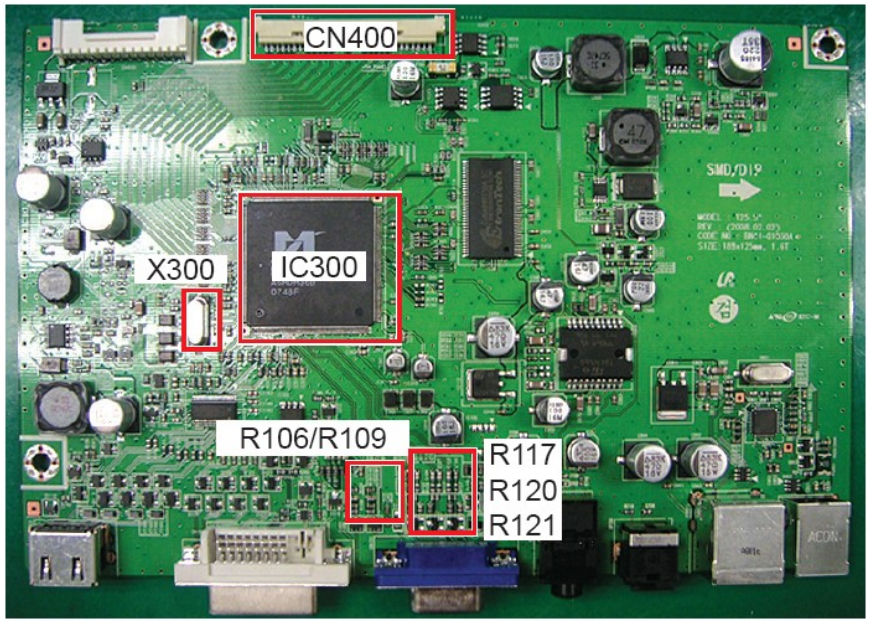


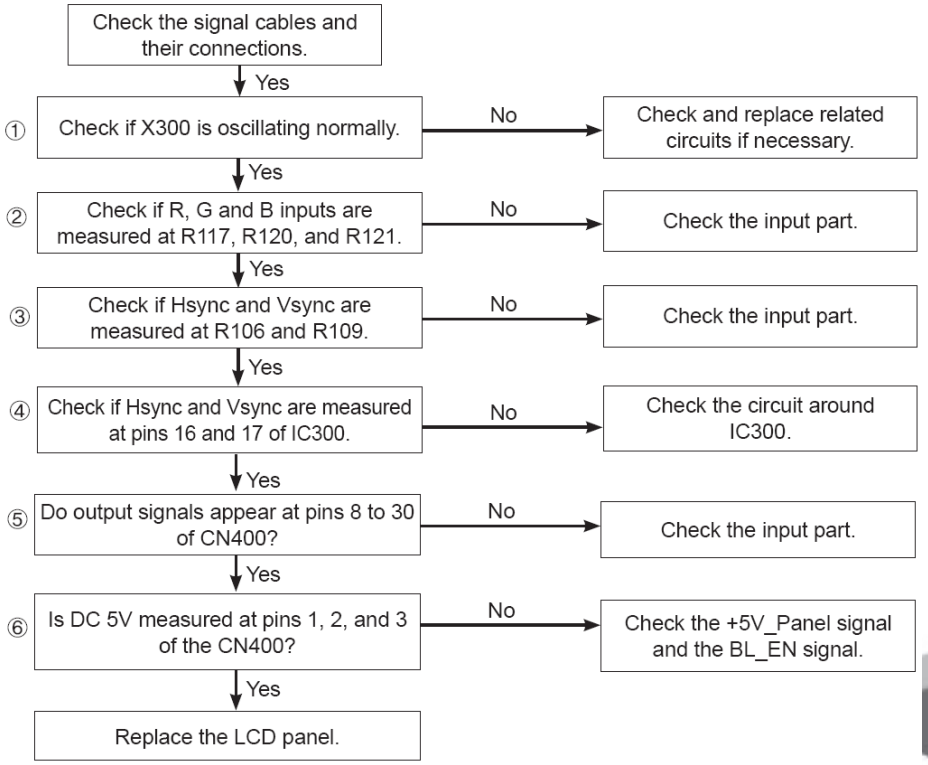
Circuit diagrams and waveforms when the power does not turn on.



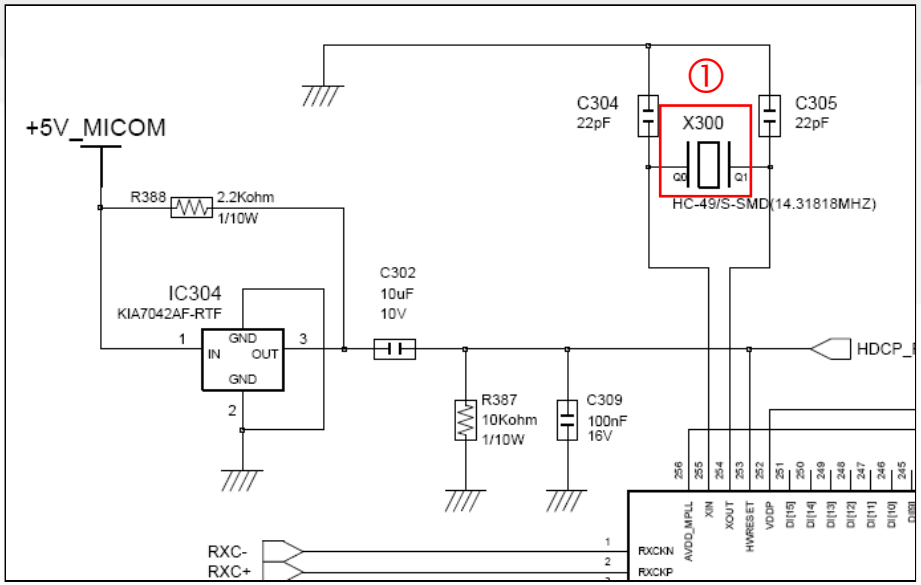
NO VIDEO (ANALOG)

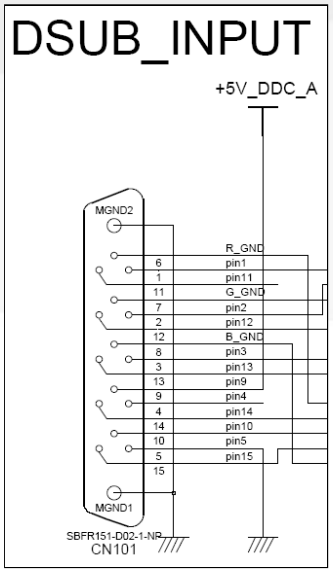
Symptom	**- Though the LED power turns on, the screen is blank when connecting D-SUB Cable**
Major checkpoints	**- Check the D-sub cable connections.** **- Check whether the LVDS cable is connected correctly to the panel.** **- Check whether the lamp connector of the panel is connected correctly to Inverter board.**
Caution	**Make sure to disconnect the power before working on IP-Board**

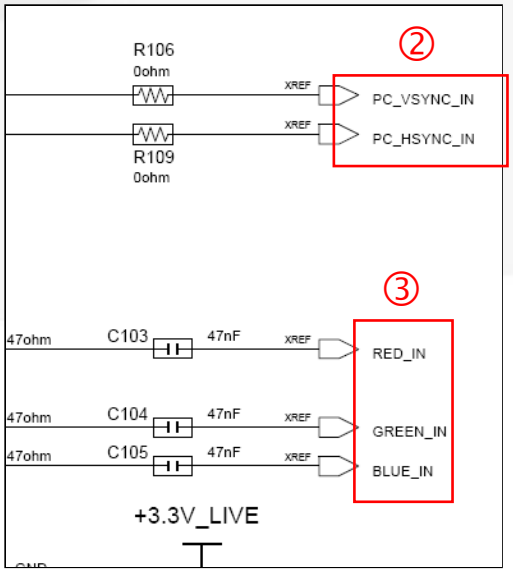


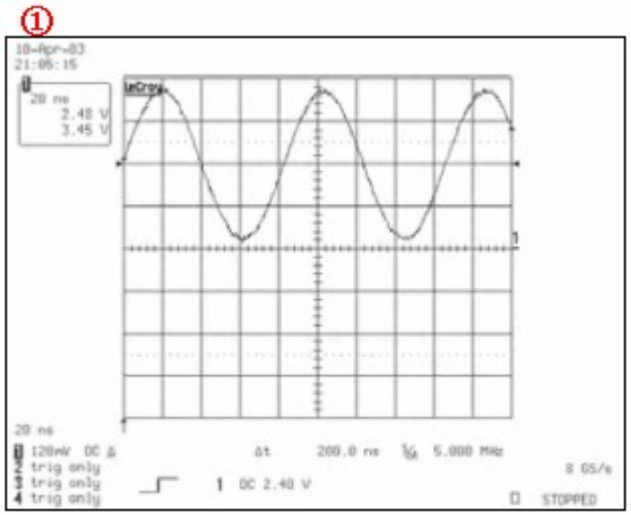


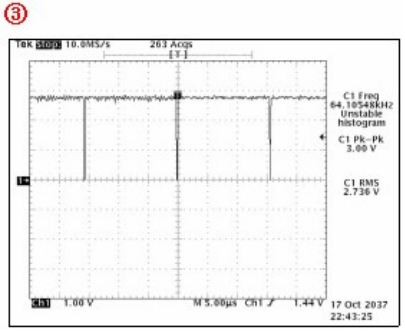
Circuit diagrams and waveforms (Analog) when on screen is displayed on the monitor.

