

# **Service Manual**

## **ViewSonic VE710s-5 VE710b-5**

**Model No. VLCDS27998-3W  
VLCDS27998-4W  
17" Color TFT LCD Display**

(VE710s-5\_VE710b-5\_SM Rev. 1a Jan. 2006)

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## Revision History

Revision	SM Editing Date	ECR Number	Description of Changes	Editor
1a	01/16/2006		Initial release	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.



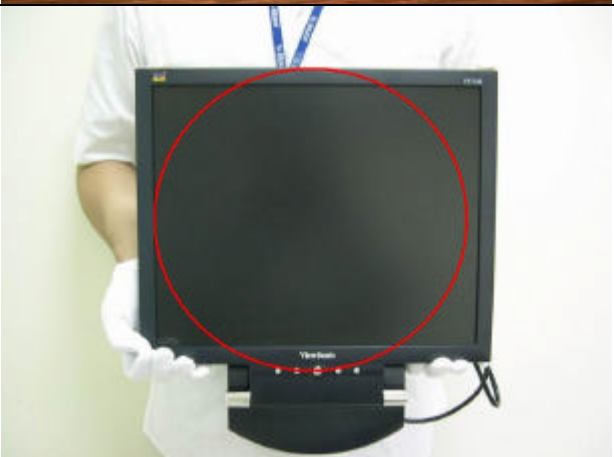

## 4. LCD Module Handling Precautions

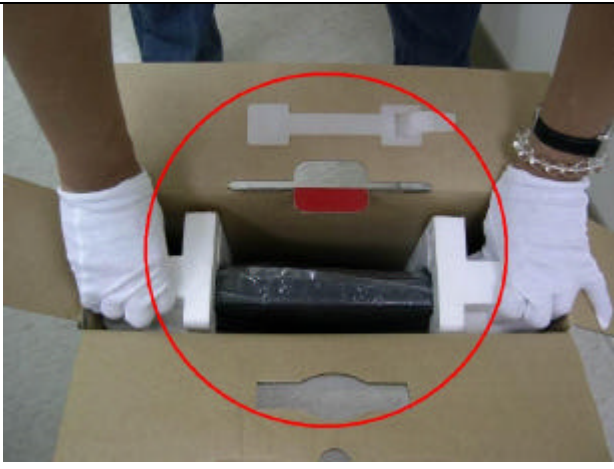
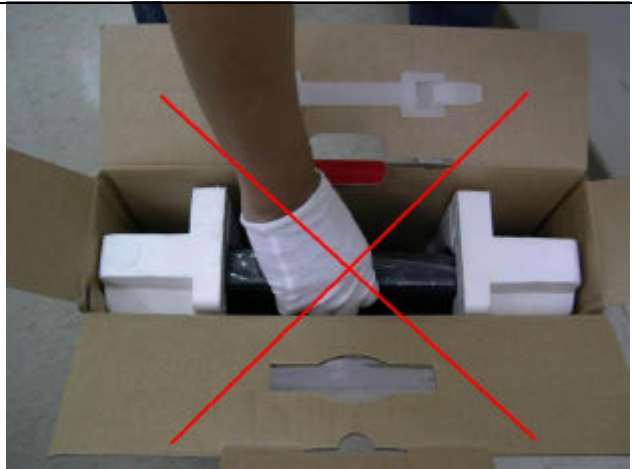


### 4.1 Handling Precautions

- (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.

## 5. Handling Methods

Correct methods :	Incorrect Methods :
Only touch the metal frame of the panel or the front cover of the monitor. Do not touch the surface of the polarizer .	If the surface of the panel is pressed by fingers, this may cause "MURA."
	
	

Correct methods :	Incorrect Methods :
Take out the monitor by grasping the cushion.	If the monitor is removed by grasping the LCD panel, that may cause "MURA."
	
Place the monitor on a clean & soft foam pad .	If the monitor is placed on foreign objects, that could scratch the surface of the panel.
	

## 2. Specification

### • General Specifications

Test Resolution & Frequency	1280 x 1024 @ 60Hz
Test Image Size	Full Size
Contrast and Brightness Controls	Factory Default: Contrast = 70%, Brightness = 100%

### • Video Interface

Analog Input Connector	DB-15 (Analog)
Video Cable Strain Relief	Equal to twice the weight of the monitor for five minutes.
Video Cable Connector DB-15 Pinout	Compliant DDC 2B.
Video Signals	Video RGB (Analog)
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 1/2B	Compliant with Revision 1.3
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, 1280 x 720, 1280 x 1024
Exclusions	Not compatible with interlaced video.

### • Power Supply

Internal Power Supply	Part Number: ADP-40AFB
Input Voltage Range	90 TO 264 VAC
Input Frequency Range	47.5 TO 63 HERTZ
Short Circuit Protection	Output can be shorted without damage.
Over Current Protection	4.5 A typical at 12 VDC
Leakage Current	3.5mA (Max) at 254VAC / 60Hz
EFFICIENCY	70 % typical at 115VAC Full Load
Fuse	Internal and not user replaceable
Power Dissipation	35 Watts (typ)
Max Input AC Current	1.2 Arms @ 90VAC, 0.8 Arms @180VAC

• **Horizontal / Vertical Frequency**

Horizontal Frequency	30 – 80 KHZ
Vertical Refresh Rate	50 –85 HZ.
Maximum Pixel Clock	135 MHz
Sync Polarity	Independent of sync polarity.
Primary Presets	
Primary Preset	1280 x 1024 @ 60Hz
Look up table timing	
<<Analog>>	
1. 640 x 350 @ 70Hz, 31.5kHz 2. 640 x 480 @ 60Hz, 31.5kHz 3. 640 x 480 @ 67Hz, 35.0kHz 4. 640 x 480 @ 75Hz, 37.5kHz 5. 640 x 480 @ 72Hz, 37.9kHz 6. 640 x 480 @ 85Hz, 43.27kHz 7. 720 x 400 @ 70Hz, 31.5kHz 8. 800 x 600 @ 56Hz, 35.1kHz 9. 800 x 600 @ 60Hz, 37.9kHz 10. 800 x 600 @ 75Hz, 46.9kHz 11. 800 x 600 @ 72Hz, 48.1kHz 12. 800 x 600 @ 85Hz, 53.7kHz 13. 832 x 624 @ 75Hz, 49.7kHz 14. 1024 x 768 @ 60Hz, 48.4kHz 15. 1024 x 768 @ 70Hz, 56.5kHz 16. 1024 x 768 @ 72Hz, 58.1kHz 17. 1024 x 768 @ 75Hz, 60.0kHz 18. 1024 x 768 @ 85Hz, 68.67kHz 19. 1280 x 1024 @ 60Hz, 63.4kHz 20. 1280 x 1024 @ 75Hz, 79.97kHz 21. 1280x720 @ 60Hz, 45kHz (HDTV)	
Changing Modes	
Maximum Mode Change Blank Time, for image stability. Note: 1) Excluding “Auto Adjust” time 2) Under DOS mode (640 x 350, 720 x 400 & 640 x 400), there is no “Auto Adjust” feature. 3) The monitor needs to do “Auto Adjust” the first time a new mode is detected.	3 seconds (Max) 1 seconds (Typ) for recognized timings 1-2 seconds (Typ) for unrecognized timing .
Mode Change Image	The image shall blank while the monitor changes modes.



## TFT LCD PANEL

### 1st Panel Characteristics :

Model number	QDI QD17EL07 V.9
Type	Active Matrix TFT, TN technology
Active Size	17"
Pixel Arrangement	RGB Vertical Stripe
Pixel Pitch	0.264 mm
Glass Treatment	Anti-Glare Hard coating (3H)
# of Backlights	4 CCFL
Backlight Life	50000 Hrs (Typ) 40000 Hrs (Min)
Luminance (Center) – CT = 6500K, Contrast/ Brightness =	260 cd/m2 (Typ after 30 minute warm up) 200 cd/m2 (Min after 30 minute warm up)
Brightness Uniformity	80 % (Typ) / 75 % (Min)
Contrast Ratio	500 :1 (Typ) 300 : 1 (Min)
Color Depth	16.2 million colors (6+2 bit panel)
Horizontal Viewing Angle	140 degrees (Typ) / 120 degrees (Min) @ CR>10 160 degrees (Typ) @ CR>5
Vertical Viewing Angle	125 degrees (Typ) / 105 degrees (Min) @ CR>10 145 degrees (Typ) @ CR>5
Response Time 10%-90% @ Ta=25°C	<b>On/Off</b> Typical = 8 ms (Tr = 2 ms / Tf = 6 ms)
Mercury	0 mg per lamp
Panel Defects	Please see Panel Quality Specifications.

### 2nd Panel Characteristics :

Model number	CPT CLAA170EA07Q
Type	Active Matrix TFT, TN technology
Active Size	17"
Pixel Arrangement	RGB Vertical Stripe
Pixel Pitch	0.264 mm
Glass Treatment	Anti-Glare
# of Backlights	4 CCFL
Backlight Life	30000 Hrs (Min)
Luminance (Center) – CT = 6500K, Contrast/ Brightness =	300 cd/m2 (Typ after 30 minute warm up) 250 cd/m2 (Min after 30 minute warm up)
Brightness Uniformity	75 % (Min)
Contrast Ratio	500 :1 (Typ) 450 : 1 (Min)
Color Depth	16.2 million colors (6+2 bit panel)
Horizontal Viewing Angle	140 degrees (Typ) / 130 degrees (Min) @ CR>10 170 degrees (Typ) @ CR>5
Vertical Viewing Angle	130 degrees (Typ) / 120 degrees (Min) @ CR>10 160 degrees (Typ) @ CR>5
Response Time 10%-90% @ Ta=25°C	<b>On/Off</b> Typical = 8 ms Maximun = 12 ms
Mercury	0 mg per lamp
Panel Defects	Please see Panel Quality Specifications.

• **Mechanical**

Dimensions (Base attached unless otherwise specified)	
Width	377.6 mm
Height	374.0 mm
Depth	195.6 mm
Depth (Head Only)	55.0 mm
Monitor Weight	4.1 kg / 9.0 lbs
Packaging Specification	
Width	450 mm
Height	522 mm
Depth	135 mm
Gross Weight	5.2 kg (11.45 lb)
# units per Pallet	36/72 (air/sea)
20'/40' Container Loading, Palletized	720/1728 pieces
Ergonomics	
Tilt Up	20 degrees minimum
Tilt Down	-5 degrees
Swivel Right	0 degrees
Swivel Left	0 degrees
Height Adjust	0 mm
Pivot	0 degrees (Clockwise)

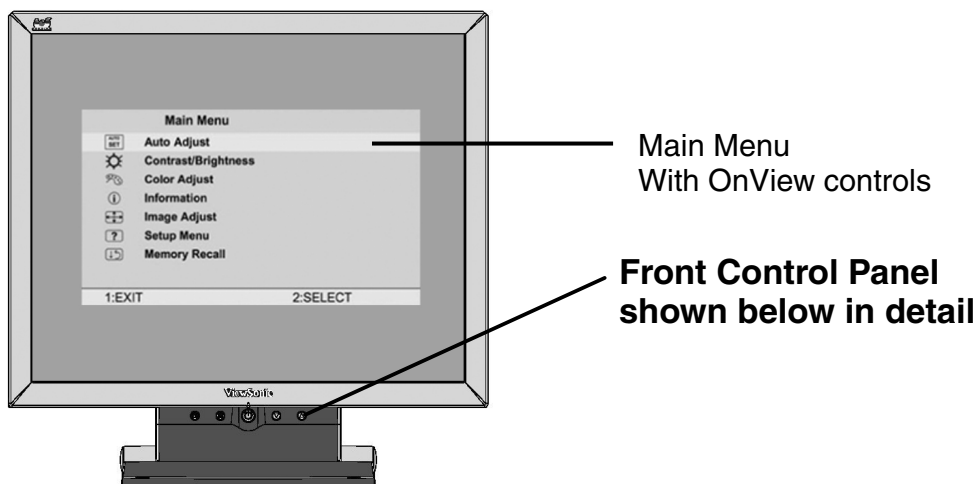
• **Environmental Conditions**

Operating Temperature	0°C to +40°C
Storage Temperature	-20°C to +60°C
Operating Relative Humidity	20% to 90% RH Non-Condensing
Storage Relative Humidity	5% to 90% RH Non-Condensing
Operating Altitude	0 to +3,000 meters
Storage Altitude	0 to +12,000 meters

### 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.



Displays the control screen for the highlighted control.

Also toggles between two controls on some screens.

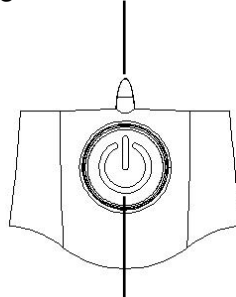
Also a shortcut to Auto Image Adjust.



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



Power light  
Green = ON  
Orange = Power Saving



Power On/Off

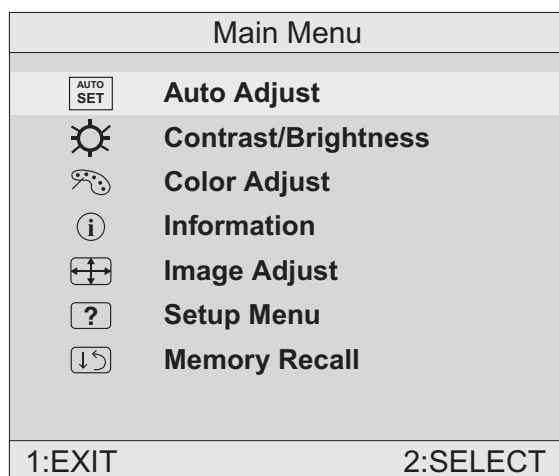
Scrolls through menu options and adjusts the displayed control.

Also a shortcut to display the Contrast adjustment control screen.



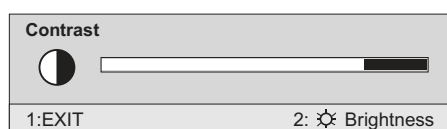
**Do the following to adjust the screen image:**

- 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 to be adjusted, press ▲ or ▼ to scroll up or down in the Main Menu.
3. After the desired control is selected, press button [2]. A control screen like the one shown below appears.



The line at the bottom of the screen shows the current functions of buttons 1 and 2: Exit or select the Brightness control.





- 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 @ 60 Hz 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
	<p><b>Auto Image Adjust</b> automatically sizes, centers, and fine tunes the video signal to eliminate waviness and distortion. Press the [2] button to obtain a sharper image.</p> <p><b>NOTE:</b></p> <ol style="list-style-type: none"><li>1. Auto Image Adjust works with most common video cards. If this function does not work on your LCD display, then lower the video refresh rate to 60 Hz and set the resolution to its pre-set value.</li><li>2. The Auto Image Adjust and most Manual Image Adjust functions are not available for DVI input.</li></ol>
	<p><b>Contrast</b> adjusts the difference between the image background (black level) and the foreground (white level).</p>
	<p><b>Brightness</b> adjusts background black level of the screen image.</p>
	<p><b>Color Adjust</b> provides several color adjustment modes: preset color temperatures and RGB which allows adjustment of red (R), green (G), and blue (B) separately. The factory setting for this product is 6500K (6500 Kelvin).</p>

Color Adjust	
sRGB	
9300K	
● 6500K	
5400K	
User Color	
1:EXIT	2:SELECT

**sRGB**-RGB is quickly becoming the industry standard for color management, with support being included in many of the latest applications. Enabling this setting allows the LCD display to more accurately display colors the way they were originally intended. Enabling the sRGB setting will cause the Contrast and Brightness adjustments to be disabled.

**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.

## Control Explanation

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

1. To select color (R, G or B) press button [2].
2. To adjust selected color, press▲or▼.
3. When you are finished making all color adjustments, press button [1] twice.



**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 card's 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.

Information	
H. Frequency:	48.60 KHz
V. Frequency:	60.00 Hz
Pixel Clock:	65.00 MHz
Resolution:	1280 x 1024
Model Number:	VS10047
Serial No:	
website : <a href="http://www.viewsonic.com">www.viewsonic.com</a>	
1:EXIT	



### Image Adjust

Image Adjust	
	<b>H./V. Position</b>
	<b>H. Size</b>
	<b>Fine Tune</b>
	<b>Sharpness</b>
1:EXIT	2:SELECT

The Image Adjust controls are explained below:



**H./V. Position** adjusts horizontal and vertical position of the screen image. You can toggle between Horizontal and Vertical by pressing button [2]. Horizontal moves the screen image to the left or to the right. Vertical moves the screen image up and down.



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

**NOTE:** Vertical size is automatic with your LCD display.

## Control Explanation



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

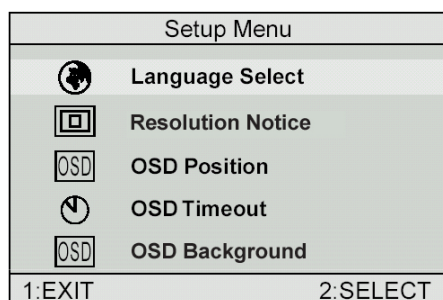
**NOTE:** Try the **Auto Adjust** (see page 9) before using the **Fine Tune** control.



**Sharpness** adjusts the clarity and focus of the screen image.



**Setup Menu** displays the menu shown below.



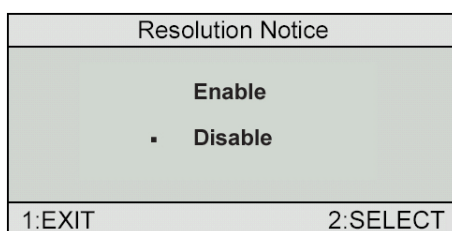
The Setup Menu controls are explained below.



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





**Resolution Notice** advises the optimal resolution to use.



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



**OSD Timeout** sets the length of time an on-screen display screen is displayed. For example, with a “15 second” setting, if a control is not pushed within 15 seconds, the display screen disappears.

