

Service Manual

ViewSonic VA712-1

VA712b-1

Model No. VS10697

17" Color TFT LCD Display

(VA712-1_VA712b-1_SM Rev. 1b Mar. 2006)

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Revision History

| Revision | SM Editing Date | Documents Number | | Description of Changes | Editor |
|----------|-----------------|------------------|------------|-------------------------------|-------------|
| | | DCN Number | ECR Number | | |
| 1a | 03/15/05 | 5245S | | Initial Release | A. Lu |
| 1b | 03/21/06 | | | Add Lack Of panel P/N for EPL | Jamie Chang |
| | | | | | |
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1. Precautions and Safety Notices

1. Appropriate Operation

- (1) Turn off the product before cleaning.
- (2) Use only a dry soft cloth when cleaning the LCD panel surface.
- (3) Use a soft cloth soaked with mild detergent to clean the display housing.
- (4) Use only a high quality, safety approved AC/DC power cord.
- (5) Disconnect the power plug from the AC outlet if the product will not be used for a long period of time.
- (6) If smoke, abnormal noise, or strange odor is present, immediately switch the LCD display off.
- (7) Do not touch the LCD panel surface with sharp or hard objects.
- (8) Do not place heavy objects on the LCD display, video cable, or power cord.
- (9) Do not use abrasive cleaners, waxes or solvents for your cleaning.
- (10) Do not operate the product under the following conditions:
 - Extremely hot, cold or humid environment.
 - Areas containing excessive dust and dirt.
 - Near any appliance generating a strong magnetic field.
 - In direct sunlight.

2. Caution

No modification of any circuit should be attempted. Service work should only be performed after you are thoroughly familiar with all of the following safety checks and servicing guidelines.

3. Safety Check


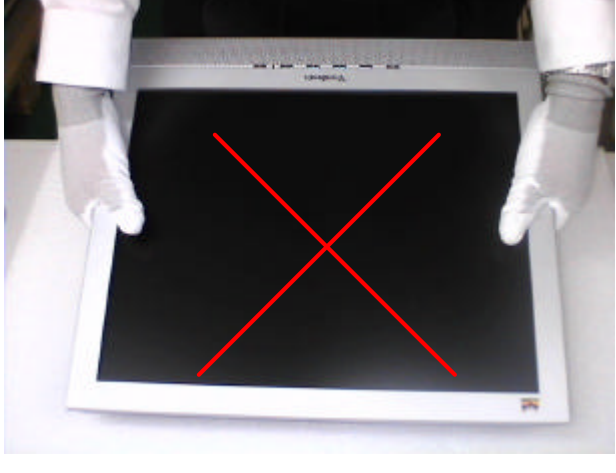


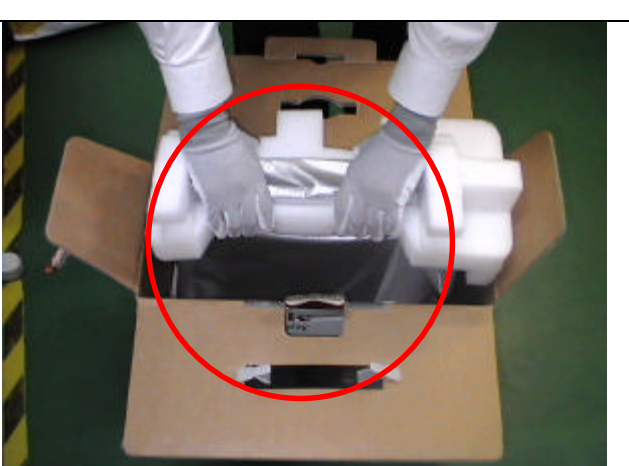

Care should be taken while servicing this LCD display. Because of the high voltage used in the inverter circuit, the voltage is exposed in such areas as the associated transformer circuits.


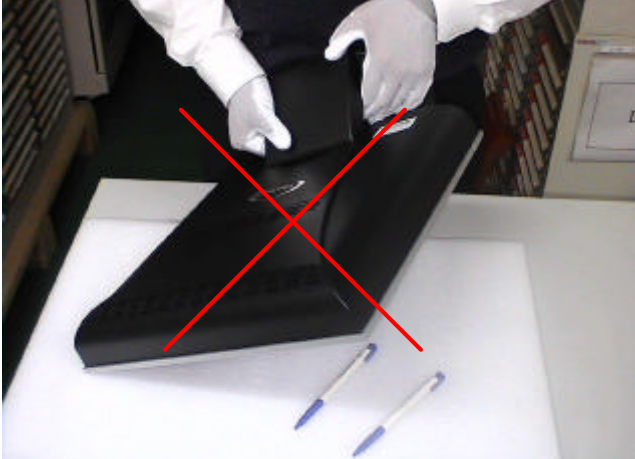
4. LCD Module Handling Precautions

4.1 Handling Precautions

- (1) Since front polarizer is easily damaged, pay attention not to scratch it.
- (2) Be sure to turn off power supply when connecting or disconnecting input connector.
- (3) Wipe off water drops immediately. Long contact with water may cause discoloration or spots.
- (4) When the panel surface is soiled, wipe it with absorbent cotton or other soft cloth.
- (5) Since the panel is made of glass, it may break or crack if dropped or bumped on hard surface.
- (6) Since CMOS LSI is used in this module, take care of static electricity and ensure human earth when handling.
- (7) Do not open or modify the Module Assembly.
- (8) Do not press the reflector sheet at the back of the module in any direction.
- (9) In the event that a Module must be put back into the packing container slot after it was taken out of the container, do not press the center of the CCFL Reflector edge. Instead, press at the far ends of the CFL Reflector edge softly. Otherwise the TFT Module may be damaged.
- (10) At the insertion or removal of the Signal Interface Connector, be sure not to rotate or tilt the Interface Connector of the TFT Module.

- (11) After installation of the TFT Module into an enclosure (LCD monitor housing, for example), do not twist or bend the TFT Module even momentarily. When designing the enclosure, it should be taken into consideration that no bending/twisting forces may be applied to the TFT Module from outside. Otherwise the TFT Module may be damaged.
- (12) The cold cathode fluorescent lamp in the LCD contains a small amount of mercury. Please follow local ordinances or regulations for disposal.
- (13) The LCD module contains a small amount of materials having no flammability grade. The LCD module should be supplied with power that complies with the requirements of Limited Power Source (IEC60950 or UL1950), or an exemption should be applied for.
- (14) The LCD module is designed so that the CCFL in it is supplied by a Limited Current Circuit (IEC60950 or UL1950). Do not connect the CCFL to a Hazardous Voltage Circuit.

| Correct methods : | Incorrect Methods : |
|---|--|
| <p>Only touch the metal-frame of the panel or the front cover of the monitor. Do not touch the surface of the polarizer .</p> | <p>Surface of the panel is pressed by fingers & this may cause “ MURA “</p> |
|  |  |
|  |  |
| <p>Take out the monitor with cushion</p> | <p>Take out the monitor by grasping the LCD panel. That may cause “ MURA “.</p> |
|  |  |

| Correct Methods : | Incorrect Methods : |
|---|--|
| Place the monitor on a clean & soft foam pad . | Place the monitor on foreign objects . That could scratch the surface of panel |
|  |  |

2. Specification

VA712 Specifications (for Analog)

Chapter 1 General Descriptions

| | FEATURES | VA712 |
|---------------------|--|-----------------------|
| TFTLCD PANEL | Size | 17" |
| | Luminance (Typ, cd/m ²) | 350 cd/m ² |
| | Contrast Ratio (Typ) | 350:1 |
| | Colors (6 bit + 2 bit FRC) | 16.2 M colors |
| | Response Time (Typ) | 8 ms |
| | Viewing Angle (H/V) | 160 ° / 120 ° |
| | Recommend resolution | 1280x1024@60Hz |
| Input Signal | Analog (75ohms, 0.7/1.0 Vp-p) | Yes |
| | Digital | Yes |
| Sync Compatibility | Separate Sync | Yes |
| | Composite Sync | No |
| | Sync on Green | No |
| Compatibility | PC | Yes |
| | Power Mac | Yes |
| | TV Box (NextVision 6) | Yes |
| Power Voltage | AC 100-240V, 50/60Hz | Yes |
| Power Consumption | On Mode(Max / Typ) | 60 W / 51 W |
| | Active Off Mode (Max) | 3 W |
| Audio | 1 W | Yes |
| Ergonomics | Tilt (20 ° +-2° - -5 °+1.5°) | Yes |
| | Swivel | No |
| | Pivot | No |
| | Height Adjust | No |
| OSD Control | [1] [?] [?] [2] [⏪] [X] | Yes |
| Dimension | Physical (W x H x D mm) | 386 x 411 x 177 |
| | Package (W x H x D mm) | 470 x 476 x 228 |
| Weight | Physical (Net kg/lb) | 4.4kg / 9.48 lbs |
| | Package (Gross Kg/lb) | 6.8 kg / 15 lbs |
| Operating Condition | Temperature (/) | 41 -95 /+5 -+35 |
| | Humidity (%) | 20 % - 80 % |
| Storage Condition | Temperature (/) | -4 -131 /-20 -55 |
| | Humidity (%) | 20 % - 85 % |
| Regulation | UL, cUL, FCC-B, CB, CE, NOM, TUV/GS, TUV ERGO (covers ISO13406-2 & MPRII), TCO99, GOST-R + 20 ORIGINAL COPIES HYGIENIC, SASO, PCBC, VCCI, BSMI, CCC, (PSB), (C-TICK), TUV-S, Green Mark, Energy Star | |

Chapter 2 Product definition and specification

| Region | VSA / VSAP(M) | VSE(E) | VSCN(G) | VSJ(J) |
|--|--|---------------|-------------------------|--------------------------|
| Product Name | VA712b | | | |
| Model Number | VS10697 | | | |
| OSD Languages | English, French, German, Italian, Spanish, Finnish, Japanese, Traditional Chinese, Simplified Chinese | | | |
| TFT LCD Panel and Model # | Vendor : CMO, Model # : A170E1- | | | |
| Scalar | Model # : Genesis 5126 | | | |
| Input Signal | Analog | | | |
| Sync Compatibility | Separate | | | |
| Audio | 1 W @ < 8 % distortion | | | |
| Adapter | 60 W (max) / 51 W (typ) | | | |
| Power Cable (1.8m, color: black, US type) | YES | NO | NO | NO |
| Power Cable (1.8m, color: black, Schuko type) | NO | YES | NO | NO |
| Power Cable (1.8m, color: black, CCC type) | NO | NO | YES | NO |
| Power Cable (1.8m, color: black, PSE type) | NO | NO | NO | YES |
| Analog Cable (1.8 m, color : black), with PC 2001 and Hot Plug Detect &DDC | YES | YES | YES | YES |
| Audio Cable (1.8m, Color: black) with PC 2001 | YES | YES | YES | YES |
| DVI Cable(1.8m, color: black) with PC 2001 | NO | NO | NO | NO |
| ViewSonic CD Wizard | Arabic, English, Finnish, Spanish, German, Italian, Japanese, Swedish, Polish, Korean Portuguese, Russian, French, Simplified Chinese, Traditional Chinese, Hungary, Czech | | | |
| ViewSonic Quick Start Guide | | | | |
| Screen Protector Mylar | YES | YES | YES | YES |
| Warranty Sticker | NO | NO | YES (Chinese) | YES (Japanese) |
| Warranty Card | NO | NO | YES (Chinese) | YES (Japanese) |
| Carton Sticker | NO | NO | YES (Chinese) | NO |
| PE bag of Carton | NO | NO | YES | NO |

Chapter 3 GENERAL specification

| | |
|----------------------------------|---|
| Test Resolution & Frequency | 1280x1024 @ 60Hz |
| Test Image Size | Full Size |
| Contrast and Brightness Controls | Factory Default: Contrast = 70%, Brightness = 100% |

Chapter 4 VIDEO INTERFACE

| | |
|-------------------------------------|---|
| Analog Input Connector | DB-15 (Analog), refer the appendix A |
| Digital Input Connector | N/A |
| Default Input Connector | Defaults to the first detected input |
| Video Cable Strain Relief | Equal to twice the weight of the monitor for five minutes |
| Video Cable Connector DB-15 Pin out | Compliant DDC 2B |
| Video Signals | Video RGB (Analog) Separate |
| Video Impedance | 75 Ohms (Analog) |
| Maximum PC Video Signal | 950 mV with no damage to monitor |
| Maximum Mac Video Signal | 1250 mV with no damage to monitor |
| Sync Signals | TTL |
| DDC 2B | Compliant with Revision 1.3 |
| Sync Compatibility | Separate Sync |
| Video Compatibility | Shall be compatible with all PC type computers, Macintosh computers, and after market video cards |
| Resolution Compatibility | 640 x 350*, 640 x 480, 720 x 400* (640 x 400*), 800 x 600, 832 x 624, 1024 x 768, 1152 x 870, 1280 x 720, 1280 x 960, 1280 x 1024 * The image vertical size might not be full screen. But the image vertical position should be at the center. |
| Exclusions | Not compatible with interlaced video |

Chapter 5 POWER SUPPLY

| | |
|-------------------------------------|--|
| Power Supply (Adapter) | Part Number: UP060B1190 or DA-60F19 |
| Input Voltage Range | 90 TO 264 VAC |
| Input Frequency Range | 47 TO 63 HERTZ |
| Short Circuit Protection | Output can be shorted without damage |
| Over Current Protection | 3.476~4.74 A typical at 18.05 VDC |
| Leakage Current | 0.25mA (Max) at 264VAC / 60Hz |
| EFFICIENCY | 80 % typical at 115VAC Full Load |
| Fuse | Internal and not user replaceable |
| Power Dissipation | 60 Watts (max) / 51 Watts (typ) |
| Max Input AC Current | 1.6 Arms @ 90VAC, |
| INRUSH CURRENT (COLD START) | 80 A @ 120VAC, 80 A(max) @220VAC |
| Power Supply Cold Start | Shall start and function properly when under full load, with all combinations of input voltage, input frequency, and operating temperature |
| Power Supply Transient Immunity | Shall be able to withstand an EN61000-4-4 ±2KV transient test with no damage |
| Power Supply Line Surge Immunity | Shall be able to withstand ±2KV (L-L) and ±2.3KV (L-PE) with no damage |
| Power Supply Missing Cycle Immunity | Shall be able to function properly, without reset or visible screen artifacts, when ½ cycle of AC power is randomly missing at nominal input |
| Power Supply Acoustics | The power supply shall not produce audible noise that would be detectable by the user. Audible shall defined to be in compliance with ISO 7779 (DIN EN27779:1991) Noise measurements of machines acoustics. Power Switch noise shall not be considered |
| US Type Power Cable | Separate 3-prong NEMA 5-15P type plug. Length = 1.8m. Connects to display. Color = Black |
| European Type Power Cable | Schuko CEE7-7 type plug. Length = 1.8m, Connects to display. Color = Black |
| CCC Type Power Cable | Separate 3-prong type plug. Length = 1.8m. Connects to display. Color = Black |
| PSE Type Power Cable | Separate 2-prong NEMA 1-15P type plug. Length = 1.8m. Connects to display. Color = Black |
| Power Saving Operation(Method) | VESA DPMS Signaling |
| Power Consumption | ON Mode < 60 W (max) / 51 W (typ) ACTIVE OFF < 3W |
| Recovery Time | ON MODE = N/A, ACTIVE OFF < 5 SEC |

Chapter 6 ELECTRICAL REQUIREMENT

Horizontal / Vertical Frequency

| | |
|-----------------------|-------------------------------|
| Horizontal Frequency | 30 – 82 KHZ |
| Vertical Refresh Rate | 50 – 85* HZ. |
| Maximum Pixel Clock | 135 MHz |
| Sync Polarity | Independent of sync polarity. |

Chapter 7 Timing Table

| Item | Timing | Analog |
|--|--------------------------------|--------|
| 1 | 640 x 350 @ 70Hz, 31.5kHz | Yes |
| 2 | 640 x 400 @ 60Hz, 31.5kHz | Yes |
| 3 | 640 x 400 @ 70Hz, 31.5kHz | Yes |
| 5 | 640 x 480 @ 60Hz, 31.5kHz | Yes |
| 6 | 640 x 480 @ 67Hz, 35.0kHz | Yes |
| 7 | 640 x 480 @ 72Hz, 37.9kHz | Yes |
| 8 | 640 x 480 @ 75Hz, 37.5kHz | Yes |
| 9 | 640 x 480 @ 85Hz, 43.27kHz | Yes |
| 10 | 720 x 400 @ 70Hz, 31.5kHz | Yes |
| 11 | 800 x 600 @ 56Hz, 35.1kHz | Yes |
| 12 | 800 x 600 @ 60Hz, 37.9kHz | Yes |
| 13 | 800 x 600 @ 75Hz, 46.9kHz | Yes |
| 14 | 800 x 600 @ 72Hz, 48.1kHz | Yes |
| 15 | 800 x 600 @ 85Hz, 53.7kHz | Yes |
| 16 | 832 x 624 @ 75Hz, 49.7kHz | Yes |
| 17 | 1024 x 768 @ 60Hz, 48.4kHz | Yes |
| 18 | 1024 x 768 @ 70Hz, 56.5kHz | Yes |
| 19 | 1024 x 768 @ 72Hz, 58.1kHz | Yes |
| 20 | 1024 x 768 @ 75Hz, 60.0kHz | Yes |
| 21 | 1024 x 768 @ 85Hz, 68.67kHz | Yes |
| 22 | 1152 x 870 @ 75Hz, 68.7kHz | Yes |
| 23 | 1280 x 1024 @ 60Hz, 63.4kHz | Yes |
| 24 | 1280 x 1024 @ 75Hz, 79.97kHz | Yes |
| 25 | 1280x 720 @ 60Hz, 45kHz (HDTV) | Yes |
| <p>Note 1: When Vertical frequency at 85Hz or resolution, the vertical image size might not be full screen. But the vertical image position should be at the center.</p> <p>Note 2: Out of scalar chip (gm5126) limit.</p> | | |

VA712B Specifications (for Digital)

Chapter 1 General Descriptions

| FEATURES | | VA712b |
|---------------------|--|-----------------------|
| TFTLCD PANEL | Size | 17" |
| | Luminance (Typ, cd/m ²) | 350 cd/m ² |
| | Contrast Ratio (Typ) | 350:1 |
| | Colors (6 bit + 2 bit FRC) | 16.2 M colors |
| | Response Time (Typ) | 8 ms |
| | Viewing Angle (H/V) | 160 ° / 120 ° |
| | Recommend resolution | 1280x1024@60Hz |
| Input Signal | Analog (75ohms, 0.7/1.0 Vp-p) | Yes |
| | Digital | Yes |
| Sync Compatibility | Separate Sync | Yes |
| | Composite Sync | No |
| | Sync on Green | No |
| Compatibility | PC | Yes |
| | Power Mac | Yes |
| | TV Box (NextVision 6) | Yes |
| Power Voltage | AC 100-240V, 50/60Hz | Yes |
| Power Consumption | On Mode(Max / Typ) | 60 W / 51 W |
| | Active Off Mode (Max) | 3 W |
| Audio | 1 W | Yes |
| Ergonomics | Tilt (20 ° +-2° - -5 °+-1.5°) | Yes |
| | Swivel | No |
| | Pivot | No |
| | Height Adjust | No |
| OSD Control | [1] [?] [?] [2] [⏏] [X] | Yes |
| Dimension | Physical (W x H x D mm) | 386 x 411 x 177 |
| | Package (W x H x D mm) | 470 x 476 x 228 |
| Weight | Physical (Net kg/lb) | 4.4kg / 9.48 lbs |
| | Package (Gross Kg/lb) | 6.8 kg /15 lbs |
| Operating Condition | Temperature (/) | 41 -95 /+5 -+35 |
| | Humidity (%) | 20 % - 80 % |
| Storage Condition | Temperature (/) | -4 -131 /-20 -55 |
| | Humidity (%) | 20 % - 85 % |
| Regulation | UL, cUL, FCC-B, CB, CE, NOM, TUV/GS, TUV ERGO (covers ISO13406-2 & MPRII), TCO99, GOST-R + 20 ORIGINAL COPIES HYGIENIC, SASO, PCBC, VCCI, BSMI, CCC, (PSB), (C-TICK), TUV-S, Green Mark, Energy Star | |

Chapter 2 Product definition and specification

| Region | VSA / VSAP(M) | VSE(E) | VSCN(G) | VSJ(J) |
|--|--|--------|------------------|-------------------|
| Product Name | VA712b | | | |
| Model Number | VS10697 | | | |
| OSD Languages | English, French, German, Italian, Spanish, Finnish, Japanese, Traditional Chinese, Simplified Chinese | | | |
| TFT LCD Panel and Model # | Vendor : CMO, Model # : A170E1- | | | |
| Scalar | Model # : Genesis 5126 | | | |
| Input Signal | Analog + Digital | | | |
| Sync Compatibility | Separate | | | |
| Audio | 1 W @ < 8 % distortion | | | |
| Adapter | 60 W (max) / 51 W (typ) | | | |
| Power Cable (1.8m, color: black, US type) | YES | NO | NO | NO |
| Power Cable (1.8m, color: black, Schuko type) | NO | YES | NO | NO |
| Power Cable (1.8m, color: black, CCC type) | NO | NO | YES | NO |
| Power Cable (1.8m, color: black, PSE type) | NO | NO | NO | YES |
| Analog Cable (1.8 m, color : black), with PC 2001 and Hot Plug Detect &DDC | YES | YES | YES | YES |
| Audio Cable (1.8m, Color: black) with PC 2001 | YES | YES | YES | YES |
| DVI Cable(1.8m, color: black) with PC 2001 | NO | NO | NO | NO |
| ViewSonic CD Wizard | Arabic, English, Finnish, Spanish, German, Italian, Japanese, Swedish, Polish, Korean Portuguese, Russian, French, Simplified Chinese, Traditional Chinese, Hungary, Czech | | | |
| ViewSonic Quick Start Guide | | | | |
| Screen Protector Mylar | YES | YES | YES | YES |
| Warranty Sticker | NO | NO | YES (Chinese) | YES (Japanese) |
| Warranty Card | NO | NO | YES (Chinese) | YES (Japanese) |
| Carton Sticker | NO | NO | YES (Chinese) | NO |
| PE bag of Carton | NO | NO | YES | NO |

Chapter 3 GENERAL specification

| | |
|----------------------------------|---|
| Test Resolution & Frequency | 1280x1024 @ 60Hz |
| Test Image Size | Full Size |
| Contrast and Brightness Controls | Factory Default: Contrast = 70%, Brightness = 100% |

Chapter 4 VIDEO INTERFACE

| | |
|-------------------------------------|---|
| Analog Input Connector | DB-15 (Analog), refer the appendix A |
| Digital Input Connector | DVI-D (Digital), refer the appendix B |
| Default Input Connector | Defaults to the first detected input |
| Video Cable Strain Relief | Equal to twice the weight of the monitor for five minutes |
| Video Cable Connector DB-15 Pin out | Compliant DDC 2B |
| Video Signals | 1. Video RGB (Analog) Separate 2. TMDS (Digital) |
| Video Impedance | 75 Ohms (Analog), 100 Ohms (Digital) |
| Maximum PC Video Signal | 950 mV with no damage to monitor |
| Maximum Mac Video Signal | 1250 mV with no damage to monitor |
| Sync Signals | TTL |
| DDC 2B | Compliant with Revision 1.3 |
| Sync Compatibility | Separate Sync |
| Video Compatibility | Shall be compatible with all PC type computers, Macintosh computers, and after market video cards |
| Resolution Compatibility | 640 x 350*, 640 x 480, 720 x 400* (640 x 400*), 800 x 600, 832 x 624, 1024 x 768, 1152 x 870, 1280 x 720, 1280 x 960, 1280 x 1024 * The image vertical size might not be full screen. But the image vertical position should be at the center. |
| Exclusions | Not compatible with interlaced video |