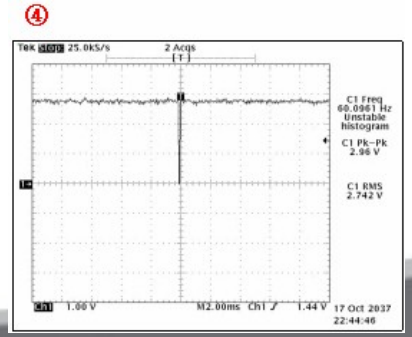


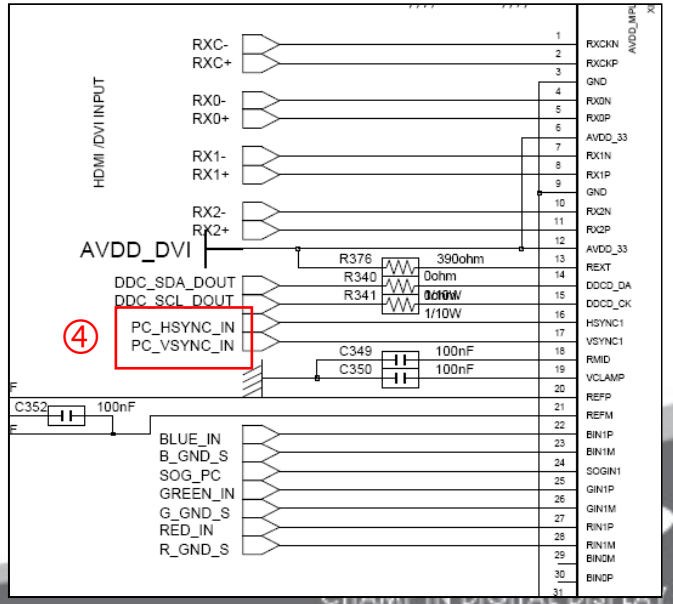






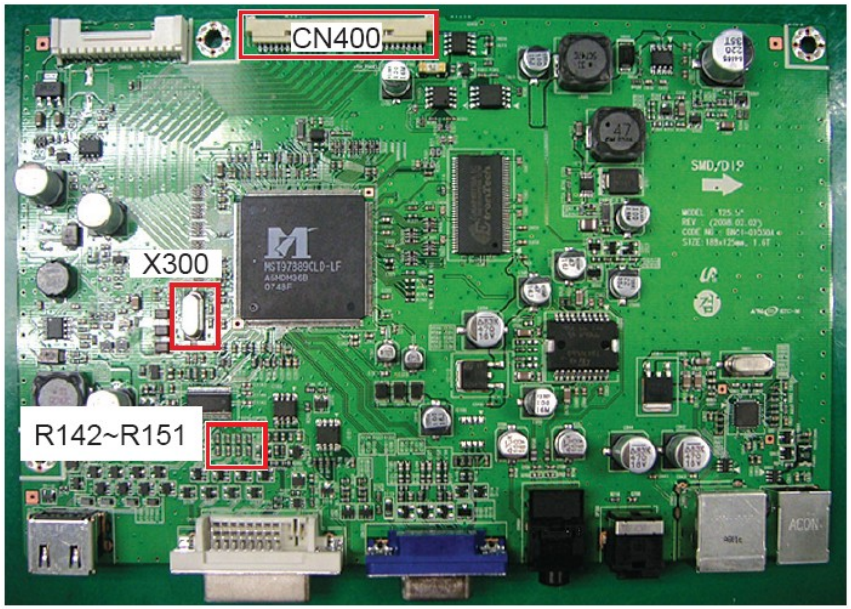


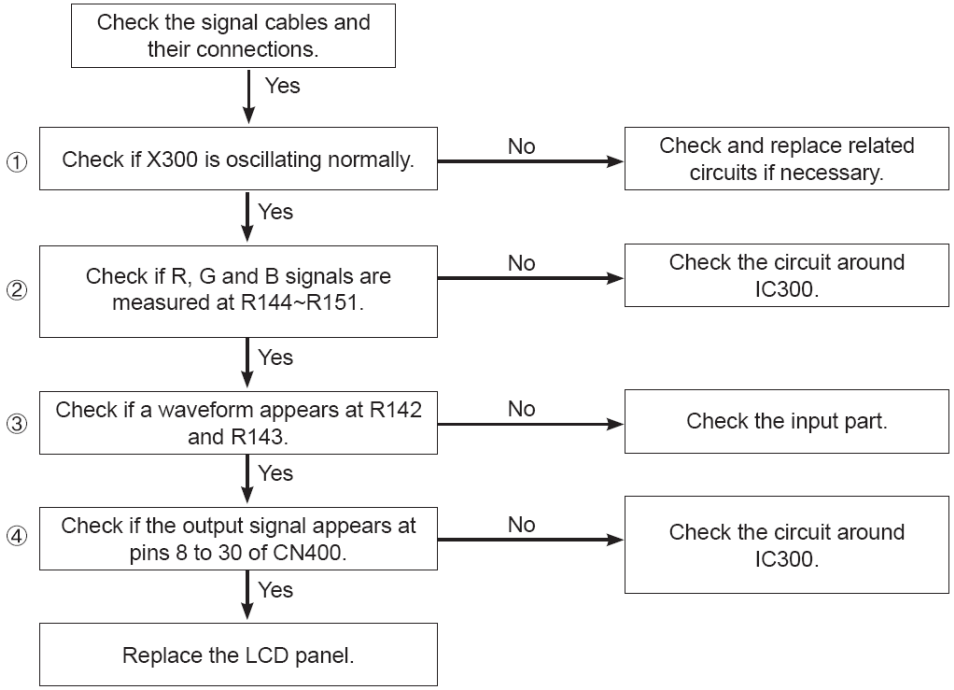




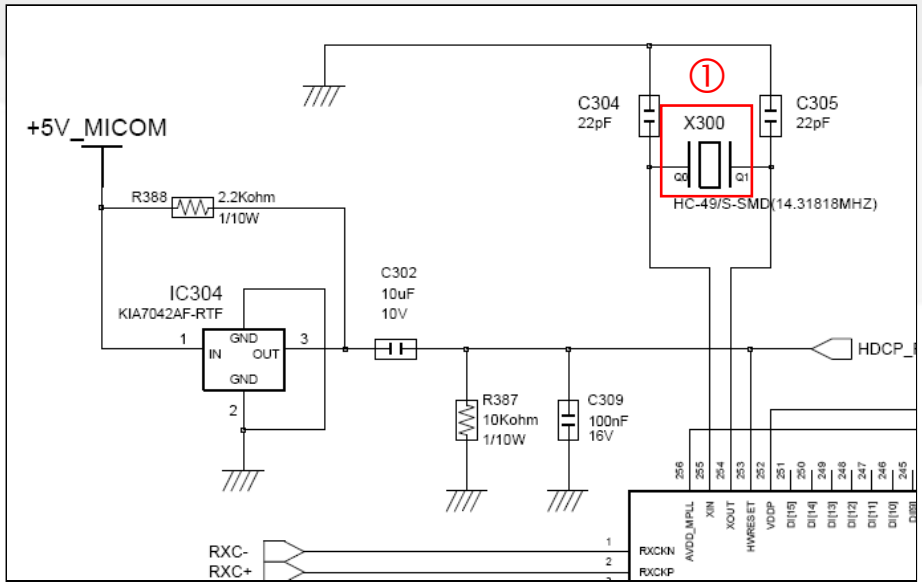
NO VIDEO (DIGITAL)

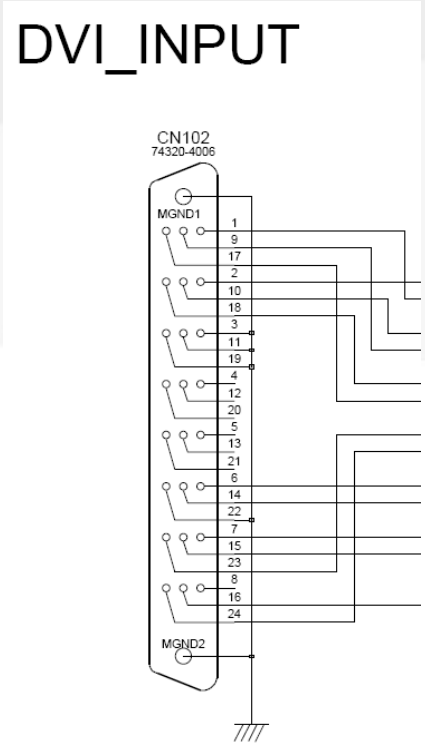
Symptom	**- Though the LED power turns on, the screen is blank when connecting DVI Cable**
Major checkpoints	**- Check the DVI cable connections.** **- Check whether the LVDS cable is connected correctly to the panel.** **- Check whether the lamp connector of the panel is connected correctly to Inverter board.**
Caution	**Make sure to disconnect the power before working on IP-Board**

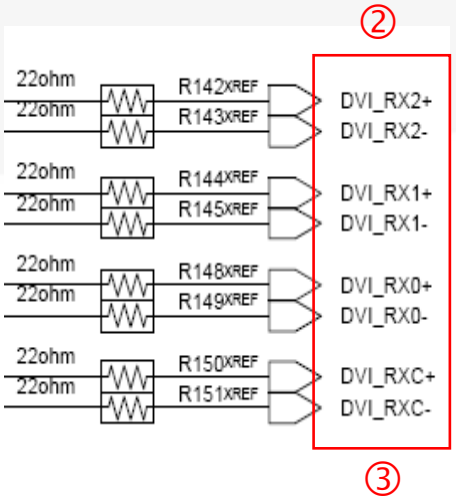


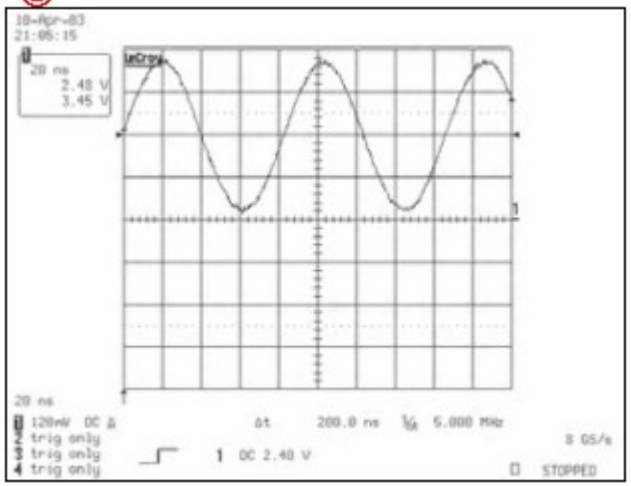


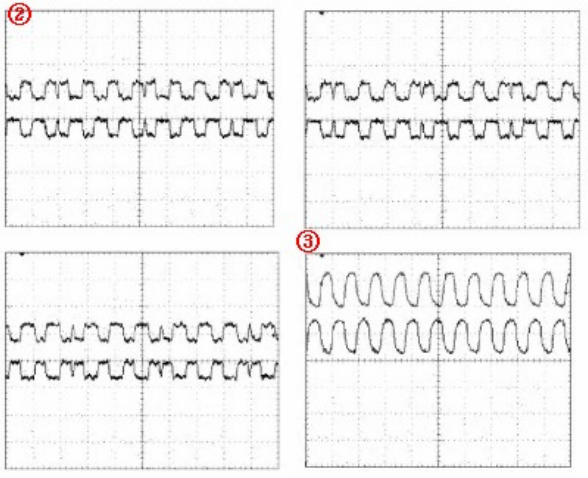
Circuit diagrams and waveforms (Digital) when on screen is displayed on the monitor.