Control	Explanation
	<b>OSD Background</b> allows you to turn the On-Screen display background on or off. This means that while making adjustments from the OSD control screens you can also view open software applications, or the Windows desktop.
	<b>Memory Recall</b> returns adjustments to the original factory settings if the display is operating in a factory Preset Timing Mode listed in this user guide.





### 3. ELECTRICAL SPECIFICATIONS

#### 3.1 Standard conditions

Display Area	<b>338x 270 mm</b>
Video Signal	<b>0.7Vpp</b>
Contrast	<b>70%</b>
Brightness	<b>Max.</b>
Ambient	<b>20 +/- 5 °C</b>
Input	<b>AC</b>
Warming up	<b>&gt; 30 min</b>
Display	<b>1280 x 1024</b>

#### 3.2 POWER

##### 3.2.1 Power supply

Input voltage	100~240Vac
Power frequency	50~60Hz
Input current	<1.5Arms@90Vac
Inrush current	<0.75Arms@240Vac 90A(Max) at 230Vac(cold start)
Power consumption	50W(typical);40Watts(Max)
Output	@0-3.0A load 12Vdc +/-5%

##### 3.2.2 Power Management

State	Power	Indicator
On	45Watts	Green
Standby	< 1Watts	Amber
Off	<1Watts	Off

#### 3.3 Acceptable timing

If the timing is within following specification, this LCD display can automatically function with a certain position.

Horizontal: Sync frequency: 30~81 kHz

Vertical: Sync frequency: 56~85Hz (1280x1024,75Hz)

#### 3.4 Signal level and input impedance

3.4.1 Video Signal level: 0.7Vp-p Video signal.

3.4.2 Sync Signal level

H/V Separate: TTL level

3.4.3 Input impedance

Analog video input: 75 ohm

Sync input: > 1 k ohm

**4. SIGNAL CABLE:** Signal cable with Mini D-Sub 15P connectors at both ends. Length: 1.8 meter.

## 5. EDID data

### VE710s EDID(QDI panel)

Time: 09:10:39

Date: Wed Jan 19, 2005

VIEWSONIC CORPORATION

EDID Version # 1, Revision # 3

DDCTest For: ViewSonic VE710s

EDID Block 0, Bytes 0-127

128 BYTES OF EDID CODE:

	0	1	2	3	4	5	6	7	8	9
0	00	FF	FF	FF	FF	FF	FF	00	5A	63
10	18	F5	01	01	01	01	01	0F	01	03
20	18	22	1B	78	2E	8A	15	A3	58	49
30	9D	24	16	50	54	BF	EF	80	81	80
40	81	40	71	4F	01	01	01	01	01	01
50	01	01	01	01	30	2A	00	98	51	00
60	2A	40	30	70	13	00	52	0E	11	00
70	00	1E	00	00	00	FF	00	41	33	33
80	30	35	30	31	30	30	30	30	31	0A
90	00	00	00	FD	00	32	4B	1E	50	0E
100	00	0A	20	20	20	20	20	20	00	00
110	00	FC	00	56	45	37	31	30	73	0A
120	20	20	20	20	20	20	00	8F		

(08-09) ID Manufacturer Name = VSC

(11-10) Product ID Code = F518

(12-15) Last 5 Digits of Serial Number = Not Used

(16) Week of Manufacture = 01

(17) Year of Manufacture = 2005

(10-17) Complete Serial Number = See Descriptor Block

(18) EDID Version Number = 1

(19) EDID Revision Number = 3

(20) VIDEO INPUT DEFINITION:

Analog Signal

0.700, 0.300 (1.000 Vp-p)

Blank-to-Black Setup, Separate Syncs

(21) Maximum Horizontal Image Size = 340 mm

(22) Maximum Vertical Image Size = 270 mm

(23) Display Gamma = 2.20

(24) Power Management and Supported Feature(s):

Active Off/Very Low Power, Standard Default Color Space,

Preferred Timing Mode

Display Type = R/G/B Color

(25-34) CHROMA INFO:

Red X - 0.639 Green X - 0.287 Blue X - 0.141 White X - 0.313

Red Y - 0.344 Green Y - 0.615 Blue Y - 0.087 White Y - 0.329

- (35) ESTABLISHED TIMING I:  
 720 X 400 @ 70Hz (IBM,VGA)  
 640 X 480 @ 60Hz (IBM,VGA)  
 640 X 480 @ 67Hz (Apple,Mac II)  
 640 X 480 @ 72Hz (VESA)  
 640 X 480 @ 75Hz (VESA)  
 800 X 600 @ 56Hz (VESA)  
 800 X 600 @ 60Hz (VESA)

- (36) ESTABLISHED TIMING II:  
 800 X 600 @ 72Hz (VESA)  
 800 X 600 @ 75Hz (VESA)  
 832 X 624 @ 75Hz (Apple,Mac II)  
 1024 X 768 @ 60Hz (VESA)  
 1024 X 768 @ 70Hz (VESA)  
 1024 X 768 @ 75Hz (VESA)  
 1280 X 1024 @ 75Hz (VESA)

- (37) Manufacturer's Reserved Timing:  
 1152 X 870 @ 75Hz (Apple,Mac II)

- (38-53) Standard Timing Identification:  
 1280 X 1024 @60Hz  
 1280 X 960 @60Hz  
 1152 X 864 @75Hz  
 Not Used  
 Not Used  
 Not Used  
 Not Used  
 Not Used

- 
- (54-71) Detailed Timing / Descriptor Block 1:  
 1280x1024 Pixel Clock: 108.00 MHz
- 

Horizontal Image Size: 338 mm	Vertical Image Size: 270 mm
Refreshed Mode: Non-Interlaced	Normal Display - No Stereo

Horizontal:

Active Time: 1280 pixels	Blanking Time: 408 pixels
Sync Offset: 48 pixels	Sync Pulse Width: 112 pixels
Border: 0 pixels	Frequency: 63.98 KHz

Vertical:

Active Time: 1024 lines	Blanking Time: 42 lines
Sync Offset: 1 lines	Sync Pulse Width: 3 lines
Border: 0 lines	Frequency: 60.02 Hz

Digital Separate, Horizontal Polarity (+) Vertical Polarity (+)

- 
- (72-89) Detailed Timing / Descriptor Block 2:  
 Monitor Serial Number:  
 A33050100001
-

(90-107) Detailed Timing / Descriptor Block 3:

Monitor Range Limits:  
Min Vertical Freq - 50 Hz  
Max Vertical Freq - 75 Hz  
Min Horiz. Freq - 30 KHz  
Max Horiz. Freq - 80 KHz  
Pixel Clock - 140 MHz  
Secondary GTF - Not Supported

---

(108-125) Detailed Timing / Descriptor Block 4:

Monitor Name:  
VE710s

(126) No Extension EDID Block(s)

(127) CheckSum OK

#### VE710b EDID(QDI panel)

Time: 09:10:09

Date: Wed Jan 19, 2005

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VIEWSONIC CORPORATION  
EDID Version # 1, Revision # 3  
DDCTest For: ViewSonic VE710b

---

EDID Block 0, Bytes 0-127

128 BYTES OF EDID CODE:

	0	1	2	3	4	5	6	7	8	9
0	00	FF	FF	FF	FF	FF	FF	00	5A	63
10	18	F6	01	01	01	01	01	0F	01	03
20	18	22	1B	78	2E	8A	15	A3	58	49
30	9D	24	16	50	54	BF	EF	80	81	80
40	81	40	71	4F	01	01	01	01	01	01
50	01	01	01	01	30	2A	00	98	51	00
60	2A	40	30	70	13	00	52	0E	11	00
70	00	1E	00	00	00	FF	00	41	33	34
80	30	35	30	31	30	30	30	30	31	0A
90	00	00	00	FD	00	32	4B	1E	50	0E
100	00	0A	20	20	20	20	20	20	00	00
110	00	FC	00	56	45	37	31	30	62	0A
120	20	20	20	20	20	20	00	9E		

- (08-09) ID Manufacturer Name = VSC
- (11-10) Product ID Code = F618
- (12-15) Last 5 Digits of Serial Number = Not Used
- (16) Week of Manufacture = 01
- (17) Year of Manufacture = 2005
- (10-17) Complete Serial Number= See Descriptor Block
- (18) EDID Version Number = 1
- (19) EDID Revision Number = 3
- (20) VIDEO INPUT DEFINITION:  
 Analog Signal  
 0.700, 0.300 (1.000 Vp-p)  
 Blank-to-Black Setup, Separate Syncs
- (21) Maximum Horizontal Image Size = 340 mm
- (22) Maximum Vertical Image Size = 270 mm
- (23) Display Gamma = 2.20
- (24) Power Management and Supported Feature(s):  
 Active Off/Very Low Power, Standard Default Color Space,  
 Preferred Timing Mode  
 Display Type = R/G/B Color
- (25-34) CHROMA INFO:  
 Red X - 0.639 Green X - 0.287 Blue X - 0.141 White X - 0.313  
 Red Y - 0.344 Green Y - 0.615 Blue Y - 0.087 White Y - 0.329
- (35) ESTABLISHED TIMING I:  
 720 X 400 @ 70Hz (IBM,VGA)  
 640 X 480 @ 60Hz (IBM,VGA)  
 640 X 480 @ 67Hz (Apple,Mac II)  
 640 X 480 @ 72Hz (VESA)  
 640 X 480 @ 75Hz (VESA)  
 800 X 600 @ 56Hz (VESA)  
 800 X 600 @ 60Hz (VESA)
- (36) ESTABLISHED TIMING II:  
 800 X 600 @ 72Hz (VESA)  
 800 X 600 @ 75Hz (VESA)  
 832 X 624 @ 75Hz (Apple,Mac II)  
 1024 X 768 @ 60Hz (VESA)  
 1024 X 768 @ 70Hz (VESA)  
 1024 X 768 @ 75Hz (VESA)  
 1280 X 1024 @ 75Hz (VESA)
- (37) Manufacturer's Reserved Timing:  
 1152 X 870 @ 75Hz (Apple,Mac II)

(38-53) Standard Timing Identification:

1280 X 1024 @60Hz

1280 X 960 @60Hz

1152 X 864 @75Hz

Not Used

Not Used

Not Used

Not Used

Not Used

---

(54-71) Detailed Timing / Descriptor Block 1:

1280x1024 Pixel Clock: 108.00 MHz

---

Horizontal Image Size: 338 mm	Vertical Image Size: 270 mm
Refreshed Mode: Non-Interlaced	Normal Display - No Stereo
Horizontal:	
Active Time: 1280 pixels	Blanking Time: 408 pixels
Sync Offset: 48 pixels	Sync Pulse Width: 112 pixels
Border: 0 pixels	Frequency: 63.98 KHz
Vertical:	
Active Time: 1024 lines	Blanking Time: 42 lines
Sync Offset: 1 lines	Sync Pulse Width: 3 lines
Border: 0 lines	Frequency: 60.02 Hz

Digital Separate, Horizontal Polarity (+) Vertical Polarity (+)

---

(72-89) Detailed Timing / Descriptor Block 2:

Monitor Serial Number:

A34050100001

---

(90-107) Detailed Timing / Descriptor Block 3:

Monitor Range Limits:

Min Vertical Freq - 50 Hz

Max Vertical Freq - 75 Hz

Min Horiz. Freq - 30 KHz

Max Horiz. Freq - 80 KHz

Pixel Clock - 140 MHz

Secondary GTF - Not Supported

---

(108-125) Detailed Timing / Descriptor Block 4:

Monitor Name:

VE710b

(126) No Extension EDID Block(s)

(127) CheckSum OK

## 6. THEORY OF OPERATION

This section describes the function of the LCD monitor per functional block.

This monitor includes MB board, power board and button board.

### 6.1 MB BOARD

The MB board is a two-layer, single-landed design with ground and internal planes provided. DC power from the power board enters the board through a 6P connector. The other connector on the board is for the button board. The VGA cable is a signal cable that carries the video, sync and DDC signals from the PC VGA adapter. This system board consists of 4 functional areas: flat panel controller, MCU with flash ROM, and power regulators.

#### 6.1.1 Flat panel controller: MST8111A(U3)

The heart of the system board is the Realtek MST8111A. The MST8111A is a graphics processing IC designed for LCD monitors. It provides all key IC functions required for LCD displays. On-chip functions include a high-speed triple-ADC, PLL, high scaling engine and OSD controller.

##### a) Clock Generation:

Crystal Input Clock (TCLK and XTAL). This is the input pair to an internal crystal oscillator and corresponding logic. A 14.318 MHz crystal is recommended.

##### b) Analog to Digital Converter:

The MST8111A chip has three ADCs (analog-to-digital converters), one for each color (red, green and blue). The analog RGB signals are connected to MST8111A as described below.

Pin Name	Pin Number
Red +	63
Red -	62
Green +	60
Green -	59
Blue +	58
Blue -	57

- c) OSD: The MST8111A has a fully programmable, high-quality OSD controller. The on-chip static RAM (4096 words by 24 bits) stores the cell map and the cell definitions.



- d) **MTV312 Micro Controller:** The MTV312 micro controller (MCU) serves as the system micro controller. It programs the MST8111A and manages other devices in the system such as the keypad, the backlight, the LED, the audio system and the non-volatile RAM using general purpose input/output (GPIO) pins.

Pin number	Pin Name	Pin Number Usage
21	P1.3	Key / Power on ,off
13	P3.4	NV_RAM (U4) SDA
14	P3.5	NV_RAM (U4) SCL
25	P1.7	Key_down
9	P6.3	Key_right
24	P1.6	Key_up
16	P6.2	Key_left
37	P4.1	Key_mute
34	P5.6	VGA connector
23	P1.5	Key_select
42	P5.3	LED_red
41	P5.4	LED_green
32	P6.6	LCD panel power1 on / off control
3	P5.0	LCD panel power2 on / off control
36	P4.0	Backlight on / off control

- e) **Panel Power Sequencing (VDDCTRL1, 2) (Pin 32, 3):** The MTV312 has two dedicated outputs VDDCTRL1 and 2 ( Pin32 and Pin3) to control LCD power sequencing once data and control signals are stable.
- f) **Panel interface (Pin 1~25, Pin75~128) :** The MTV312 driver interface is highly programmable. It supports dual bus / dual port for SXGA drivers.

6.1.2 **Power Regulator MC34063A (U6),AIC1739 (Q4):** The MC34063A is a monolithic control IC containing the primary functions required for DC to DC converters. The device consists of an internal temperature compensated reference, a comparator, and a controlled duty cycle oscillator with an active current sense circuit. The desired output voltage is determined by the equation,  $V_{out} = 1.25 ( 1 + R_{67} / R_{66})$ . In this case, the output voltage is 3.3 Volts. The AIC1563 is a low dropout positive adjustable regulator with minimum of 1A output current capability, so it is well suited to serve as a 3.3 V or 2.5 V regulator.

6.1.3 **Power Regulator MC34063A (U7):** The MC34063A is a monolithic control IC containing the primary functions required for DC to DC converters. The device consists of an internal temperature compensated reference, a comparator, and a controlled duty cycle oscillator with an active current sense circuit. The desired output voltage is determined by the equation,  $V_{out} = 1.25 ( 1 + R_{85} / R_{86})$ . In this case, the output voltage is 5.0 Volts for panel power.

## 6.2 Power (Inverter) Board

This is a specific power (inverter) board for VE710 monitor with output of 40W / 12V / 3.5A. It provides 12 VDC to drive the four cold cathode fluorescence tubes in the backlight.

6.2.1 The inverter's electrical specification is described below.

<b>Input</b>	Rated Input Voltage	12Vdc
	Input Voltage Range	11.4 ~ 12.6 Vdc
	Input Current	<2A
	On / Off control Voltage	2~3.3 for on, 0~1 for off
<b>Output</b>	Rated Output Strike-on Voltage	1500Vrms
	Rated Output Voltage	710Vrms at 7mA
	Rate Output Frequency	40~50KHz
	Rated Output Current	7~8 mA

### 6.2.2 Power

This is a general purpose AC / DC adapter which converts 90~240 Vac to a stabilized DC voltage: 12 Volts, with a rated output current of 4.16A. The electrical specification is described below.

	Rated Input Voltage	90~240 Vac, 50 / 60Hz
	Operation Input Voltage	90~260 Vac, 47 ~ 63Hz
	Input Current	<1.5A
	Inrush Current	<100A@120Vac
	Standby Input Voltage	12Vdc
	Output Voltage Regulation	+/-5%
	Output Ripple & Noise	120mVp-p
	Rate Output Current	<3.5A
	Turn-on delay	<3secs

## 5. Adjustment Procedure

### OSD Function Menu

#### A. When in Analog Input Mode

##### 1. Main Menu

Press the [1] (Menu) button to enter the Main Menu:

Press the [▲] button to highlight the previous item or the [▼] button to highlight the next item.

Press the [1] (Menu) button to exit the Main Menu.

##### (1) Auto Image Adjust Page:

Press the [2] button to execute the auto image adjust function.

Press the [1] button to exit the page.

##### (2) Contrast/Brightness Page:

Press the [2] button to enter the contrast adjustment page.

Press the [1] button to exit the page.

##### 1) Contrast Item

Press the [▲] button to increase the contrast.

Press the [▼] button to decrease the contrast.

Press the [2] button to enter the brightness adjustment page.

Press the [1] button to exit the page.

##### 2) Brightness Item

Press the [▲] button to increase the brightness.

Press the [▼] button to decrease the brightness.

Press the [2] button to enter the contrast adjustment page.

Press the [1] button to exit the page.

##### (3) Input Select Page:

Press the [2] button to switch to digital input mode.

##### (4) Color Adjust Page:

Press the [2] button to enter the color adjustment page.

Press the [1] button to exit the page.

Press the [▲] button to highlight the previous item or the [▼] button to highlight the next item.

##### 1) sRGB Item

##### 2) 9300K Item

##### 3) 6500K Item

##### 4) 5400K Item

Press the [2] button to select the currently highlighted item.