Chapter 5 POWER SUPPLY

| | |
|-------------------------------------|--|
| Power Supply (Adapter) | Part Number: UP060B1190 or DA-60F19 |
| Input Voltage Range | 90 TO 264 VAC |
| Input Frequency Range | 47 TO 63 HERTZ |
| Short Circuit Protection | Output can be shorted without damage |
| Over Current Protection | 3.476~4.74 A typical at 18.05 VDC |
| Leakage Current | 0.25mA (Max) at 264VAC / 60Hz |
| EFFICIENCY | 80 % typical at 115VAC Full Load |
| Fuse | Internal and not user replaceable |
| Power Dissipation | 60 Watts (max) / 51 Watts (typ) |
| Max Input AC Current | 1.6 Arms @ 90VAC, |
| INRUSH CURRENT (COLD START) | 80 A @ 120VAC, 80 A(max) @220VAC |
| Power Supply Cold Start | Shall start and function properly when under full load, with all combinations of input voltage, input frequency, and operating temperature |
| Power Supply Transient Immunity | Shall be able to withstand an EN61000-4-4 ±2KV transient test with no damage |
| Power Supply Line Surge Immunity | Shall be able to withstand ±2KV (L-L) and ±2.3KV (L-PE) with no damage |
| Power Supply Missing Cycle Immunity | Shall be able to function properly, without reset or visible screen artifacts, when ½ cycle of AC power is randomly missing at nominal input |
| Power Supply Acoustics | The power supply shall not produce audible noise that would be detectable by the user. Audible shall defined to be in compliance with ISO 7779 (DIN EN27779:1991) Noise measurements of machines acoustics. Power Switch noise shall not be considered |
| US Type Power Cable | Separate 3-prong NEMA 5-15P type plug. Length = 1.8m. Connects to display. Color = Black |
| European Type Power Cable | Schuko CEE7-7 type plug. Length = 1.8m, Connects to display. Color = Black |
| CCC Type Power Cable | Separate 3-prong type plug. Length = 1.8m. Connects to display. Color = Black |
| PSE Type Power Cable | Separate 2-prong NEMA 1-15P type plug. Length = 1.8m. Connects to display. Color = Black |
| Power Saving Operation(Method) | VESA DPMS Signaling |
| Power Consumption | ON Mode < 60 W (max) / 51 W (typ) ACTIVE OFF < 3W |
| Recovery Time | ON MODE = N/A, ACTIVE OFF < 5 SEC |

Chapter 6 ELECTRICAL REQUIREMENT

Horizontal / Vertical Frequency

| | |
|-----------------------|-------------------------------|
| Horizontal Frequency | 30 – 82 KHZ |
| Vertical Refresh Rate | 50 – 85* HZ. |
| Maximum Pixel Clock | 135 MHz |
| Sync Polarity | Independent of sync polarity. |

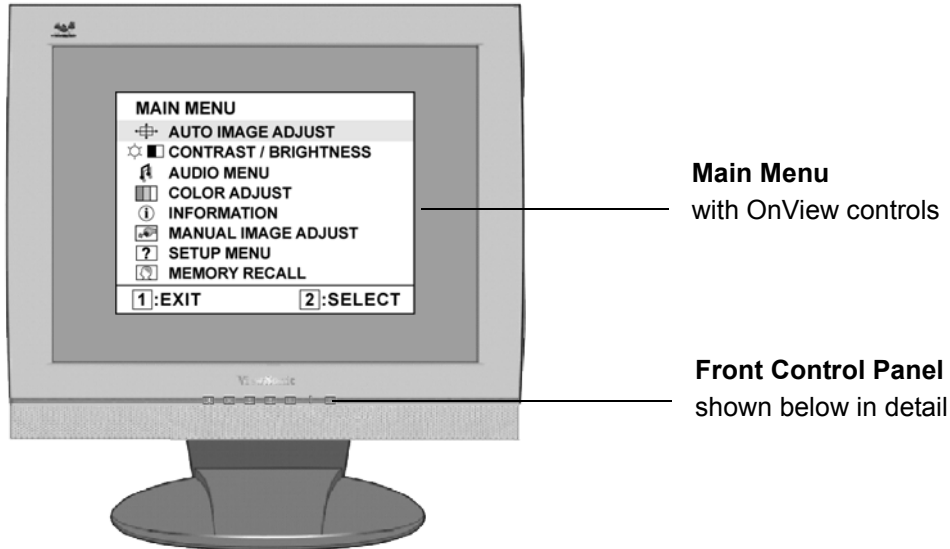
Chapter 7 Timing Table

| Item | Timing | Analog | Digital |
|--|--------------------------------|--------|---------|
| 1 | 640 x 350 @ 70Hz, 31.5kHz | Yes | Yes |
| 2 | 640 x 400 @ 60Hz, 31.5kHz | Yes | Yes |
| 3 | 640 x 400 @ 70Hz, 31.5kHz | Yes | Yes |
| 5 | 640 x 480 @ 60Hz, 31.5kHz | Yes | Yes |
| 6 | 640 x 480 @ 67Hz, 35.0kHz | Yes | Yes |
| 7 | 640 x 480 @ 72Hz, 37.9kHz | Yes | Yes |
| 8 | 640 x 480 @ 75Hz, 37.5kHz | Yes | Yes |
| 9 | 640 x 480 @ 85Hz, 43.27kHz | Yes | Yes |
| 10 | 720 x 400 @ 70Hz, 31.5kHz | Yes | Yes |
| 11 | 800 x 600 @ 56Hz, 35.1kHz | Yes | Yes |
| 12 | 800 x 600 @ 60Hz, 37.9kHz | Yes | Yes |
| 13 | 800 x 600 @ 75Hz, 46.9kHz | Yes | Yes |
| 14 | 800 x 600 @ 72Hz, 48.1kHz | Yes | Yes |
| 15 | 800 x 600 @ 85Hz, 53.7kHz | Yes | Yes |
| 16 | 832 x 624 @ 75Hz, 49.7kHz | Yes | Yes |
| 17 | 1024 x 768 @ 60Hz, 48.4kHz | Yes | Yes |
| 18 | 1024 x 768 @ 70Hz, 56.5kHz | Yes | Yes |
| 19 | 1024 x 768 @ 72Hz, 58.1kHz | Yes | Yes |
| 20 | 1024 x 768 @ 75Hz, 60.0kHz | Yes | Yes |
| 21 | 1024 x 768 @ 85Hz, 68.67kHz | Yes | Yes |
| 22 | 1152 x 870 @ 75Hz, 68.7kHz | Yes | Yes |
| 23 | 1280 x 1024 @ 60Hz, 63.4kHz | Yes | Yes |
| 24 | 1280 x 1024 @ 75Hz, 79.97kHz | Yes | No |
| 25 | 1280x 720 @ 60Hz, 45kHz (HDTV) | Yes | Yes |
| <p>Note 1: When Vertical frequency at 85Hz or resolution, the vertical image size might not be full screen. But the vertical image position should be at the center.</p> <p>Note 2: Out of scalar chip (gm5126) limit.</p> | | | |

3. Front Panel Function Control Description

Adjusting the Screen Image

Use the buttons on the front control panel to display and adjust the OnView® controls which display on the screen. The OnView controls are explained at the top of the next page and are defined in “Main Menu Controls” on page 10.



Displays the Main Menu or exits the control screen and saves adjustments.

Scrolls through menu options and adjusts the displayed control.
Also a shortcut to display the Contrast adjustment control screen.

Displays the control screen for the highlighted control.
Also toggles between two controls on some screens.
Also a shortcut to toggle analog and digital connection.

Audio Mute button turns the sound off

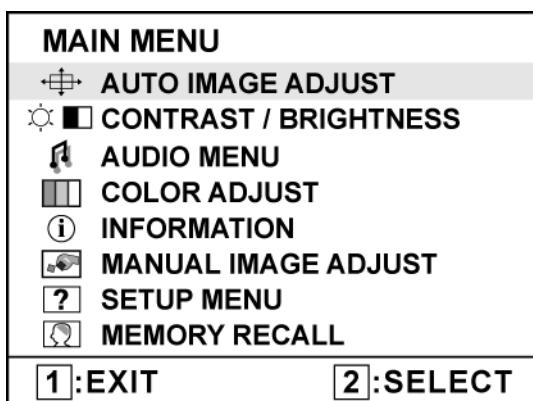
Power light
Green = ON
Orange = Power Saving

Standby Power On/Off



Do the following to adjust the screen image:

1. To display the Main Menu, press button [1].



NOTE: All OnView menus and adjustment screens disappear automatically after about 15 seconds. This is adjustable through the OSD timeout setting in the setup menu.

2. To select a control you want to adjust, press ▲ or ▼ to scroll up or down the Main Menu.
3. After the control is selected, press button [2]. A control screen like the one shown below appears.



The command line at the bottom of the control screen tells what to do next from this screen. You can toggle between control screens, adjust the selected option, or exit the screen.






4. To adjust the control, press the up ▲ or down ▼ buttons.
5. To save the adjustments and exit the menu, press button [1] *twice*.

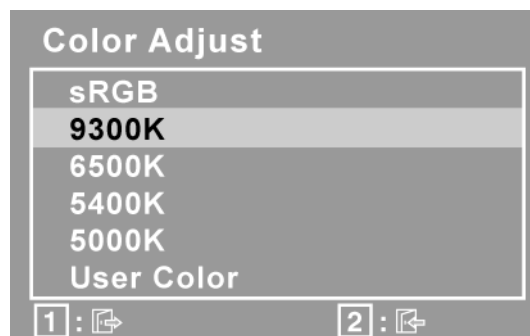
The following tips may help you optimize your display:

- Adjust your computer's graphic card so that it outputs a video signal 1280 x 1024 @ 60Hz to the LCD display. (Look for instructions on “changing the refresh rate” in your graphic card's user guide.)
- If necessary, make small adjustments using H. POSITION and V. POSITION until the screen image is completely visible. (The black border around the edge of the screen should barely touch the illuminated “active area” of the LCD display.)

Main Menu Controls

Adjust the menu items shown below by using the up ▲ and down ▼ buttons.

| Control | Explanation |
|---|---|
|  | Auto Image Adjust sizes and centers the screen image automatically. |
|  | Contrast adjusts the difference between the image background (black level) and the foreground (white level). |
|  | Brightness adjusts background black level of the screen image. |
|  | Audio Adjust Volume increases the volume, decreases the volume, and mutes the audio. Mute temporarily silences audio output. |
|  | Color Adjust provides several color adjustment modes: preset color temperatures and RGB which allows you to adjust red (R), green (G), and blue (B) separately. The factory setting for this product is 6500K (6500 Kelvin). |



9300K-Adds blue to the screen image for cooler white (used in most office settings with fluorescent lighting).

6500K-Adds red to the screen image for warmer white and richer red.

5400K-Adds green to the screen image for a darker color.

5000K-Adds blue and green to the screen image for a darker color.

User Color Individual adjustments for red (R), green (G), and blue (B).

1. To select color (R, G or B) press button [2].

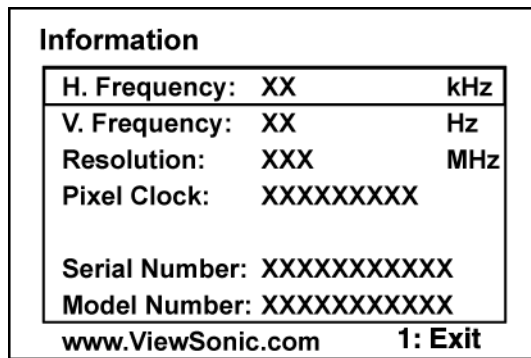
To adjust selected color, press▲and▼.

Important: If you select RECALL from the Main Menu when the product is set to a Preset Timing Mode, colors return to the 6500K factory preset.

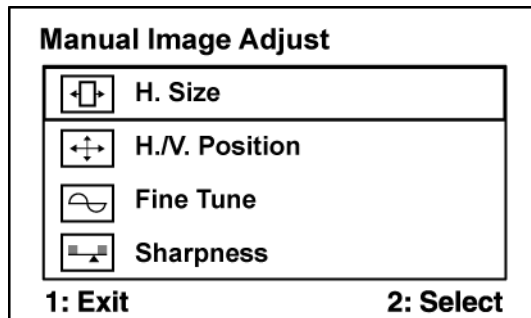


Information displays the timing mode (video signal input) coming from the graphics card in your computer, the LCD model number, the serial number, and the ViewSonic website URL. See your graphic cards user guide for instructions on changing the resolution and refresh rate (vertical frequency).

NOTE: VESA 1280 x 1024 @ 60Hz (recommended) means that the resolution is 1280 x 1024 and the refresh rate is 60 Hertz.



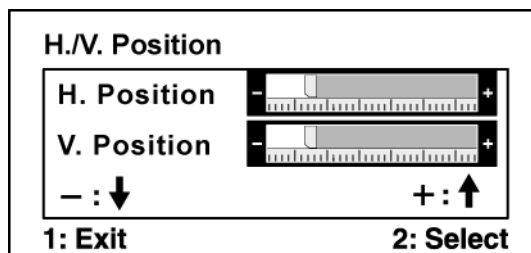
Manual Image Adjust Sub-menu



H. Size (Horizontal Size) adjusts the width of the screen image.



H./V. Position (Horizontal/Vertical Position) moves the screen image left or right and up or down.



Fine Tune sharpens the focus by aligning the text and/or graphic characters.

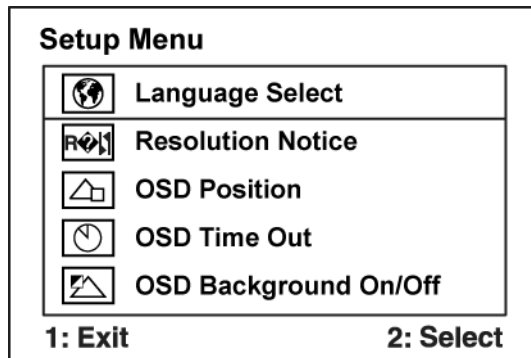
NOTE: Try Auto Image Adjust first.



Sharpness adjusts the clarity and focus of the screen image.



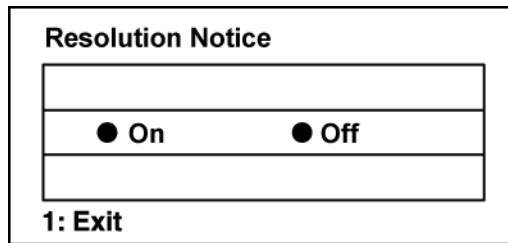
Setup menu displays the menu shown below:



Language allows you to choose the language used in the menus and control screens.



Resolution Notice allows you to enable or disable this notice.



If you enable the Resolution Notice shown above and your computer is set at a resolution other than 1280 x 1024, the following screen appears.



OSD Position allows you to move the on-screen display menus and control screens.



OSD Timeout sets the length of time the on-screen display screen is displayed. For example, with a “30 second” setting, if a control is not pushed within 30 seconds, the display screen disappears.



OSD Background On/Off allows you to turn the On-Screen Display background On or Off.



Memory Recall returns the adjustments back to factory settings if the display is operating in a factory Preset Timing Mode listed in the Specifications of this manual.

Hot Keys for Function Controls

| | |
|--|---|
| [1] | Main Menu |
| [2] | Input toggle (Analog or Digital) or Auto Image Adjust. |
| [▼] or [▲] | To immediately activate Contrast menu. It should be change to Brightness OSD by push button [2] |
| [▼] + [▲] | Recall both of Contrast and Brightness to default |
| [1] + [2] | Toggle 720x400 and 640x400 mode when input 720x400 or 640x400 mode |
| [1] + [▼] + [▲] | White Balance. (Not shown on user's guide) |
| [1] + [▼] | Power Lock |
| [1] + [▲] | OSD Lock |
| <ol style="list-style-type: none"> 1. Turn off [Power on/off] button. 2. Press [▲] + [▼] + [Power on/off] at same time 3. Press [1] | All Mode Reset. It will erase all end users' setting and restore the factory defaults. |
| Remark : All the short cuts function are only available while OSD off | |

Hot Keys for Factory Control

3. Turn off [Power on/off] button.
4. Press [▲] + [▼] + [Power on/off] at same time
5. Press [1]

Then you will see the BIOS update picture show in the screen as below.



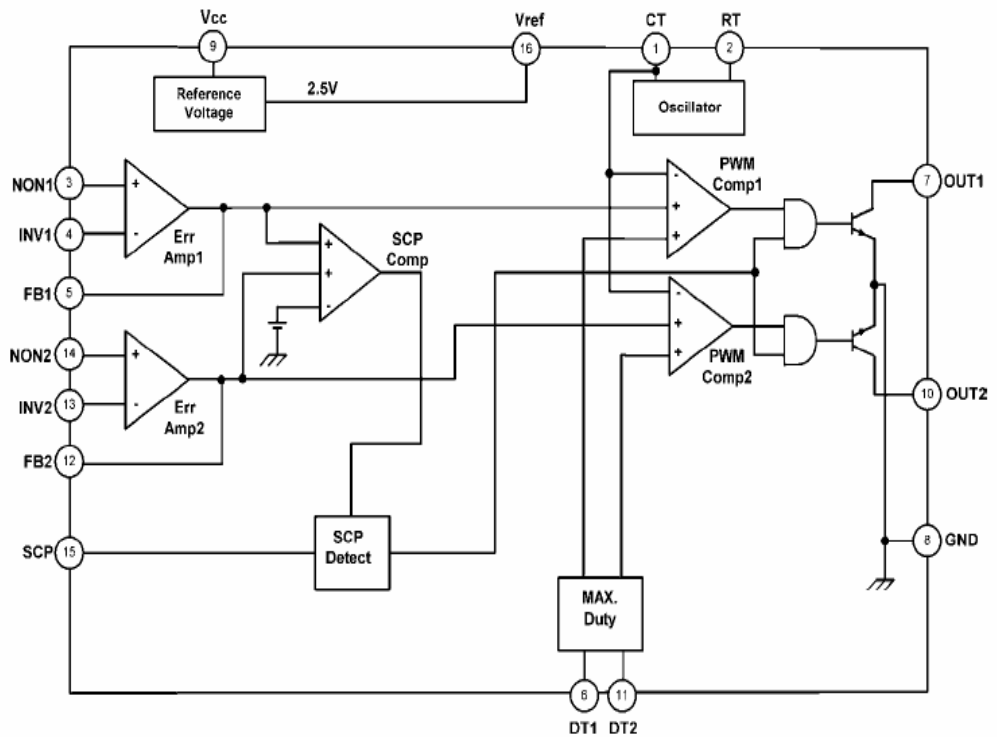
4. Circuit Description

Circuit Description

1. Power supply (DC/DC Converter)

The AT1741 is 2-channel PWM switching regulator controllers that contains an on-chip 2.5V reference, two error amplifier, an adjustable oscillator, two dead-time comparators, under voltage lockout circuitry and 2 common-emitter output. It is idea for step-up, step-down, and inverting converter.

Block Diagram



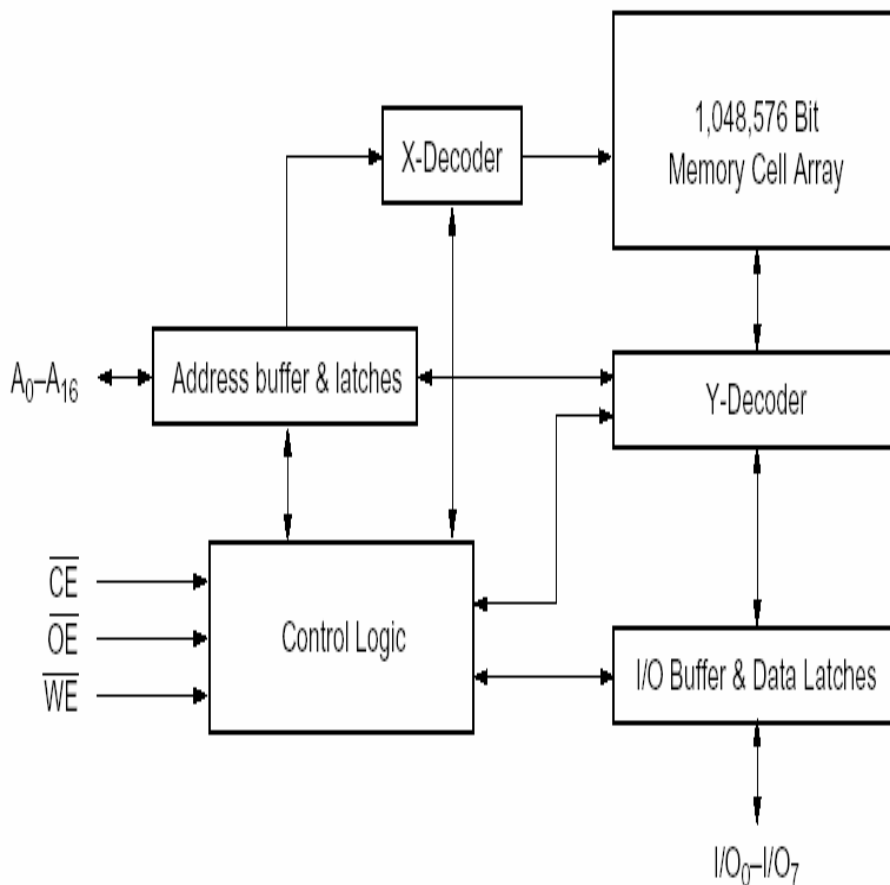
2. Flash Memory

The F29C51001T/F29C51001B is a 1 Megabit, 5.0 Volt-only Flash Memory organized as 131,072 bytes of 8 bits each. This device is designed to use a 4.7 Volt to 5.3 Volt power supply to perform in-system programming.

The 1 Megabit memory array is divided into thirty-two uniform blocks of 4 Kbytes each for data and/or code storage.

The block architecture allows users to flexibly make chip erase or block erase operation. The block erase feature allows a particular block to be erased and reprogrammed without affecting the data in other blocks. After the device performs chip erase or block erase operation, it can be reprogrammed on a byte-by-byte basis.

Functional Block Diagram



3. GM5120

The gm5116/26 is a graphic processing IC for Liquid Crystal Display (LCD) monitors at XGA/SXGA resolution. It provides all key IC functions required for the highest quality LCD monitors. On-chip functions include a high-speed triple-ADC and PLL, Ultra-Reliable DVI™ receiver, a high quality zoom and shrink scaling engine, an on-screen display (OSD) controller, digital color controls and an on-chip microcontroller (OCM). With this level of integration, the gm5116/26 devices simplify and reduce the cost of LCD monitors while maintaining a high-degree of flexibility and quality.

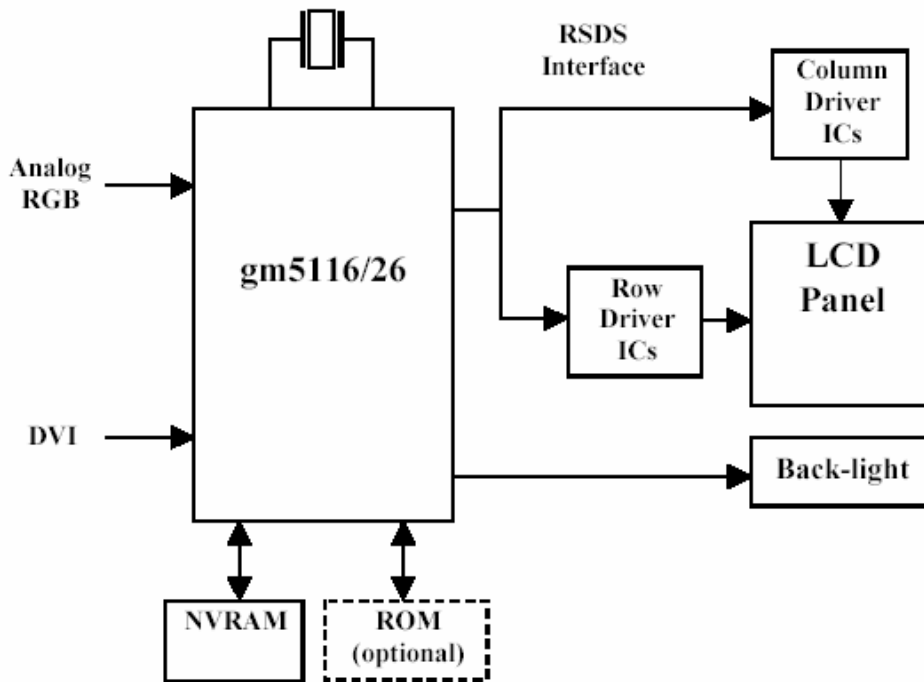


Figure 1. gm5116/26 System Design Example

4. LVDS (THC63LVDM83A)

The THC63LVDM83A transmitter converts 28 bits of CMOS/TTL data into LVDS (Low Voltage Differential Signaling) data stream. A phase-locked transmit clock is transmitted in parallel with the data streams over a fifth LVDS link. The HC63LVDM83A can be programmed for rising edge or falling edge clocks through a dedicated pin. The THC63LVDF84A receiver converts the LVDS data streams back into 28 bits of CMOS/TTL data with falling edge clock. At a transmit clock frequency of 85MHz, 24 bits of RGB data and 4 bits of LCD timing and control data (HSYNC, VSYNC, CNTL1, CNTL2) are transmitted at a rate of 595 Mbps per LVDS data channel.

5. Adjustment Procedure

5-1 Function Test and Alignment Procedure

1. All Modes Reset

You should do “All Model Reset” (Refer to Chap 3. Hot Keys for Function Controls) first. This action will allow you to erase all end-user’s settings and restore the factory defaults.

2. Auto Image Adjust

The Auto Adjust is aimed to offer a best screen quality by built-in ASIC. For optimum screen quality, the user has to adjust each function manually.