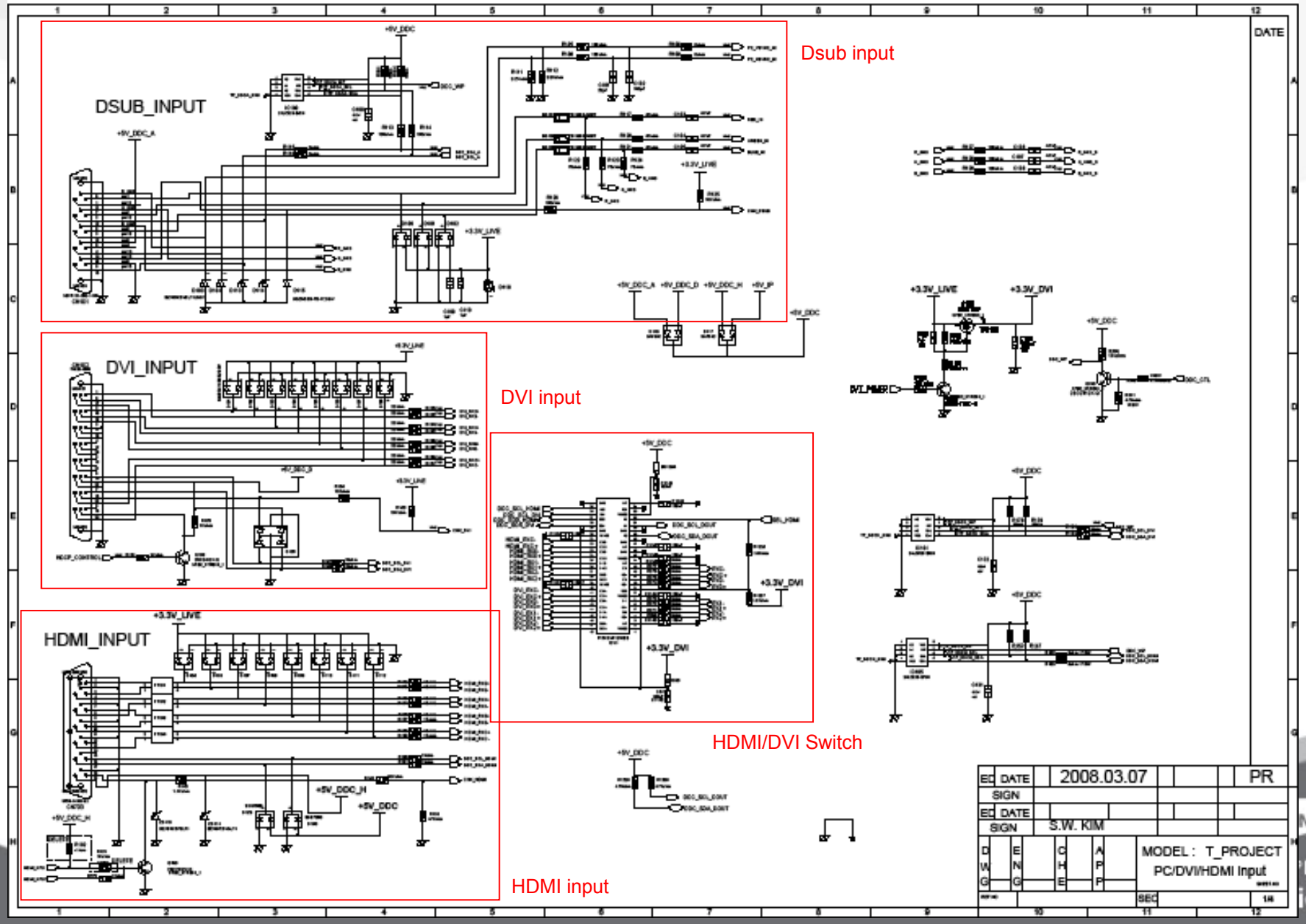




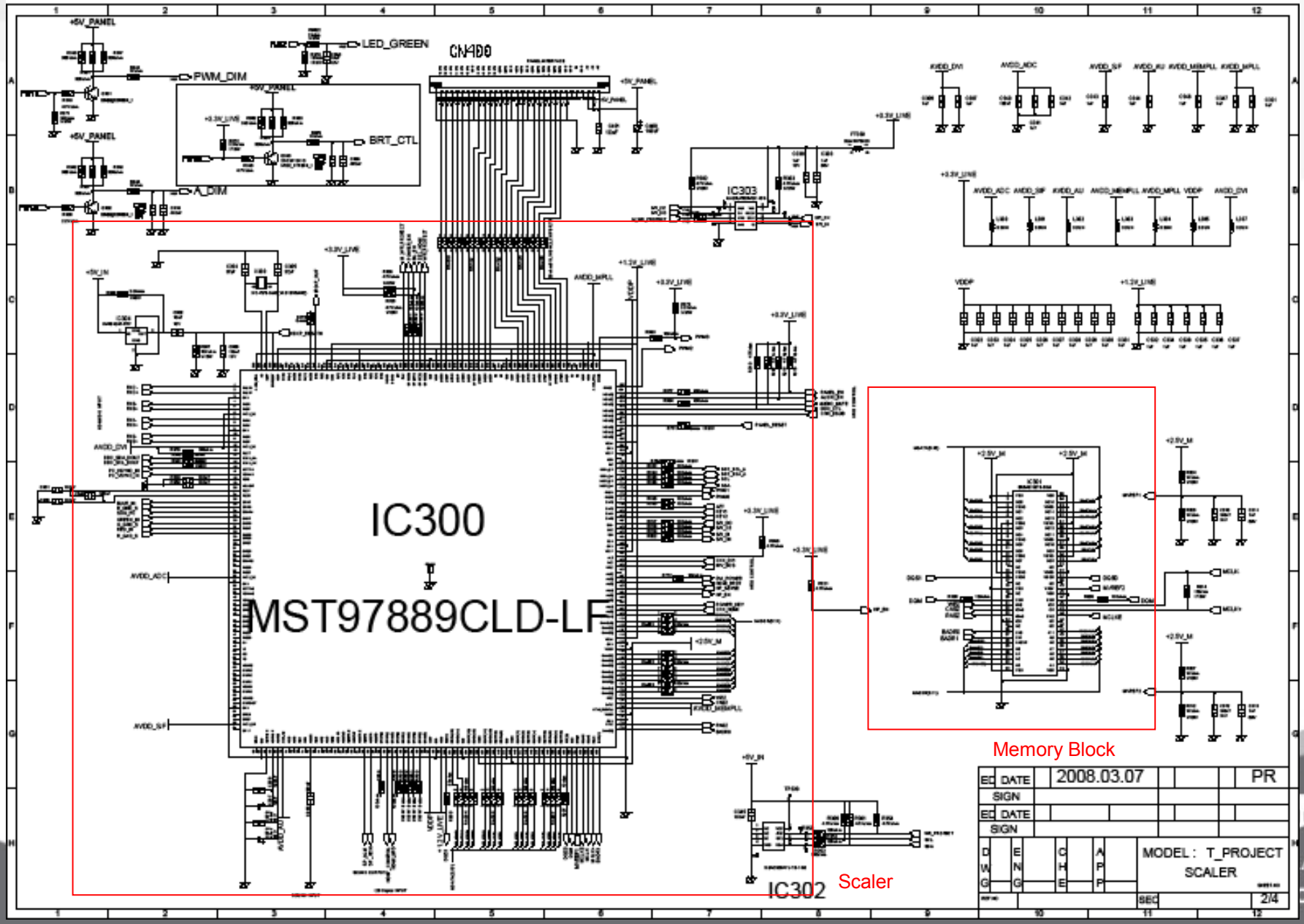




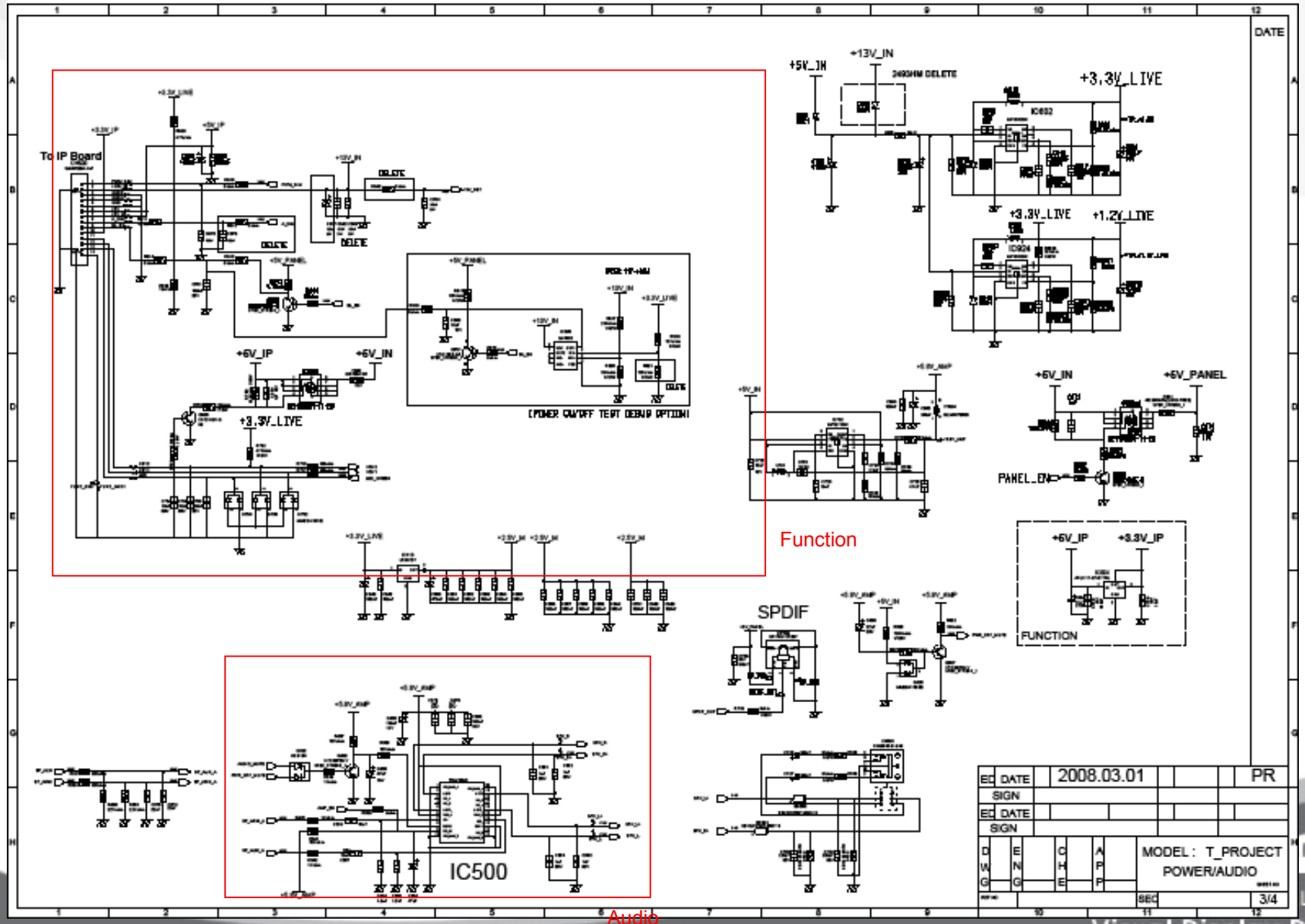
14. Main PBA - Schematics(1)



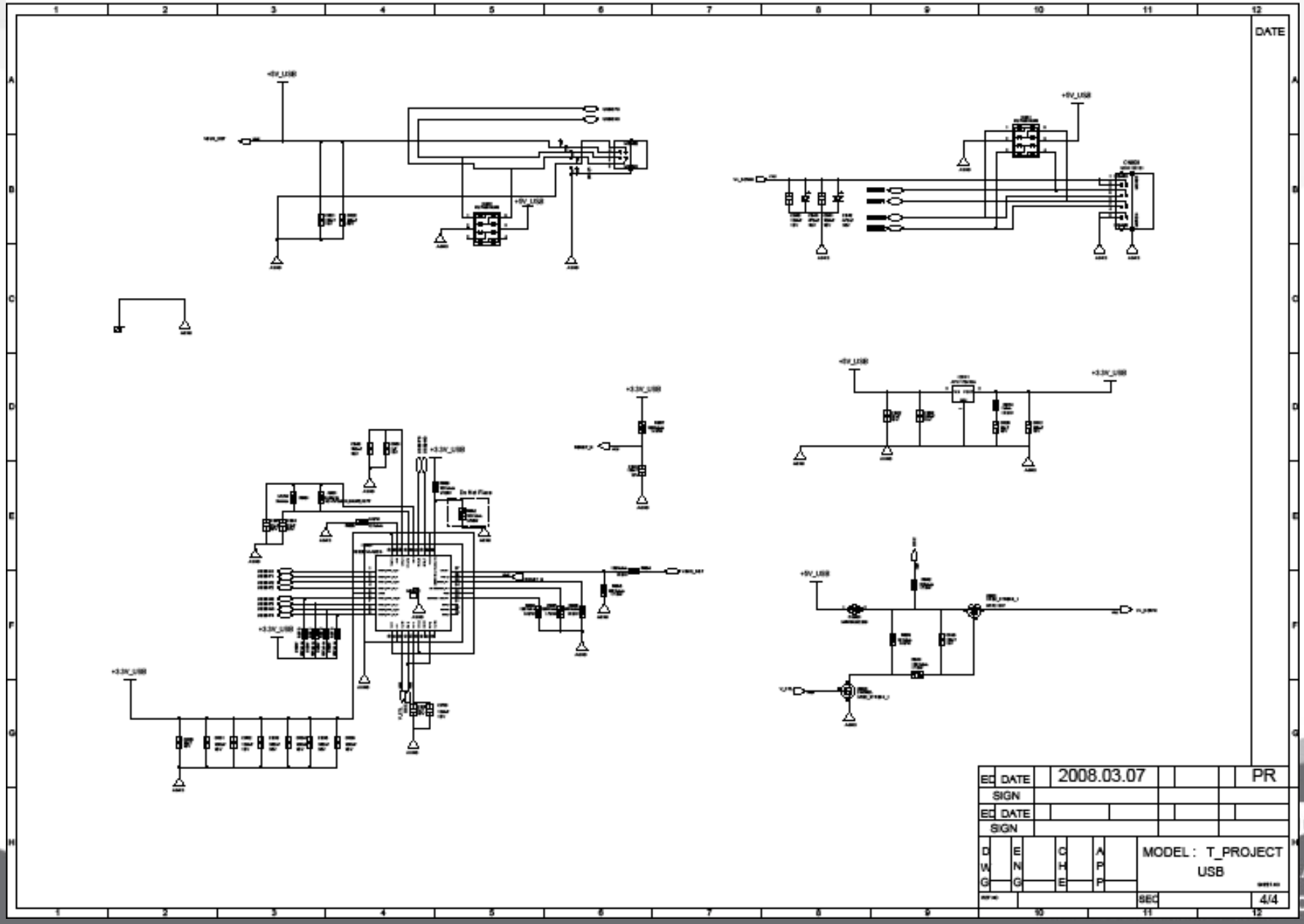
14. Main PBA - Schematics(2)