Press the [1] button to exit the currently highlighted item.

##### 5) User Color Item

Press the [2] button to enter the user color page.

Press the [1] button to exit the page.

##### Red, Green, Blue Options:

Press the [2] button to cycle among the colors.

Press the [1] button to exit the page.

Press the [▲] button to increase the selected color level.

Press the [▼] button to decrease the selected color level.

**(5) Information Page:**

Press the [2] button to enter the information page.

Press the [1] button to exit the information page.

**(6) Manual Image Adjust Page:**

Press the [2] button to enter the manual image adjustment page.

Press the [1] button to exit the page.

Press the [▲] button to highlight the previous item or the [▼] button to highlight the next item.

**1) H./V. Position Item**

Press the [2] button to enter the horizontal/vertical position adjustment page.

Press the [1] button to exit the page.

**a) Horizontal Position:**

Press the [2] button to enter the vertical position adjustment page.

Press the [1] button to exit the page.

Press the [▲] button to shift the image to the right.

Press the [▼] button to shift the image to the left.

**b) Vertical Position:**

Press the [2] button to return to the horizontal position adjustment page.

Press the [1] button to exit the page.

Press the [▲] button to shift the image upward.

Press the [▼] button to shift the image downward.

**2) Horizontal Size Item**

Press the [2] button to enter the horizontal size adjustment page.

Press the [1] button to exit the page.

Press the [▲] button to make the image wider.

Press the [▼] button to make the image narrower.

**3) Fine tune Item**

Press the [2] button to enter the fine tuning page.

Press the [1] button to exit the page.

Press “[▲]” Button to adjust character position in one direction.

Press “[▼]” Button to adjust character position in the other direction.

**4) Sharpness Item**

Press the [2] button to enter the sharpness adjustment page.

Press the [1] button to exit the page.

Press “[▲]” Button to increase image sharpness.

Press “[▼]” Button to decrease image sharpness.

**(7) Setup Menu Page:**

Press the [2] button to enter the setup menu page.

Press the [1] button to exit the page.

Press the [▲] button to highlight the previous item or the [▼] button to highlight the next item.

**1) Language Select Item**

Press the [2] button to enter the language selection page.

Press the [1] button to exit the page.  
Press the [▲] button to highlight the previous item or the [▼] button to highlight the next item.

**English, French... Option**

Press the [2] button to select the language.  
Press the [1] button to exit the page.

**2) Resolution Notice Item**

Press the [2] button to enter the resolution notice page.  
Press the [1] button to exit the page.

**Enable, Disable Option**

Press the [2] button to select the highlighted option.  
Press the [1] button to exit the page.  
Press the [▲] button to highlight the previous option or the [▼] button to highlight the next option.

**3) OSD Position Item**

Press the [2] button to enter the OSD position adjustment page.  
Press the [1] button to exit the page.

**a) Horizontal Position Option**

Press the [2] button to enter the vertical position adjustment page.  
Press the [1] button to exit the page.  
Press the [▲] button to shift the menu to the right.  
Press the [▼] button to shift the menu to the left.

**b) Vertical Position Option:**

Press the [2] button to enter the horizontal position adjustment page.  
Press the [1] button to exit the page.  
Press the [▲] button to shift the menu upward.  
Press the [▼] button to shift the menu downward.

**4) OSD Time Out Item**

Press the [2] button to enter the OSD time out adjustment page.  
Press the [1] button to exit the page.  
Press the [▲] button to increase the OSD time out.  
Press the [▼] button to decrease the OSD time out.

**5) OSD Background Item**

Press the [2] button to enter the OSD background selection page.  
Press the [1] button to exit the page.

**Enable, Disable Option**

Press the [▲] button to highlight the previous option or the [▼] button to highlight the next option.  
Press the [2] button to select the highlighted option.  
Press the [1] button to exit the page.

**(8) Memory Recall Page**

Press the [2] button to execute the memory recall function.  
Press the [1] button to exit the page.

## **2. Other Menu:**

This “shortcut” menu is directly accessible without bringing up the OSD.

### **(1) Contrast Dialog**

Press the [▲] or [▼] button to enter the Contrast Dialog.

Press the [1] button to exit the Contrast Dialog.

Press the [2] button to enter the Brightness Dialog.

Press the [▲] button to increase the contrast.

Press the [▼] button to decrease the contrast.

### **(2) Brightness Dialog**

Press the [▲] or [▼] button to enter the Brightness Dialog.

Press the [1] button to exit the Brightness Dialog.

Press the [2] button to enter the Contrast Dialog.

Press the [▲] button to increase the brightness.

Press the [▼] button to decrease the brightness.

### **(3) Analog/Digital Dialog**

Press the [2] button to toggle between analog and digital modes.

### 3. Function test

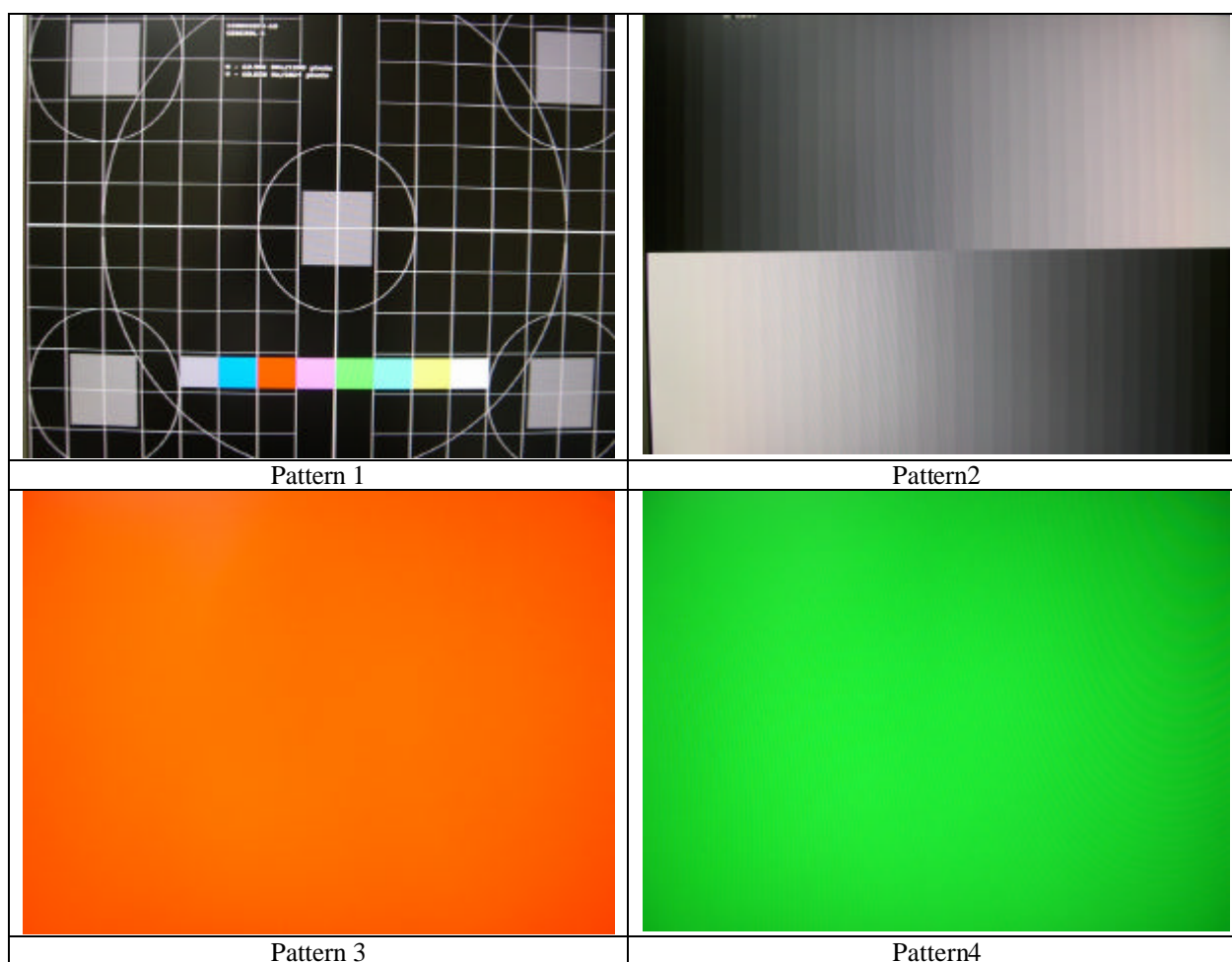
- (1) Test equipment  
Color video signal and pattern generator (or PC with SXGV resolution)
- (2) Test condition  
Before function testing and alignment, the unit must warm up for at least 30 minutes under the following conditions:
  1. Room temperature
  2. With full-white screen, RGB, black pattern
  3. With cycled display modes

### 4. Test display modes

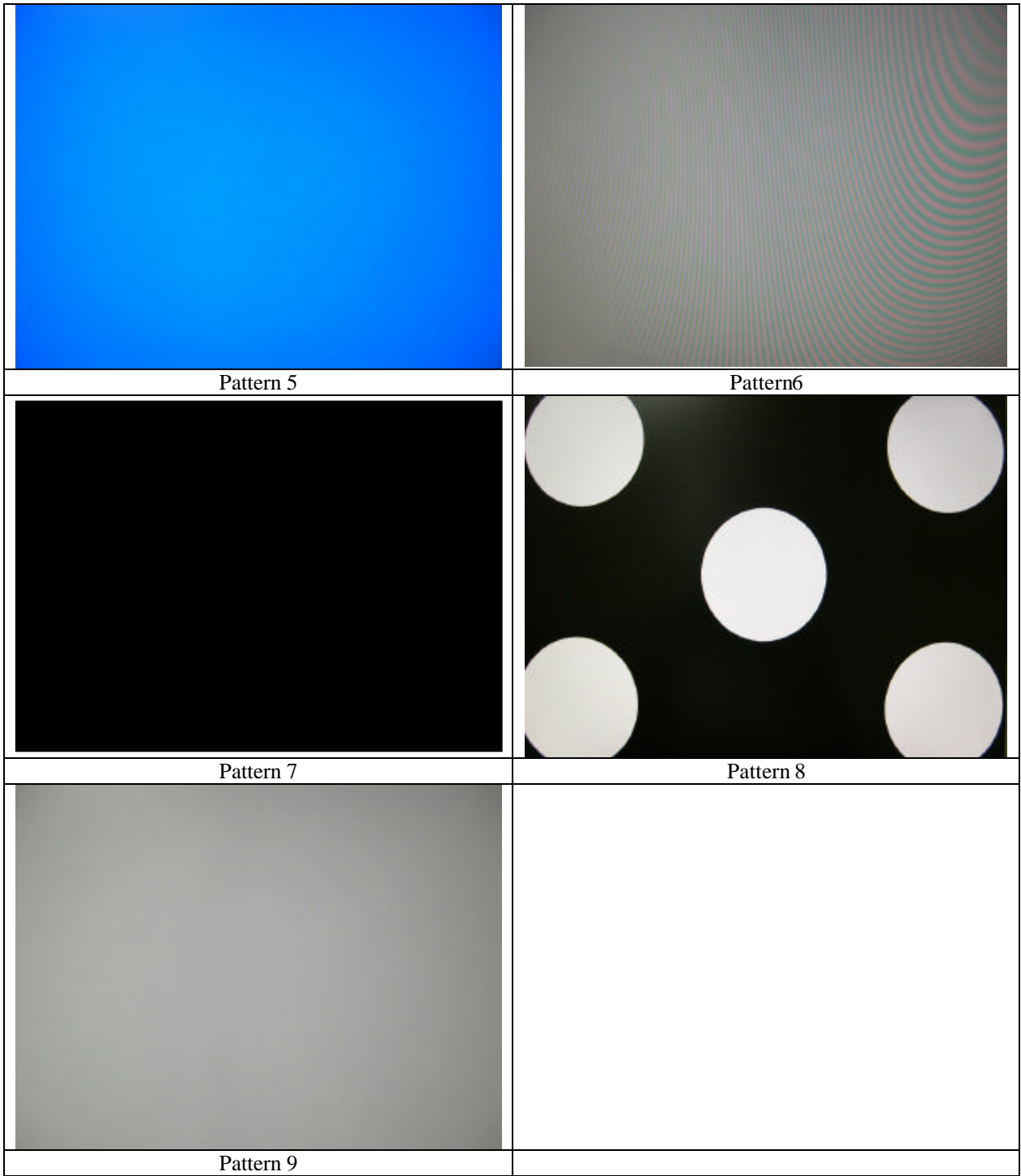
Item	Timing	Analog
1	640 x 350 @ 70Hz, 31.5kHz	Yes
2	640 x 400 @ 60Hz, 31.5kHz	Yes
3	640 x 400 @ 70Hz, 31.5kHz	Yes
4	640 x 480 @ 50Hz, 24.7kHz	Yes
5	640 x 480 @ 60Hz, 31.5kHz	Yes
6	640 x 480 @ 67Hz, 35.0kHz	Yes
7	640 x 480 @ 72Hz, 37.9kHz	Yes
8	640 x 480 @ 75Hz, 37.5kHz	Yes
9	640 x 480 @ 85Hz, 43.27kHz	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 864 @ 75Hz, 67.5kHz	Yes
23	1152 x 870 @ 75Hz, 68.7kHz	Yes
24	1280 x 1024 @ 60Hz, 63.4kHz	Yes
25	1280 x 1024 @ 75Hz, 79.97kHz	Yes
26	1280x 720 @ 60Hz, 45kHz (HDTV)	Yes

## 5. Test pattern

Item	Test condition	Pattern	Specification	Remark
1	Frequency & performance	Cross-hatch pattern	No noise is allowed, all colors must be clear	Pattern 1
2	Monitor saturation	16-gray scale pattern	3 to 4 levels must be saturated when brightness and contrast are set to 100%	Pattern 2
3	RGB color performance	RGB color	Check the color temperature of RGB signal color	Pattern 3, 4, 5
4	Sub-pixel defect	RGB color	Check for sub-pixel defects	Pattern 3, 4, 5
5	Full white	Full white	Check the brightness and contrast ratio, and check for bright pixel defects	Pattern 6
6	Full black	Full black		Pattern 7
7.	5-cycle pattern	5-cycle pattern	Check the BU	Pattern 8
8.	1-dot pattern	1-dot pattern	Check the flicker	Pattern 9







## 6. Firmware update procedure :

When examining a monitor, please check whether the firmware version is the latest. If not, please follow the procedure below to upgrade to the latest version.

1. Equipment needed :
  - VE710s/b
  - PC ( Personal computer )
  - LPT cable
  - Fixture (LM5ISP)
  - Firmware upgrade program



Print port



Fixture



VE710s/b



LPT cable

2. Connection :



## 7. Appendix A : How to install the software for ISP :

### 0. To setup ISP environment

#### Hardware:

PC or Notebook , Parallel(Printer) cable , ISP tool( Fig 0.0)

#### Software:

ISP driver .

If the O.S. was Win2000 or Win XP please have to install

PORT95NT.exe



Fig0.0

In order to ensure can execute ISP program, please set BIOS in PC or Notebook as Fig 0.1

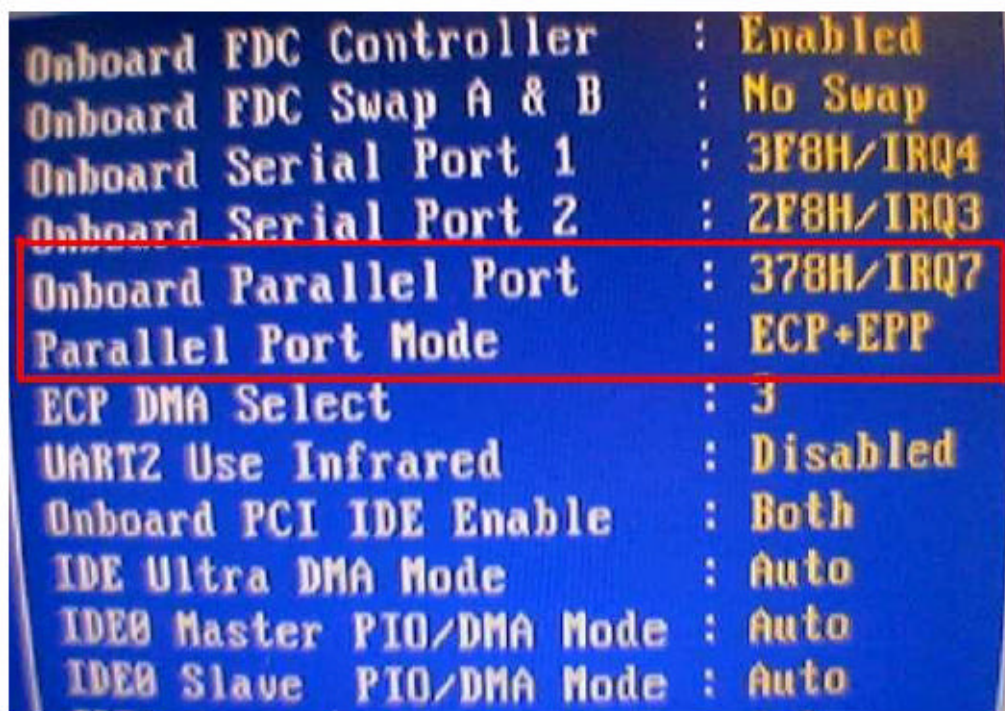


Fig 0.1

1. Install ISP
  - 1.1 User could download ISP river and PORT95NT install from Myson Century website ([www.myson.com.tw](http://www.myson.com.tw))
  - 1.2 After extracting the ZIP file , the total files list as Fig 1.2 , and double click the file of setup.exe to install.