- A. Turn the computer and LCD monitor on.
- B. Press the ‘Auto’ button on monitor keypad to Auto Adjust.
- C. The LCD monitor will start the Auto Adjust process automatically and run for 10 consecutive seconds, during which time you will notice the image change.

3. Firmware

Test Pattern : Burn in Model (Refer to Chap3. Hot Keys for Function Control)

-Make sure the F/W is the latest version.

4. DCC

Test Pattern: EDID program

-Make sure it can pass test program.

5. Window Shut Down

Test Signal: 1280*1024@60Hz

Test Pattern:



Checkered Pattern Every One Pixel (50%Green & 50%Blue)

Inspection Item: Flicker, Mura

6. Window BG

Test Signal: 1280*1024@60Hz

Test Pattern:



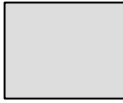
Window standard pattern

Inspection Item: Line Defect, Function Defect & Mura

7. 25 Gray

Test Signal: 1280*1024@60Hz

Test Pattern:



Full Screen 25% White (Gray)

Inspection Item: Particle, Line Defect & Mura

8. 50 Gray

Test Signal: 1280*1024@60Hz

Test Pattern:



Full Screen 50% White (Gray)

Inspection Item: Bright Dot, Particle, Line Defect & Mura

9. White Box

Test Signal: 1280*1024@60Hz

Test Pattern:



Window standard pattern

Inspection Item: Particle, Line Defect, Power, Image Remain & Mura

10. Black Box

Test Signal: 1280*1024@60Hz

Test Pattern:



Window standard pattern

Inspection Item: Bright Dot, Line Defect & Power

11. RED

Test Signal: 1280*1024@60Hz

Test Pattern:



Full Screen Red

Inspection Item: Bright Dot, Partial & Line Defect

12. Green

Test Signal: 1280*1024@60Hz

Test Pattern:



Full Screen Green

Inspection Item: Bright Dot, Partial & Line Defect

13. Blue

Test Signal: 1280*1024@60Hz

Test Pattern:



Full Screen Green

Inspection Item: Bright Dot, Partial & Line Defect

14. Gray_Scale_0-100_V256

Test Signal: 1280*1024@60Hz

Test Pattern:



Vertical 64 (256) Gray Scale (Right Left , From 0 to 100% White)

Inspection Item: Line Defect & Function Defect

16. Gray_Scale_0-100_H256

Test Signal: 1280*1024@60Hz

Test Pattern:



Horizontal 64(256) Gray Scale (Up Down , From 0 to 100% White)

Inspection Item: Line Defect & Function Defect

16. Block Window

Test Signal: 1280*1024@60Hz

Test Pattern:

Black block at the center



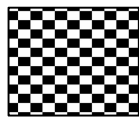
Inspection Item: Cross Talk & Optical Character

17. Black_Tile

Test Signal: 1280*1024@60Hz

Test Pattern:

Black tile under white background



Inspection Item: Function Defect & Image Remain

5-2 Function Test Display pattern

| Item | Pattern | Description | Remark |
|------|--------------------|---|----------|
| 1 | Gray_Scale_0-100_V | Vertical 64 (256) Gray Scale (右 左 , From 0 to 100% White) | Figure 1 |
| 2 | Gray_Scale_0-100_H | Horizontal 64 (256) Gray Scale (上 下 , From 0 to 100% White) | Figure 2 |
| 3 | Black | Full Screen Black | Figure 3 |
| 4 | Red | Full Screen 50% Red | Figure 4 |
| 5 | Green | Full Screen 50% Green | Figure 5 |
| 6 | Blue | Full Screen 50% Blue | Figure6 |
| 7 | White | Full Screen White | Figure7 |
| 8 | Black_Tile | Black Tile Under White Background | Figure 8 |

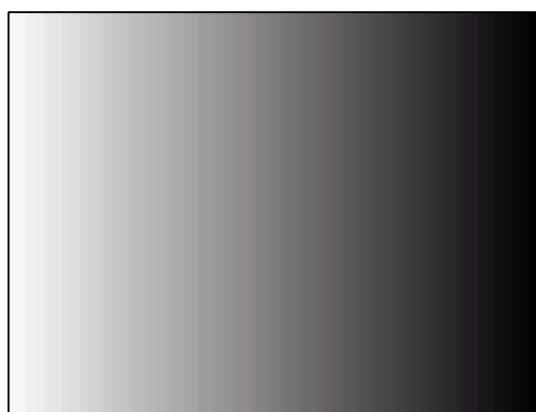


Figure 1



Figure 2

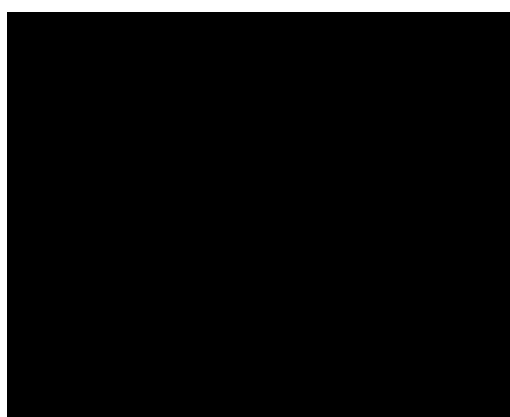


Figure 3



Figure 4

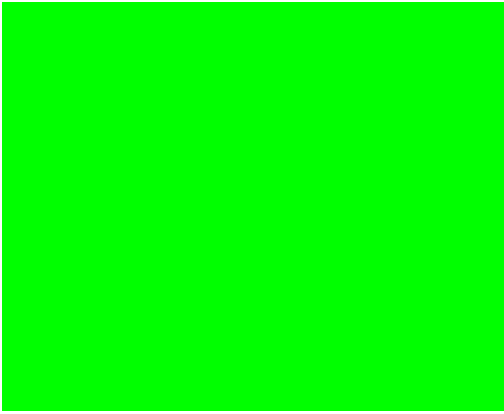


Figure 5

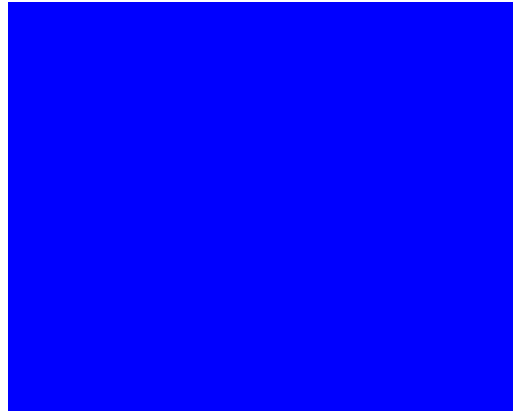


Figure 6

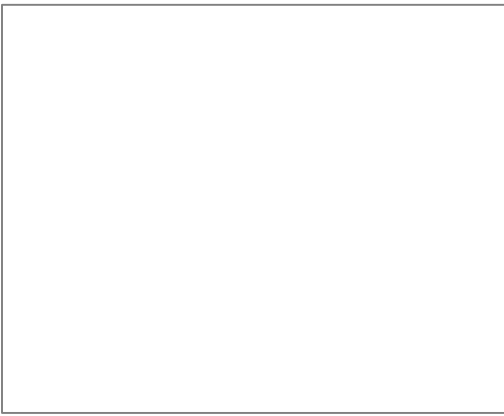


Figure 7

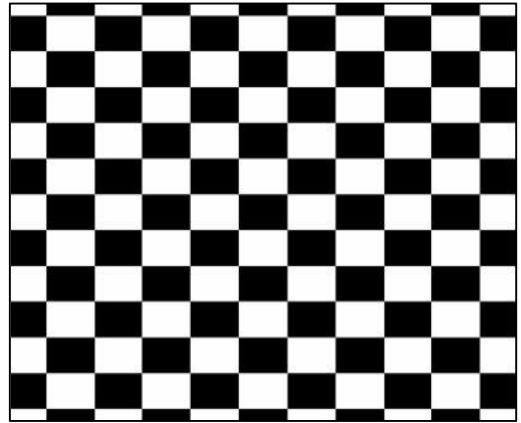


Figure 8

5-3 Function Test and Alignment Procedure

1. All Modes Reset

You should do “All Model Reset” (Refer to Chap 3. Hot Keys for Function Controls) first. This action will allow you to erase all end-user’s settings and restore the factory defaults.

2. Auto Image Adjust

The Auto Adjust is aimed to offer a best screen quality by built-in ASIC. For optimum screen quality, the user has to adjust each function manually.

- A. Turn the computer and LCD monitor on.
- B. Press the ‘Auto’ button on monitor keypad to Auto Adjust.
- C. The LCD monitor will start the Auto Adjust process automatically and run for 10 consecutive seconds, during which time you will notice the image change.

3. Firmware

Test Patten : Burn in Model (Refer to Chap3. Hot Keys for Function Control)

-Make sure the F/W is the latest version.

4. DCC

Test Patten: EDID program

-Make sure it can pass test program.

5. Window Shut Down

Test Signal: 1280*1024@60Hz

Test Pattern:

6. BIOS update procedure

BIOS Update User Guide

For ViewSonic

BIOS Update Flow for Genesis

1.1 Program :

1.1.1. Software

a. Please download the file “ Genesis” from CMO E-Sir system. There are ISP & BIOS two files, kindly see as below.

a) ISPACK.EXE: Main program



GProbe4.2.0.3.exe

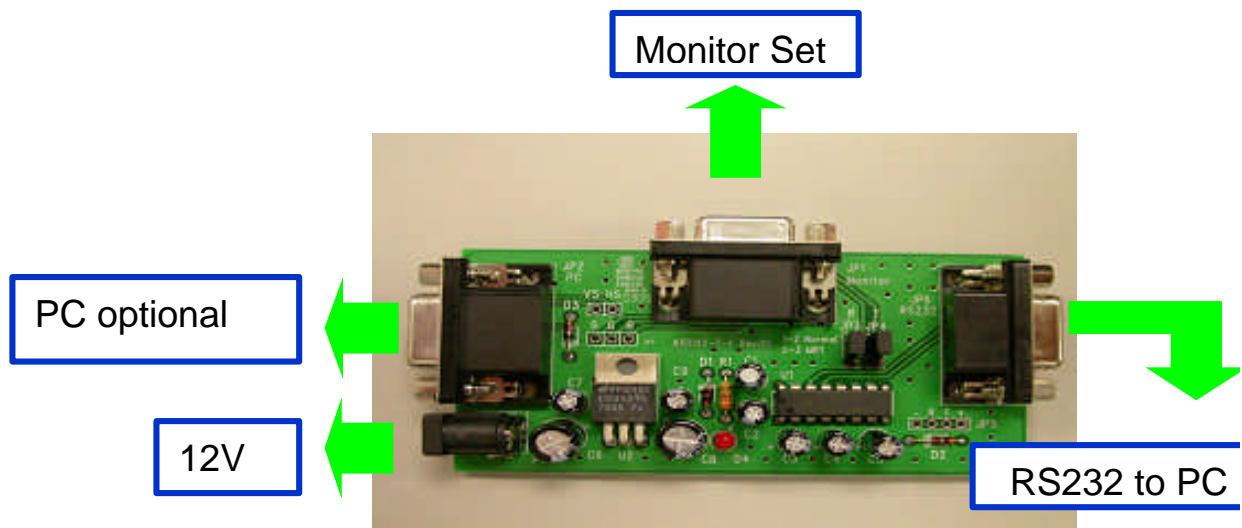
b) Ancillary .ISPACK.EXE : Description program



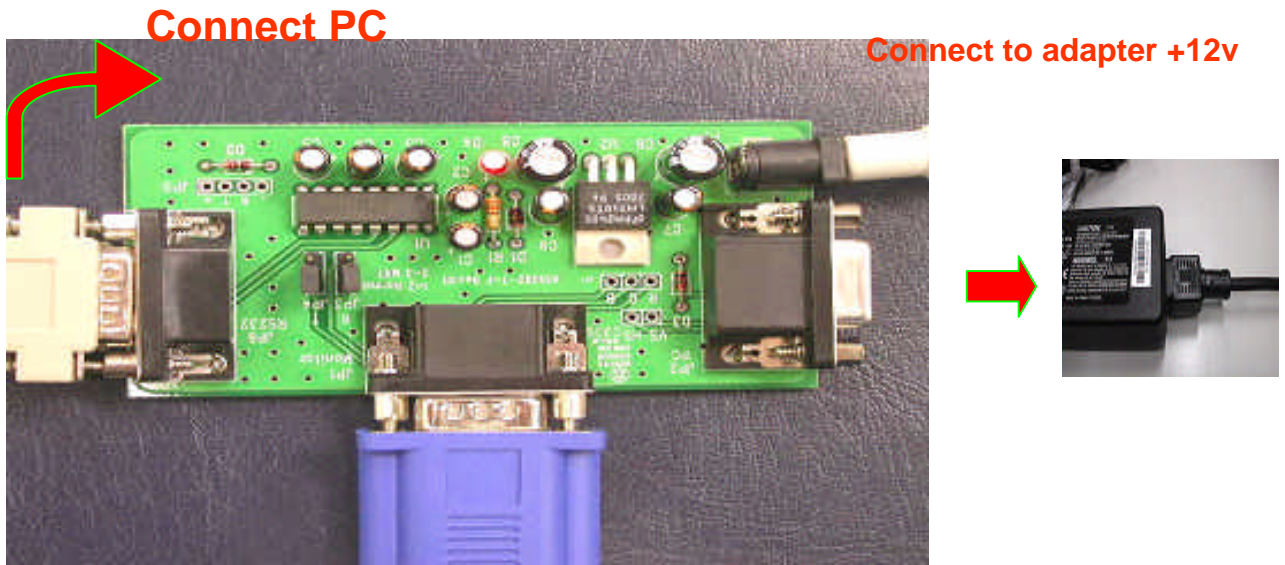
GProbe4.2.0.3_gm5126.exe

1.1.2. Hardware

- RS232 cable (9 Pin)
- D_Sub cable (15Pin)
- 12V Power supply
- RS232 to D_Sub transfer BD



1.1.3 Join R232, monitor cable, and adapter. Detail, see the example picture as below.



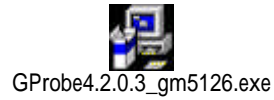
VGA
Cable



Connect monitor

1.2 Installation :

A. Please install the programs respectively as below.



Before Setup produce **GProbe 4** file . Please set at ISP & BIOS software file.

B. I S & BIOS software file to be about to produce the next. (If the file existence already, needn't to



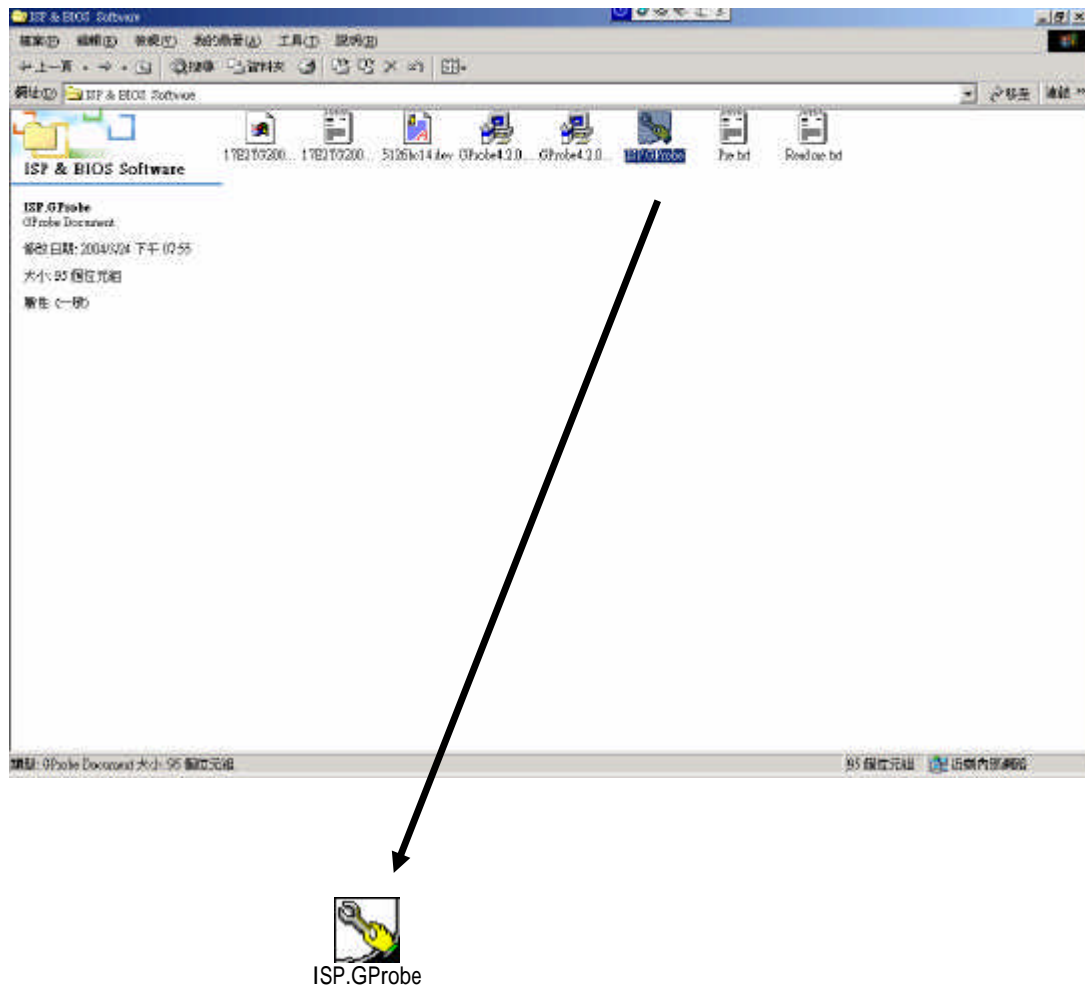
repeat.) This system is applied to Win 95/98/NT/2000.

1.3 ISP Execution

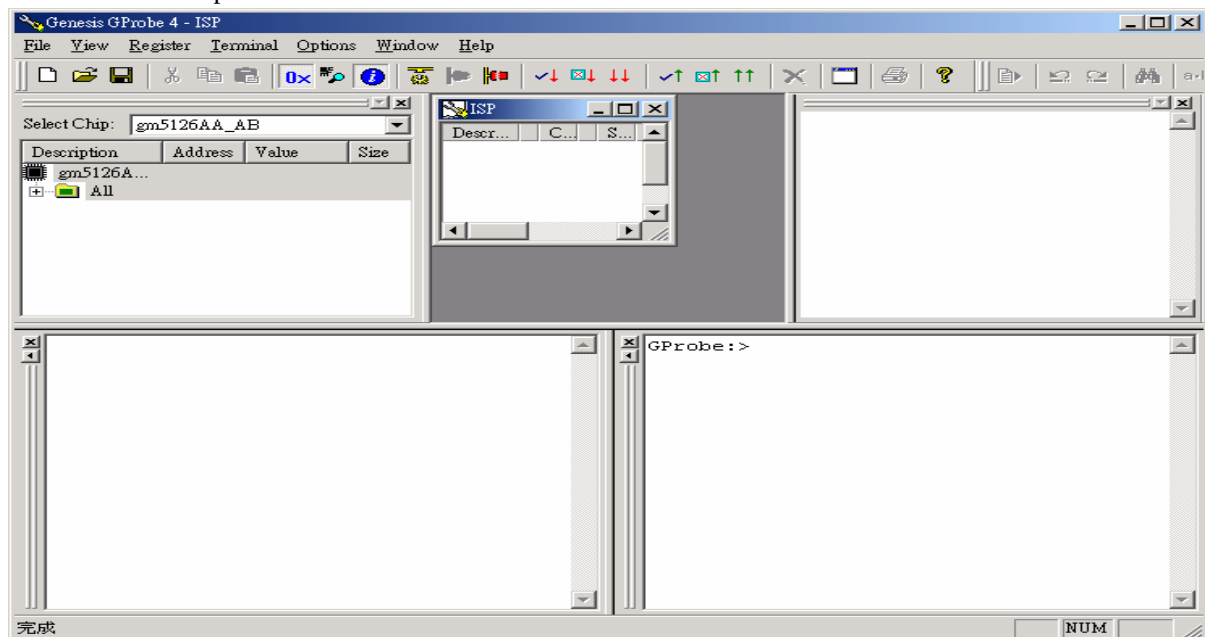


Please copy all the files above to the same directory

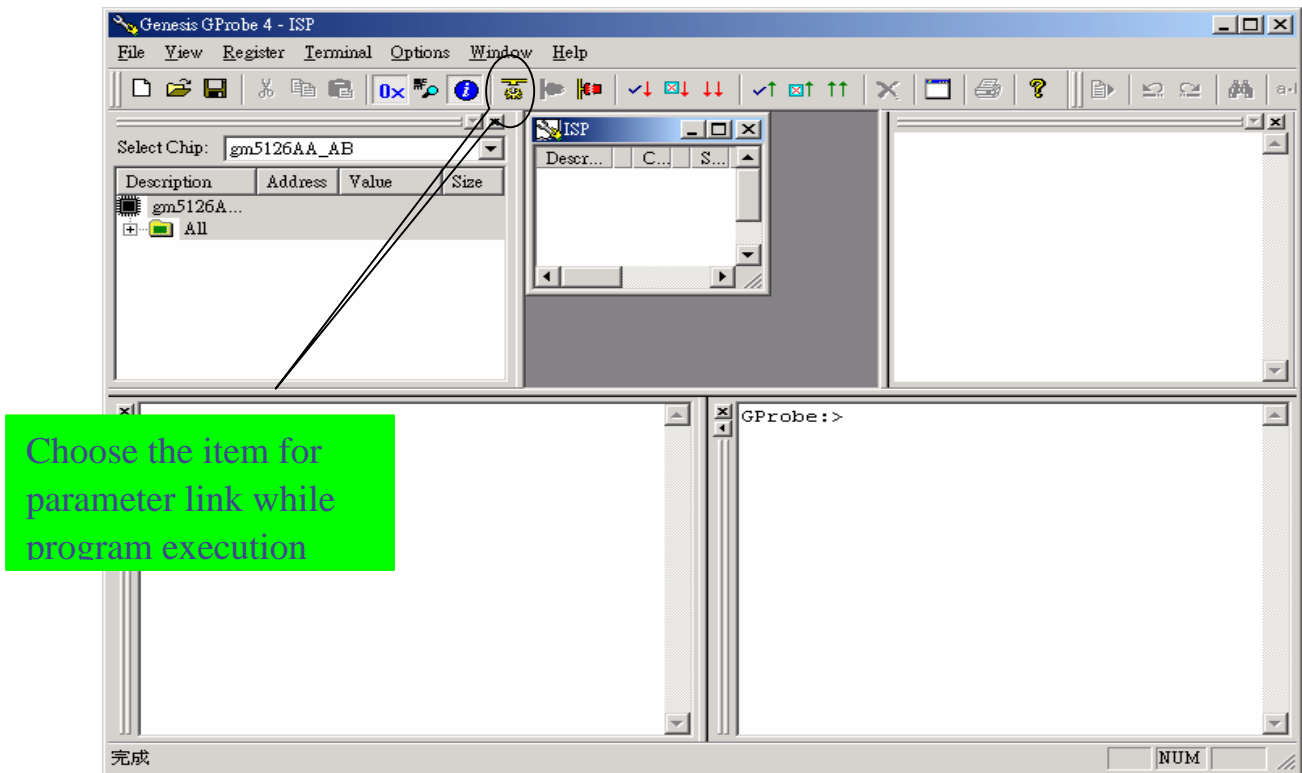
1. Open ISP.Gprobe while parameters set up have been completed.



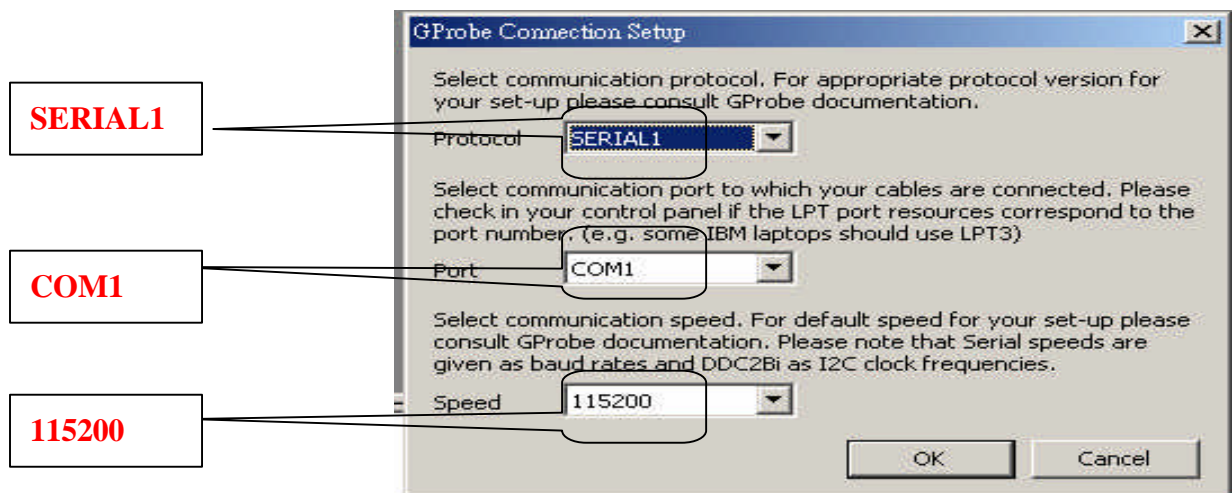
2. You will see the picture as below.