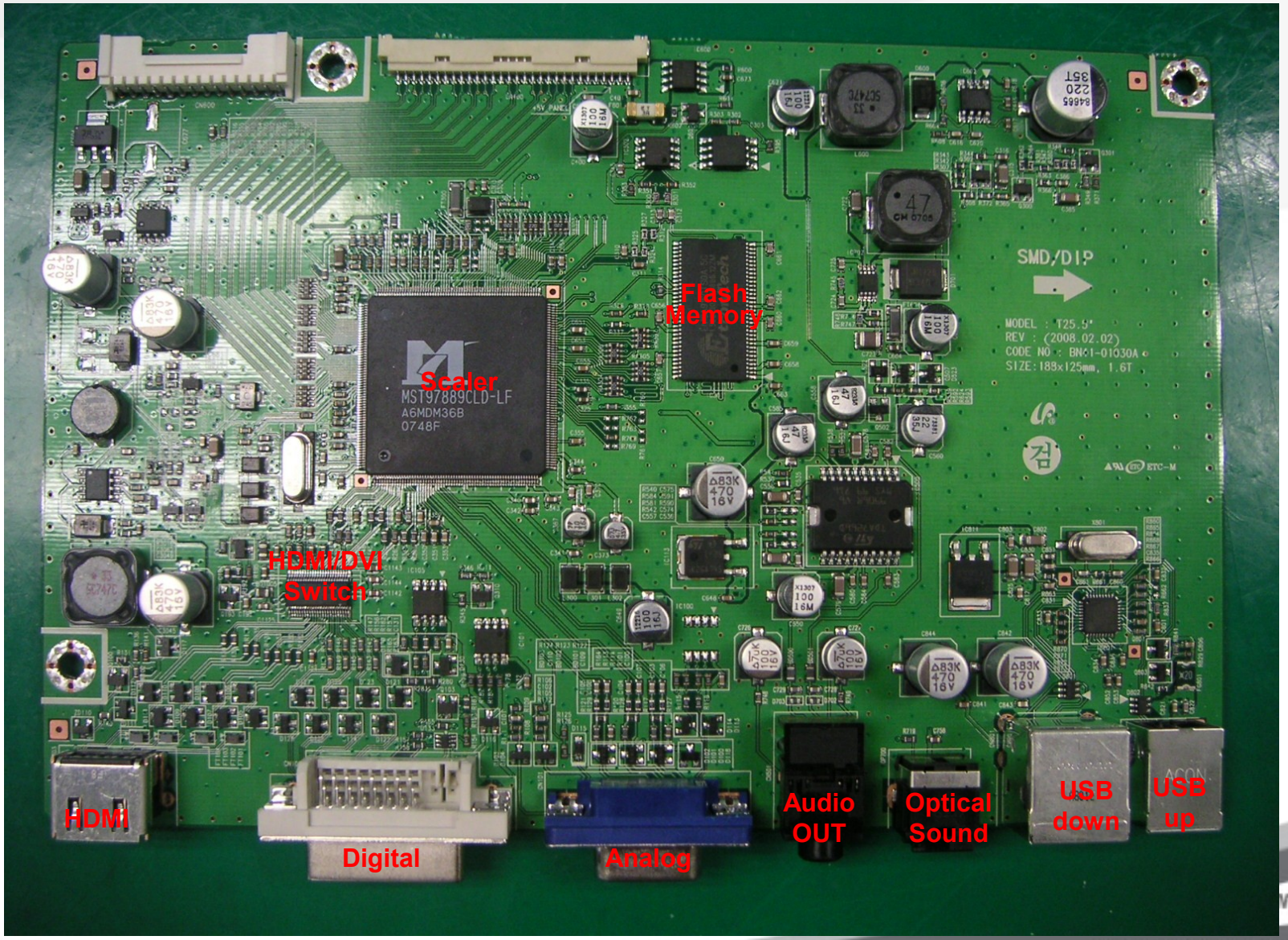
14. Main PBA - Schematics(3)



14. Main PBA - Schematics(4)



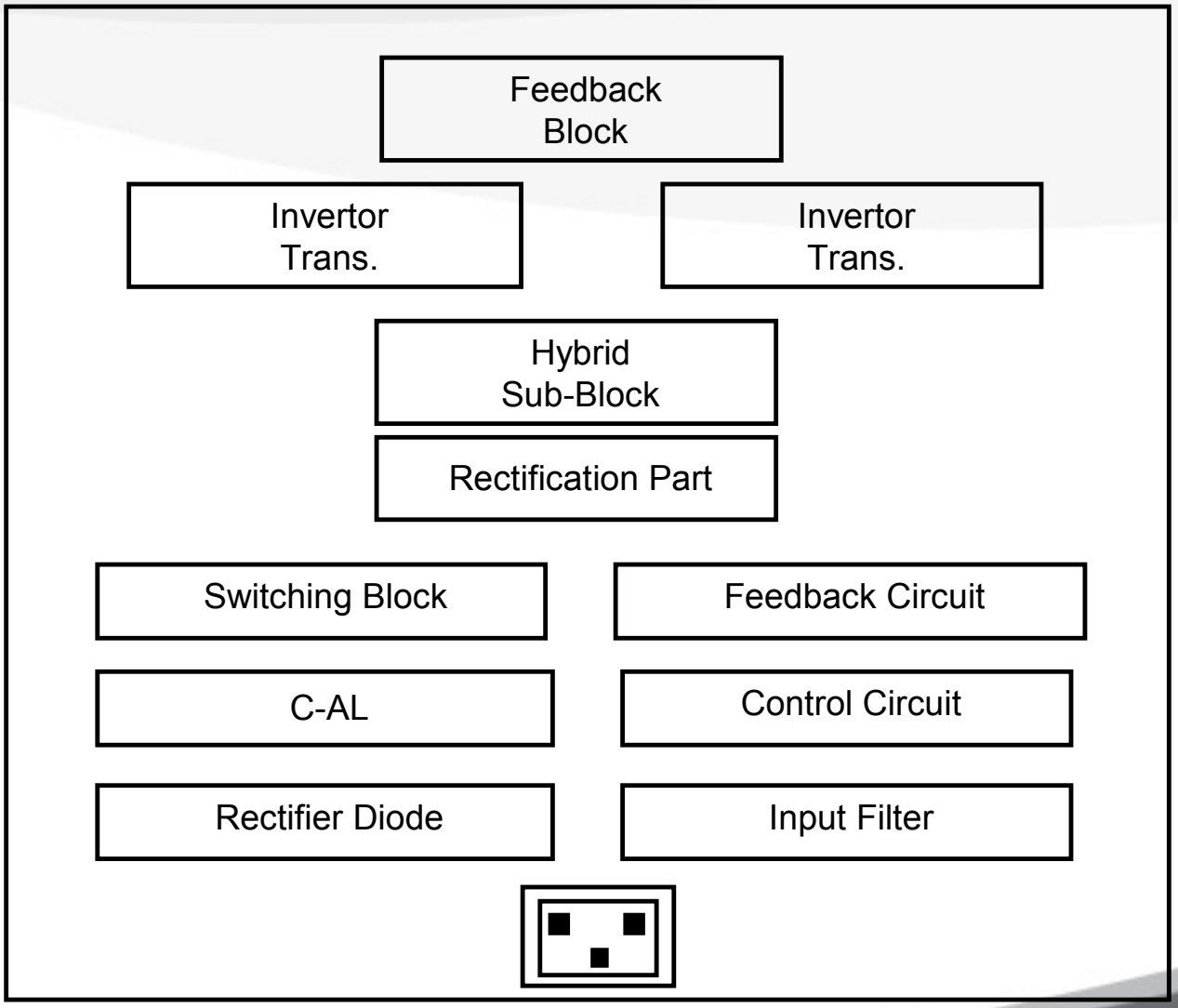
15. T260 / T240 Block Description (1)



15. T260 / T240 Block Description (2)

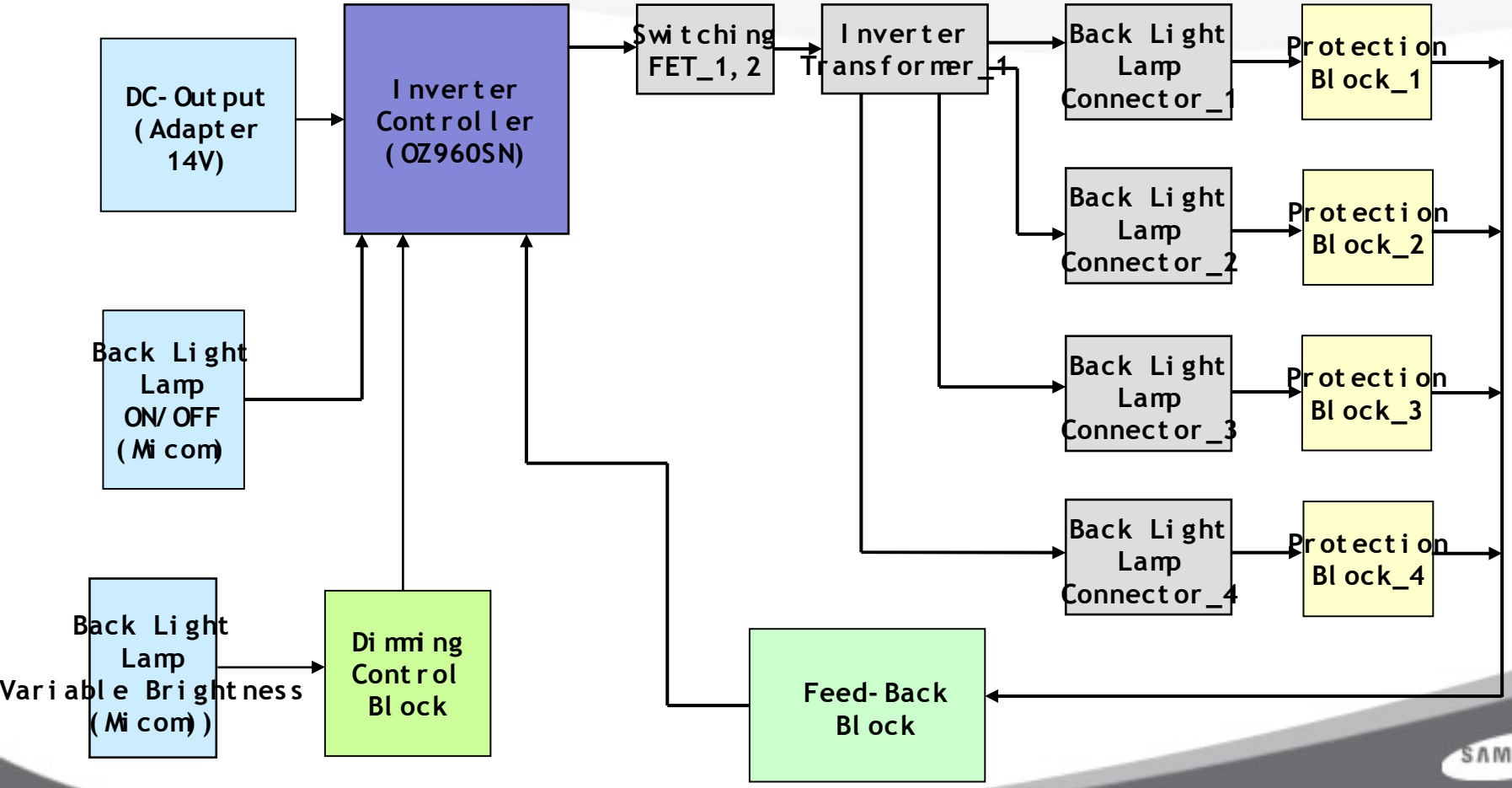
No	Block	Description	remark
1	**Scaler**	Scaler Integrate ADC and TMDS, Scaling part, Controller,	
2	**FLASH MEMORY**	Flash memory save information that SCALER needed. Program update is possible through the Firmware.	
3	**RECEIVER IC**	This chip receives DVI and HDMI signal from the source and decodes signal to scaler needed.	

16. Description of I P-Board Part(1)



16. Description of IP-Board Part(2)

Inverter Part



Ref : Inverter-Dimming

There are three methods. The Current Control method controls the amount of the current that enters the lamp. The PWM method turn on and off the lamp in a constant cycle. The Complex methods combines both two methods.

Current Control (Analog Dimming)

- Dimming is possible with giving little affect to the panel.
- Requires a minimum current so that no partial ON appears at the minimum brightness.
- Low dimming ratio (about 2:1)
- Efficiency is low at the dimming state because the inverter is optimized to the maximum brightness.

PWM Control (Burst Dimming)

- Dimming is done by turning on and off the lamp at the frequency of about 300 Hz to 1 kHz.
- Because this method turns on and off a large volume of current in a constant cycle, the ground of the panel power part becomes unstable and noise is generated, causing water falls.
- Because the lamp ON state always operates at the maximum brightness, efficiency is high and the partial ON problem at the minimum brightness is solved.
- High dimming ratio (about 5:1)

Complex Control

* PROTECTI ON*

- LAMP(Inverter) PROTECION

  → If the lamp connector is disconnected or there is no feedback because the lamp has a crack, the lamp protection is activated.