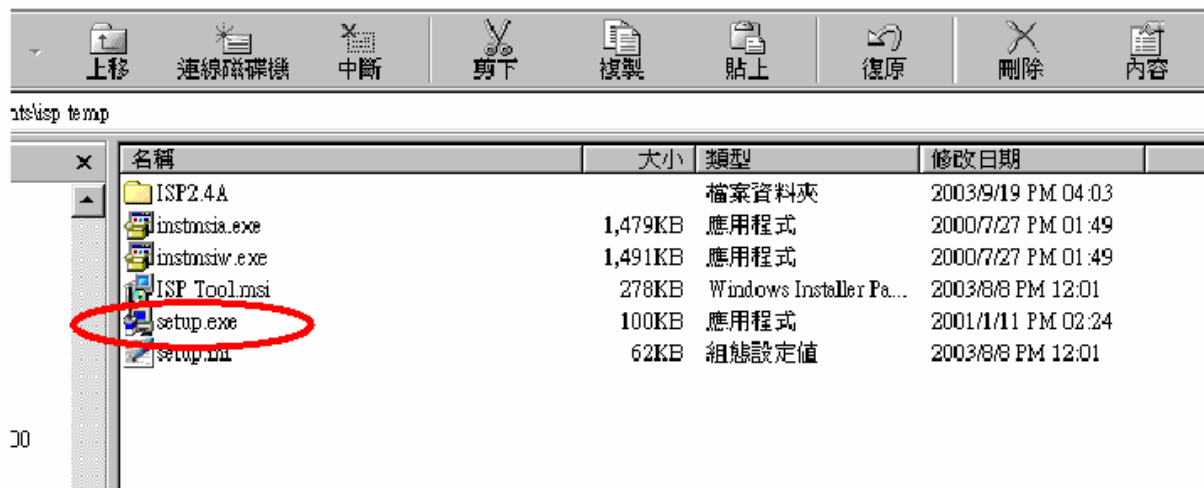


Fig 1.2

- 1.3 Press “Next “ button to continue., see Fig 1.3

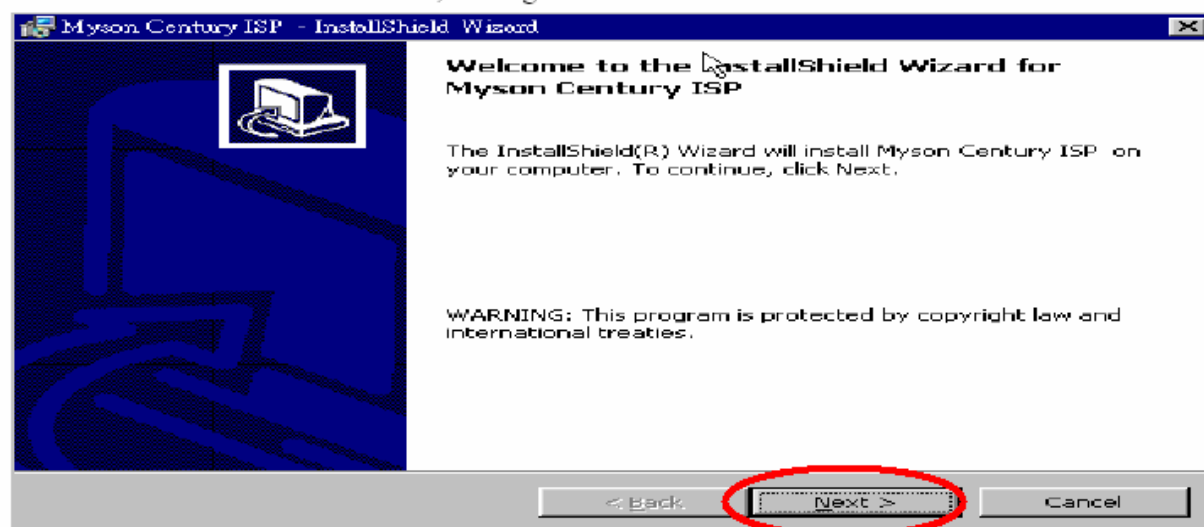


Fig 1.3

1.4 Keep default setting or press “Change “ button for selecting the path that you want , and then press “Next “ button to continue , see Fig 1.4 .

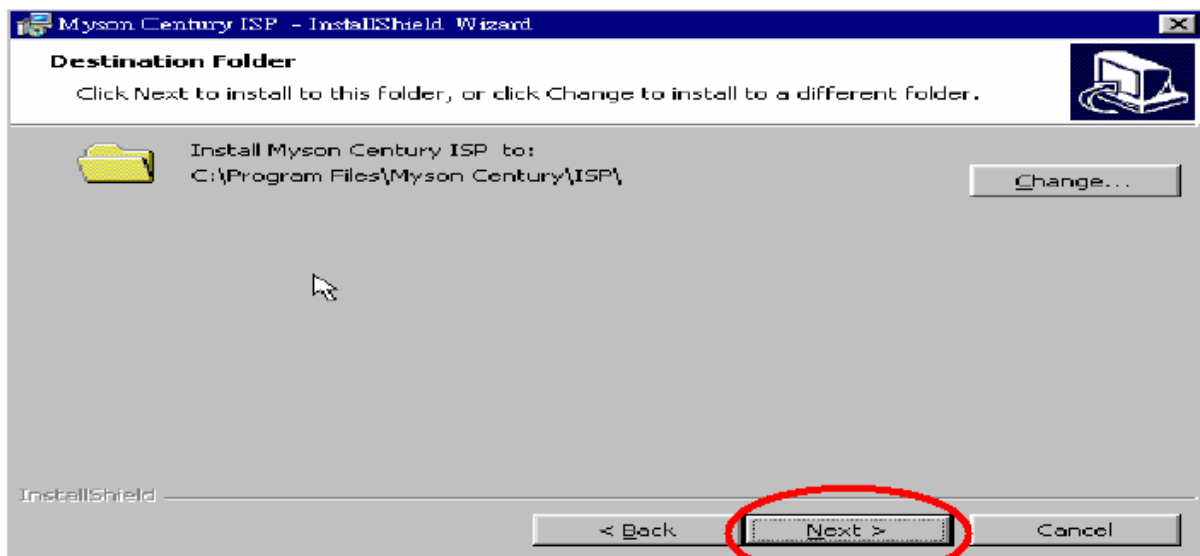


Fig 1.4

1.5 Press “Install “ button to continue , see Fig 1.5

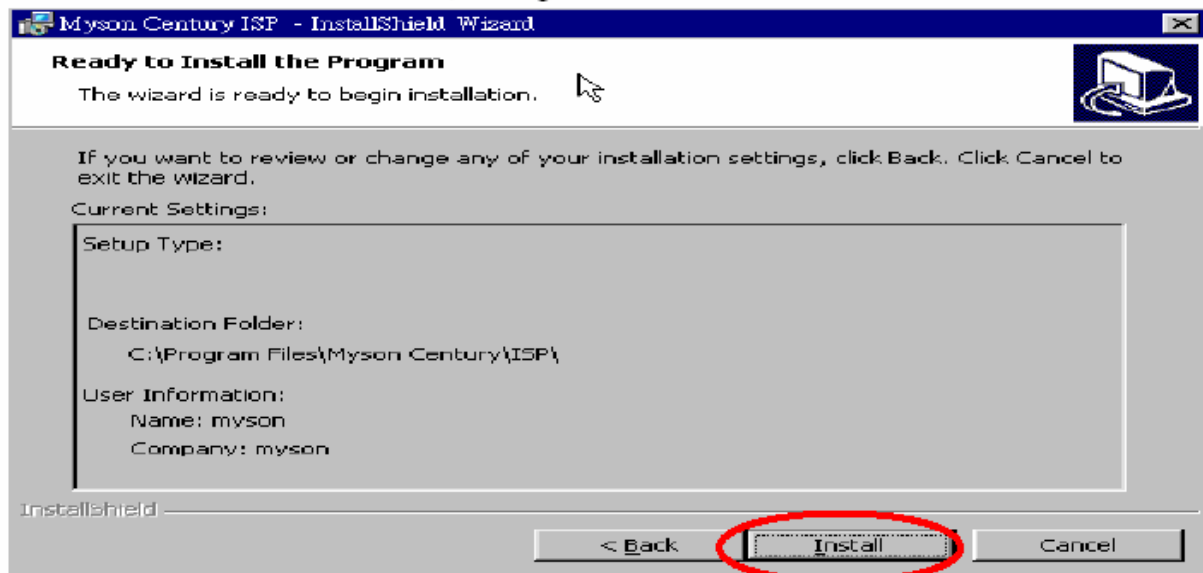


Fig 1.5

1.6 The installer Information shows package warning , Press “Ignore “button to continue .see Fig 1.6 .

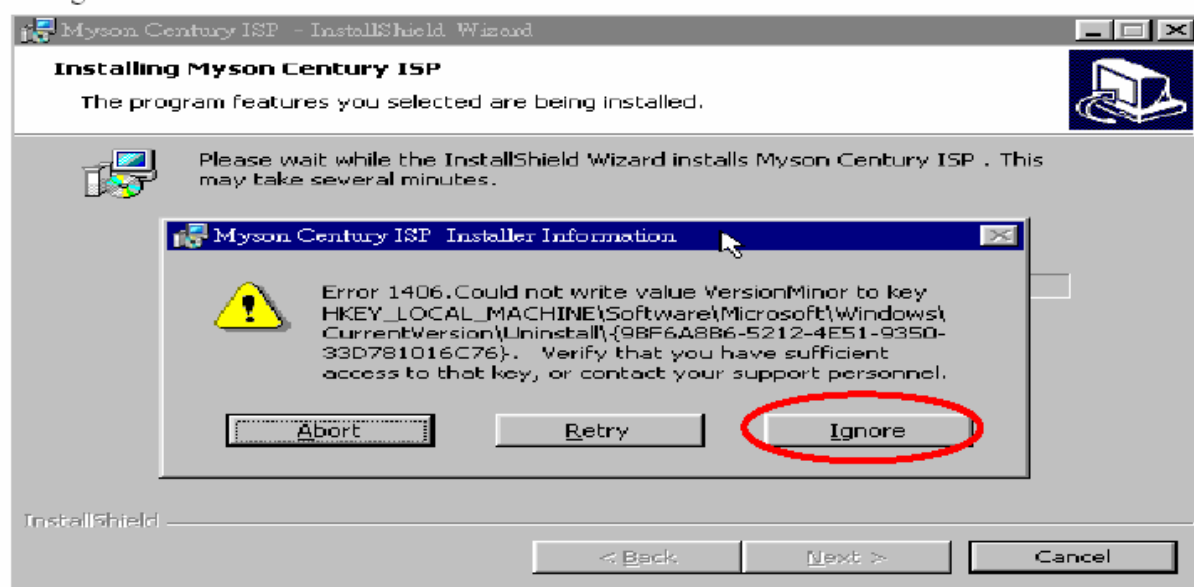


Fig 1.6

1.7 Installation has finished , press “Finish “button , see Fig 1.7 .

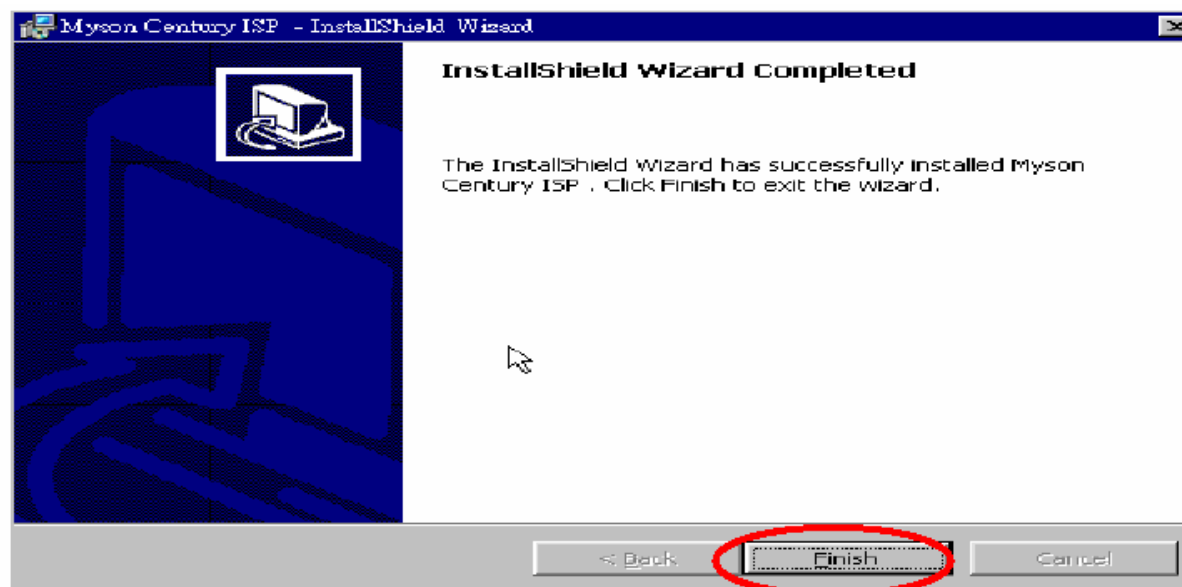


Fig. 1.7



## 8. Appendix B : How to use software to upgrade the BIOS :

8.1. After installation, shortcuts may be found in the settings path or the program menu (default setting); see Fig 2.1.

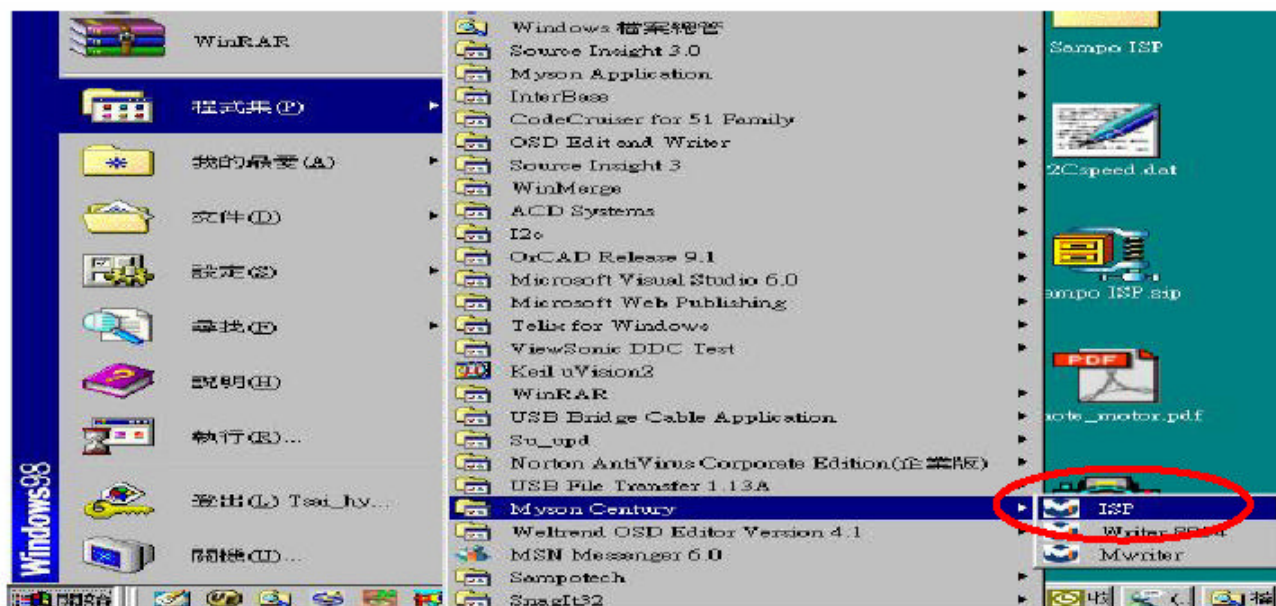


Fig 2.1

8.2 The security file is a key to use ISP functions; press the "OK" button. See Fig 2.2.

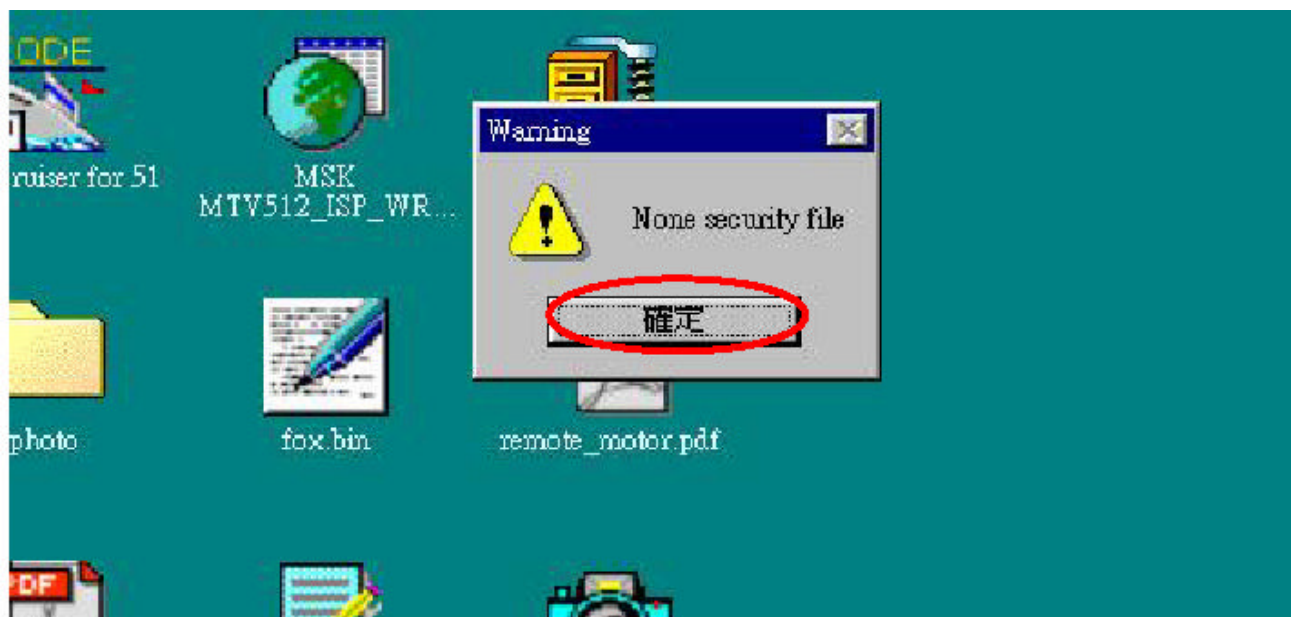


Fig 2.2

- 8.3 The warning shown in Fig. 2.3 is used to remind the user that a CPU rate that differs from IIC protocol may cause the ISP functions to fail; press the "OK" button.