3. Execute the main program (Grove).

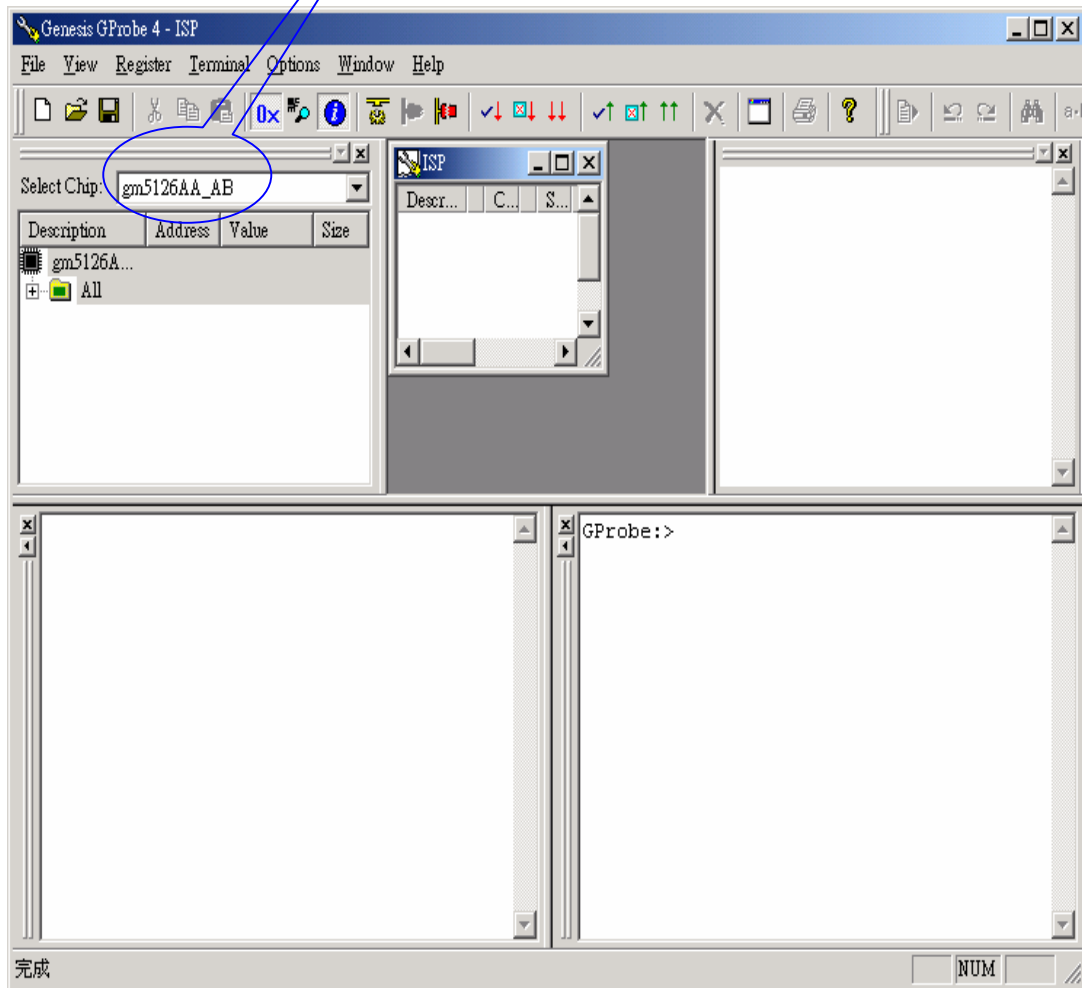


4. Please follow up the parameter set up shown as below :



5. Select “gm5126AA_AB”

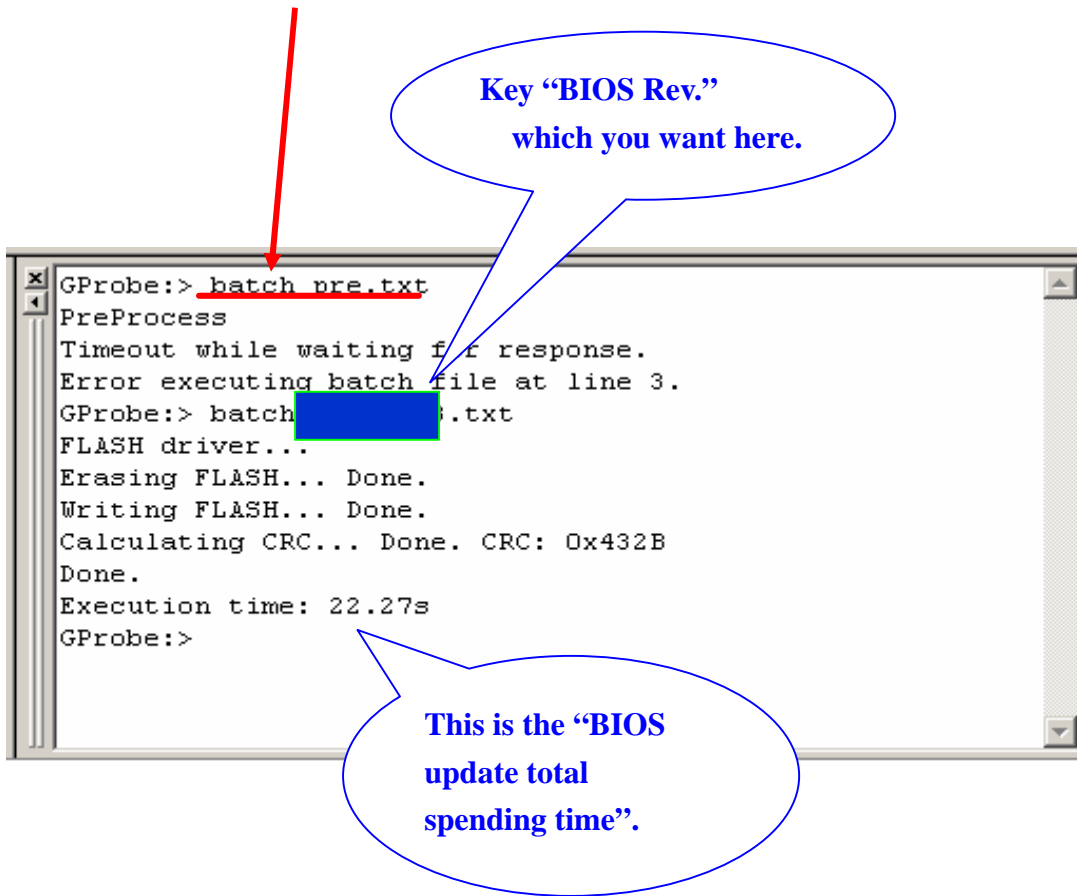
Select
“gm5126AA_AB”



6. Execute Pre.txt : Input **BATCH PRE.TXT**

The image shows a terminal window with two panes. The left pane displays system information: 'V1.11 RC23', 'ChipID = 0xf1', and 'Debug Mode' (underlined). A callout bubble points to 'Debug Mode' with the text: 'The system can execute ISP while the words show up'. The right pane shows a command prompt 'GProbe:>' followed by the command 'batch pre.txt' (underlined). A callout bubble points to this command with the text: 'Input " BATCH PRE.TXT"'. Below the command, the output is: 'PreProcess', 'Timeout while waiting for response.', 'Error executing batch file at line 3.', and 'GProbe:>'. A callout bubble points to the error message with the text: 'If appear line 3 is OK, Appear line 2 is Error. Please check wiring.'

7. Please check the entity connection and execute Gprobe 4 again once Debug Mode did not show up
ISP Program execution : Input **BATCH (update of BIOS Rev) .TXT**

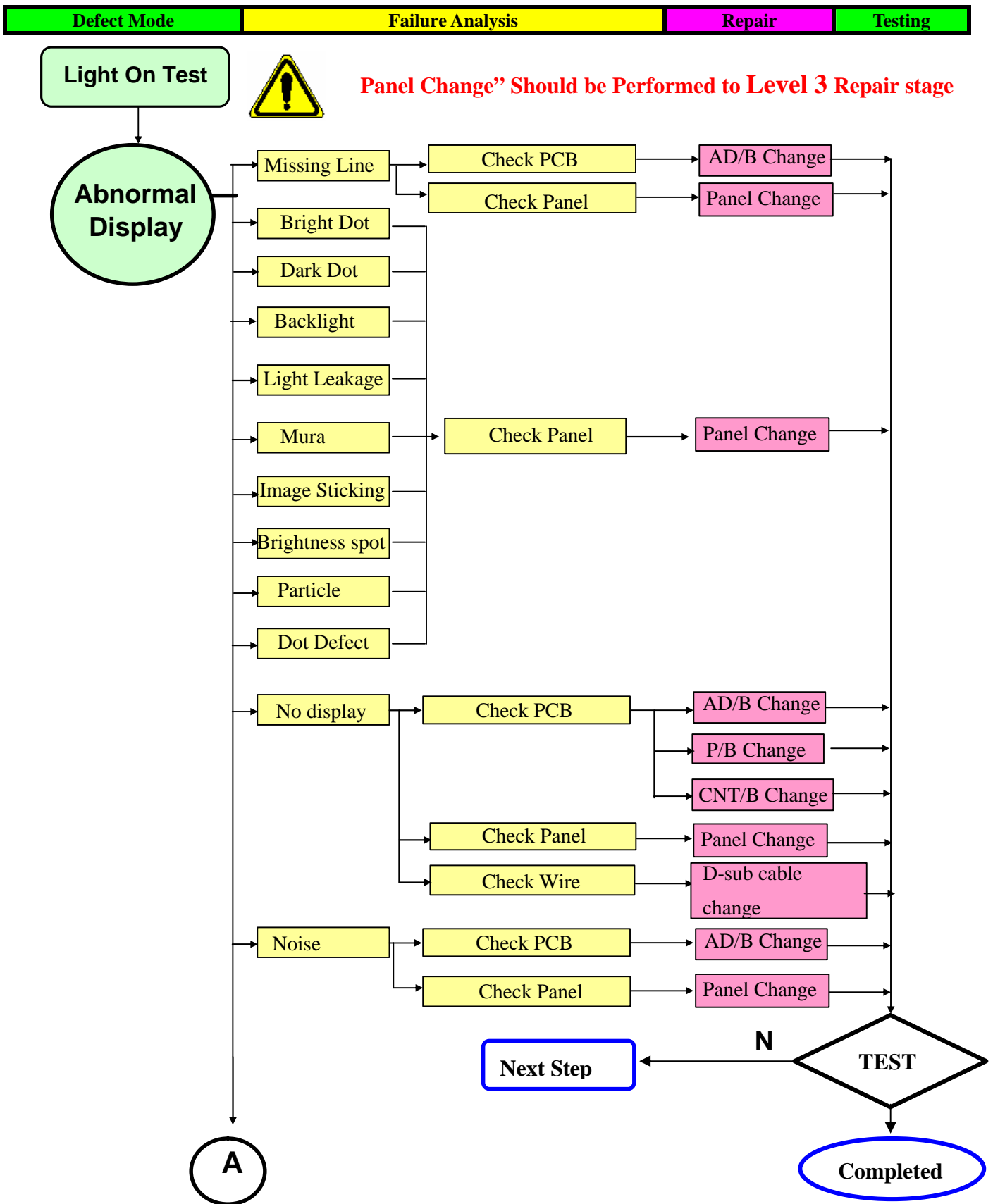


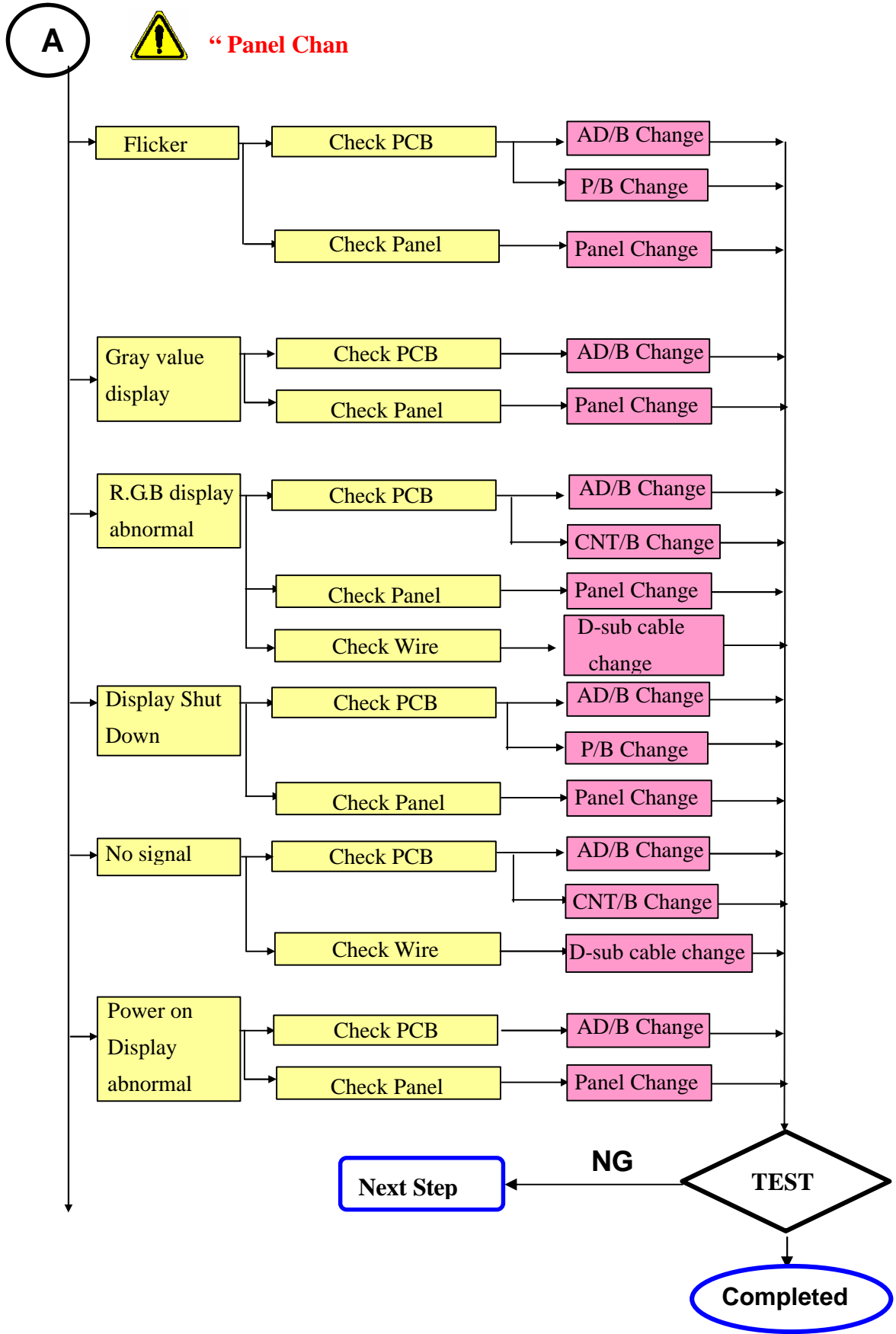
If failed, Please don't turn off power. Repeat do it again, from step 6 to step 7.

8. When everything is done. Please turn off the power and restart it again.
Check Factory Mode and make sure it already be updated.



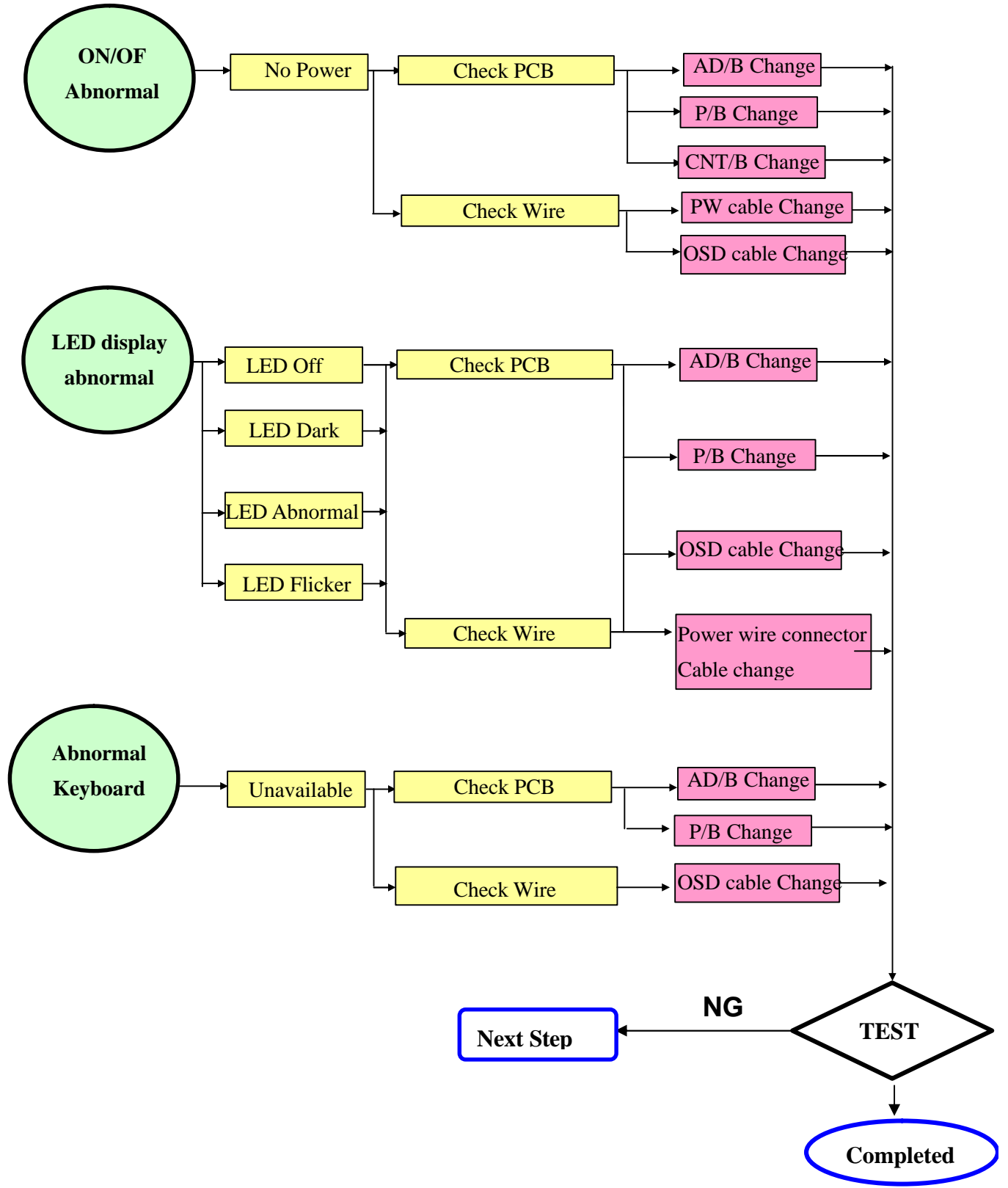
6. Troubleshooting Flow Chart





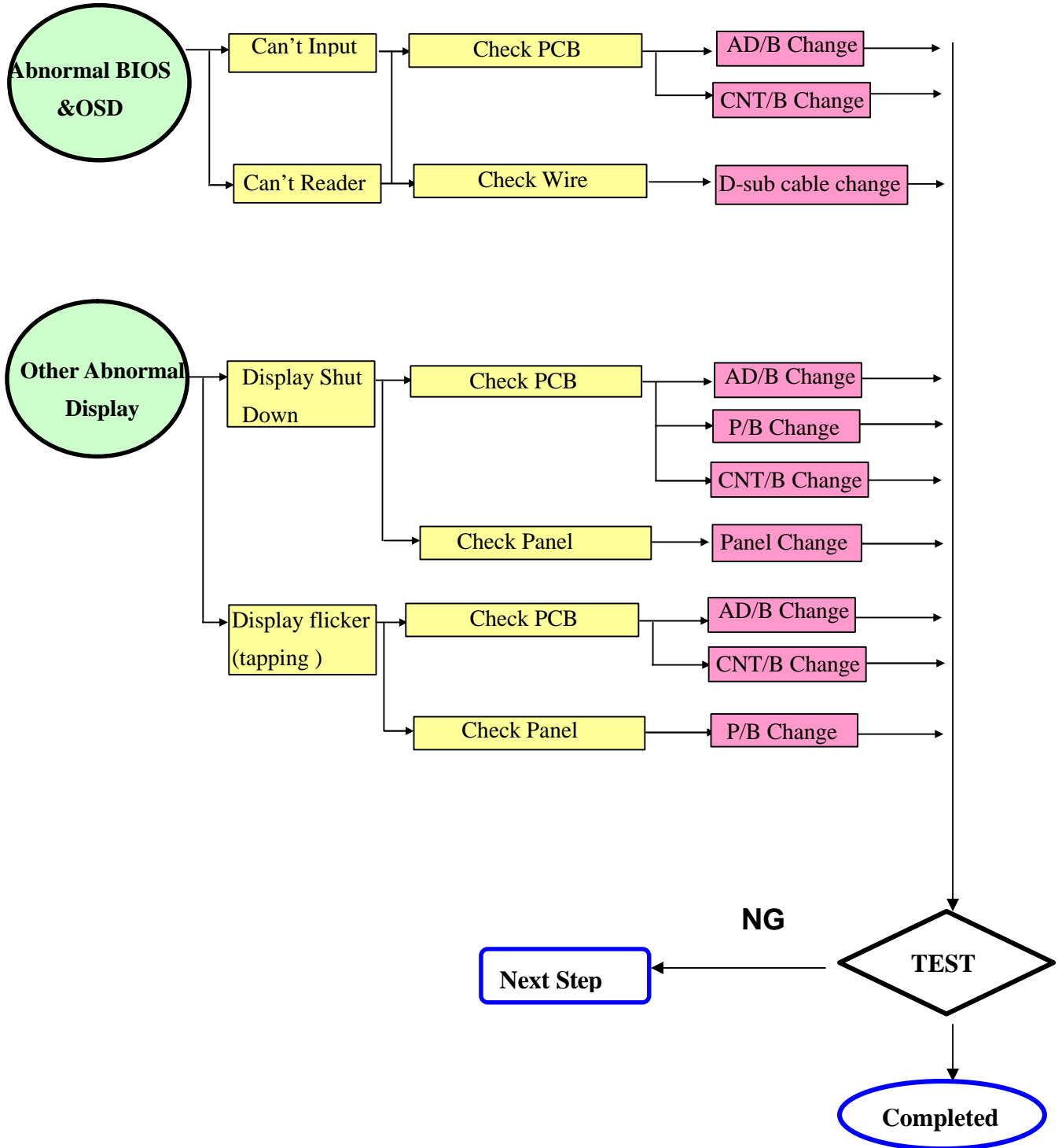


“Panel Change” Should be Performed to Level 3 Repair stage





“Panel Change” Should be Performed to Level 3 Repair stage



◆ Troubleshooting Analysis

Check the information in this section to see if the problems can be solved before requesting repair.

Note : The consumers are only allowed to solve the problems described as below. Any unauthorized product modification, or failure to follow instructions supplied with the product will end the warranty immediately.

- **No image**
 - Make sure power button is ON.
 - Check whether the LCD monitor and computer power cords are plugged and whether there is a supply of power.
- **No Signal Input**
 - Check the signal connection between the computer and LCD monitor.
- **“Out of Range”**
 - Check the computer image output resolution and frequency and compare the value with the preset values (Please refer to [Appendix-Display Mode]).
- **Fuzzy Image**
 - Adjust Phase.
- **Image too bright**
 - Adjust brightness and contrast by OSD.
- **Image too dark**
 - Adjust brightness and contrast by OSD.
- **Irregular image**
 - Check the signal connection between the computer and LCD monitor.
 - Perform Auto Adjust.
- **Distorted image**
 - Reset the LCD monitor
 - Take off extra accessories (such as signal extension cord).
- **Image is not centered**
 - Use OSD Image Menu to adjust H_Position and V_Position.
 - Check image size setting.
 - Perform Auto Adjust.
- **Size is not appropriate**
 - Use OSD Image Menu to adjust H_Position and V_Position.
 - Check image size setting.
 - Perform Auto Adjust.
- **Uneven color**
 - Use OSD Color Menu to adjust color setting.
- **Color too dark**
 - Use OSD Color Menu to adjust color setting.
- **Dark area distorted**
 - Use OSD Color Menu to adjust color setting.
- **White color is not white**
 - Use OSD Color Menu to adjust color setting.