  → If the Inverter Trans has a high voltage output, the Over Voltage Protection is activated as lamp protection.

- Power Protection

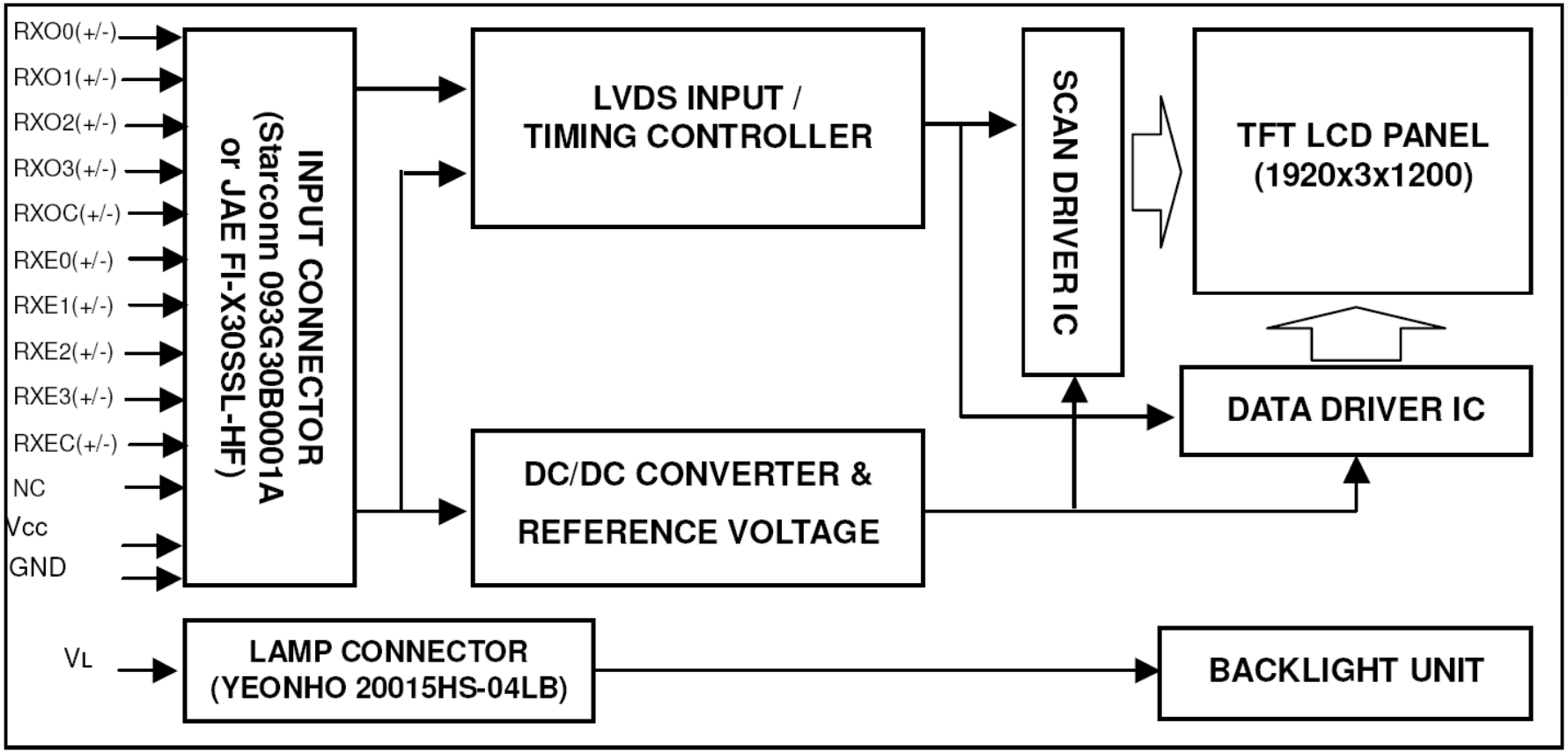
  → All protections (OVP/OCP) for the panel operate in Auto Recovery Mode.

  Therefore, when a protection is activated temporarily, the panel continues to work without power- off when it is cleared.

  However, exceptionally, in the case of Thermal Protection, the panel works normally only if the power is turned off to discharge completely and turned on again. This is controlled by the function designed in the Power IC.

17. Panel Part Description

LCD PANEL : M260J3-L01

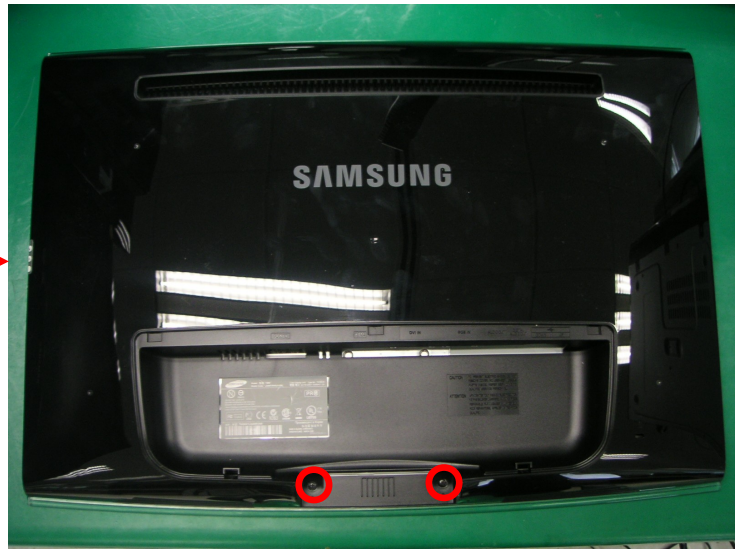


18. Disassembly (1)

1. Turn the monitor off before beginning the disassembly process.
2. Disassemble the monitor carefully as directed in the following procedures.
3. When disassembling the monitor, do not use any metal tools except for the provided jig.

STAND

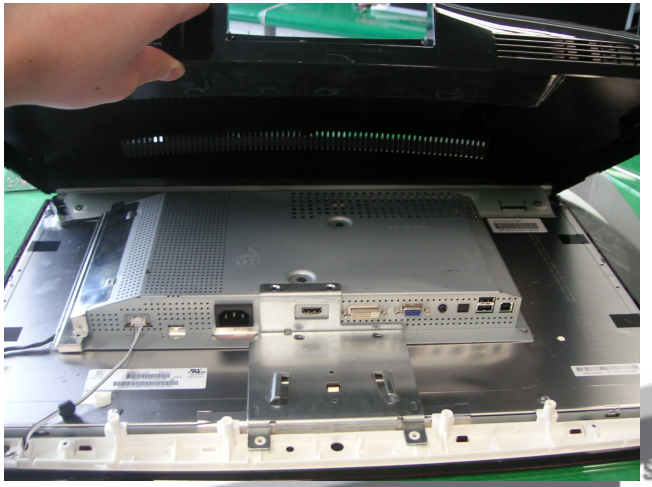
1. Place a soft cloth on the floor and place the monitor on it so that the front of the monitor is on the cloth.



2. Remove 2 screws.

18. Disassembly (2)

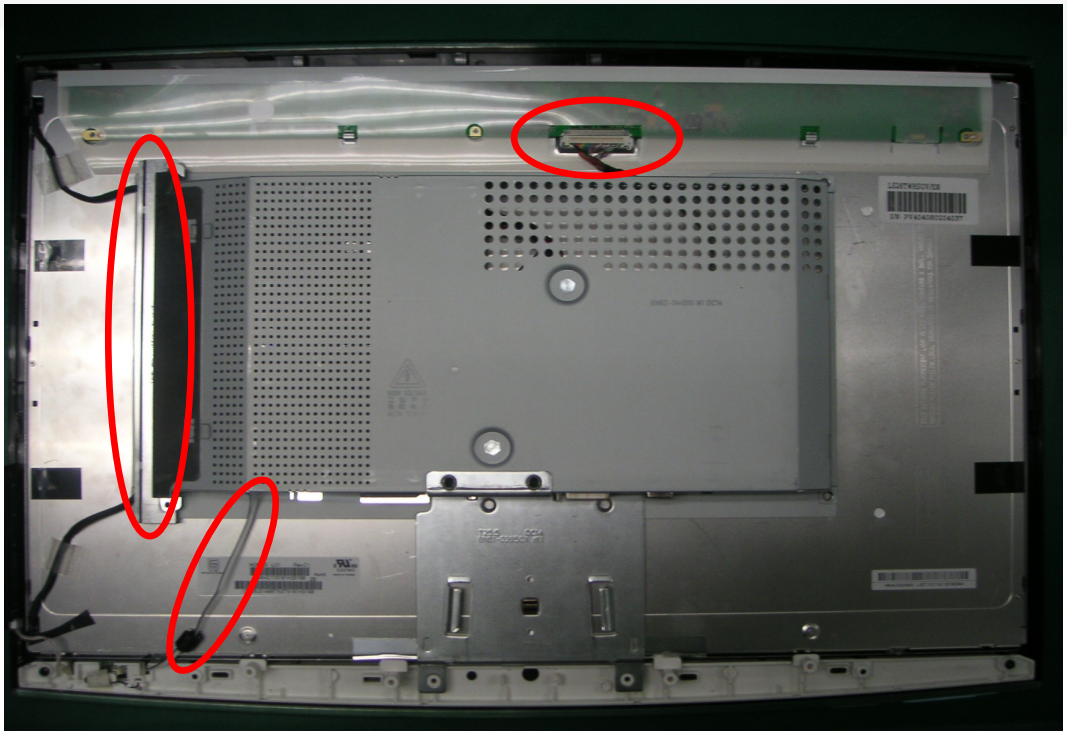
Rear Cover



3. Remove the cover and the LCD panel using the provided jig on both grooves at the bottom.

18. Disassembly (3)

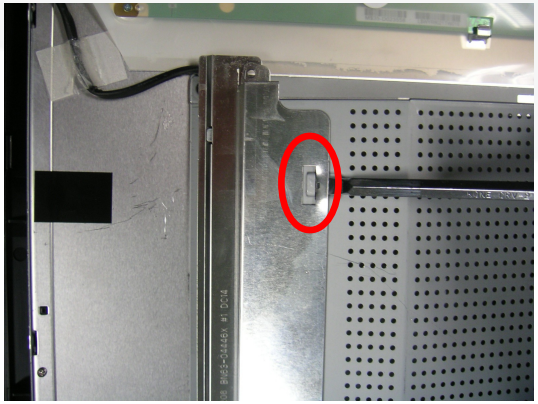
Cable

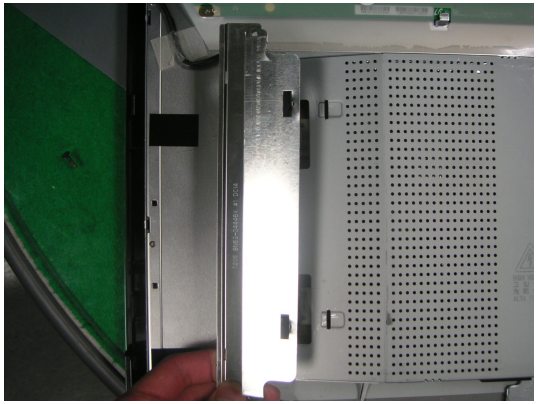


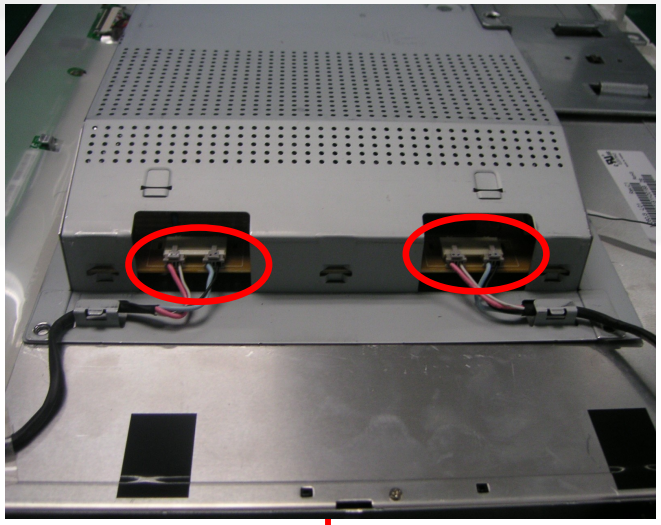
4. Remove the Cable.