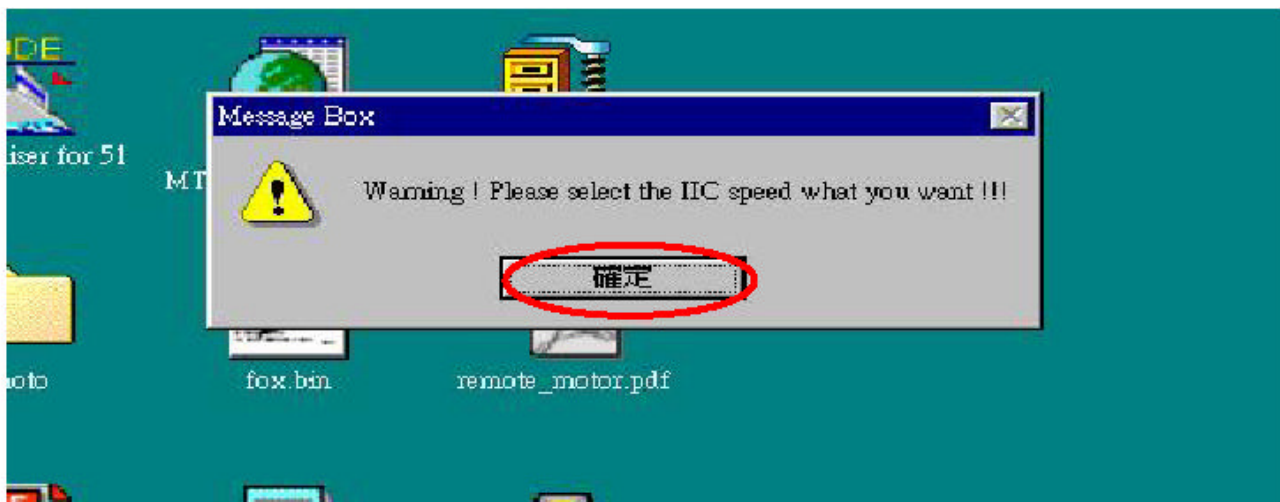


Fig 2.3

- 8.4 Press “Create Security File” button to key in **Security code** . Adjusting bar to decrease speed of **IIC bus** , See Fig. 2.4 .

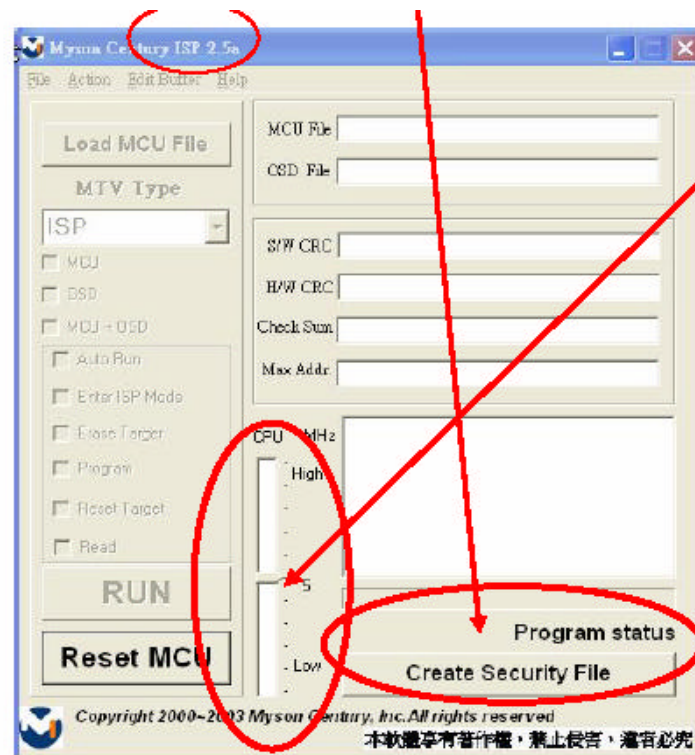


Fig 2.4



8.5 Fig 2.7 shows the settings for the ISP software's security code. It requires two command numbers, and the commands must be keyed in sequentially: 7C, 4C, 77. The command numbers and commands must be set by the user while coding. For more details, please refer to section 6 boot code of ISP.

Field	Value	Range
ISP Slave Add.	7C	0x00 - 0xFF
SlaveB Add.	4C	0x00 - 0xFF
Command 1	77	0x00 - 0xFF
Command 2		0x00 - 0xFF
Command 3		0x00 - 0xFF
Command 4		0x00 - 0xFF
Command 5		0x00 - 0xFF
Command 6		0x00 - 0xFF
Command 7		0x00 - 0xFF
Command 8		0x00 - 0xFF
Command 9		0x00 - 0xFF
Command 10		0x00 - 0xFF
Command 11		0x00 - 0xFF
Command 12		0x00 - 0xFF
Command 13		0x00 - 0xFF
Command 14		0x00 - 0xFF
Command 15		0x00 - 0xFF

Command No: 2

OK CLEAR

Fig 2.7

## 9. Use ISP to program MCU

- 9.1 Select MTV type first , load the binary or intel hex file that you want to program into the MCU , and select “AUTO” item , then press “RUN “ button , see fig3.1
- 9.2 If user change the MTV type , it must load file again , or the buffer of load file will be cleared .
- 9.3 CRC ( cyclic redundancy check ) : the host can check CRC register’s result instead of reading every byte in flash . The message of **Check MCU CRC OK** means that the host verify OK for the progress of program .

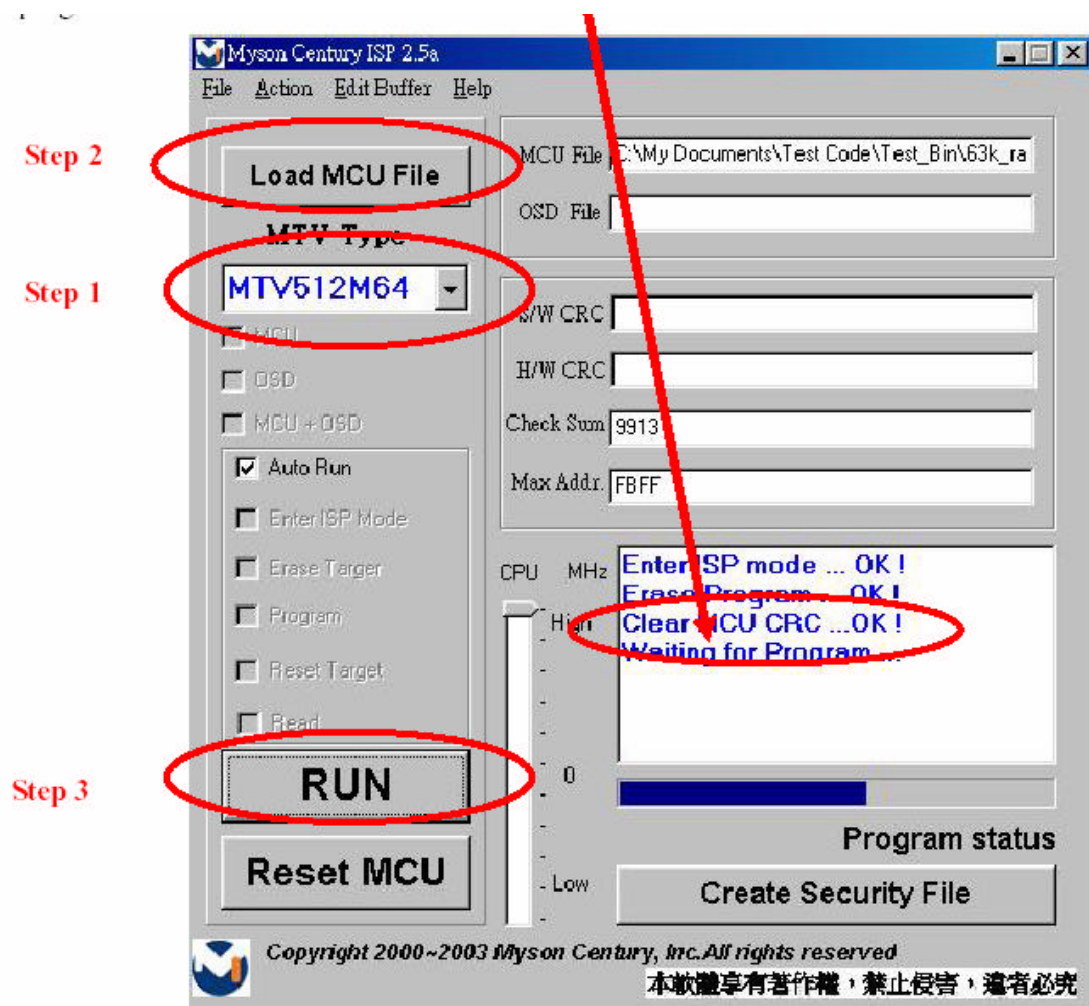


Fig 3.1

## 10. Use ISP to read MCU content

- 10.1 Only software ISP could read the MCU content, it is according to program the boot code while coding. The limitation is used for the security of customer's code. Select "Read Target" item, and press "button", the MCU content will show as Fig4.1

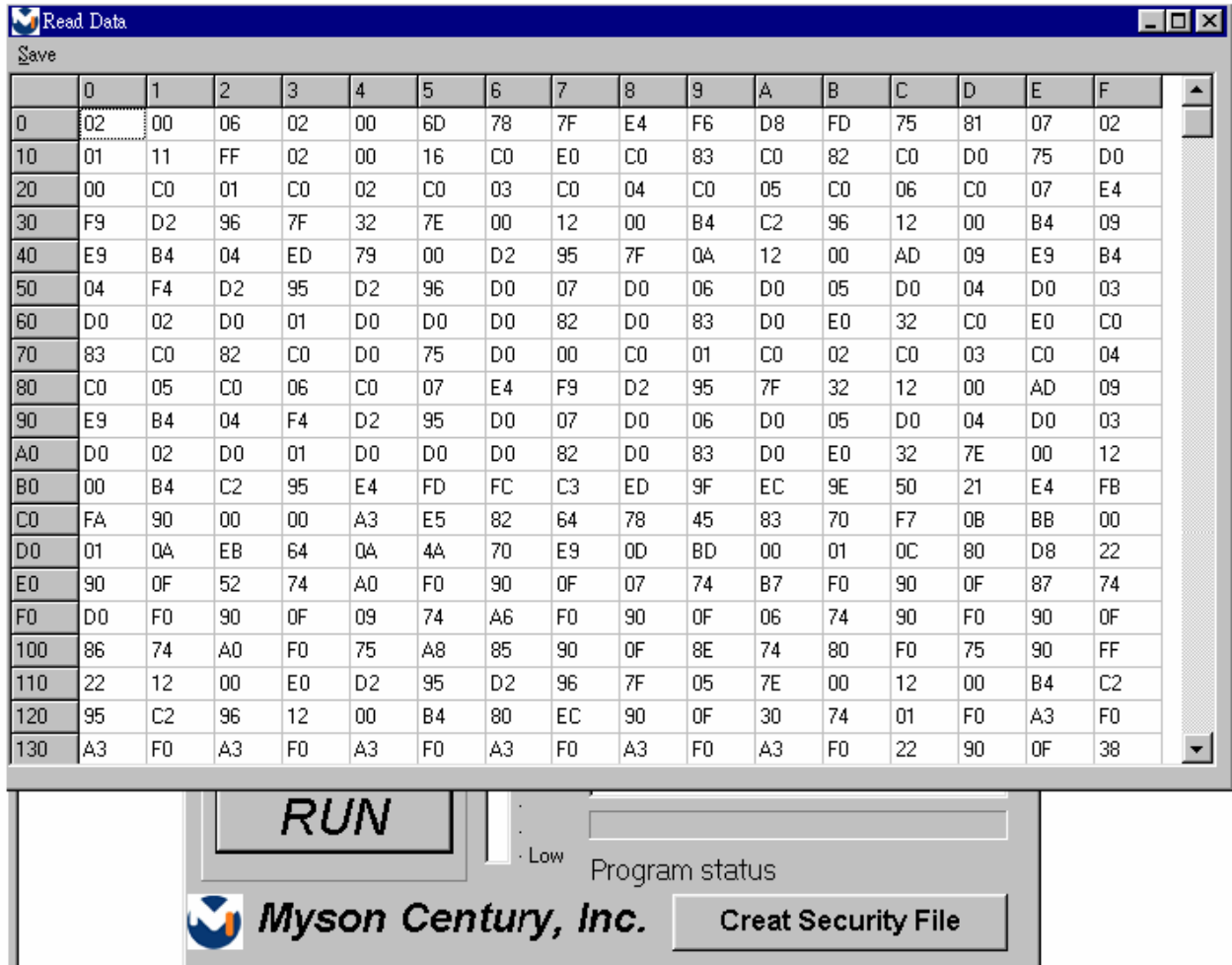
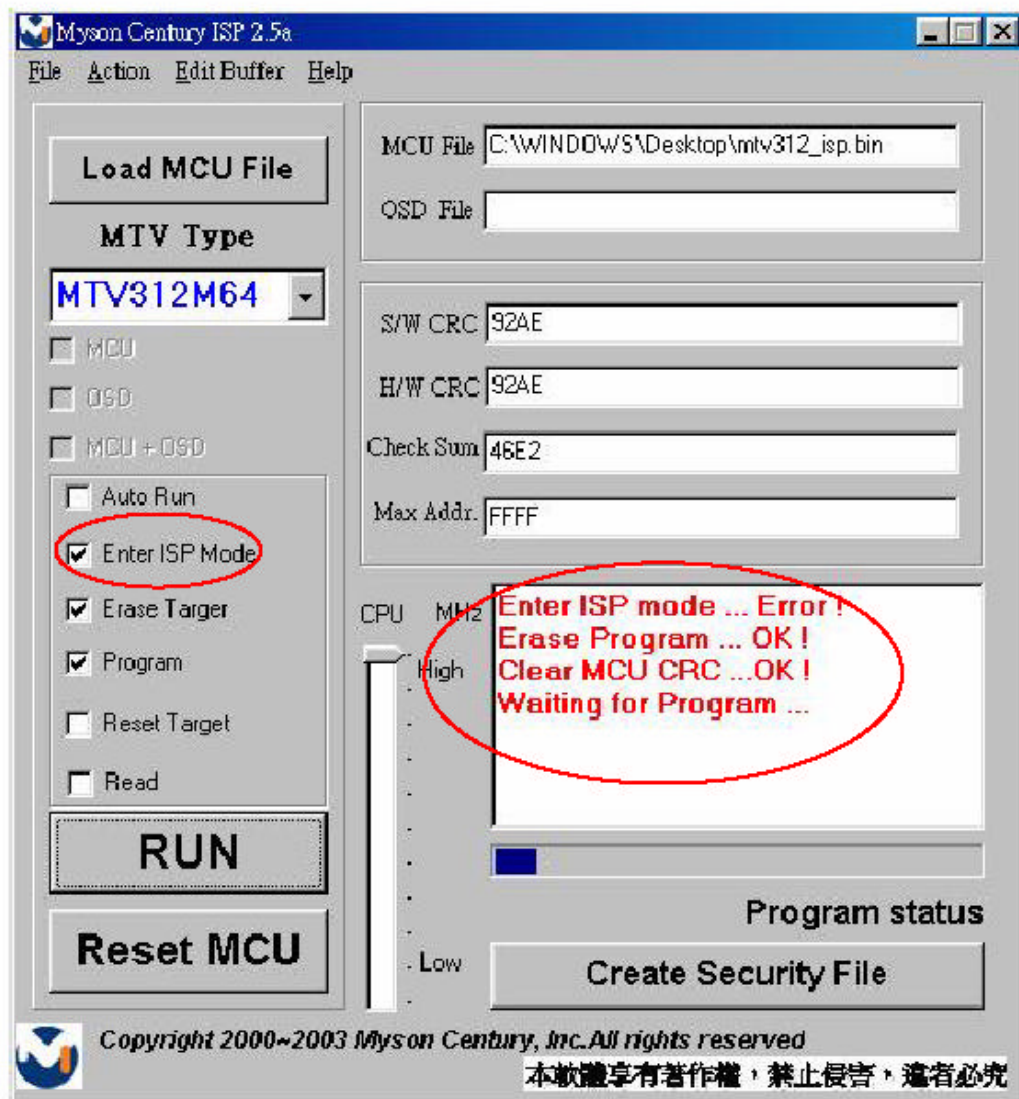
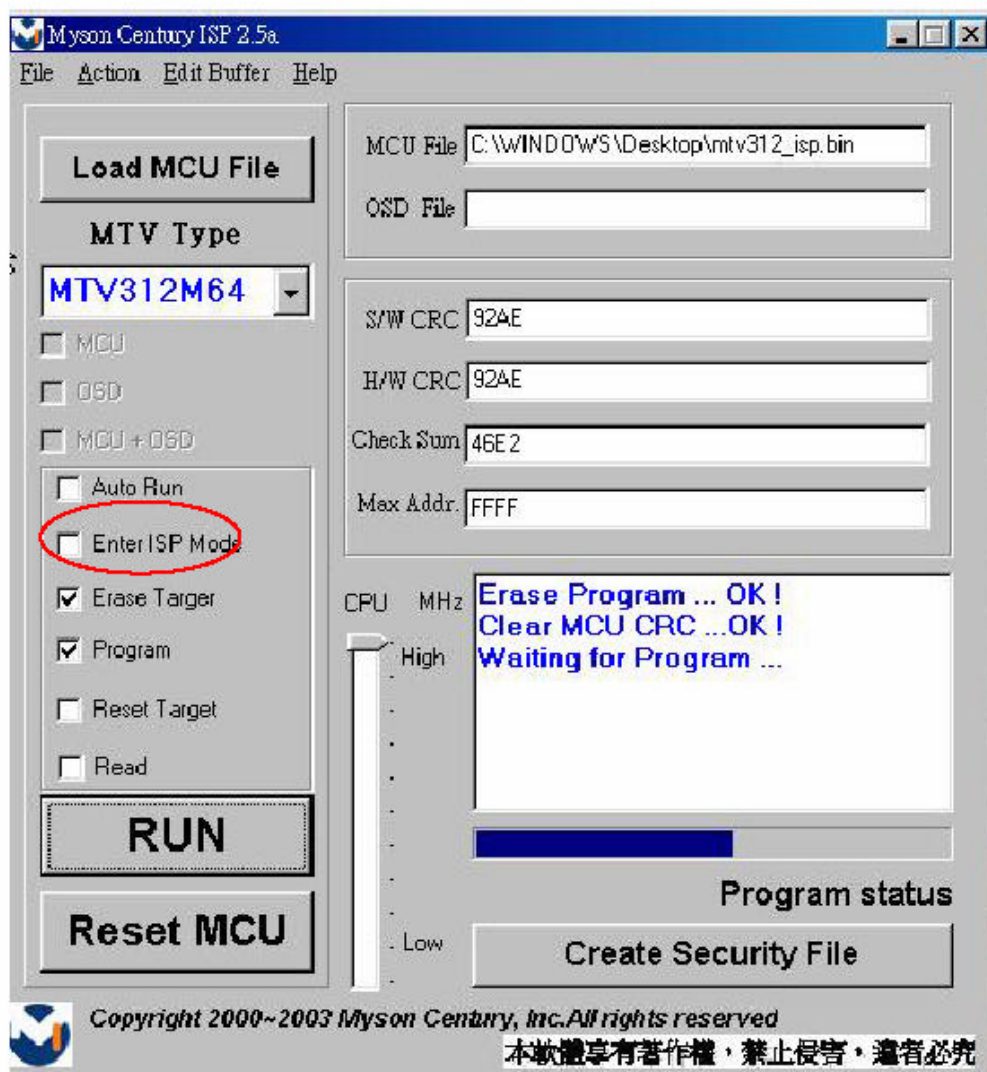