7. Recommended Spare Parts List

RECOMMENDED SPARE PARTS LIST (VA712-1)

ViewSonic Model Number: VS10697
Rev: 1a

Due to the VA712-1 is *ISM model, therefore, it didn't have separate part number for panel.
*ISM : Integrated Smart Module.

| Item | Description | ECR/ECN | ViewSonic P/N | Ref. P/N | Location | Q'ty |
|------|---|---------|---------------|-------------------------|----------|------|
| 1 | Accessory: Adapter, DA-60F19-AE, 19 V, 3.16 A, 60 W, Black, Asian Power Devices, Two BC, CD FOR VSC | | A-00002056 | 271906019K | | 1 |
| 2 | Power Cord, UL, SVT#18/3C, 75, LP-30B+LS-13, L=1830+/-50mm, Black, Linetek, 18AWG, No Bag (for Taiwan) | | A-00000458 | 32E1818015 (AH0E1TCA2G) | | 1 |
| 3 | Power Cord, UL, SVT#18/3C, 75, LP-30B+LS-13, L=1830+/-50mm, Black, Linetek, 18AWG, No Bag (for UK) | | A-00002057 | 32E1818060 (AH0E1TBK2G) | | 1 |
| 4 | Power Cord, UL, SVT#18/3C, 75, LP-30B+LS-13, L=1830+/-50mm, Black, Linetek, 18AWG, No Bag (for China) | | A-00002058 | 32E1818013 (AH0E1TBC2G) | | 1 |
| 5 | Power Cord, UL, SVT#18/3C, 75, LP-30B+LS-13, L=1830+/-50mm, Black, Linetek, 18AWG, No Bag (for North America) | | A-00000458 | 32E1818015 (AH0E1TBA2G) | | 1 |
| 6 | Power Cord, UL, SVT#18/3C, 75, LP-30B+LS-13, L=1830+/-50mm, Black, Linetek, 18AWG, No Bag (Europe) | | A-00002059 | 32E1818018 (AH0E1TBE2G) | | 1 |
| 7 | Power Cord, UL, SVT#18/3C, 75, LP-30B+LS-13, L=1830+/-50mm, Black, Linetek, 18AWG, No Bag (Japan) | | A-00002060 | 32E1818014 (AH0E1TBJ2G) | | 1 |
| 8 | Board Assembly: DC/AC Inverter, TWS-444-991, 2560V(min)/5.5mA(type), Sumida | | B-00002061 | 2714000027 | | 1 |
| 9 | PCBA for , A170E2-T, A170E2-H-S, 202-04, X3, OSE/USI, ODM, | | B-00002062 | 35-D000353 | | 1 |
| 10 | PCBA For A170E2-T, A170E2-H-K, Rev.02, Rigid, 202-01, (turn key) | | B-00000460 | 35A17K0205 | | 1 |
| 11 | Cabinets: Bezel Assy, A170E1-H0G, Assy, Pantone 877C Silver, Injex | | C-00002063 | 40-D000161 | | 1 |
| 12 | Cover Hinge Assy, A170E1-H0G, Assy, J91A11B4 Black, Injex | | C-00002064 | 40-D000212 | | 1 |
| 13 | Rear Assy, A170E1-H0G, Assy, J91A11B4 Black, Injex | | C-00002065 | 40-D000165 | | 1 |
| 14 | Stand Seat Assy, A170E1-H0G, Assy, J91A11B4, Injex | | C-00002066 | 40-D000164 | | 1 |
| 15 | Cables: Audio Cable, A150X2, 18AWG, 180cm, Black, JCE | | CB-00000544 | 32F2818004 | | 1 |
| 16 | FFC_X, A170E1, 45Pin, 55*23mm | | CB-00000545 | 3241702002 | | 1 |
| 17 | FFC-OSD, A170E1-H01, 15Pin, 180mm*16mm, Pitch=1.0mm | | CB-00000546 | 3241700001 | | 1 |
| 18 | Monitor Cable, A150X2, 30AWG, 180cm, Black, JCE | | CB-00000547 | 32F3018003 | | 1 |
| 19 | Documentation: Carton Label, A170E1-H0G, 76.2 mm, 76.2 mm | | DC-00002072 | 77-D000113 | | 1 |
| 20 | Label, Bar-Code Labe, 55*13mm | | DC-00002073 | 7741519181 | | 1 |
| 21 | Menu for VSC(VA712), Complex, 4C | | DC-00002074 | 76-D000119 | | 1 |
| 22 | Safety Label, A170E1-H0G, 118 mm, 49 mm | | DC-00002075 | 77-D000115 | | 1 |
| 23 | Hardware: Corner Protector, 50*50*1850(mm) | | HW-00002076 | 7841595111 | | |
| 24 | Cover AD_Assy, A170E1, Tinplate, t=0.4mm, AutoAssy, DVI & D-SUB & Audio | | HW-00002077 | 41A1799118 | | 1 |
| 25 | Cover-FFC, A170E1, Tin Plate, t=0.4mm | | C-00000465 | 41A1799102 | | 1 |
| 26 | Metal Frame Front Assy, A170E1, Tin Plate, t=0.4mm, For New Panel | | M-00000558 | 41A1769104 | | |
| 27 | Screw, M3*P0.5*4, f 5.5*2, Steel | | HW-00000553 | 42A9930008 | | 2000 |
| 28 | Screw, M3*P0.5*4, f 5.5*2, Steel | | HW-00000553 | 42A9930008 | | 2000 |
| 29 | Screw, M3*P0.5*6, Steel | | HW-00000555 | 42A9930014 | | 2000 |
| 30 | Screw, f 3*P1.27*12, f 5.5*2, Steel | | HW-00000556 | 42A9990005 | | 2000 |
| 31 | Screw, f 3*P1.27*8, f 5.5*2, Steel | | HW-00000557 | 42A9930017 | | 2000 |
| 32 | Stand-Off 4 #-.40*11.8 | | M-00000559 | 42A9940007 | | 2000 |
| 33 | Support Plate, A170E1-H0G, SECC | | HW-00002078 | 41-D000130 | | |
| 34 | Miscellaneous: Tape-Conductive, AL, 125*30*0.08, A170E1-H01, 3M:AL-35R | | M-00000561 | 7344711002 | | 1 |
| 35 | Packing Material: Carton, A170E1-H0G, 470 mmx228 mmx476 mm | | P-00002067 | 78-D000122 | | 1 |
| 36 | Cushion, A170E1-H0G, PE_LD, white, 460 mmx210 mmx40 mm, Hwa Chang, PE_Foam(bottom) | | P-00002068 | 78-D000307 | | 1 |
| 37 | Cushion, A170E1-H0G, PE_LD, white, 460 mmx210 mmx40 mm, Hwa Chang, PE_Foam(Top) | | P-00002069 | 78-D000306 | | 1 |
| 38 | Inner Box, A170E1-H0G, 454 mmx160 mmx43 mm, Yuen Foong Yu, Inner Box | | P-00002070 | 78-D000337 | | |
| 39 | PE Foam Bag, LDPE, 490x560x0.13 | | P-00002071 | 7841719931 | | 1 |

RECOMMENDED SPARE PARTS LIST (VA712b-1)

ViewSonic Model Number: VSI0697
Rev: 1a

Due to the VA712-1 is *ISM model, therefore, it didn't have separate part number for panel.
*ISM : Integrated Smart Module.

| Item | Description | ECR/ECN | ViewSonic P/N | Ref.P/N | Location | Q'ty |
|------|---|---------|---------------|-------------------------|----------|------|
| 1 | Adapter, DA-60F19-AE, 19 V, 3.16 A, 60 W, Black, Asian Power Devices, Two BC, CD FOR VSC | | A-00002056 | 271906019K | | 1 |
| 2 | Power Code, UL, SVT#18/3C, 75, LP-30B+LS-13, L=1830+/-50mm, Black, Linetek, 18AWG, No Bag (for Taiwan) | | A-00000458 | 32E1818015 (AH0E1HCA2G) | | 1 |
| 3 | Power Code, UL, SVT#18/3C, 75, LP-30B+LS-13, L=1830+/-50mm, Black, Linetek, 18AWG, No Bag (for North America) | | A-00000458 | 32E1818015 (AH0E1HBA1G) | | 1 |
| 4 | Power Code, UL, SVT#18/3C, 75, LP-30B+LS-13, L=1830+/-50mm, Black, Linetek, 18AWG, No Bag (for Japan) | | A-00002060 | 32E1818014 (AH0E1HBJ1G) | | 1 |
| 5 | Power Code, UL, SVT#18/3C, 75, LP-30B+LS-13, L=1830+/-50mm, Black, Linetek, 18AWG, No Bag (for Europe) | | A-00002059 | 32E1818018 (AH0E1HBE1G) | | 1 |
| 6 | Power Code, UL, SVT#18/3C, 75, LP-30B+LS-13, L=1830+/-50mm, Black, Linetek, 18AWG, No Bag (for UK) | | A-00002057 | 32E1818060 (AH0E1HBK1G) | | 1 |
| 7 | Power Code, UL, SVT#18/3C, 75, LP-30B+LS-13, L=1830+/-50mm, Black, Linetek, 18AWG, No Bag (for China) | | A-00002058 | 32E1818013 (AH0E1HBC1G) | | 1 |
| 8 | DC/AC Inverter, TWS-444-991, 2560V(min)/5.5mA(type), Sumida | | B-00002061 | 2714000027 | | 1 |
| 9 | PCBA for , A170E2-H, A170E2-H-S, 201-08, X3, USI/OSE, ODM, | | B-00002079 | 35-D000352 | | 1 |
| 10 | PCBA For A170E2-T, A170E2-H-K, Rev.02, Rigid, 202-01, (turn key) | | B-00000460 | 35A17K0205 | | 1 |
| 11 | Bezel Assy, A170E1-H0G, ASSY, H93828B4 Midnight Gray, Injex | | C-00002080 | 40-D000162 | | 1 |
| 12 | Cover Hinge Assy, A170E1-H0G, ASSY, H93828B4 Midnight Gray, Injex | | C-00002088 | 40-D000213 | | 1 |
| 32 | Cover-FFC, A170E1, Tin Plate, t=0.4mm | | C-00000465 | 41A1799102 | | 1 |
| 13 | Rear Assy, A170E1-H0G, ASSY, H93828B4 Midnight Gray, Injex | | C-00002081 | 40-D000175 | | 1 |
| 15 | Stand Seat Assy, A170E1-H0G, ASSY, H93828B4 Midnight Gray, Injex | | C-00002082 | 40-D000163 | | 1 |
| 17 | Audio Cable, A150X2, 18AWG, 180cm, Black, JCE | | CB-00000544 | 32F2818004 | | 1 |
| 18 | DVI CABLE, DVI-D(M) TO DVI-D(M), S/L, 1.8M, W/2F, JCE, BLACK | | CB-00002083 | 32F0000004 | | 1 |
| 19 | FFC_X, A170E1, 45Pin, 55*23mm | | CB-00000545 | 32A1702002 | | 1 |
| 20 | FFC-OSD, A170E1-H01, 15Pin, 180mm*16mm, Pitch=1.0mm | | CB-00000546 | 32A1700001 | | 1 |
| 21 | Monitor Cable, A150X2, 30AWG, 180cm, Black, JCE | | CB-00000547 | 32F3018003 | | 1 |
| 22 | Carton Label for , A170E1-H0G, 76.2 mmx76.2 mm, VSC(VA712b) | | DC-00002084 | 77-D000264 | | |
| 23 | Label, Bar-Code Labe, 55*13mm | | DC-00000548 | 77A1519181 | | 1 |
| 24 | Menu for VSC_VA712b, Complex, 4C, A170E1-H0G | | DC-00002085 | 76-D000312 | | 1 |
| 25 | Safety Label for , A170E1-H0G, 118 mmx49 mm, VSC(VA712b) | | DC-00002086 | 77-D000270 | | 1 |
| 26 | Corner Protector, 50*50*1850(mm) | | HW-00002076 | 78A1595111 | | |
| 27 | Cover AD_Assy, A170E1, Tinplate, t=0.4mm, Autoassy, DVI & D-SUB & Audio | | HW-00002077 | 41A1799118 | | 1 |
| 28 | Metal Frame Front Assy, A170E1, Tin Plate, t=0.4mm, For New Panel | | M-00000558 | 41A1769104 | | |
| 29 | Screw, M3*P0.5*4, f 5.5*2, Steel | | HW-00000553 | 42A9930008 | | 2000 |
| 14 | Screw, M3*P0.5*4, f 5.5*2, Steel | | HW-00000553 | 42A9930008 | | 2000 |
| 16 | Screw, M3*P0.5*6, Steel | | HW-00000555 | 42A9930014 | | 2000 |
| 30 | Screw, f 3*P1.27*12, f 5.5*2, Steel | | HW-00000556 | 42A9990005 | | 2000 |
| 31 | Screw, f 3*P1.27*8, f 5.5*2, Steel | | HW-00000557 | 42A9930017 | | 2000 |
| 33 | Stand-Off 4 #-40*11.8 | | M-00000559 | 42A9940007 | | 2000 |
| 34 | Support Plate, A170E1-H0G, SECC | | HW-00002078 | 41-D000130 | | |
| 35 | Miscellaneous: Tape-Conductive, AL, 125*30*0.08, A170E1-H01, 3M:AL-35R | | M-00000561 | 7344711002 | | 1 |
| 36 | Carton, A170E1-H0G, 470 mmx228 mmx476 mm, VSC_VA712b | | P-00002087 | 78-D000310 | | 1 |
| 37 | Cushion, A170E1-H0G, PE_LD, white, 460 mmx210 mmx40 mm, Hwa Chang, PE_Foam(bottom) | | P-00002068 | 78-D000307 | | 1 |
| 38 | Cushion, A170E1-H0G, PE_LD, white, 460 mmx210 mmx40 mm, Hwa Chang, PE_Foam(Top) | | P-00002069 | 78-D000306 | | 1 |
| 39 | Inner Box, A170E1-H0G, 454 mmx160 mmx43 mm, Yuen Foong Yu, Inner Box | | P-00002070 | 78-D000337 | | 1 |
| 40 | PE Foam Bag, LDPE, 490x560x0.13 | | P-00002071 | 78A1719931 | | 1 |

BOM LIST (VA712-1)

ViewSonic Model Number: VS10697

Rev: 1a

| Item | ViewSonic P/N | Ref.P/N | Location | Location | Universal # | Q'ty |
|------|---------------|------------|---|---|-------------|------|
| 1 | #N/A | MH0E50EK01 | 17" Common BOM,E5-L08,72%,Scan COG,TFT Rev.C 10ms Cell | | | 1 |
| 2 | #N/A | L3H007XXX7 | 17"Phot Spacer TN Asahi 0.7mm glass with 10 ms LC | | | 1 |
| 3 | #N/A | 36X8607401 | Driver IC,COG,Scan,HX8607APD400,263Channel,HIMAX | SIC | | 4 |
| 4 | #N/A | 7344191016 | COG_CF,AC-8405Z-23,1.5mm,50M/RL | | | 1 |
| 5 | #N/A | 7344191002 | ACF,AC7206(OLB),100M/RL | | | 1 |
| 6 | #N/A | 36X8002551 | TAB-DATA,A170E1,HIMAX:HX8002TB55 | Data | | 10 |
| 7 | #N/A | 7344191011 | ACF,AC-9051AR-35,100M/RL | | | 1 |
| 8 | #N/A | 35A17X0211 | PCBA,A170E2-H,A170E2-H-X,201-05,X4,OSE/Universal Scientific Industrial/USI,TurnKey | PCBA-X | | 1 |
| 9 | #N/A | 34A17X2X07 | PCB,A170E2-H-X,X4,Taiwan PCB Techvest,(A17012614A),RoHS | | | 1 |
| 10 | #N/A | 01056FR001 | Chip Resistor,SMD,+5%,0603,1/16W,0 OHM | R4,R6,R7,R9,R15,R20 ,R28,R36,R44,R42,R4 5,R12 | | 12 |
| 11 | #N/A | 01056F1011 | Chip Resistor,SMD,+5%,0603,1/16W,100 OHM | R13,R14,R16~R19,R2 2~R27,R30~R35,R37, R38 | | 20 |
| 12 | #N/A | 01058FR001 | Chip Resistor,SMD,+5%,0805,1/10W,0 OHM | L1,L2 | | 2 |
| 13 | #N/A | 050Z015561 | Chip Capacitor,MLCC,Y5V,0603,100nF,25V,-20~+80% | C3,C16~C25,C27~C36 | | 21 |
| 14 | #N/A | 050Z475381 | Chip Capacitor,MLCC,Y5V,0805,4.7uF,10V,-20~+80% | C4,C5,C7,C9,C11,C13 ,C15 | | 7 |
| 15 | #N/A | 050Z4754C3 | Chip Capacitor,MLCC,Y5V,1206,4.7uF,16V,-20~+80% | C2,C26,C37,C39,C41, C43,C45 | | 7 |
| 16 | #N/A | 250345S452 | Connector,B-F,45pin,Hirose,FH12-45S-0.5SH | CN2,CN1 | | 2 |
| 17 | #N/A | 7349951002 | Silicone,TORAY/-9187L,330g | | | 0.4 |
| 18 | #N/A | PH0EFT8G03 | Olympic,17",Function BOM,D-sub+Audio,Genesis,Semi- Auto BLU(West Lamp)10ms,For VSC | Yes | | 1 |
| 19 | #N/A | 2714000027 | DC/AC Inverter,TWS-444- 991,2560V(min)/5.5mA(type),Sumida | | | 1 |
| 20 | #N/A | 3241702002 | FFC_X,A170E1,45Pin,55*23mm | | | 2 |
| 21 | C-00000465 | 41A1799102 | Cover-FFC,A170E1,Tin Plate,t=0.4mm | | | 1 |
| 22 | C-00000463 | 41A1799116 | Cover ad-assy,A170E1,Tinplate,t=0.4mm,Autoassy | | | 1 |
| 23 | HW-00000553 | 42A9930008 | Screw,M3*P0.5*4,5.5*2,Steel | | | 13 |
| 24 | M-00000559 | 42A9940007 | Stand-Off 4 #-40*11.8 | | | 2 |
| 25 | B-00002062 | 35-D000353 | PCBA for ,A170E2-T,A170E2-H-S,202- 04,X3,OSE/USI,ODM, | PCBA-S | | 1 |
| 26 | M-00000558 | 41A1769104 | Metal Frame Front Assy,A170E1,Tin Plate,t=0.4mm,For New Panel | Front | | 1 |
| 27 | M-00000566 | 44A1713023 | Backlight Unit,A170E1,CLT,Direct Type,West Lamp,with CMC Diffuser(For Auto Assy) | B/L | | 1 |
| 28 | #N/A | PH0E12G000 | Olympic,17",ID BOM,D-sub+Audio,USA+Taiwan,Silver Black,For VSC, | Yes | | 1 |
| | #N/A | PH0E12G000 | Olympic,17",ID BOM,D-sub+Audio,USA+Taiwan,Silver Black,For VSC, | | | 1 |
| | #N/A | PH0E12G002 | Olympic,17",ID BOM,D-sub+Audio,China,Silver Black,For VSC, | | | 1 |
| | #N/A | PH0E12G001 | Olympic,17",ID BOM,D-sub+Audio,European,Silver Black,For VSC, | | | 1 |
| | #N/A | PH0E12G004 | Olympic,17",ID BOM,D-sub+Audio,Japan,Silver Black,For VSC, | | | 1 |
| | #N/A | PH0E12G003 | Olympic,17",ID BOM,D-sub+Audio,UK,Silver Black,For VSC, | | | 1 |
| 29 | C-00002063 | 40-D000161 | Bezel Assy,A170E1-H0G,ASSY,Pantone 877C Silver,Injex | | | 1 |
| 30 | C-00002065 | 40-D000165 | Rear Assy,A170E1-H0G,ASSY,J91A11B4 BLACK,Injex | | | 1 |
| 31 | C-00002066 | 40-D000164 | Stand Seat Assy,A170E1-H0G,ASSY,J91A11B4,Injex | | | 1 |
| 32 | C-00002064 | 40-D000212 | Cover Hinge Assy,A170E1-H0G,ASSY,J91A11B4 BLACK,Injex | | | 1 |
| 33 | HW-00002078 | 41-D000130 | Support Plate,A170E1-H0G,SECC | | | 1 |

| Item | ViewSonic P/N | Ref.P/N | Location | Location | Universal # | Q'ty |
|------|---------------|------------|--|-------------------------|-------------|-------|
| 34 | CB-00000546 | 3241700001 | FFC-OSD,A170E1-H01,15Pin,180mm*16mm,Pitch=1.0mm | | | 1 |
| 35 | M-00000561 | 7344711002 | TAPE-CONDUCTIVE,AL,?125*30*0.08,A170E1-H01,3M:AL-35R | | | 1 |
| 36 | HW-00000557 | 42A9930017 | Screw,?3*P1.27*8,5.5*2,Steel | | | 2 |
| 37 | HW-00000553 | 42A9930008 | Screw,M3*P0.5*4,5.5*2,Steel | | | 2 |
| 38 | HW-00000555 | 42A9930014 | Screw,M3*P0.5*6,Steel | | | 4 |
| 39 | HW-00000556 | 42A9990005 | Screw,M3*P1.27*12,5.5*2,Steel | | | 6 |
| 40 | #N/A | 45-D000324 | Washer,Stand Washer,3.1 mm,10 mm,CLT ME | | | 4 |
| 41 | #N/A | 10E1700049 | Software (EDID_D-SUB),A170E1,Ver.VSCC81BA00,ViewSonic,Checksum(66 EDD),Analog Port | | | 1 |
| 42 | B-00000460 | 35A17K0205 | PCBA For A170E2-T,A170E2-H-K,Rev.02,Rigid,202-01,(turn key) | | | 1 |
| 43 | #N/A | 34A17K2201 | PCB For A170E2-H-K,Rev.02,Rigid,(A170A26011) | | | 1 |
| 44 | #N/A | 2304112001 | LED Lamp(SMD;Orange),19-21UYOC/S530-A2/TR8,605nm,H=0.8mm,Everlight,RoHS | D2 | | 1 |
| 45 | #N/A | 2304114001 | LED Lamp(SMD;Green),19-21VGC/TR8,571nm,H=0.8mm,Everlight,RoHS | D1 | | 1 |
| 46 | #N/A | 2503715151 | Connector,B-F,15Pin,E&T,7151-15 | CN1 | | 1 |
| 47 | #N/A | 2502532021 | CONNECTOR,W-B,A150X2,MOLEX,53261-0290,2Pin | CN3,CN2 | | 2 |
| 48 | #N/A | 2704020004 | Switch,Forward,SFKHHMW,4Pin,12V,DC 5mA | SW1,SW2,SW3,SW4,SW5,SW6 | | 6 |
| 49 | #N/A | 10B1700085 | Software(BIOS),A170E2,Ver.NR17E2TG0016,CMC,Analog+Audio,Taiwan,CheckSum(0010) | BIS | | 1 |
| 50 | #N/A | 7341311051 | Protector Film-Panel,PET,XG536,A170E1-H02 | | | 1 |
| 51 | #N/A | 7741519181 | Label,Bar-Code Labe,55*13mm | | | 1 |
| 52 | #N/A | 77-D000267 | SN Label for ,A170E1-H0G,50 mmx25 mm,VSC_VA712 | | | 1 |
| | #N/A | 77-D000267 | SN Label for ,A170E1-H0G,50 mmx25 mm,VSC_VA712 | | | 1 |
| | #N/A | 77-D000267 | SN Label for ,A170E1-H0G,50 mmx25 mm,VSC_VA712 | | | 1 |
| | #N/A | 77-D000267 | SN Label for ,A170E1-H0G,50 mmx25 mm,VSC_VA712 | | | 1 |
| | #N/A | 77-D000267 | SN Label for ,A170E1-H0G,50 mmx25 mm,VSC_VA712 | | | 1 |
| | #N/A | 77-D000349 | SN Label for ,A170E1-H0G,50 mmx25 mm,VSC_VA712_for China | | | 1 |
| 53 | DC-00002075 | 77-D000115 | Safety Label,A170E1-H0G,118 mm,49 mm | | | 1 |
| 54 | P-00002071 | 7841719931 | PE Foam Bag,LDPE,490x560x0.13 | | | 1 |
| 55 | #N/A | 7841599191 | Pallet,A150X1-T01,Wooden,1150 mmx970 mmx135 mm | | | 0.025 |
| 56 | #N/A | 7841995111 | Separator,(AA), 1130x955x11,A190E1-H01 | | | 0.025 |
| 57 | #N/A | 7741999141 | Label,Pallet Barcode Label,75x40,A190E2-H03,VSC | | | 0.025 |
| 58 | DC-00002072 | 77-D000113 | Carton Label Label,A170E1-H0G,76.2 mm,76.2 mm | | | 1 |
| 59 | P-00002070 | 78-D000337 | Inner Box,A170E1-H0G,454 mmx160 mmx43 mm,Yuen Foong Yu,Inner Box | | | 1 |
| 60 | P-00002069 | 78-D000306 | Cushion,A170E1-H0G,PE_LD,white,460 mmx210 mmx40 mm,Hwa Chang,PE_Foam(Top) | | | 1 |
| 61 | P-00002068 | 78-D000307 | Cushion,A170E1-H0G,PE_LD,white,460 mmx210 mmx40 mm,Hwa Chang,PE_Foam(bottom) | | | 1 |
| 62 | HW-00002076 | 7841595111 | Corner Protector,50*50*1850(mm) | | | 0.1 |
| 63 | DC-00002074 | 76-D000119 | MENU forVSC(VA712),Complex,4C | QUICK-G | | 1 |
| 64 | P-00002067 | 78-D000122 | Carton,A170E1-H0G,470 mmx228 mmx476 mm | | | 1 |
| 65 | #N/A | 7345511002 | Tape,Security Tape,OPP,L900xW50x0.045mm,VSC | | | 0.07 |
| 66 | #N/A | 78-D000275 | Warranty Card,A170E1-H0G,143 mmx210 mm,VSC_VA712 | WANTY-C | | 1 |
| 67 | #N/A | 77-D000114 | Customer Label,A170E1-H0G,180 mm,100 mm | | | 1 |
| 68 | #N/A | 77-D000118 | Customer Label,A170E1-H0G,130 mm,80 mm | | | 1 |
| 69 | #N/A | PH0EAAM000 | Olympic,17",Accessory BOM,D-sub+Audio,USA/Taiwan 3 pin,Black,For VSC | Yes | | 1 |
| | #N/A | PH0EAAM000 | Olympic,17",Accessory BOM,D-sub+Audio,USA/Taiwan 3 pin,Black,For VSC | | | 1 |
| | #N/A | PH0EACJ000 | Olympic,17",Accessory BOM,D-sub+Audio,China 3 pin,Black,For VSC | | | 1 |
| | #N/A | PH0EAES000 | Olympic,17",Accessory BOM,D-sub+Audio,European / Korea 2 pin,Black,For VSC | | | 1 |
| | #N/A | PH0EAJD000 | Olympic,17",Accessory BOM,D-sub+Audio,Japan 2 pin,Black,For VSC | | | 1 |