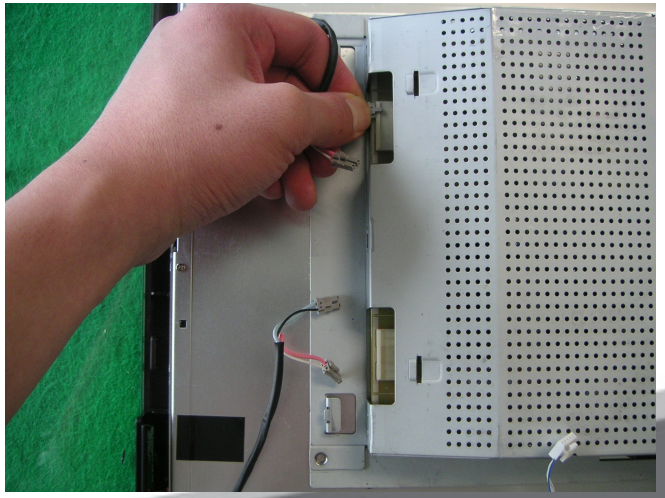
18. Disassembly (4)

Lamp Wire





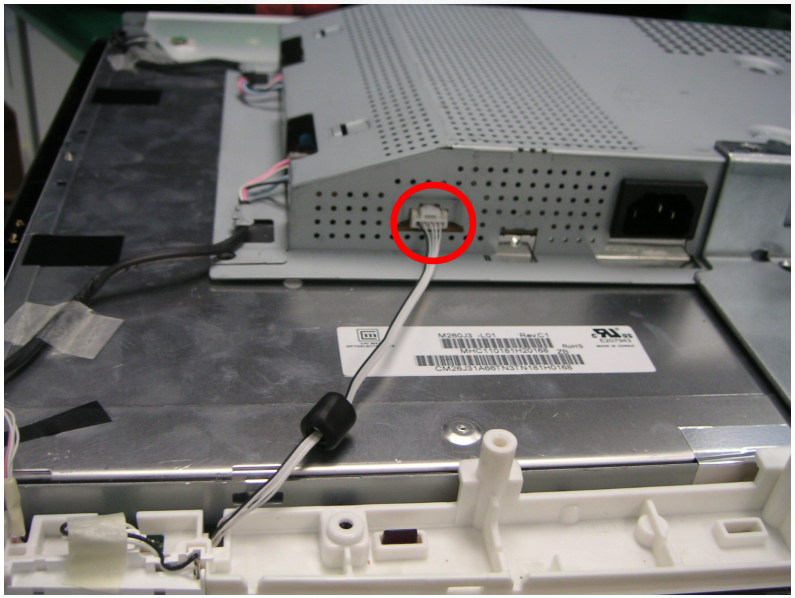




5. Remove the Shield Lamp using a pointed tool and then remove the four (4) lamp wires.

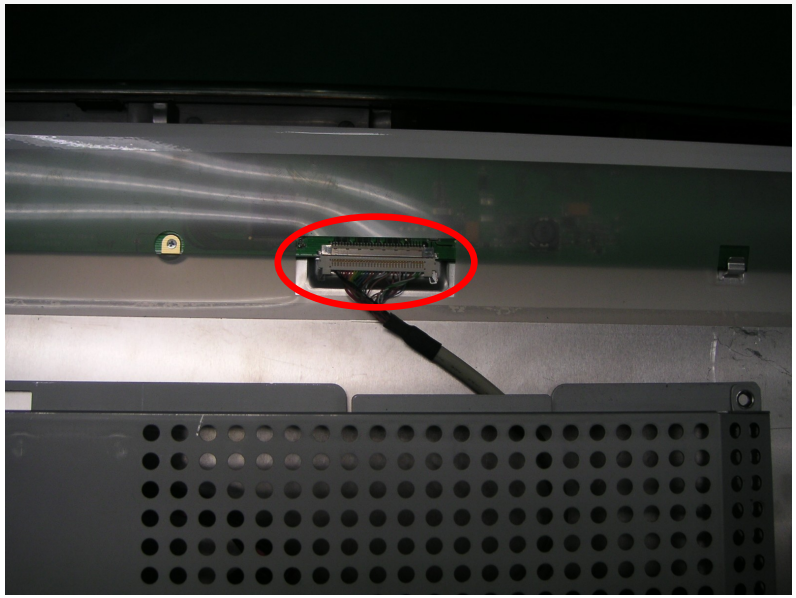
18. Disassembly (5)

Function Wire



6. Remove the IP board cable and the function wire.

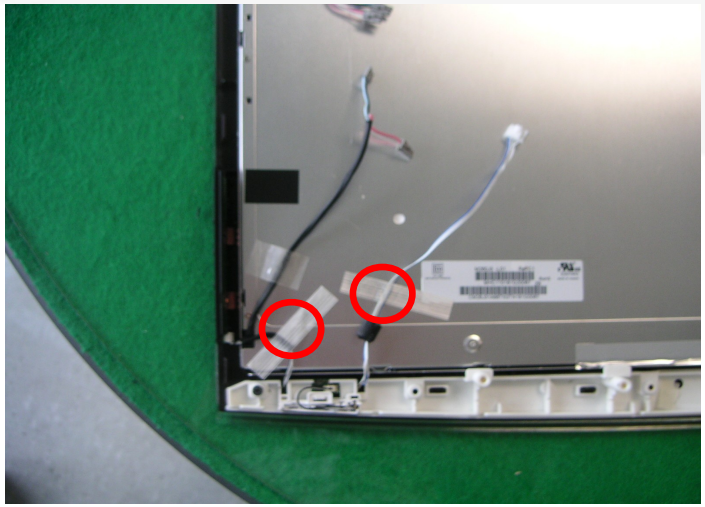
LVDS Cable

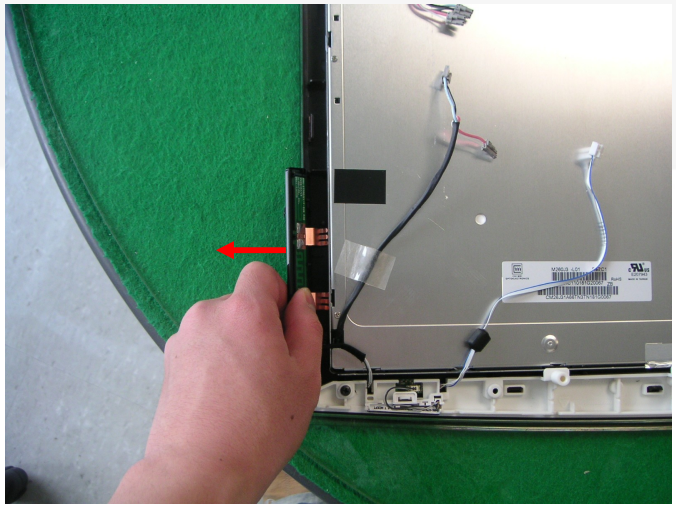


7. Disconnect LVDS cable from panel.

18. Disassembly (6)

Function ASSY

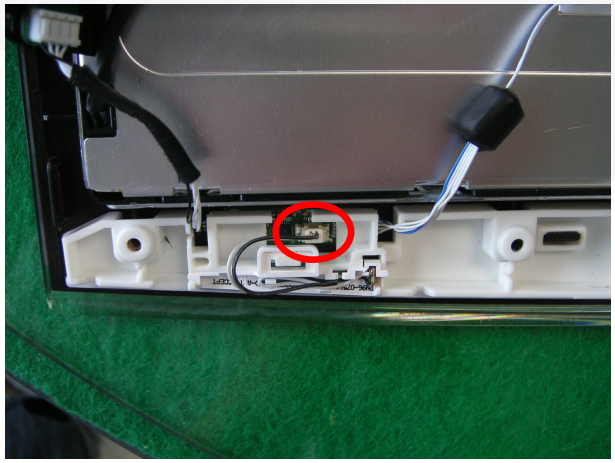


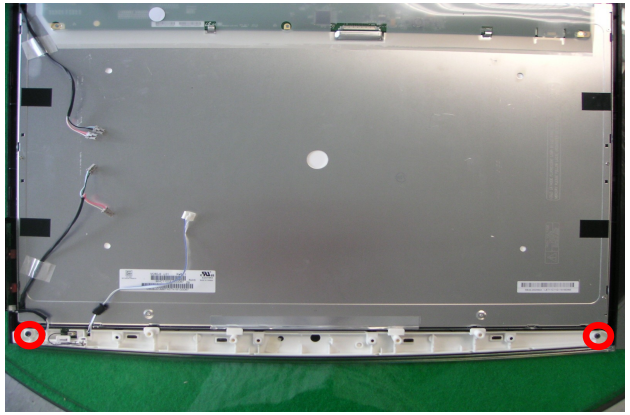


8. Remove the Chassis Assy and remove the two pieces of tape on the Function Assy. Then remove the knob while pressing it outwards.

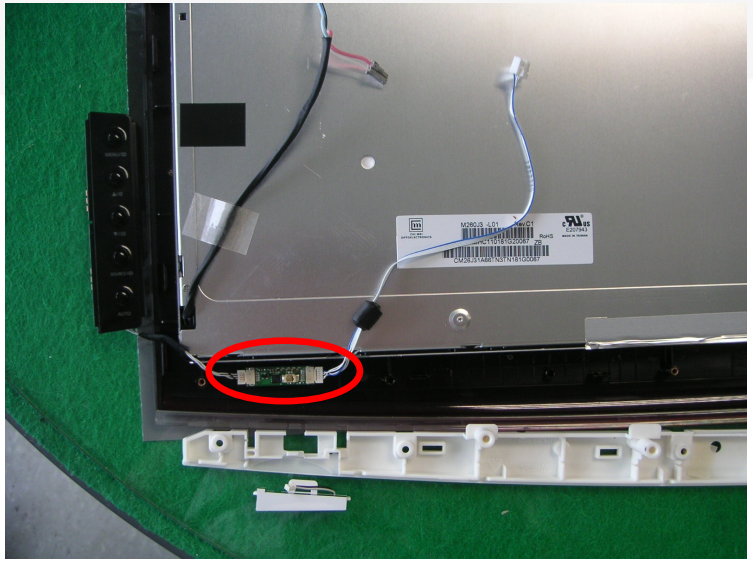
18. Disassembly (7)

Holder Boss, LED





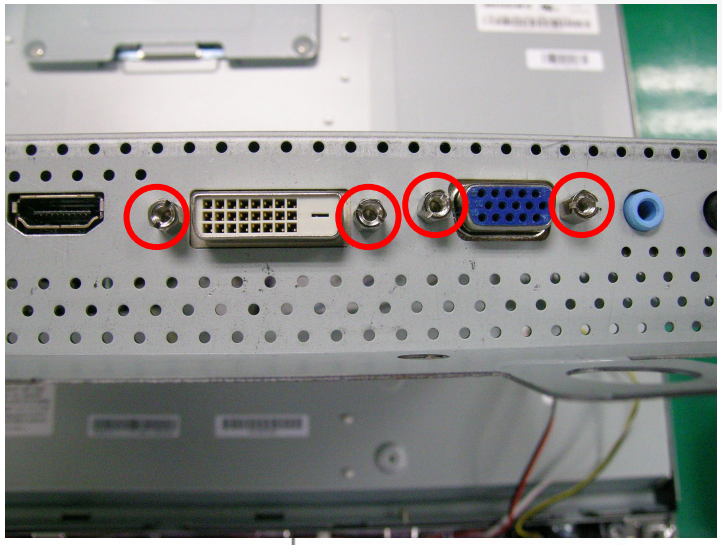
9. Remove the LED cable and remove the two screws on both sides. Then lift and remove the Holder Boss.