Fig 4.1

## 11. Re-entry the ISP Mode

When you couldn't select or click "Reset MCU" button and enter ISP mode again, you'll see the message as below :





Note :

- (1) Disable the “Enter ISP Mode” option to avoid the error message display
- (2) If you using the MTV312M64 or before MCU serials , the MCU will always in “ISP Mode “ even Programming fail or erase MCU that instead of select or press “Reset MCU “

## Packing procedure

- 1.1 Paste protection film to protect the monitor (Figure.1)
- 1.2 Put the monitor in PE bag & seal the with tape . (Figure.2)



Figure.1

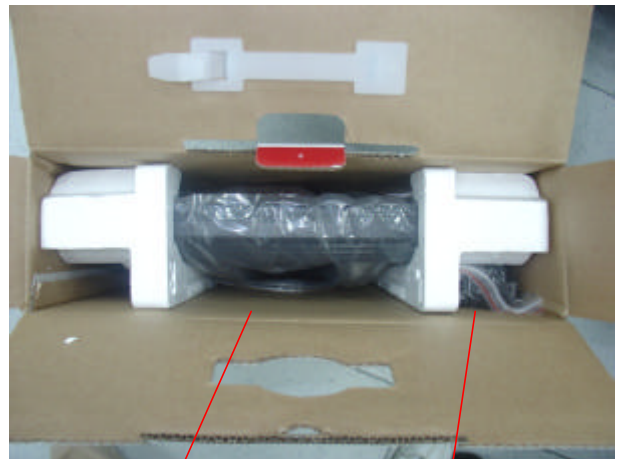


Figure.2

- 1.3 Put the cushion on the monitor (Figure.3)
- 1.4 Put the monitor into carton & put all the accessories into the carton .Then close the carton . (Figure.4)



(Figure 3)



(Figure 4)

OSG

Power cord



## Disassemble monitor

- 1.1 Take off the hinge caps (Figure 5)
- 1.2 Lay VE710s/b down & take off the screws to remove the base (Figure 6)



(Figure 5)



(Figure 6)

- 1.3 Remove the screw cover (Figure 7)
- 1.4 Take of the screws (Figure 8)



Figure 7



Figure 8

- 1.5 Remove the back cover (Figure 9)
- 1.6 Take off the screw on the VGA cable (Figure 10)



Figure 9



Figure 10

- 1.7 Take off the screws on the B/B (Figure 11)
- 1.8 Remove the B/B from the front-bezel (Figure 12)



Figure 11



Figure 12

- 1.9 Tear off the AL-foil , all cables on M/B & lamp wires . (Figure 13)
- 1.10 Take off the screws on the PCB holder & remove the PCB holder with the boards . (Figure 14)



Figure 13



Figure 14



1.11 Take out the screws on M/B & remove the cable between M/B & power board (Figure 15)

1.12 Remove the M/B out (Figure 16)



Figure 15



Figure 16

1.13 Put the PCB holder up-side-down & remove the screws on the power board (Figure 17)

1.14 Remove the power board (Figure 18)



Figure 17

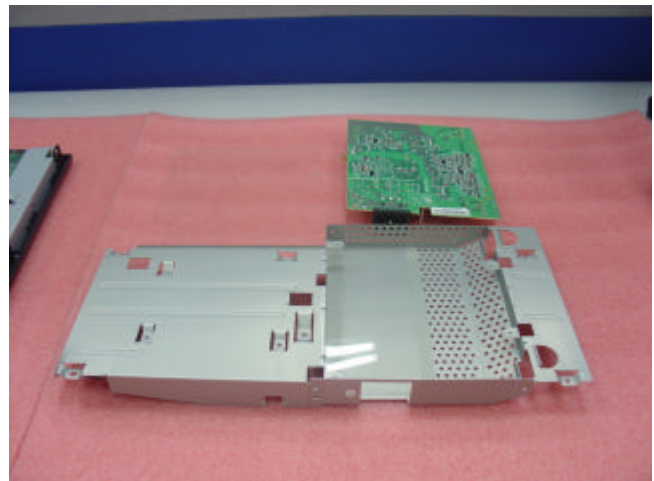


Figure 18

1.15 Separate the bezel & panel (with BKT) & remove the cable on panel (Figure 19)

1.16 Take off the L/R BKT & remove the L/R BKT . (Figure 20)

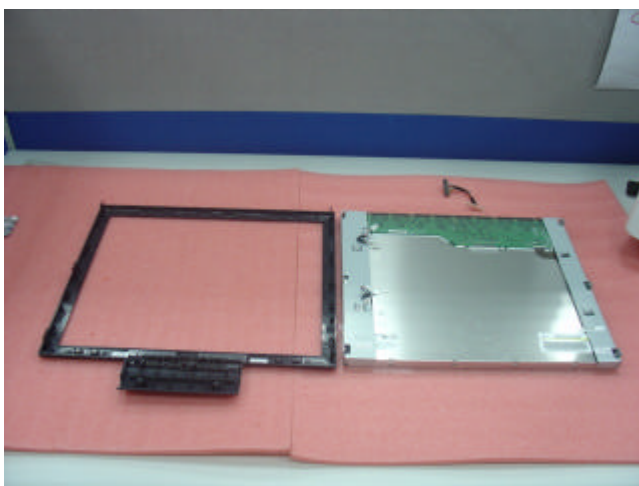


Figure 19

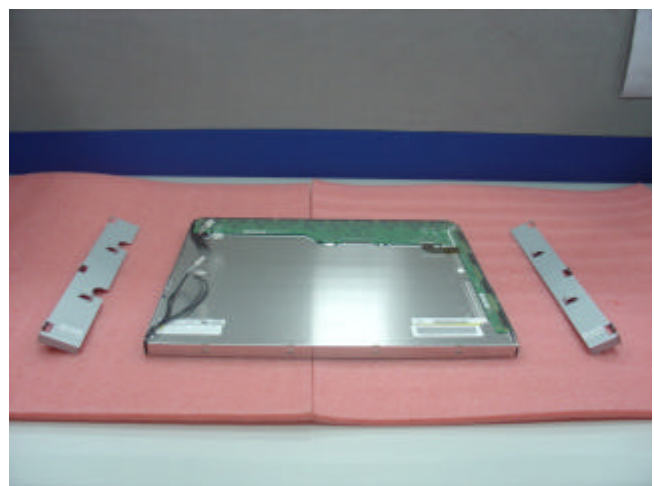
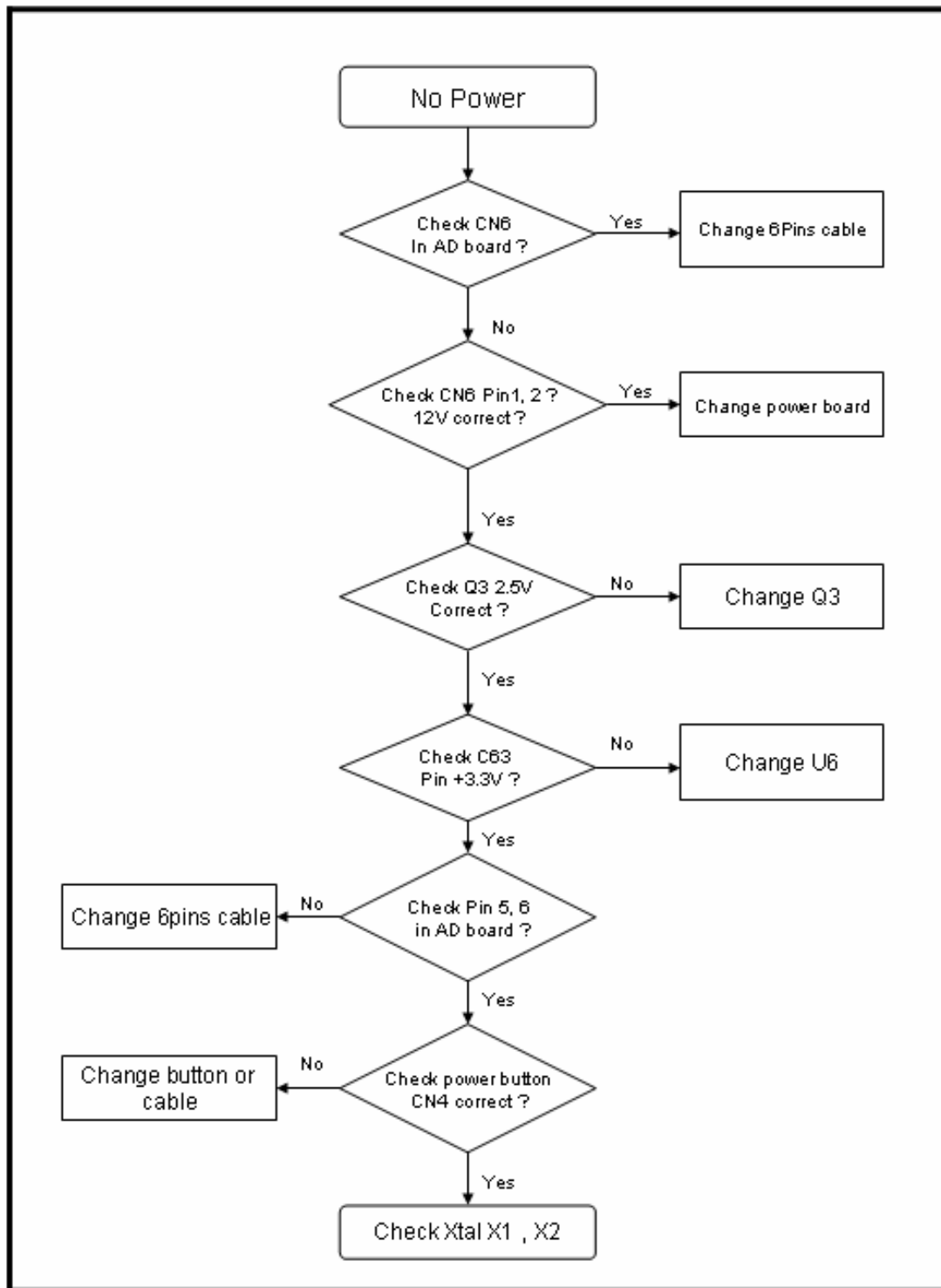