| Item | ViewSonic P/N | Ref.P/N | Location | Location | Universal # | Q'ty |
|------|---------------|------------|--|----------|-------------|------|
| | #N/A | PH0EAKN000 | Olympic,17",Accessory BOM,D-sub+Audio,UK / HK 3 pin,Black,For VSC | | | 1 |
| 70 | A-00002056 | 271906019K | Adapter,DA-60F19-AE,19 V,3.16 A,60 W,Black,Asian Power Devices,Two BC,CD FOR VSC | ADAPTOR | | 1 |
| 71 | CB-00000544 | 32F2818004 | Audio Cable,A150X2,18AWG,180cm,Black,JCE | AUDIO | | 1 |
| 72 | A-00000458 | 32E1818015 | Power Code,UL,SVT#18/3C,75,LP-30B+LS-13,L=1830+/-50mm,Black,Linetek,18AWG,No Bag | POWER | | 1 |
| | A-00000458 | 32E1818015 | Power Code,UL,SVT#18/3C,75,LP-30B+LS-13,L=1830+/-50mm,Black,Linetek,18AWG,No Bag | | | 1 |
| | A-00002058 | 32E1818013 | Power Cord,CCC,300/500V,0.75mm2,3C,PC-323+COC-01,L=1830+/-50mm,Black,Linetek,18AWG,No Bag | | | 1 |
| | A-00002059 | 32E1818018 | Power Code,CEE,SP-023+IS-14,H05VV-F,3G,0.75mm2,CT-12,L=1800+/-50mm,I-SHENG,18AWG,Black,No Bag | | | 1 |
| | A-00002060 | 32E1818014 | Power Code,JIS,VCTF,0.75mm2,3C,LP54+LS-13J,L=1830+/-50mm,Black,Linetek,18AWG,No Bag | | | 1 |
| | A-00002057 | 32E1818060 | Power Cord,BSI,H05VV-F,0.75mm2,3C,LP-60L+LS-60,L=1830+/-50mm,Black,18AWG,PSB Mark,Linetek,No Bag | | | 1 |
| 73 | CB-00000547 | 32F3018003 | Monitor Cable,A150X2,30AWG,180cm,Black,JCE | DSUB | | 1 |

BOM LIST (VA712b-1)

Model Number: VS10697

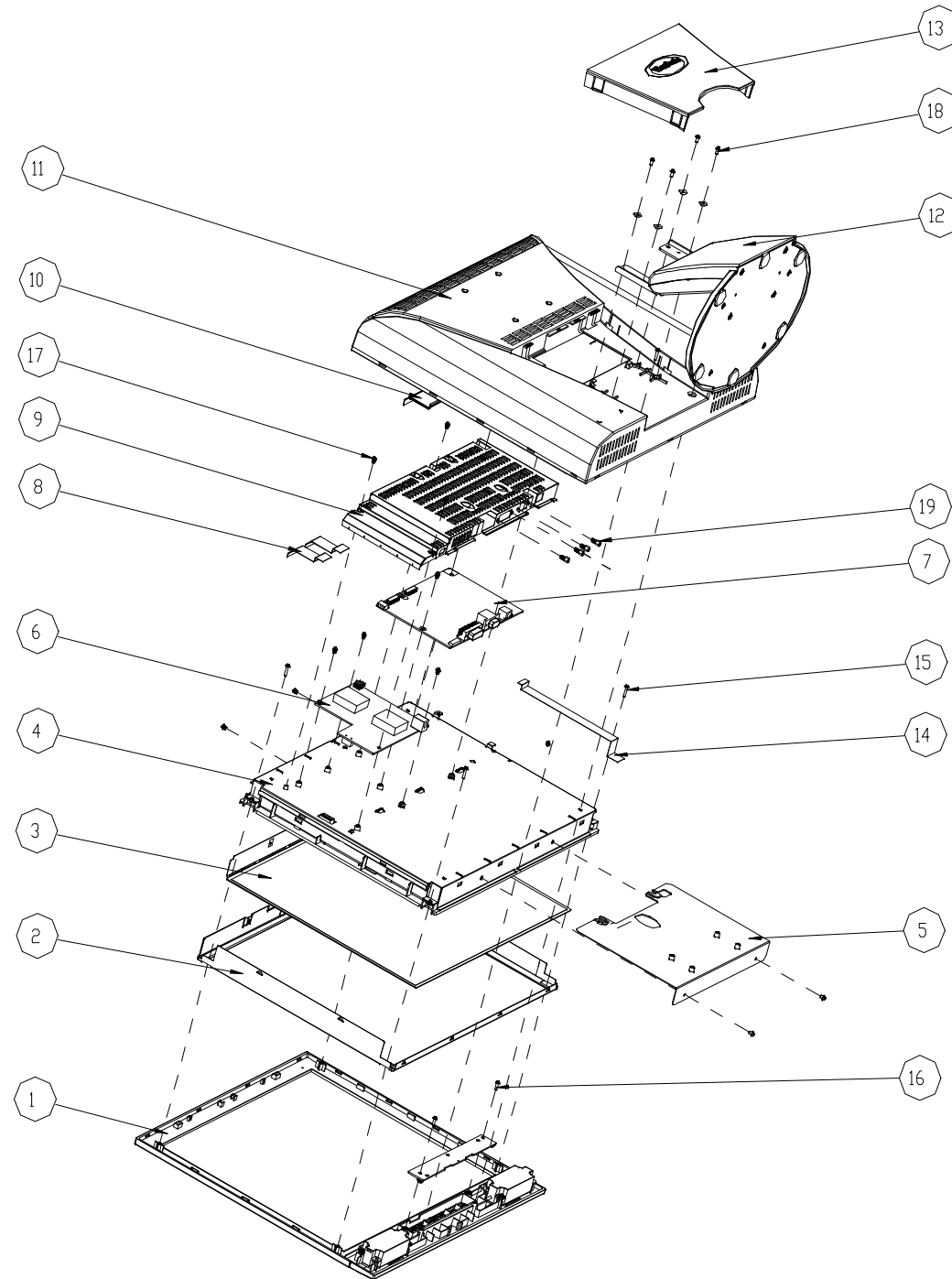
Rev: 1a

| Item | ViewSonic P/N | Ref.P/N | Location | Location | Universal # | Q'ty |
|------|---------------|------------|---|---|-------------|------|
| 1 | #N/A | MH0E50EK01 | 17" Common BOM,E5-L08,72%,Scan COG,TFT Rev.C 10ms Cell | | | 1 |
| 2 | #N/A | L3H007XXX7 | 17" Phtot Spacer TN Asahi 0.7mm glass with 10ms LC | | | 1 |
| 3 | #N/A | 36X8607401 | Driver IC,COG,Scan,HX8607APD400,263Channel,HIMAX | SIC | | 4 |
| 4 | #N/A | 7344191016 | COG_CF,AC-8405Z-23,1.5mm,50M/RL | | | 1 |
| 5 | #N/A | 7344191002 | ACF,AC7206(OLB),100M/RL | | | 1 |
| 6 | #N/A | 36X8002551 | TAB-DATA,A170E1,HIMAX:HX8002TB55 | Data | | 10 |
| 7 | #N/A | 7344191011 | ACF,AC-9051AR-35,100M/RL | | | 1 |
| 8 | #N/A | 35A17X0211 | PCBA,A170E2-H,A170E2-H-X,201-05,X4,OSE/Universal Scientific Industrial/USI,TurnKey | PCBA-X | | 1 |
| 9 | #N/A | 34A17X2X07 | PCB,A170E2-H-X,X4,Taiwan PCB Techvest,(A17012614A),RoHS | | | 1 |
| 10 | #N/A | 01056FR001 | Chip Resistor,SMD,+/-5%,0603,1/16W,0 OHM | R4,R6,R7,R9,R15,R20,R28,R36,R44,R42,R45,R12 | | 12 |
| 11 | #N/A | 01056F1011 | Chip Resistor,SMD,+/-5%,0603,1/16W,100 OHM | R13,R14,R16~R19,R22~R27,R30~R35,R37,R38 | | 20 |
| 12 | #N/A | 01058FR001 | Chip Resistor,SMD,+/-5%,0805,1/10W,0 OHM | L1,L2 | | 2 |
| 13 | #N/A | 050Z015561 | Chip Capacitor,MLCC,Y5V,0603,100nF,25V,-20~+80% | C3,C16~C25,C27~C36 | | 21 |
| 14 | #N/A | 050Z475381 | Chip Capacitor,MLCC,Y5V,0805,4.7uF,10V,-20~+80% | C4,C5,C7,C9,C11,C13,C15 | | 7 |
| 15 | #N/A | 050Z4754C3 | Chip Capacitor,MLCC,Y5V,1206,4.7uF,16V,-20~+80% | C2,C26,C37,C39,C41,C43,C45 | | 7 |
| 16 | #N/A | 250345S452 | Connector,B-F,45pin,Hirose,FH12-45S-0.5SH | CN2,CN1 | | 2 |
| 17 | #N/A | 7349951002 | Silicone,TORAY/-9187L,330g | | | 0.4 |
| 18 | #N/A | PH0EFH5G03 | Olympic,17",Function BOM,D-sub+DVI+Audio,Genesis,Semi-Auto BLU(West Lamp)10ms,For VSC | Yes | | 1 |
| 19 | #N/A | 2714000027 | DC/AC Inverter,TWS-444-991,2560V(min)/5.5mA(type),Sumida | | | 1 |
| 20 | #N/A | 3241702002 | FFC_X,A170E1,45Pin,55*23mm | | | 2 |
| 21 | C-00000465 | 41A1799102 | Cover-FFC,A170E1,Tin Plate,t=0.4mm | | | 1 |
| 22 | HW-00002077 | 41A1799118 | Cover AD_Assy,A170E1,Tinplate,t=0.4mm,Autoassy,DVI & D-SUB & Audio | | | 1 |
| 23 | HW-00000553 | 42A9930008 | Screw,M3*P0.5*4,5.5*2,Steel | | | 13 |
| 24 | M-00000559 | 42A9940007 | Stand-Off 4 # -40*11.8 | | | 4 |
| 25 | B-00002079 | 35-D000352 | PCBA for ,A170E2-H,A170E2-H-S,201-08,X3,USI/OSE,ODM, | PCBA-S | | 1 |
| 26 | M-00000558 | 41A1769104 | Metal Frame Front Assy,A170E1,Tin Plate,t=0.4mm,For New Panel | Front | | 1 |
| 27 | M-00000566 | 44A1713023 | Backlight Unit,A170E1,CLT,Direct Type,West Lamp,with CMC Diffuser(For Auto Assy) | B/L | | 1 |
| 28 | #N/A | PH0E11G000 | Olympic,17",ID BOM,D-sub+DVI+Audio,USA+Taiwan,Black,For VSC, | Yes | | 1 |
| | #N/A | PH0E11G000 | Olympic,17",ID BOM,D-sub+DVI+Audio,USA+Taiwan,Black,For VSC, | | | 1 |
| | #N/A | PH0E11G002 | Olympic,17",ID BOM,D-sub+DVI+Audio,China,Black,For VSC, | | | 1 |
| | #N/A | PH0E11G001 | Olympic,17",ID BOM,D-sub+DVI+Audio,European,Black,For VSC, | | | 1 |

| Item | ViewSonic P/N | Ref.P/N | Location | Location | Universal # | Q'ty |
|------|---------------|------------|---|-------------------------|-------------|-------|
| | #N/A | PH0E1G004 | Olympic,17",ID BOM,D-sub+DVI+Audio,Japan,Black,For VSC, | | | 1 |
| | #N/A | PH0E1G003 | Olympic,17",ID BOM,D-sub+DVI+Audio,UK,Black,For VSC, | | | 1 |
| 29 | C-00002080 | 40-D000162 | Bezel Assy,A170E1-H0G,ASSY,H93828B4 Midnight Gray,Injex | | | 1 |
| 30 | C-00002081 | 40-D000175 | Rear Assy,A170E1-H0G,ASSY,H93828B4 Midnight Gray,Injex | | | 1 |
| 31 | C-00002082 | 40-D000163 | Stand Seat Assy,A170E1-H0G,ASSY,H93828B4 Midnight Gray,Injex | | | 1 |
| 32 | C-00002088 | 40-D000213 | Cover Hinge Assy,A170E1-H0G,ASSY,H93828B4 Midnight Gray,Injex | | | 1 |
| 33 | HW-00002078 | 41-D000130 | Support Plate,A170E1-H0G,SECC | | | 1 |
| 34 | CB-00000546 | 3241700001 | FFC-OSD,A170E1-H01,15Pin,180mm*16mm,Pitch=1.0mm | | | 1 |
| 35 | M-00000561 | 7344711002 | TAPE-CONDUCTIVE,AL,?2125*30*0.08,A170E1-H01,3M:AL-35R | | | 1 |
| 36 | HW-00000557 | 42A9930017 | Screw,?3*P1.27*8,5.5*2,Steel | | | 2 |
| 37 | HW-00000553 | 42A9930008 | Screw,M3*P0.5*4,5.5*2,Steel | | | 2 |
| 38 | HW-00000555 | 42A9930014 | Screw,M3*P0.5*6,Steel | | | 4 |
| 39 | HW-00000556 | 42A9990005 | Screw,M3*P1.27*12,5.5*2,Steel | | | 6 |
| 40 | #N/A | 45-D000324 | Washer,Stand Washer,3.1 mm,10 mm,CLT ME | | | 4 |
| 41 | B-00000460 | 35A17K0205 | PCBA For A170E2-T,A170E2-H-K,Rev.02,Rigid,202-01,(turn key) | | | 1 |
| 42 | #N/A | 34A17K2201 | PCB For A170E2-H-K,Rev.02,Rigid(A170A26011) | | | 1 |
| 43 | #N/A | 2304112001 | LED Lamp(SMD;Orange),19-21UYOC/S530-A2/TR8,605nm,H=0.8mm,Everlight,RoHS | D2 | | 1 |
| 44 | #N/A | 2304114001 | LED Lamp(SMD;Green),19-21VGC/TR8,571nm,H=0.8mm,Everlight,RoHS | D1 | | 1 |
| 45 | #N/A | 2503715151 | Connector,B-F,15Pin,E&T,7151-15 | CN1 | | 1 |
| 46 | #N/A | 2502532021 | CONNECTOR,W-B,A150X2,MOLEX,53261-0290,2Pin | CN3,CN2 | | 2 |
| 47 | #N/A | 2704020004 | Switch,Forward,SFKHHMW,4Pin,12V,DC 5mA | SW1,SW2,SW3,SW4,SW5,SW6 | | 6 |
| 48 | #N/A | 10E1700047 | Software (EDID_D-SUB),A170E1,Ver. VSCCE1BA00,ViewSonic,Checksum(16),Analog Port | EDD | | 1 |
| 49 | #N/A | 10E1700048 | Software (EDID_DVI),A170E1,Ver. VSCCE1BD00,ViewSonic,Checksum(C6),DVI Port | EDD | | 1 |
| 50 | #N/A | 10B1700084 | Software(BIOS),A170E2,Ver.NR17E2TG0015,CMC,Analog+Audio,Taiwan,Checksum(000F) | BIS | | 1 |
| 51 | #N/A | 7341311051 | Protector Film-Panel,PET,XG536,A170E1-H02 | | | 1 |
| 52 | #N/A | 7741519181 | Label,Bar-Code Labe,55*13mm | | | 1 |
| 53 | DC-00002086 | 77-D000270 | Safety Label for ,A170E1-H0G,118 mmx49 mm,VSC(VA712b) | | | 1 |
| 54 | #N/A | 77-D000269 | SN Label for ,A170E1-H0G,50 mmx25 mm,VSC(VA712b) | | | 1 |
| | #N/A | 77-D000269 | SN Label for ,A170E1-H0G,50 mmx25 mm,VSC(VA712b) | | | 1 |
| | #N/A | 77-D000269 | SN Label for ,A170E1-H0G,50 mmx25 mm,VSC(VA712b) | | | 1 |
| | #N/A | 77-D000269 | SN Label for ,A170E1-H0G,50 mmx25 mm,VSC(VA712b) | | | 1 |
| | #N/A | 77-D000269 | SN Label for ,A170E1-H0G,50 mmx25 mm,VSC(VA712b) | | | 1 |
| | #N/A | 77-D000350 | SN Label for ,A170E1-H0G,50 mmx25 mm,VSC_VA712b_for China | | | 1 |
| 55 | #N/A | 7841599191 | Pallet,A150X1-T01,Wooden,1150 mmx970 mmx135 mm | | | 0.025 |
| 56 | P-00002087 | 78-D000310 | Carton,A170E1-H0G,470 mmx228 mmx476 mm,VSC_VA712b | | | 1 |

| Item | ViewSonic P/N | Ref.P/N | Location | Location | Universal # | Q'ty |
|------|---------------|------------|--|----------|-------------|-------|
| 57 | #N/A | 7841995111 | Separator,(AA), 1130x955x11,A190E1-H01 | | | 0.025 |
| 58 | #N/A | 7741999141 | Label,Pallet Barcode Label,75x40,A190E2-H03,VSC | | | 0.025 |
| 59 | DC-00002084 | 77-D000264 | Carton Label for ,A170E1-H0G,76.2 mmx76.2 mm,VSC(VA712b) | | | 1 |
| 60 | P-00002070 | 78-D000337 | Inner Box,A170E1-H0G,454 mmx160 mmx43 mm,Yuen Foong Yu,Inner Box | | | 1 |
| 61 | P-00002069 | 78-D000306 | Cushion,A170E1-H0G,PE_LD,white,460 mmx210 mmx40 mm,Hwa Chang,PE_Foam(Top) | | | 1 |
| 62 | P-00002068 | 78-D000307 | Cushion,A170E1-H0G,PE_LD,white,460 mmx210 mmx40 mm,Hwa Chang,PE_Foam(bottom) | | | 1 |
| 63 | HW-00002076 | 7841595111 | Corner Protector,50*50*1850(mm) | | | 0.1 |
| 64 | DC-00002085 | 76-D000312 | MENU for VSC_VA712b,Complex,4C,A170E1-H0G | QUICK-G | | 1 |
| 65 | P-00002071 | 7841719931 | PE Foam Bag,LDPE,490x560x0.13 | | | 1 |
| 66 | #N/A | 7345511002 | Tape,Security Tape,OPP,L900xW50x0.045mm,VSC | | | 0.07 |
| 67 | #N/A | 78-D000275 | Warranty Card,A170E1-H0G,143 mmx210 mm,VSC_VA712 | | | 1 |
| 68 | #N/A | 77-D000114 | Customer Label,A170E1-H0G,180 mm,100 mm | | | 1 |
| 69 | #N/A | 77-D000118 | Customer Label,A170E1-H0G,130 mm,80 mm | | | 1 |
| 70 | #N/A | PH0EAAN000 | Olympic,17",Accessory BOM,D-sub+DVI+Audio,USA/Taiwan 3 pin,Black,For VSC | Yes | | 1 |
| | #N/A | PH0EAAN000 | Olympic,17",Accessory BOM,D-sub+DVI+Audio,USA/Taiwan 3 pin,Black,For VSC | | | 1 |
| | #N/A | PH0EACK000 | Olympic,17",Accessory BOM,D-sub+DVI+Audio,China 3 pin,Black,For VSC | | | 1 |
| | #N/A | PH0EAET000 | Olympic,17",Accessory BOM,D-sub+DVI+Audio,European / Korea 2 pin,Black,For VSC | | | 1 |
| | #N/A | PH0EAJE000 | Olympic,17",Accessory BOM,D-sub+DVI+Audio,Japan 2 pin,Black,For VSC | | | 1 |
| | #N/A | PH0EAKP000 | Olympic,17",Accessory BOM,D-sub+DVI+Audio,UK / HK 3 pin,Black,For VSC | | | 1 |
| 71 | A-00002056 | 271906019K | Adapter,DA-60F19-AE,19 V,3.16 A,60 W,Black,Asian Power Devices,Two BC,CD FOR VSC | ADAPTOR | | 1 |
| 72 | CB-00000544 | 32F2818004 | Audio Cable,A150X2,18AWG,180cm,Black,JCE | AUDIO | | 1 |
| 73 | A-00000458 | 32E1818015 | Power Code,UL,SVT#18/3C,75,LP-30B+LS-13,L=1830+/-50mm,Black,Linetek,18AWG,No Bag | POWER | | 1 |
| | A-00000458 | 32E1818015 | Power Code,UL,SVT#18/3C,75,LP-30B+LS-13,L=1830+/-50mm,Black,Linetek,18AWG,No Bag | | | 1 |
| | A-00002058 | 32E1818013 | Power Cord,CCC,300/500V,0.75mm2,3C,PC-323+COC-01,L=1830+/-50mm,Black,Linetek,18AWG,No Bag | | | 1 |
| | A-00002059 | 32E1818018 | Power Code,CEE,SP-023+IS-14,H05VV-F,3G,0.75mm2,CT-12,L=1800+/-50mm,I-SHENG,18AWG,Black,No Bag | | | 1 |
| | A-00002060 | 32E1818014 | Power Code,JIS,VCTF,0.75mm2,3C,LP54+LS-13J,L=1830+/-50mm,Black,Linetek,18AWG,No Bag | | | 1 |
| | A-00002057 | 32E1818060 | Power Cord,BSI,H05VV-F,0.75mm2,3C,LP-60L+LS-60,L=1830+/-50mm,Black,18AWG,PSB Mark,Linetek,No Bag | | | 1 |
| 74 | CB-00000547 | 32F3018003 | Monitor Cable,A150X2,30AWG,180cm,Black,JCE | DSUB | | 1 |
| 75 | CB-00002083 | 32F0000004 | DVI CABLE,DVI-D(M) TO DVI-D(M),S/L,1.8M,W/2F,JCE,BLACK | DVI | | 1 |

8. Exploded Diagram and Spare Parts List



EXPLODED PARTS LIST (VA712/b-1)

ViewSonic Model Number: VS10697

Rev: 1b

| Item | ViewSonic P/N | Ref. P/N | Description |
|------|---------------|------------|-------------------------|
| 1 | C-00002080 | 40-D000162 | BEZEL ASSY (Digital) |
| | C-00002063 | 40-D000161 | BEZEL ASSY (Analog) |
| 2 | M-00000558 | 41A1769104 | METAL FRAME FRONT |
| 3 | E-00003827 | MH0E50EK01 | PANEL |
| 4 | M-00000566 | 44A1713023 | BACKLIGHT UNIT |
| 5 | HW-00002078 | 41-D000130 | SUPPORT PLATE |
| 6 | B-00002061 | 2714000027 | INVERTOR PCB |
| 7 | B-00002079 | 35-D000352 | AD PCB (Digital) |
| | B-00002062 | 35-D000353 | AD PCB (Analog) |
| 8 | CB-00000545 | 3241702002 | FFC X-PCBA TO AD-PCBA |
| 9 | HW-00002077 | 41A1799118 | COVER AD |
| 10 | C-00000465 | 41A1799102 | COVER FFC |
| 11 | C-00002081 | 40-D000175 | REAR ASSY (Digital) |
| | C-00002065 | 40-D000165 | REAR ASSY (Analog) |
| 12 | C-00002082 | 40-D000163 | STAND SEAT ASSY |
| 13 | C-00002064 | 40-D000212 | COVER HINGE |
| 14 | CB-00000546 | 3241700001 | FFC AD-PCBA TO OSD-PCBA |
| 15 | HW-00000556 | 42A9990005 | SCREW M3*PITCH1.27*12 |
| 16 | HW-00000557 | 42A9930017 | SCREW M3*PITCH1.27*8 |
| 17 | HW-00000553 | 42A9930008 | SCREW M3*PITCH0.5*4 |
| 18 | HW-00000555 | 42A9930014 | SCREW M3*PITCH0.5*6 |
| 19 | M-00000559 | 42A9940007 | STAND OFF |

Monitor Assembly and Disassembly

1.1 Separate Stand Assy

1.1.1 Remove Stand Cover



Step 1 :
Remove Cover Hinges



Step 2 :
Loose and Remove 4 screws



Step 3:
Remove Stand Assy

Step 4:
Completed

1.2 Separate Rear Cover (Rear Case Assy)

Loosen and remove 2 screws.