10. Remove the LED and the Function Power.

18. Disassembly (8)

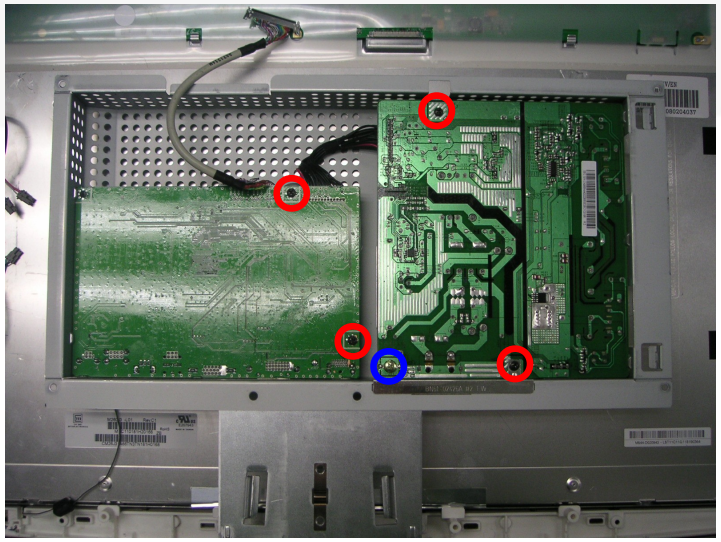
ASSY CHASSIS



Screw

11. Remove the four (4) screws shown in the figure.

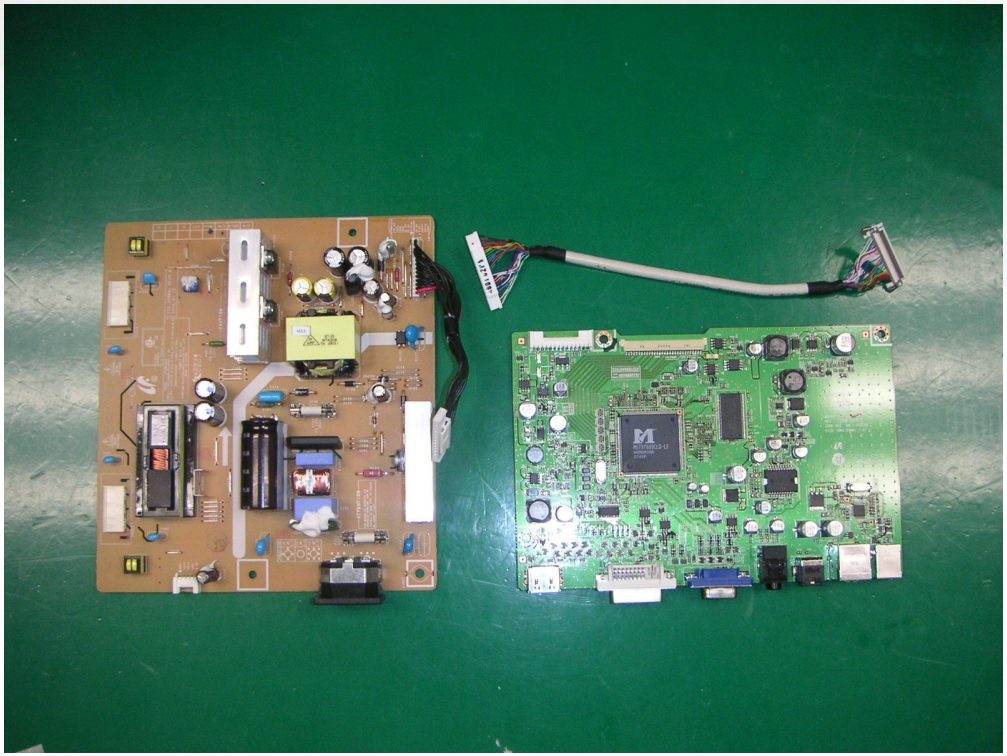
MAIN BOARD , IP-Board



Screw

12. Remove the four (5) screws shown in the figure and remove the Bracket support.

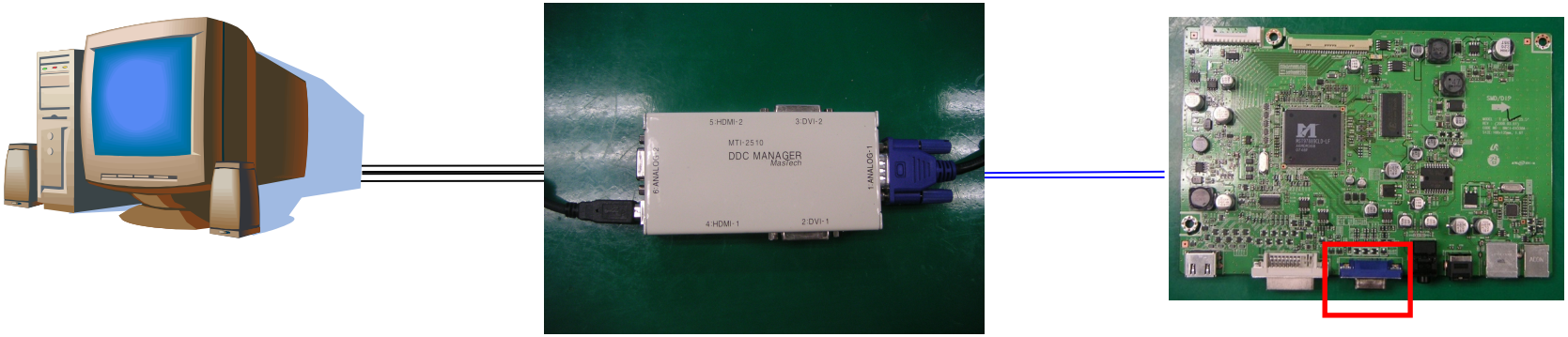
18. Disassembly (9)



- Reassembly procedures are in the reverse order of disassembly procedures.

19. Firmware Installation (1)

- After exchange the Main Board, We use DDC manager and must complete downloading.
- Connecting is refer to below picture.
- MICOM can be updated with DDC manager.

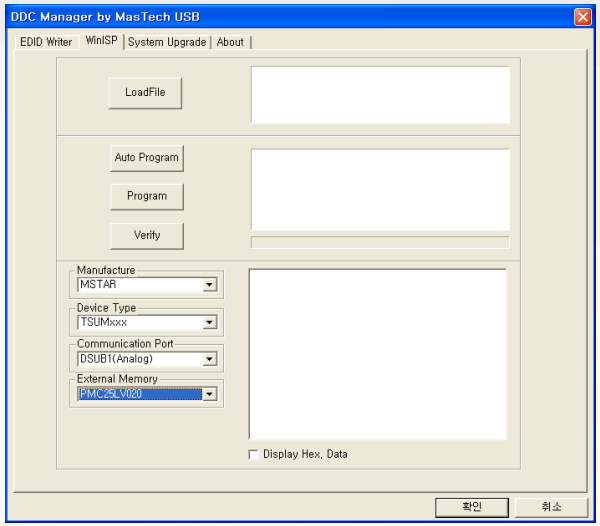


Connect to parallel port

DDC MANAGER

connect to MAIN board CN101

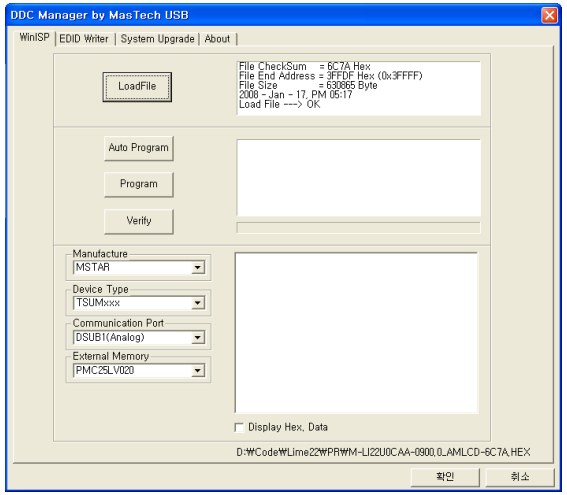
19. Firmware Installation(2)