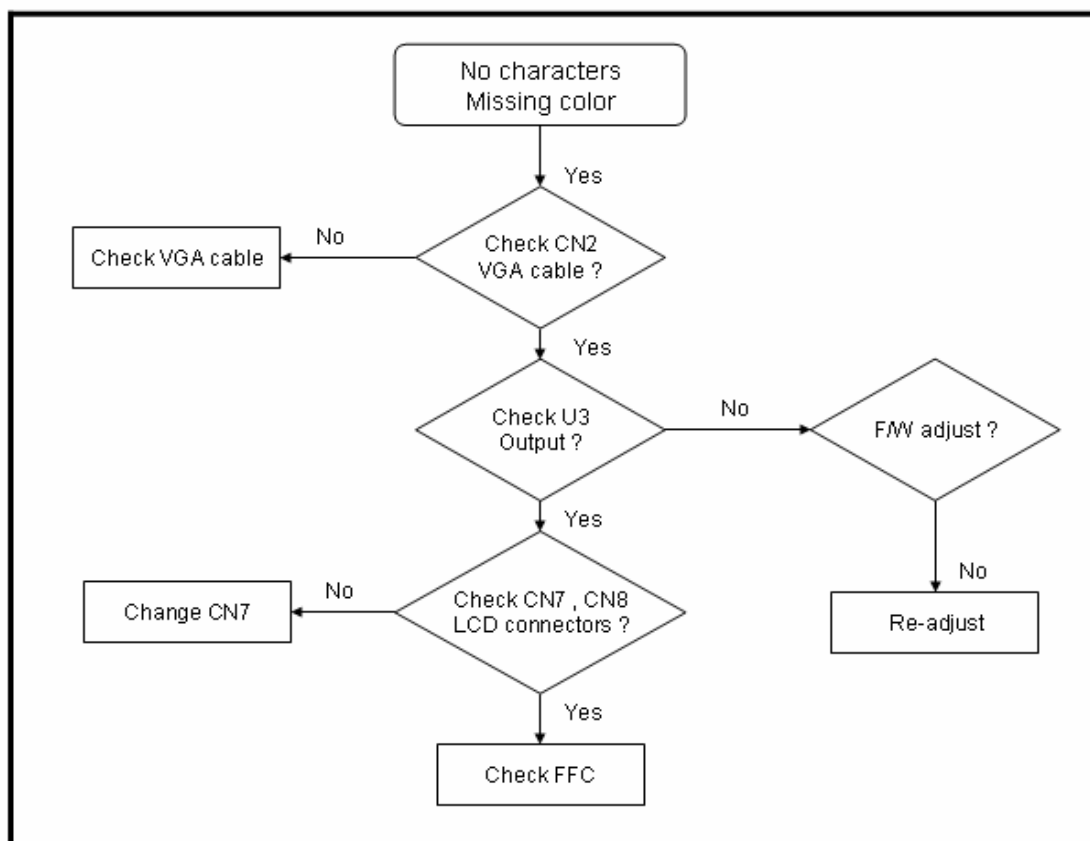
Figure 20

## 6. Troubleshooting Flow Chart

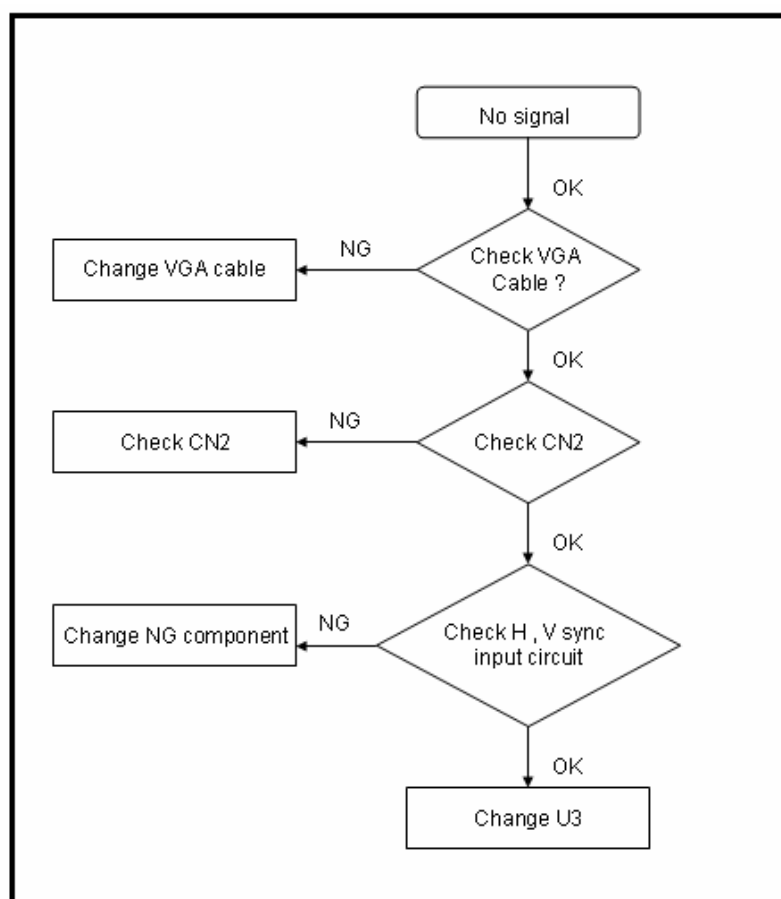
### 1. No Power



## 2. No Characters , Missing Color



## 3 Always show NO SIGNAL



## 7. Recommended Spare Parts List

### RECOMMENDED SPARE PARTS LIST (VE710b-5)

ViewSonic Model Number: VLCDS27998-4W

Rev: 1b

Serial No. Prefix: PUD

Item	Description	ECR/ECN	ViewSonic P/N	Ref. P/N	Location	Universal number#	Unit Price (FOB)	Lead time	Q'ty
1	Accessories:	Power cable	12/22/05: Added	A-PC-0106-0224	DM333181G97	Power cable	1.00	4 weeks	1
2	Board Assembly:	Button board	23L7VBB0026	B-CB-0206-0170	23L7VBB0026	Button board	3.00	4 weeks	1
3		Main Board	1SL7VCMB015	B-00003437	1SL7VCMB015	Main board	8.00	4 weeks	1
4		Power board	12/22/05: Removed & Replaced Part	B-00003429	AS02B012D75	Power board	9.00	4 weeks	4
5	Cabinets:	Back Cover Assembly	37L7VBCVS38	C-BC-0302-0575	37L7VBCVS38	back cover	3.50	4 weeks	1
6		Base Assembly	26L7VSAVA17	C-00003438	26L7VSAVA17	Stand ASSY	5.00	4 weeks	1
7		Front bezel assy	33L7VFBVS29	C-FP-0301-9923	33L7VFBVS29	front bezel ass'y	3.75	4 weeks	1
8	Cables:	Cable ASSY L7VC BUTTON-MB	DDL7VCTH004	CB-00002262	DDL7VCTH004	Cable BUTTON-MB	1.50		
9		Cable ASSY L7VC MB-VGA	DDL7VCP001	CB-00000182	DDL7VCP001	Cable MB-VGA	1.50	4 weeks	1
10		Cable ASSY L7VC Power-MB	DDL7VCPB101	CB-00002263	DDL7VCPB101	Cable Power-MB	3.00	4 weeks	1
11		CABLE MB-LCD	DDL70LLC201	M-FC-0809-0795	DDL70LLC201	CABLE MB-LCD	3.50		
12		VGA-cable	12/22/05: Removed & Replaced Part	M-MS-0808-9399	DDL7VDPC005	VGA-cable	4.20	4 weeks	4
13		FLAT CABLE LVDS		CB-00004846	DDL70LLC219	Cable LVDS	2.50	4 weeks	1
13	Documentation:	User manual + CD wizard	HGL7VC05017	DC-00003432	HGL7VC05017	User manual	5.00	4 weeks	1
14	Electronic Components:	17" QDI TFT LCD panel QD17EL07 V.9 (8ms)	AA0170EA224	E-00003433	AA0170EA224	LCD panel	180.00	4 weeks	1
15	Miscellaneous:	SCREW M3.0*6.0-I (NI) GP	MM30060IBJ8	M-SCW-0824-6800	MM30060IBJ8		0.01	4 weeks	7
16		SCREW M3.0*4.0-I(NI) GP	MM30040IBJ9	M-SCW-0824-6802	MM30040IBJ9		0.01	4 weeks	10
17		SCREW F4.0*8.0-B(BNI) GP	MF40080BJ29	M-SCW-0824-6797	MF40080BJ29		0.01	4 weeks	5
18	Miscellaneous:	LCD film L7VC	JXL7V003017	M-MS-0808-7399	JXL7V003017	LCD FILM	1.00	4 weeks	1
19		8ms sticker	HCL7V028020	M-00003434	HCL7V028020	8ms sticker	0.50	4 weeks	1
20	Packing Material:	Carton	HFL7V010011	P-00003435	HFL7V010011	carton	1.20	4 weeks	1
21		End cap (L)	HBL7V005019	P-FM-0602-0840	HBL7V005019	cushion	0.50	4 weeks	1
22		End cap (R)	HBL7V006011	P-00003436	HBL7V006011	cushion	0.50	4 weeks	1
23		EPE bags	HAL7V001012	M-MS-0808-8981	HAL7V001012	EPE bags	2.00	4 weeks	1

Remark 1: Above listed items are examples, supplier can expand the rows to add more necessary items.

Remark 2: All revised RSPLs with newly added items or any change made should be highlighted and correlated with the ECN/ECR approved by ViewSonic Corporation. This is to

### RECOMMENDED SPARE PARTS LIST (VE710s-5)

ViewSonic Model Number: VLCDS27998-3W

Rev: 1b

Serial No. Prefix: PUE

Item	Description	ECR/ECN	ViewSonic P/N	Ref. P/N	Location	Universal number#	Unit Price (FOB)	Lead time	Q'ty
1	Accessories:	Power cable	12/22/05: Added	A-PC-0106-0224	DM333181G97	Power cable	1.00	4 weeks	1
2	Board Assembly:	Button board	23L7VBB0026	B-CB-0206-0170	23L7VBB0026	Button board	3.00	4 weeks	1
3		Main Board		B-00003428	1SL7VCMB007	Main board	8.00	4 weeks	1
4		Power board	12/22/05: Removed & Replaced Part	B-00003429	AS02B012D75	Power board	9.00	4 weeks	4
5	Cabinets:	Back Cover Assy		C-BC-0302-0576	37L7VBCVS46	back cover	3.50	4 weeks	1
6		Base Assembly		C-00003430	26L7VSAVA25	Stand ASSY	5.00	4 weeks	1
7		Front bezel assy		C-FP-0301-9924	33L7VFBVS37	front bezel ass'y	3.75	4 weeks	1
8	Cables:	Cable ASSY L7VC BUTTON-MB		CB-00002262	DDL7VCTH004	Cable BUTTON-MB	1.50		
9		Cable ASSY L7VC MB-VGA		CB-00000182	DDL7VCP001	Cable MB-VGA	1.50	4 weeks	1
10		Cable ASSY L7VC Power-MB		CB-00002263	DDL7VCPB101	Cable Power-MB	3.00	4 weeks	1
11		CABLE MB-LCD		M-FC-0809-0795	DDL70LLC201	CABLE MB-LCD	3.50		
12		VGA-cable	Removed & Replaced Part	M-MS-0808-9399	DDL7VDPC005	VGA-cable	4.20	4 weeks	4
13		FLAT CABLE LVDS		CB-00004846	DDL70LLC219	Cable LVDS	2.50	4 weeks	1
13	Documentation:	User manual + CD wizard		DC-00003432	HGL7VC05017	User manual	5.00	4 weeks	1
14	Electronic Components:	17" CPT CLAA170EA07Q (8ms) TFT LCD panel		E-00003433	AA0170EA224	LCD panel	180.00	4 weeks	1
15	Miscellaneous:	SCREW M3.0*6.0-I (NI) GP		M-SCW-0824-6800	MM30060IBJ8		0.01	4 weeks	7
16		SCREW M3.0*4.0-I(NI) GP		M-SCW-0824-6802	MM30040IBJ9		0.01	4 weeks	10
17		SCREW F4.0*8.0-B(BNI) GP		M-SCW-0824-6797	MF40080BJ29		0.01	4 weeks	5
18	Miscellaneous:	LCD film L7VC		M-MS-0808-7399	JXL7V003017	LCD FILM	1.00	4 weeks	1
19		8ms sticker		M-00003434	HCL7V028020	8ms sticker	0.50	4 weeks	1
20	Packing Material:	Carton		P-00003435	HFL7V010011	carton	1.20	4 weeks	1
21		End cap (L)		P-FM-0602-0840	HBL7V005019	cushion	0.50	4 weeks	1
22		End cap (R)		P-00003436	HBL7V006011	cushion	0.50	4 weeks	1
23		EPE bags		M-MS-0808-8981	HAL7V001012	EPE bags	2.00	4 weeks	1

Remark 1: Above listed items are examples, supplier can expand the rows to add more necessary items.

Remark 2: All revised RSPLs with newly added items or any change made should be highlighted and correlated with the ECN/ECR approved by ViewSonic Corporation. This is to

## BOM LIST (VE710b-5)

ViewSonic Model Number: VLCD527998-3W

Rev: 1b

Serial No. Prefix: PUD

Item	ViewSonic P/N	Ref. P/N	Description	Location	Universal number#	Q'ty
1	#N/A	1L7VCZCVS70	L7VC-CL LCD MONITOR(CPT,USA)B			
2	#N/A	29L7VCMB024	L7VC M/B ASSY(FOR L7VC-CL)CPT,MST8111A			1
3	#N/A	3BL7VSS0068	L7VC M/B S/S ASSY(QDI)LVDS			1
4	#N/A	CC62204MD23	CAP ELEC 22U 25V(+20%,105C,5*11,2000HR)	C17,C25,C28,C30, C33,C36,C49,C70		8
5	#N/A	CC622L4MD06	CAP ELEC DIP 22U 25V(+20%,105C,5*11)LXN	C17,C25,C28,C30, C33,C36,C49,C70		8
6	#N/A	CC73303MD51	CAP EC 330U 16V(+20%,105C,8*11,2KH)	C58,C62,C79,C90		4
7	#N/A	CC733L3MD09	CAP ELEC DIP330U 16V(+20%,105C,8*11)LXN	C58,C62,C79,C90		4
8	E-L-0407-1563	DC04725K002	CHOKO COIL 47UH(2.5A,+10%,T07473)	L21,L32		2
9	M-MS-0808-9809	DFHD30MR259	CONN DIP HEADER 30P 2R MR(P2.0,H4.0)	CN9		1
10	#N/A	DFHD14MS264	CONN DIP HEADER 14P 2R MS(P2.0,H6.0)	CN2		1
11	M-MS-0808-9810	DFHD10MR316	CONN DIP HEADER 10P 1R MR(P2.0,H4.1)	CN4		1
12	#N/A	DFHD08MS439	CONN DIP HEADER 8P 2R MS(P2.54,H6.0)	CN6		1
13	#N/A	BG611059319	CRYSTAL DIP 11.0592MHZ(+30PPM,49/US)	X2		1
14	E-X-0415-0128	BG614318D55	XTAL DIP 14.318MHZ(+30PPM,07010-X-136-2	X1		1
15	#N/A	AZL7VC0C004	L7VC-CL SW BIOS IMAGE(CPT)MST8111A N/A			1
16	B-SB-0221-0686	AS020126104	ADP/INV ADP-40AFA, 90~264V REV1A			1
17	B-00000936	AS05B310202	ADP/INV,SLV0315A0450-1057,90~264V REV1A			1
18	B-CB-0206-0170	23L7VBB0026	L7VC BUTTON/B ASSY			1
19	#N/A	DFHD08MR301	CONN DIP HEADER 8P 1R MR(P2.0,H4.1)	CN1		1
20	#N/A	BEYG0013DA3	LED(DIP) YELLOW/GREEN(L-3WYGW)	LED1		1
21	#N/A	DAL7VCTB1C5	PCB(BUTTON) L7VC TL(1L,125*23,REV3)			1
22	#N/A	DHP0002B205	SWITCH PUCH BUTTON(PT-002-B2,50MA,12V)	SW1,SW2,SW3,S W4,SW5		5
23	#N/A	22L7VCLA000	L7VC-CL LCD MODULE ASSY(CPT)BLACK			1
24	C-FP-0301-9923	33L7VFBVS29	L7VC FRONT BEZEL ASSY			1
25	C-FP-0301-1066	EAL7V012014	LCD BEZEL L7VC(EAL7V012,REV3C)			1
26	M-MS-0808-9242	EBL7V021014	LENS L7VC(EBL7V021,REV3A)			1
27	PL-BT-0706-0179	EBL7V022011	CONTROL BUTTON L7VC(EBL7V022,REV3A)			1
28	M-MS-0808-9243	FEL7V003019	LOGO FRONT-VSC-38MM L7VC(FEL7V003,REV3A)			1
29	M-MS-0808-9244	FEL7V004015	BIRD LOGO-10MM L7VC(FEL7V004,REV3A)			1
30	M-MS-0808-9249	JXLM7002011	FOIL LM7S(JXLM7002,REV3B)			1
31	C-BC-0302-0575	37L7VBCVS38	L7VC BACK COVER ASSY			1
32	M-BK-0805-0059	34L7VBAVS00	L7VC PCB BKT ASSY			1
33	E-00003433	AA0170EA224	LCD(TFT) CLAA170EA07Q(8MS) 17" SXGA			1
34	M-BK-0805-0127	FAL7V016010	LCD BKT-L-QDI L7VC(FAL7V016,REV3B)			1
35	M-BK-0805-0128	FAL7V017016	LCD BKT-R-QDI L7VC(FAL7V017,REV3B)			1
36	M-MS-0808-8984	FCL70004010	LCD MYLAR L70L-E(FCL70004,REV3A)			1
37	M-MS-0808-9248	FCL7A001014	AL FOIL L7A(FCL7A001,REV3A) GP			2
38	M-MS-0808-7302	FCL7V012016	P/B MYLAR-DOWN L7VC(FCL7V012,REV3A)			1
39	M-SCW-0824-6797	MF40080BJ29	SCREW F4.0*8-B(BNI) GP			3
40	M-SCW-0824-6798	MM30080BBJ2	SCREW M3.0*8,B(NI)			1
41	M-SCW-0824-6799	MM35080BBW2	SCREW M3.5*8-B (NI,WASHER)			1
42	M-SCW-0824-6800	MM30060IBJ8	SCREW M3.0*6.0-I(NI) GP			7
43	M-SCW-0824-6801	MF40080PBJ6	SCREW F4.0*8-P(NI)			2
44	M-SCW-0824-6802	MM30040IBJ9	SCREW M3.0*4.0-I(NI) GP			10
45	M-CV-0830-0284	GAL7V009013	RUBBER PLUG COVER L7VC(GAL7V009,REV3A)			2
46	M-SCW-0824-0728	MM30050IBJ3	SCREW M3.0*5.0-I(NI) GP			2
47	M-SCW-0824-6948	MM30050FC15	SCREW M3.0*5-F(NI,NYLOK)			2
48	M-MS-0808-9237	GAL7V006014	RUBBER PLUG VESA L7VC(GAL7V006,REV3D)			4
49	C-BS-0303-0506	26L7VSAVS17	L7VC STAND ASSY			1
50	C-BS-0303-0562	EAL7V014017	BASE L7VC(EAL7V014,REV3A)			1
51	M-MS-0808-7304	FBL7V035015	BASE PLATE L7VC(FBL7V035,REV3A)			1
52	M-MS-0808-9251	GAL5V002013	RUBBER FOOT L5VC(GAL5V002,REV3A) GP			4
53	M-MS-0808-7305	GAL7V007011	RUBBER FOOT-FRONT L7VC(GAL7V007,R3A)			1
54	M-SCW-0824-6797	MF40080BJ29	SCREW F4.0*8-B(BNI) GP			5
55	M-LB-0813-1055	HCL7V020019	STAND LABEL L7VC(HCL7V020,REV3A)			1
56	#N/A	23L7VCCS001	L7VC-CL CHASSIS ASSY(CPT)			1
57	CB-00002263	DDL7VCPB101	CABLE ASSY L7VC POWER-MB(8P/8P,REV1A)			1
58	CB-00000182	DDL7VCP001	CABLE ASSY L7VC MB-VGA(14/15P,REV1A)			1
59	CB-00002262	DDL7VCTH004	CABLE ASSY L7VC BUTTON-MB(8P/10P,REV1A)			1
60	M-FC-0809-0795	DDL70LLC201	CABLE MB-LCD(30P,120MM,LG)L70L GP			1
61	M-MS-0808-7306	EBL7V023017	HINGE CAP L7VC(EBL7V023,REV3A)			2
62	M-SCW-0824-0816	MM40100BC12	SCREW M4*10.0-B(NI,NYLOK)			4
63	#N/A	24L7VCPK0K6	L7VC-CL PACKING ASSY(USA)B			1
64	A-PC-0106-0224	DM333181G97	POWER CORD 3P 1.8M(USA)V04VS350012180 GP			1
65	M-MS-0808-7399	JXL7V003017	LCD FILM L7VC(JXL7V003,REV3B)			1
66	M-MS-0808-8981	HAL7V001012	EPE BAG L7V(HAL7V001,REV3A)			1
67	P-FM-0602-0840	HBL7V005019	END CAP(L) L7VC(HBL7V005,REV3B)			1
68	P-FM-0602-0841	HBL7V006015	END CAP(R) L7VC(HBL7V006,REV3B)			1
69	M-LB-0813-0747	HCL7V004013	CORE LABEL(HCL7V004,REV3A)			1
70	#N/A	HCL7VC03011	ID LABEL(B) L7VC-CL(HCL7VC03,REV3A)			1
71	M-LB-0813-0745	HCL7V002011	SERIAL LABEL L7V(HCL7V002,REV3A)			1
72	#N/A	HCL7VC01018	CARTON LABEL-5 L7VC(HCL7VC01,REV3A)			1

Item	ViewSonic P/N	Ref. P/N	Description	Location	Universal number#	Q'ty
73	P-00003680	HFL7VC02017	CARTON VE710B-5 L7VC(HFL7VC02,REV3A)			1
74	DC-00003432	HGL7VC05017	QSG+CD VE710S-3 L7VC-CL(HGL7VC05,REV3A)			1
75	#N/A	JXLM5003011	HANDLE LM5S(JXLM5003,REV 3B) GP			1
76	#N/A	HFL7V009018	SPACE PLATE L7VC(HFL7V009,REV3B)			0.028
77	M-LB-0813-1043	HCL70021011	HI-POT LABEL L70L(HCL70021,REV3A)			1
78	M-00002264	HCL7V028010	8MS STICKER L7VC(HCL7V028,REV3A)			1
79	#N/A	HDL7VC01019	SERVICR PAPER L7VC(HDL7VC01,REV3A)			1