Separate Bezel hooks to take Bezel and Rear Cover apart.



Step 1 :

Loose and remove 2 screws.



Step 2 :

Separate Bezel hooks to take Bezel and Rear Cover apart.



Step 3 :

Remove Rear Cover



Step 4 :

Completed

1.3 Remove Power Board

1.3.1 Remove the Tinfoil



1.3.2 Remove FFC



1.3.3 Remove Metal Cover



Step 1 :

Loose and remove 4 screws



Step 2 :

Loose and remove 6 screws



Step 3 :
Remove the Cover of X-PCB

Step 4 :
Completed

1.3.4 Remove Power PCBA



Step 1 :
Loose and remove 3 screws



Step 2 :
Remove Power PCBA

Step 3 :
Completed

1.4 Change New Power Board



Step 1 :
Insert New Power PCBA



Step 2 :
Fasten 3 fixed screws
of Power PCBA

Step 3 :
Completed

1.5 Remove AD PCBA



Step 1 :

Loose and remove 1 screw



Step 2 :

Remove 2 FFC from AD PCBA



Step 3 :

Remove AD PCBA

Step 4 :

Completed

1.6 Change New AD PCBA



Step 1 :
Place New AD PCBA



Step 2 :
Insert 2 FFC



Step 3 :
Fasten 1 screw

Step 4 :
Completed

1.7 Metal Cover Assembly



Step 1 :

Join the cover hooks of X-PCB



Step 2 :

Fasten the 6 screws



Step 3 :

Fasten 4 screws



Step 4 :

Insert FFC



Step 5 :

Attach the Tinfoil

Step 6 :

Completed

1.8 Separate Bezel Assy



Step 1 :

Loose and remove 4 screws



Step 2 :

Lift up LCD module and remove Bezel

Step 3 :

Completed

1.9 Remove OSD PCBA



Step 1 :
Remove FFC



Step 2 :
Separate both Audio Cable



Step 3 :
Loose and remove 2 screws



Step 4 :
Take OSD PCBA apart

Step 5 :
Completed

1.10 Change New OSD PCBA



Step 1 :
Place New OSD PCBA



Step 2 :
Fasten 2 screws



Step 3 :
Insert Audit Cable to connectors
of OSD PCBA

Step 4 :
Completed

1.11 Rear Cover Assy Assembly



Step 1 :
Place Rear Cover



Step 2 :
Join Rear Cover with Bezel



Step 3 :
Fasten 2 screws



Step 4 :
Place Stand Assy



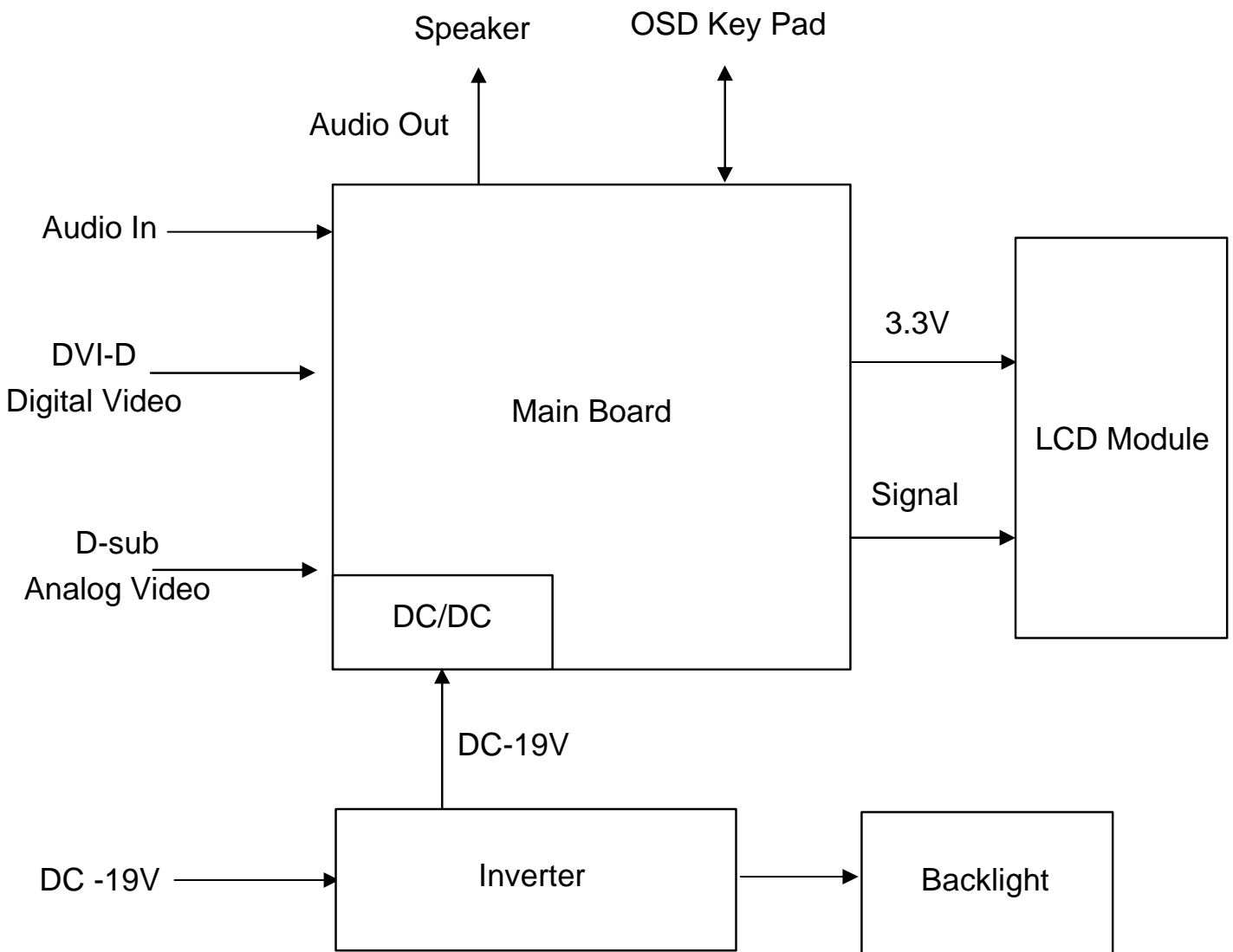
Step 5 :
Fasten 4 screws to fixed Stand Assy



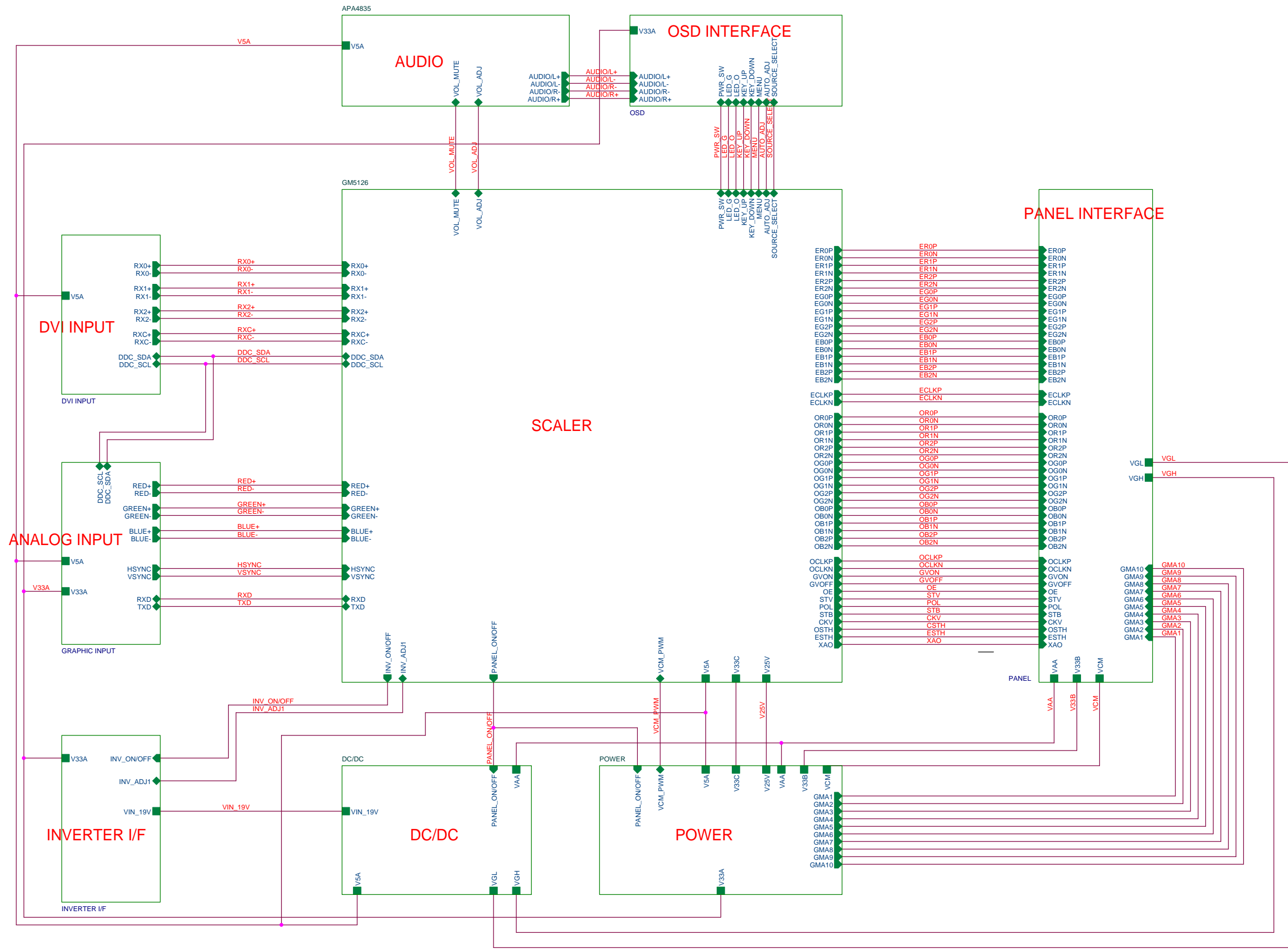
Step 6 :
Insert Cover Hinge

Step 7 :
Completed

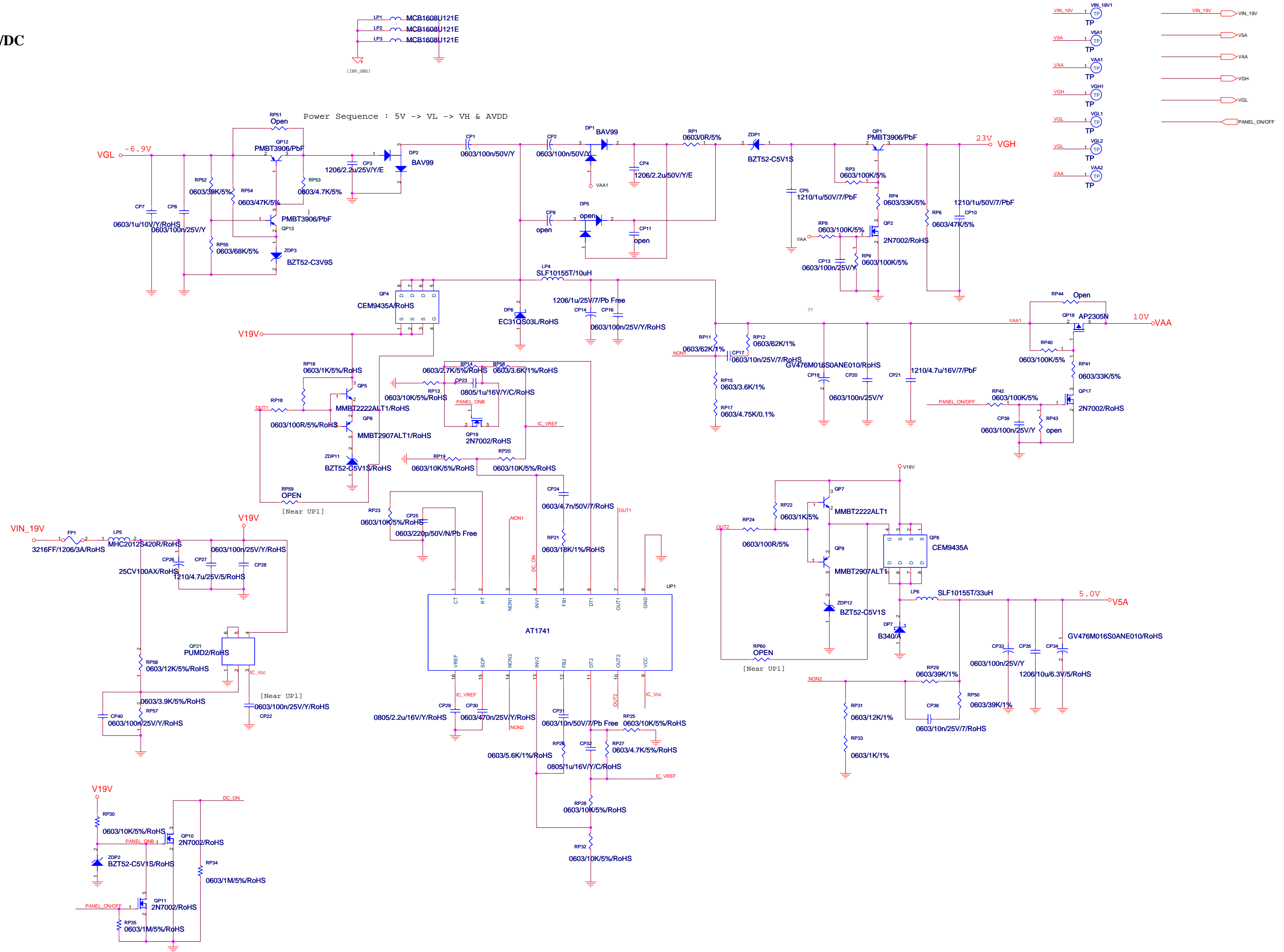
9. Block Diagram



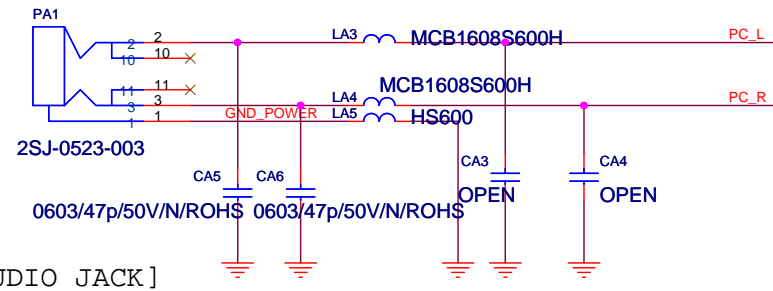
10. Schematic Diagrams



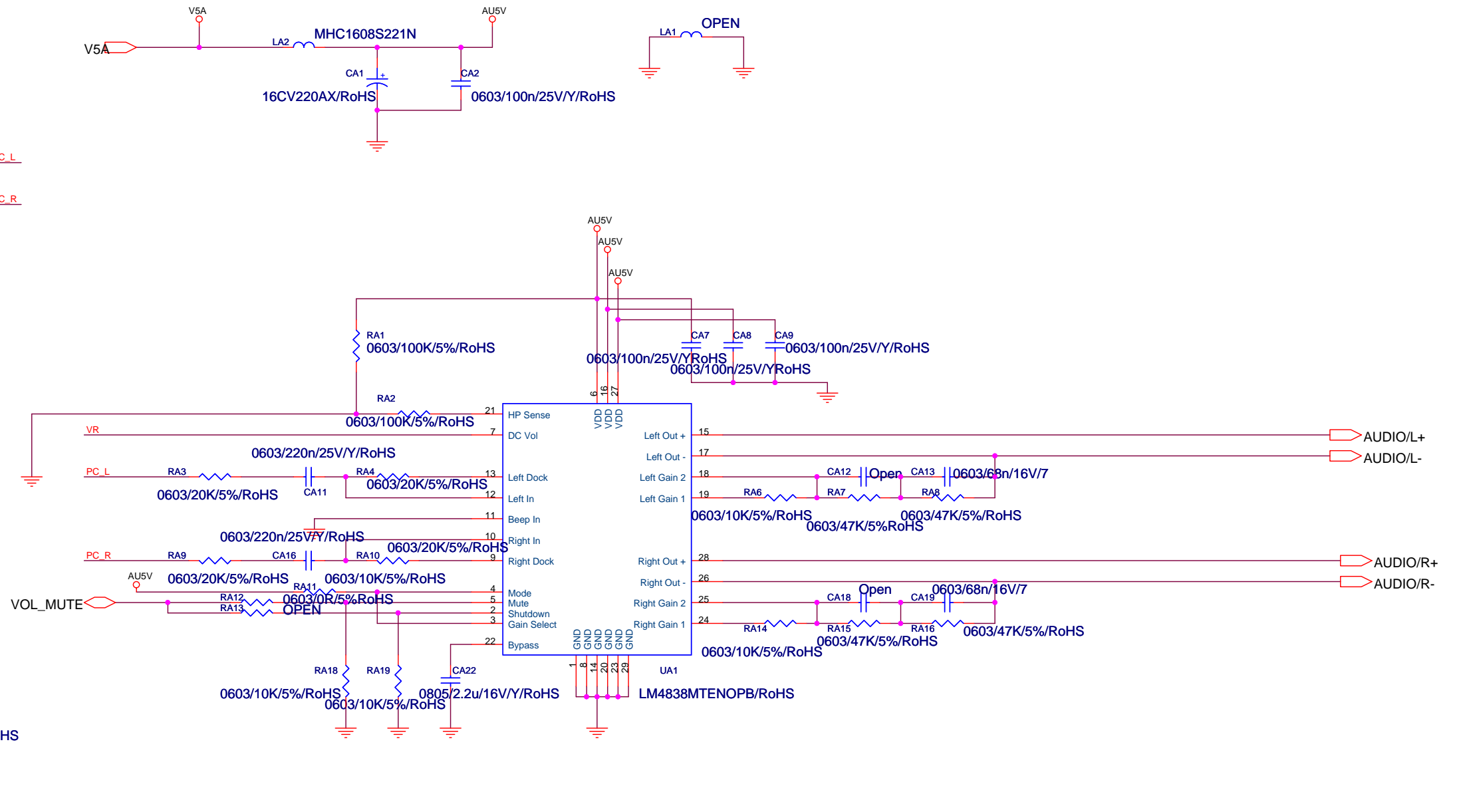
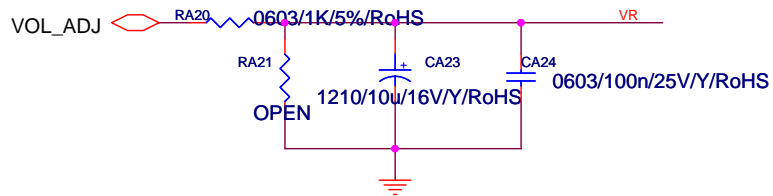
DC/DC