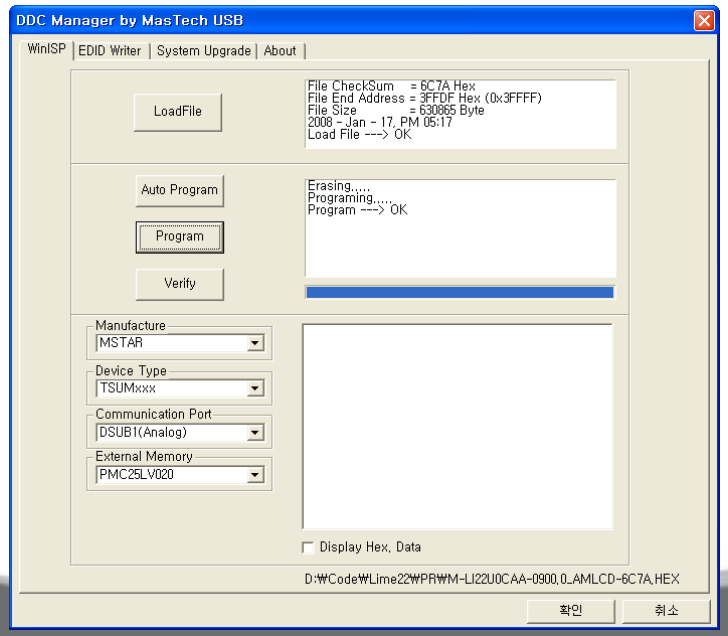


1. Execute “winDDC”.

2. Select “MSTAR”, “TSUMxxx”, “DSUB1(Analog)”, “PMC25LV040” step by step.

3. Click “LoadFile”and the latest code which code form is “*.hex”.

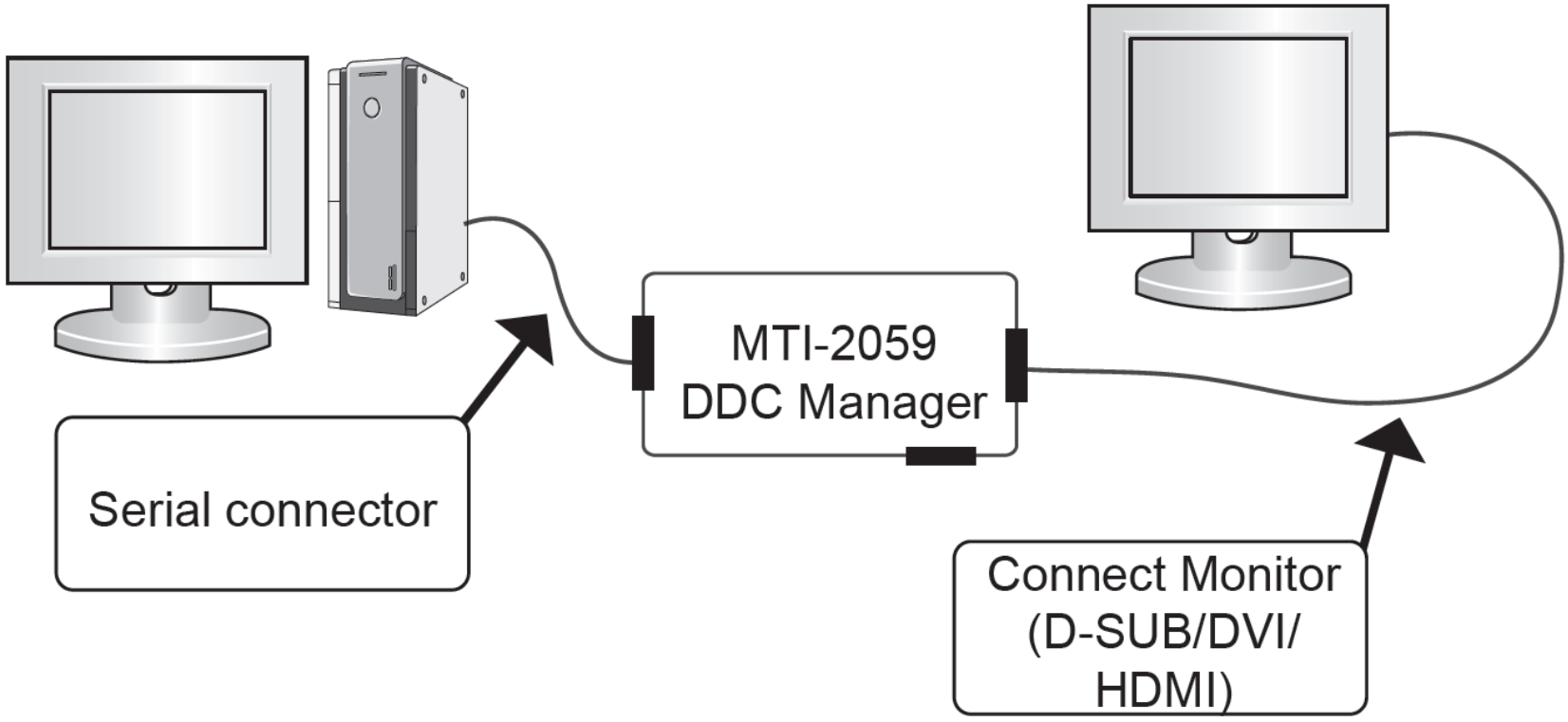




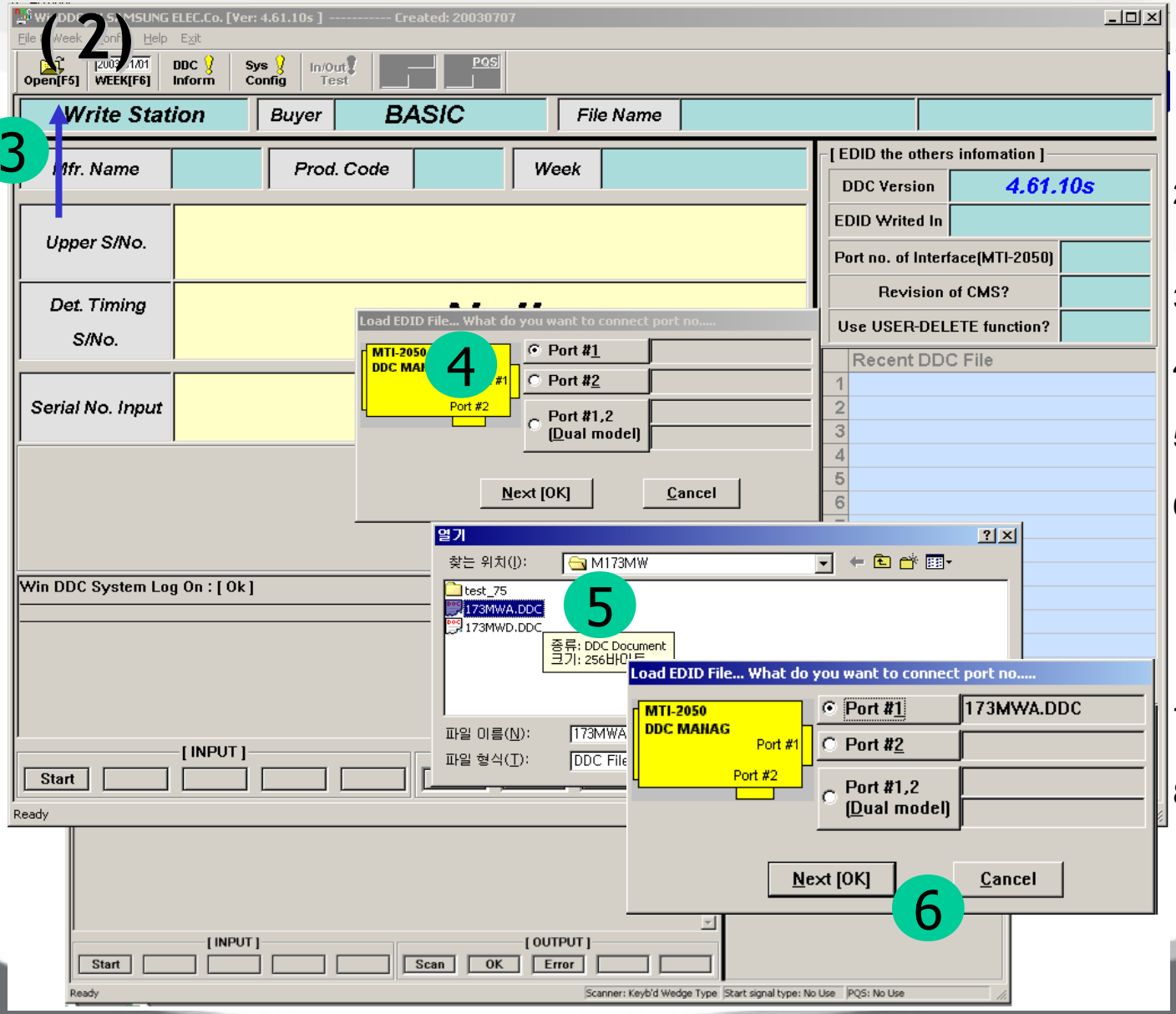
4. Click “Program”.

20. EDID Installation (1)

- EDID can be updated with DDC Manager JIG.
- Refer to below picture



20. EDID Installation (2)



1. Connect DDC Manager Jig to 2493HM with D-Sub cable and DVI cable, HDMI cable

2. Execute Winddc.exe Program on PC

3. Click the Winddc icon.

4. File open.

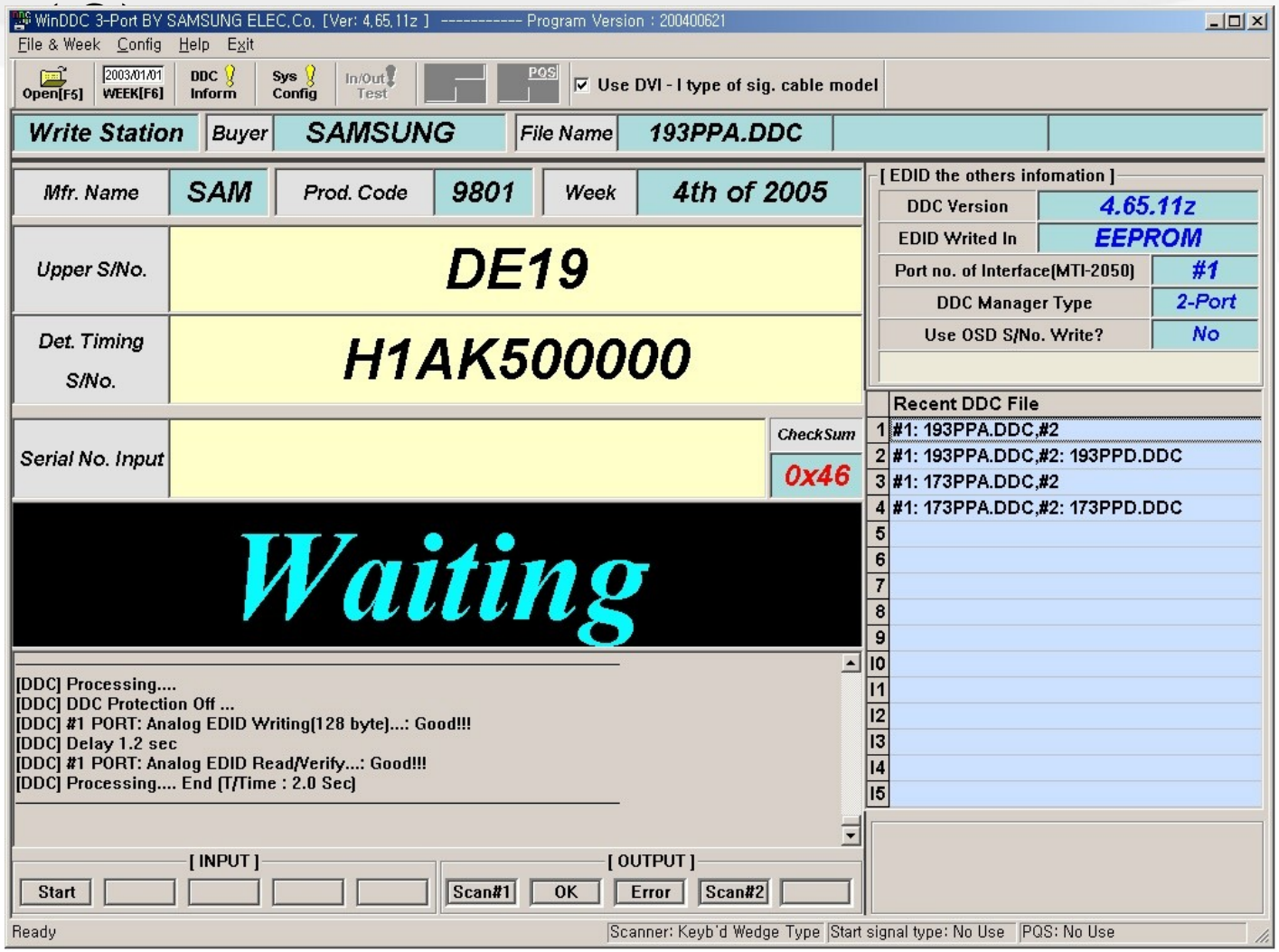
5. Select Port#1

6. Load DDC file
   File Name
   "SMT260A.ddc" : T260
   "SMT240A.ddc" : T240
   -> Analog DDC

7. Click Next(OK) button

8. Select enter button After Monitor S/N input.

20. EDID Installation



9. Enter the DVI DDC on same way.
   File name
   "SMT260D.ddc" : T260
   "SMT240D.ddc" : T240
   -> Digital DDC

10. File open.

11. Select Port#2

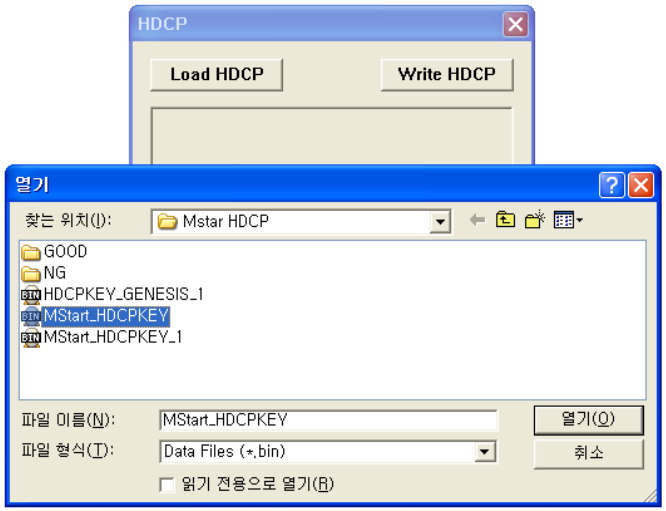
12. Load DDC file
   File Name
   "SMT260H.ddc" : T260
   "SMT240H.ddc" : T240
   -> HDMI DDC

13. Click Next(OK) button

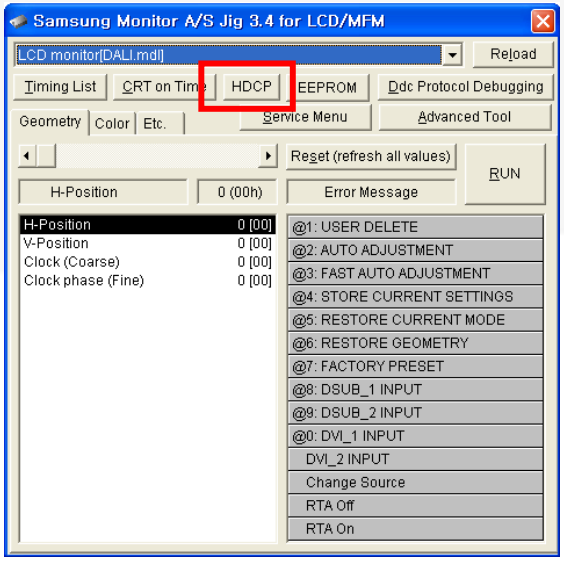
14. Select enter button After Monitor S/N input.

21. HDCP Key Installation

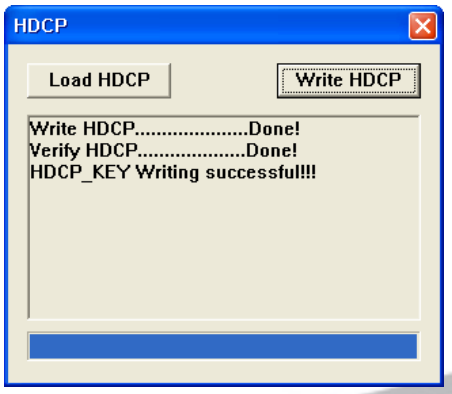
1. Execute “service”



2. Click the “HDCP”.



3. Click “Load HDCP” button and select the “Mstart_HDCPKEY”.



4. Click “Write HDCP” and check the “HDCP_KEY Writing successful!!!”

2. After Replacing Main PBA

You have to

- EDID input (Analog and Digital, HDMI)
- Firmware install – MICOM S/W input(use DDC manager)
- HDCP Key
- PC Auto Color Adjust

  -.select language “English” in OSD, then hold down Enter key for 5 seconds
- Factory Reset

  -.setting to Contrast and Brightness ‘0’.

  -.Push the menu button more than 5 seconds

  -.select Reset.

Thank You!