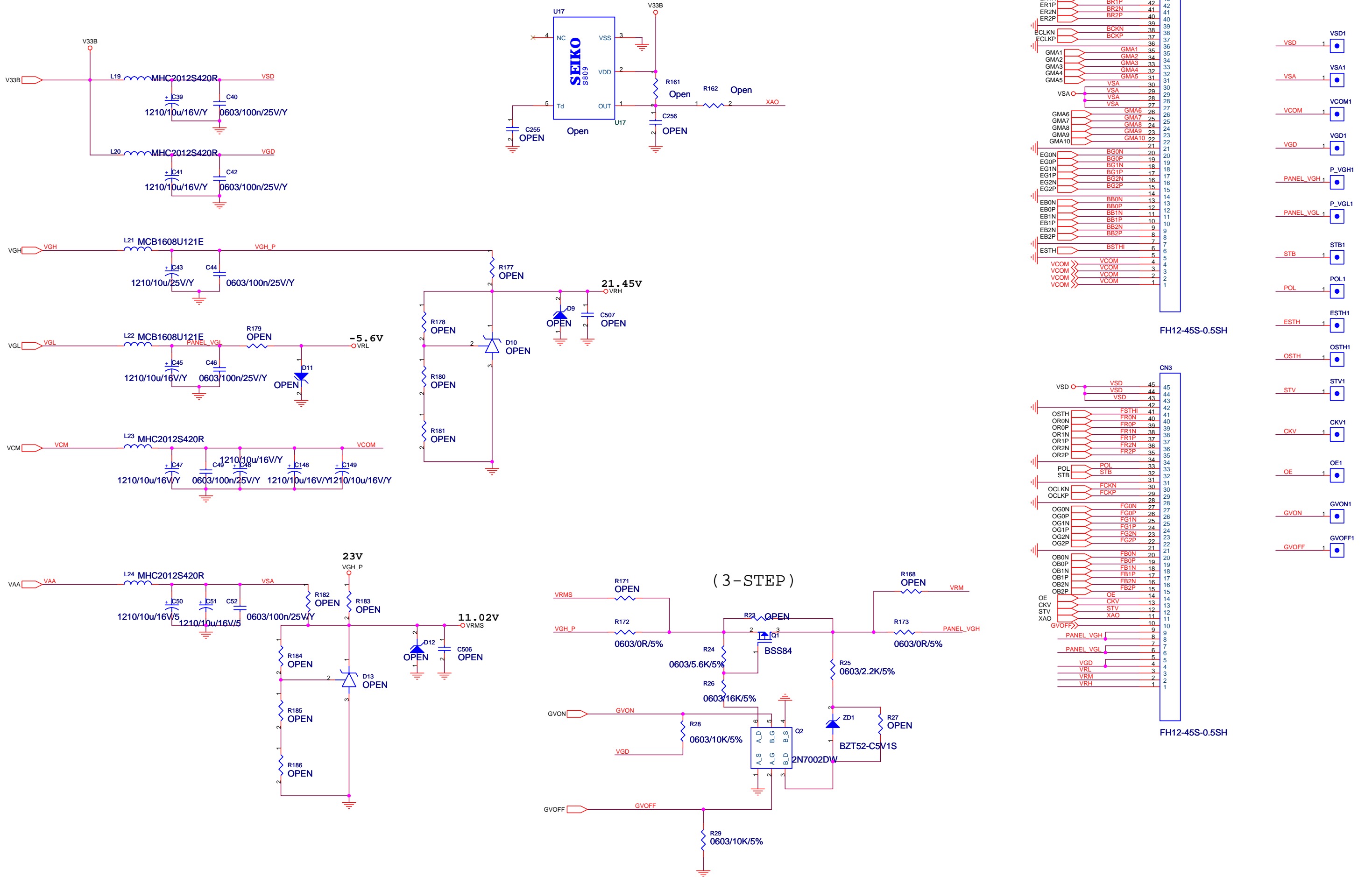
Audio



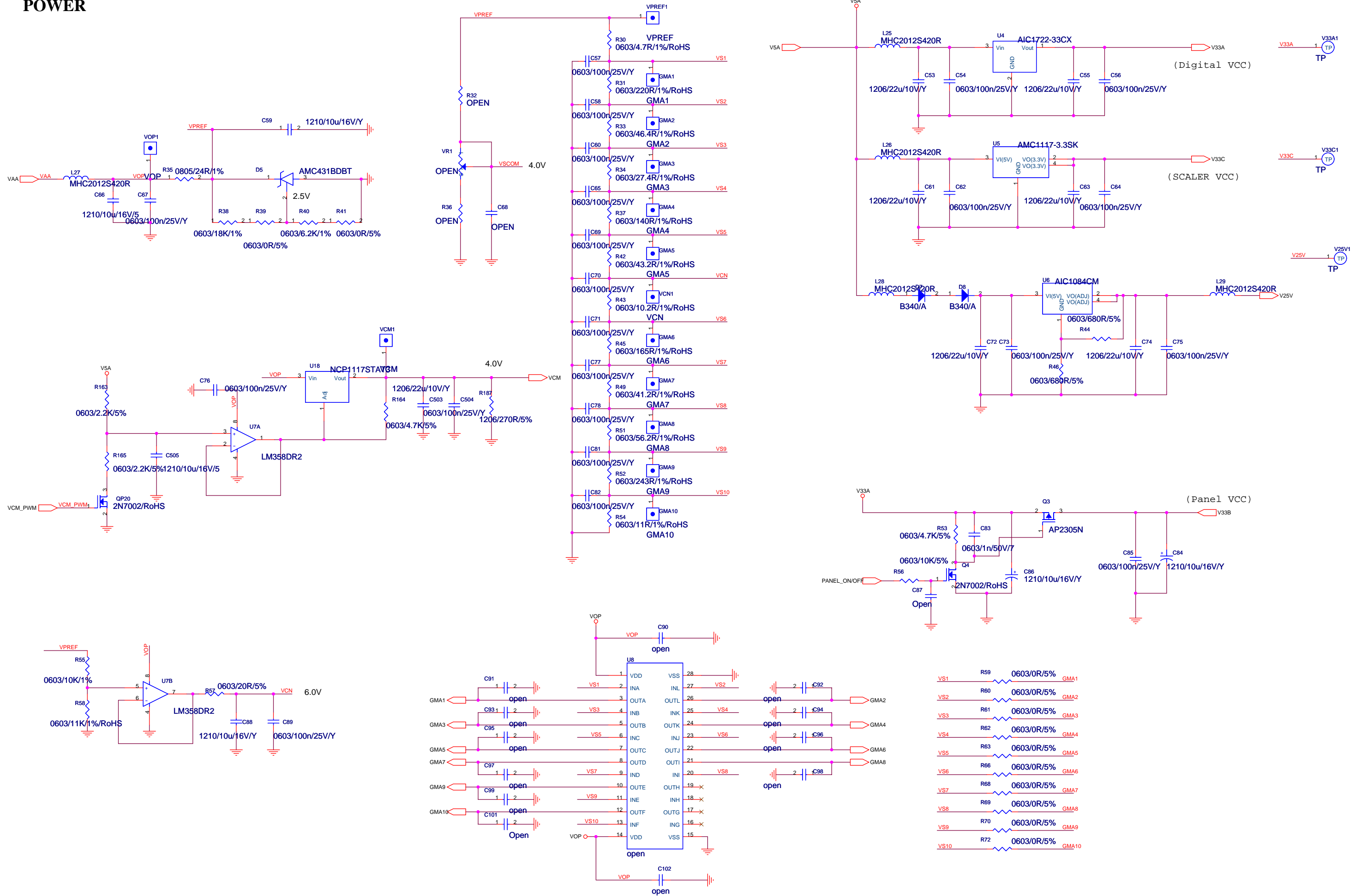
[AUDIO JACK]



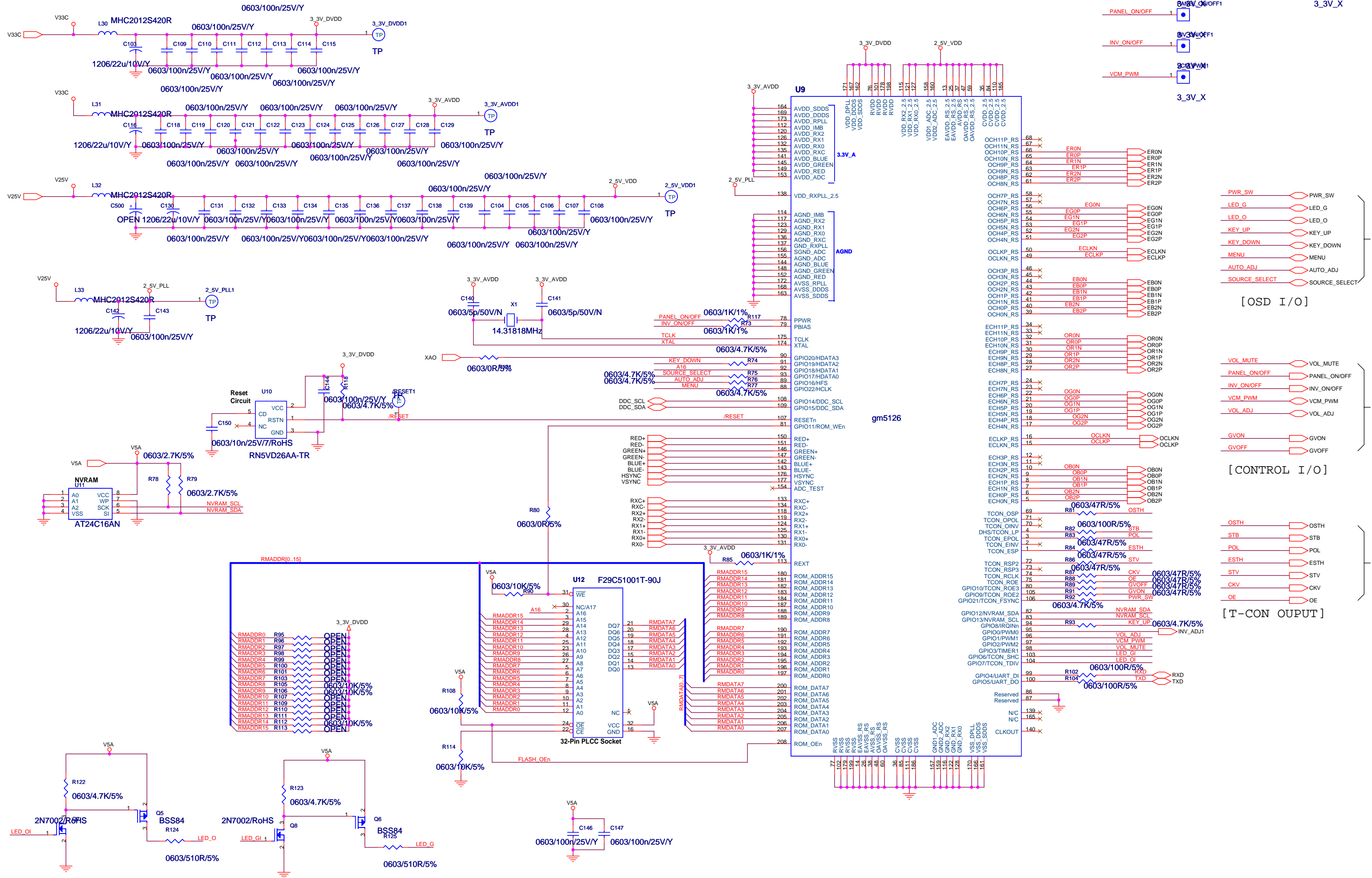
PANEL INTERFACE



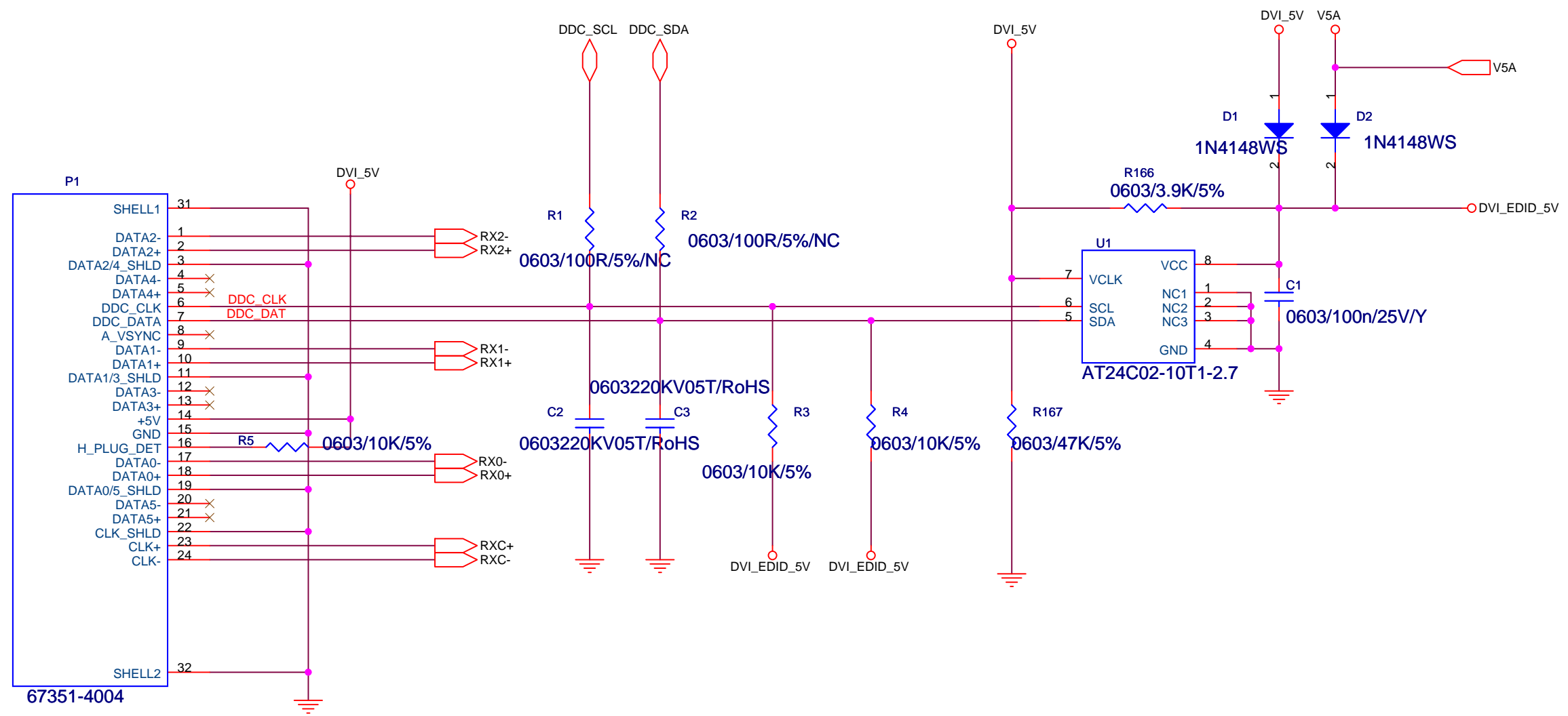
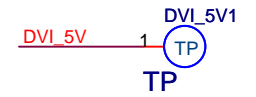
POWER



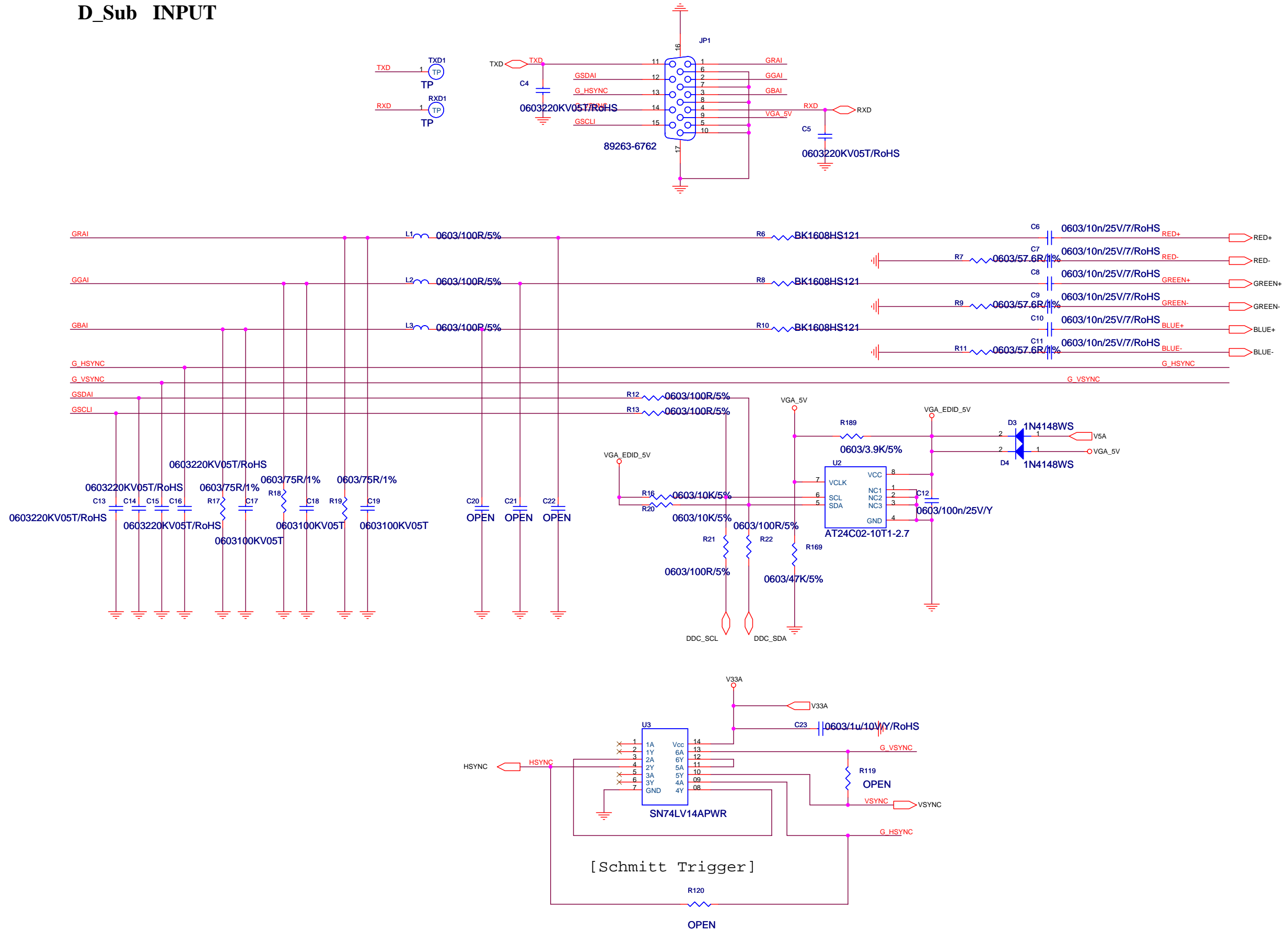
SCALER



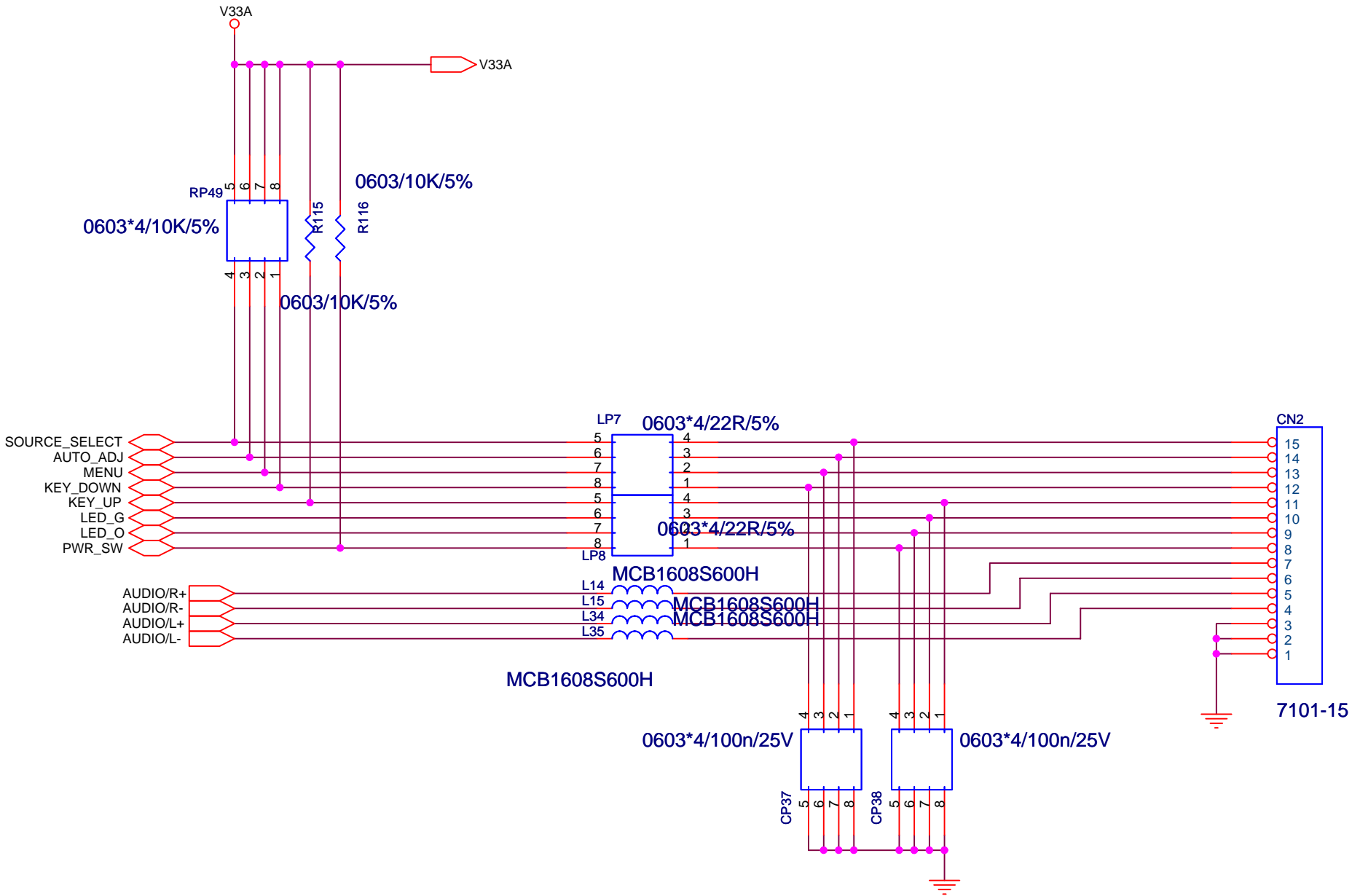
DVI INPUT



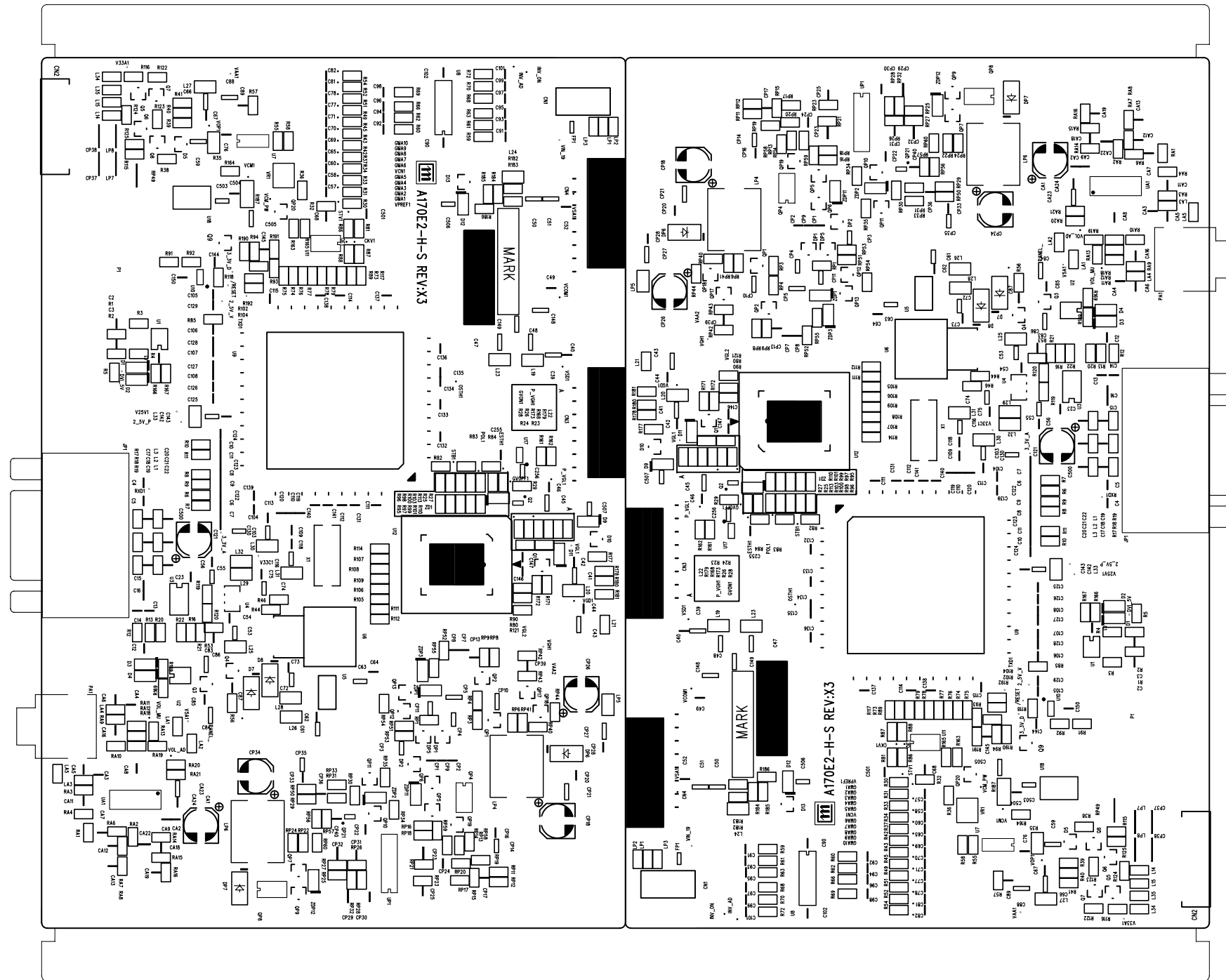
D_Sub INPUT



OSD INTERFACE



11. PCB Layout Diagrams



* *Reader's Response* *

Dear Readers:

Thank you in advance for your feedback on our Service Manual, which allows continuous improvement of our products. We would appreciate your completion of the Assessment Matrix below, for return to ViewSonic Corporation.

Assessment

A. What do you think about the content of this Service Manual?

| <i>Unit</i> | <i>Excellent</i> | <i>Good</i> | <i>Fair</i> | <i>Bad</i> |
|--|------------------|-------------|-------------|------------|
| 1. Precautions and Safety Notices | | | | |
| 2. Specification | | | | |
| 3. Front Panel Function Control Description | | | | |
| 4. Circuit Description | | | | |
| 5. Adjustment Procedure | | | | |
| 6. Troubleshooting Flow Chart | | | | |
| 7. Recommended Spare Parts List | | | | |
| 8. Exploded Diagram and Exploded Parts List | | | | |
| 9. Block Diagrams | | | | |
| 10. Schematic Diagrams | | | | |
| 11. PCB Layout Diagrams | | | | |

B. Are you satisfied with this Service Manual?

| <i>Item</i> | <i>Excellent</i> | <i>Good</i> | <i>Fair</i> | <i>Bad</i> |
|---------------------------|------------------|-------------|-------------|------------|
| 1. Service Manual Content | | | | |
| 2. Service Manual Layout | | | | |
| 3. The form and listing | | | | |

C. Do you have any other opinions or suggestions regarding this service manual?

Reader's basic data:

| | | | |
|-----------------|--|---------------|--|
| Name: | | Title: | |
| Company: | | | |
| Add: | | | |
| Tel: | | Fax: | |
| E-mail: | | | |

After completing this form, please return it to ViewSonic Quality Assurance in the USA at facsimile 1-909-839-7943. You may also e-mail any suggestions to the Director, Quality Systems & Processes (marc.maupin@viewsonic.com)