## BOM LIST (VE710s-5)

**ViewSonic Model Number: VLCD527998-3W**

**Rev: 1a**

**Serial No. Prefix: PUE**

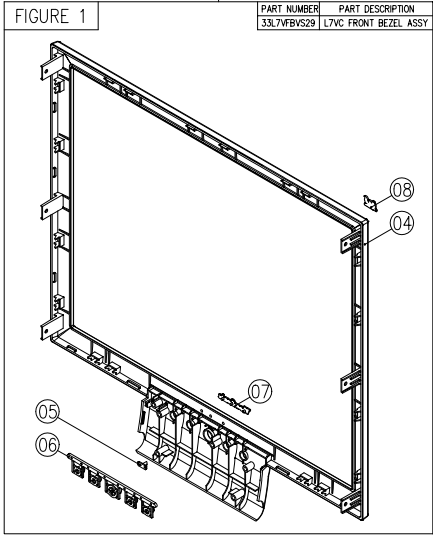
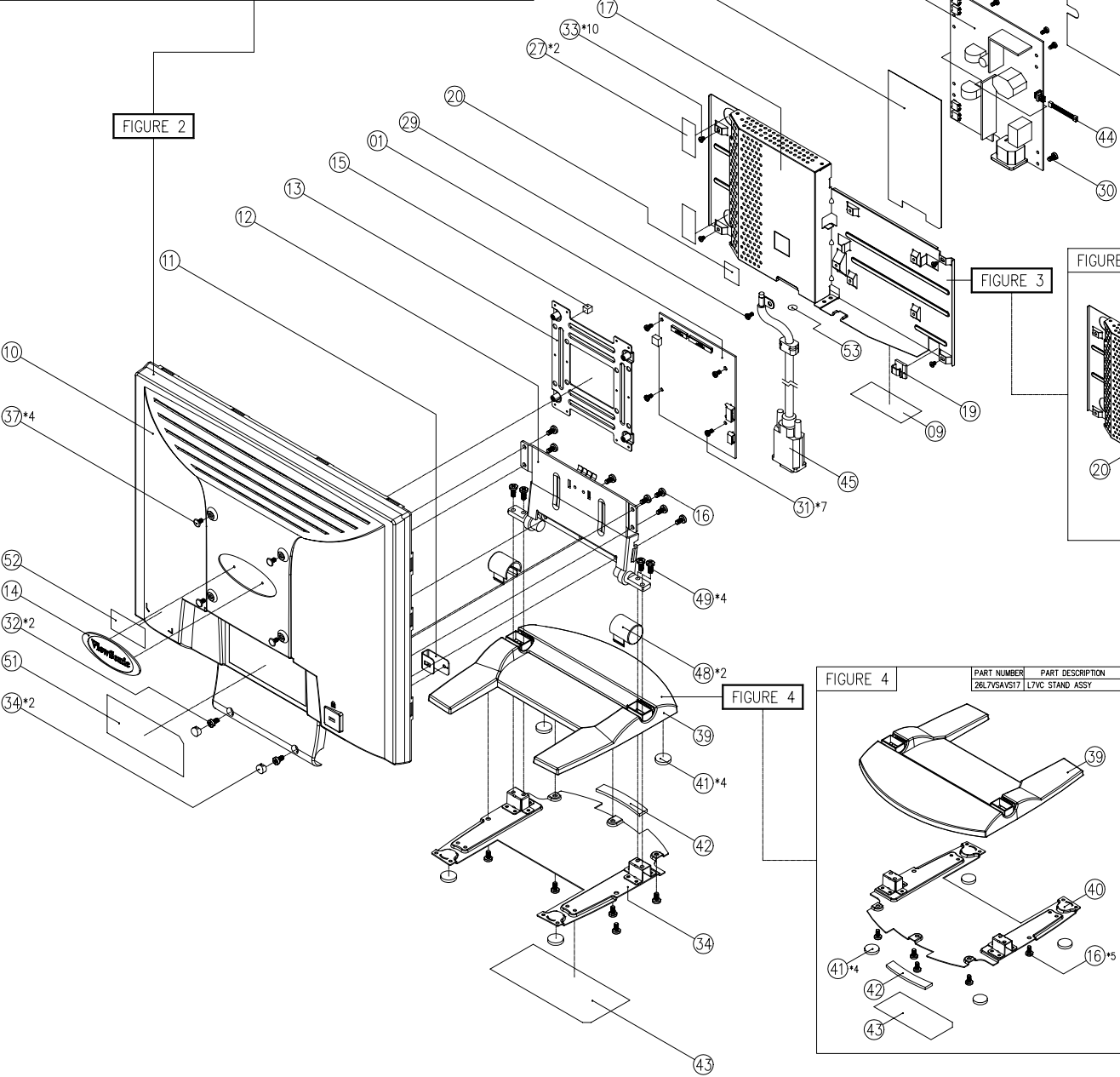
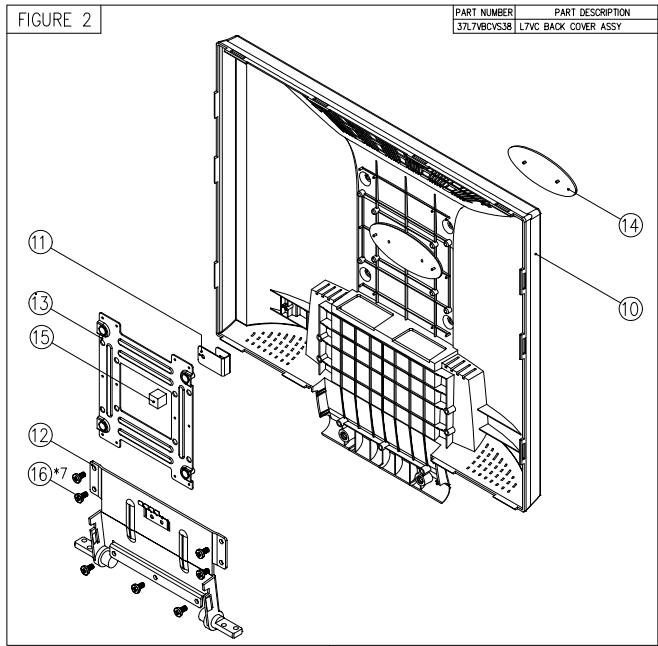
Item	ViewSonic P/N	Ref. P/N	Description	Location	Universal number#	Q'ty
1	#N/A	1L7VCZCVS02	L7VC-CL LCD MONITOR(CPT,USA)S			
2	#N/A	29L7VCMB083	L7VC M/B ASSY(FOR L7VC-CL)CPT,MST8111A S			1
3	#N/A	3BL7VSS0068	L7VC M/B S/S ASSY(QDI)LVDS			1
4	#N/A	CC62204MD23	CAP ELEC 22U 25V(+20%,105C,5*11,2000HR)	C17,C25,C28,C30, C33,C36,C49,C70		8
5	#N/A	CC622L4MD06	CAP ELEC DIP 22U 25V(+20%,105C,5*11)LXN	C17,C25,C28,C30, C33,C36,C49,C70		8
6	#N/A	CC73303MD51	CAP EC 330U 16V(+20%,105C,8*11,2KH)	C58,C62,C79,C90		4
7	#N/A	CC733L3MD09	CAP ELEC DIP330U 16V(+20%,105C,8*11)LXN	C58,C62,C79,C90		4
8	E-L-0407-1563	DC04725K002	CHOKE COIL 47UH(2.5A,+10%,T07473)	L21,L32		2
9	M-MS-0808-9809	DFHD30MR259	CONN DIP HEADER 30P 2R MR(P2.0,H4.0)	CN9		1
10	#N/A	DFHD14MS264	CONN DIP HEADER 14P 2R MS(P2.0,H6.0)	CN2		1
11	M-MS-0808-9810	DFHD10MR316	CONN DIP HEADER 10P 1R MR(P2.0,H4.1)	CN4		1
12	#N/A	DFHD08MS439	CONN DIP HEADER 8P 2R MS(P2.54,H6.0)	CN6		1
13	#N/A	BG611059319	CRYSTAL DIP 11.0592MHZ(+30PPM,49/US)	X2		1
14	E-X-0415-0128	BG614318D55	XTAL DIP 14.318MHZ(+30PPM,07010-X-136-2	X1		1
15	#N/A	AZL7VC0C101	L7VC-CL SW BIOS IMAGE(CPT)MST8111A N/A S			1
16	B-SB-0221-0686	AS020126104	ADP/INV ADP-40AFA, 90-264V REV1A			1
17	B-00000936	AS05B310202	ADP/INV,SLV0315A0450-1057,90-264V REV1A			1
18	B-CB-0206-0170	23L7VBB0026	L7VC BUTTON/B ASSY			1
19	#N/A	DFHD08MR301	CONN DIP HEADER 8P 1R MR(P2.0,H4.1)	CN1		1
20	#N/A	BEYG0013DA3	LED(DIP) YELLOW/GREEN(L-3WYGW)	LED1		1
21	#N/A	DAL7VCTB1C5	PCB(BUTTON) L7VC TL(1L,125*23,REVC)			1
22	#N/A	DHP0002B205	SWITCH PUCH BUTTON(PT-002-B2,50MA,12V)	SW1,SW2,SW3,SW 4,SW5		5
23	#N/A	22L7VCLA018	L7VC-CL LCD MODULE ASSY(CPT)SILVER			1
24	C-FP-0301-9924	33L7VFBVS37	L7VC FRONT BEZEL ASSY(SILVER)			1
25	C-FP-0301-1067	EAL7V012022	LCD BEZEL-SILVER L7VC(EAL7V012,REV3C)			1
26	M-MS-0808-9242	EBL7V021014	LENS L7VC(EBL7V021,REV3A)			1
27	PL-BT-0706-0179	EBL7V022011	CONTROL BUTTON L7VC(EBL7V022,REV3A)			1
28	M-MS-0808-9243	FEL7V003019	LOGO FRONT-VSC-38MM L7VC(FEL7V003,REV3A)			1
29	M-MS-0808-9244	FEL7V004015	BIRD LOGO-10MM L7VC(FEL7V004,REV3A)			1
30	C-BC-0302-0576	37L7VBCVS46	L7VC BACK COVER ASSY(BLACK)			1
31	M-CV-0830-2618	EAL7V013029	LCD COVER(BLACK) L7VC(EAL7V013,REV3C)			1
32	M-CV-0830-2484	FBL7V007011	KENSINGTON CAP(FBL7V007,REV3A)			1
33	M-CV-0830-2617	FBL7V034019	HINGE ASSY L7VC(FBL7V034,REV3A)			1
34	M-BK-0805-0125	FBL7V036011	VESA BKT-LONG L7VC(FBL7V036,REV3A)			1
35	#N/A	EBL5VC01011	VSC ELLIPSE LOGO POLISH(EBL5VC01,REV3A)			1
36	M-MS-0808-9246	GBLM7003017	GASKET-3 LM7S(GBLM7003,REV3A)			1
37	M-SCW-0824-6797	MF40080BJ29	SCREW F4.0*8-B(BNI) GP			7
38	M-BK-0805-0059	34L7VBAVS00	L7VC PCB BKT ASSY			1
39	M-BK-0805-0126	FAL7V011018	PCB BRACKET L7VC(FAL7V011,REV3A)			1
40	M-MS-0808-7301	FCL7V011010	P/B MYLAR-UP L7VC(FCL7V011,REV3A)			1
41	M-MS-0808-9247	EBL70023013	WIRE MOUNTS L70L-E(EBL70023,REV3A) GP			1
42	M-LB-0813-0894	HCL7V005010	WARNING LABEL, INVERTOR(HCL7V005,3A)			1
43	E-00003433	AA0170EA224	LCD(TFT) CLAA170EA07Q(8MS) 17" SXGA			1
44	M-BK-0805-0127	FAL7V016010	LCD BKT-L-QDI L7VC(FAL7V016,REV3B)			1
45	M-BK-0805-0128	FAL7V017016	LCD BKT-R-QDI L7VC(FAL7V017,REV3B)			1
46	M-MS-0808-8984	FCL70004010	LCD MYLAR L70L-E(FCL70004,REV3A)			1
47	M-MS-0808-9248	FCL7A001014	AL FOIL L7A(FCL7A001,REV3A) GP			2
48	M-MS-0808-7302	FCL7V012016	P/B MYLAR-DOWN L7VC(FCL7V012,REV3A)			1
49	M-MS-0808-9249	JXLM7002011	FOIL LM7S(JXLM7002,REV3B)			1
50	M-SCW-0824-6797	MF40080BJ29	SCREW F4.0*8-B(BNI) GP			3
51	M-SCW-0824-6798	MM30080BBJ2	SCREW M3.0*8-B(NI)			1
52	M-SCW-0824-6799	MM35080BBW2	SCREW M3.5*8-B (NI,WASHER)			1
53	M-SCW-0824-6800	MM30060IBJ8	SCREW M3.0*6.0-I(NI) GP			7
54	M-SCW-0824-6801	MF40080PBJ6	SCREW F4.0*8-P(NI)			2
55	M-SCW-0824-6802	MM30040IBJ9	SCREW M3.0*4.0-I(NI) GP			10
56	M-CV-0830-0283	GAL7V010011	RUBBER PLUG COVER /BK L7VC(GAL7V010,R3A)			2
57	M-SCW-0824-0728	MM30050IBJ3	SCREW M3.0*5.0-I(NI) GP			2
58	M-SCW-0824-6948	MM30050FC15	SCREW M3.0*5-F(NI,NYLOK)			2
59	M-MS-0808-9236	GAL7V008017	RUBBER PLUG VESA/BK L7VC(GAL7V008,R3B)			4
60	C-BS-0303-0509	26L7VSAVS25	L7VC STAND ASSY(BLACK)			1
61	C-BS-0303-0563	EAL7V014025	BASE(BLACK) L7VC(EAL7V014,REV3A)			1
62	M-MS-0808-7304	FBL7V035015	BASE PLATE L7VC(FBL7V035,REV3A)			1
63	M-MS-0808-9251	GAL5V002013	RUBBER FOOT L5VC(GAL5V002,REV3A) GP			4
64	M-MS-0808-7305	GAL7V007011	RUBBER FOOT-FRONT L7VC(GAL7V007,R3A)			1
65	M-SCW-0824-6797	MF40080BJ29	SCREW F4.0*8-B(BNI) GP			5
66	M-LB-0813-1055	HCL7V020019	STAND LABEL L7VC(HCL7V020,REV3A)			1
67	#N/A	23L7VCCS001	L7VC-CL CHASSIS ASSY(CPT)			1
68	CB-00002263	DDL7VCPB101	CABLE ASSY L7VC POWER-MB(8P/8P,REV1A)			1
69	CB-00000182	DDL7VCP001	CABLE ASSY L7VC MB-VGA(14/15P,REV1A)			1
70	CB-00002262	DDL7VCTH004	CABLE ASSY L7VC BUTTON-MB(8P/10P,REV1A)			1
71	M-FC-0809-0795	DDL70LLC201	CABLE MB-LCD(30P,120MM,LG)L70L GP			1
72	M-MS-0808-7306	EBL7V023017	HINGE CAP L7VC(EBL7V023,REV3A)			2
73	M-SCW-0824-0816	MM40100BC12	SCREW M4*10.0-B(NI,NYLOK)			4
74	#N/A	24L7VCPK0C2	L7VC-CL PACKING ASSY(USA)S			1



Item	ViewSonic P/N	Ref. P/N	Description	Location	Universal number#	Q'ty
75	A-PC-0106-0224	DM333181G97	POWER CORD 3P 1.8M(USA)V04VS350012180 GP			1
76	M-MS-0808-7399	JXL7V003017	LCD FILM L7VC(JXL7V003,REV3B)			1
77	M-MS-0808-8981	HAL7V001012	EPE BAG L7V(HAL7V001,REV3A)			1
78	P-FM-0602-0840	HBL7V005019	END CAP(L) L7VC(HBL7V005,REV3B)			1
79	P-FM-0602-0841	HBL7V006015	END CAP(R) L7VC(HBL7V006,REV3B)			1
80	M-LB-0813-0747	HCL7V004013	CORE LABEL(HCL7V004,REV3A)			1
81	#N/A	HCL7VC02014	ID LABEL(S) L7VC-CL(HCL7VC02,REV3A)			1
82	M-LB-0813-0745	HCL7V002011	SERIAL LABEL L7V(HCL7V002,REV3A)			1
83	#N/A	HCL7VC01018	CARTON LABEL-5 L7VC(HCL7VC01,REV3A)			1
84	P-00002286	HFL7VC01011	CARTON VE710S-5 L7VC(HFL7VC01,REV3A)			1
85	DC-00003432	HGL7VC05017	QSG+CD VE710S-3 L7VC-CL(HGL7VC05,REV3A)			1
86	#N/A	JXLM5003011	HANDLE LM5S(JXLM5003,REV 3B) GP			1
87	#N/A	HFL7V009018	SPACE PLATE L7VC(HFL7V009,REV3B)			0.028
88	M-LB-0813-1043	HCL70021011	HI-POT LABEL L70L(HCL70021,REV3A)			1
89	M-00002264	HCL7V028010	SMS STICKER L7VC(HCL7V028,REV3A)			1
90	#N/A	HDL7VC01019	SERVICR PAPER L7VC(HDL7VC01,REV3A)			1



8. Exploded Diagram And Spare Parts List



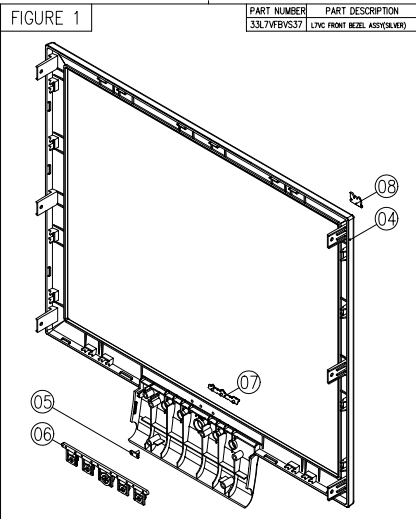
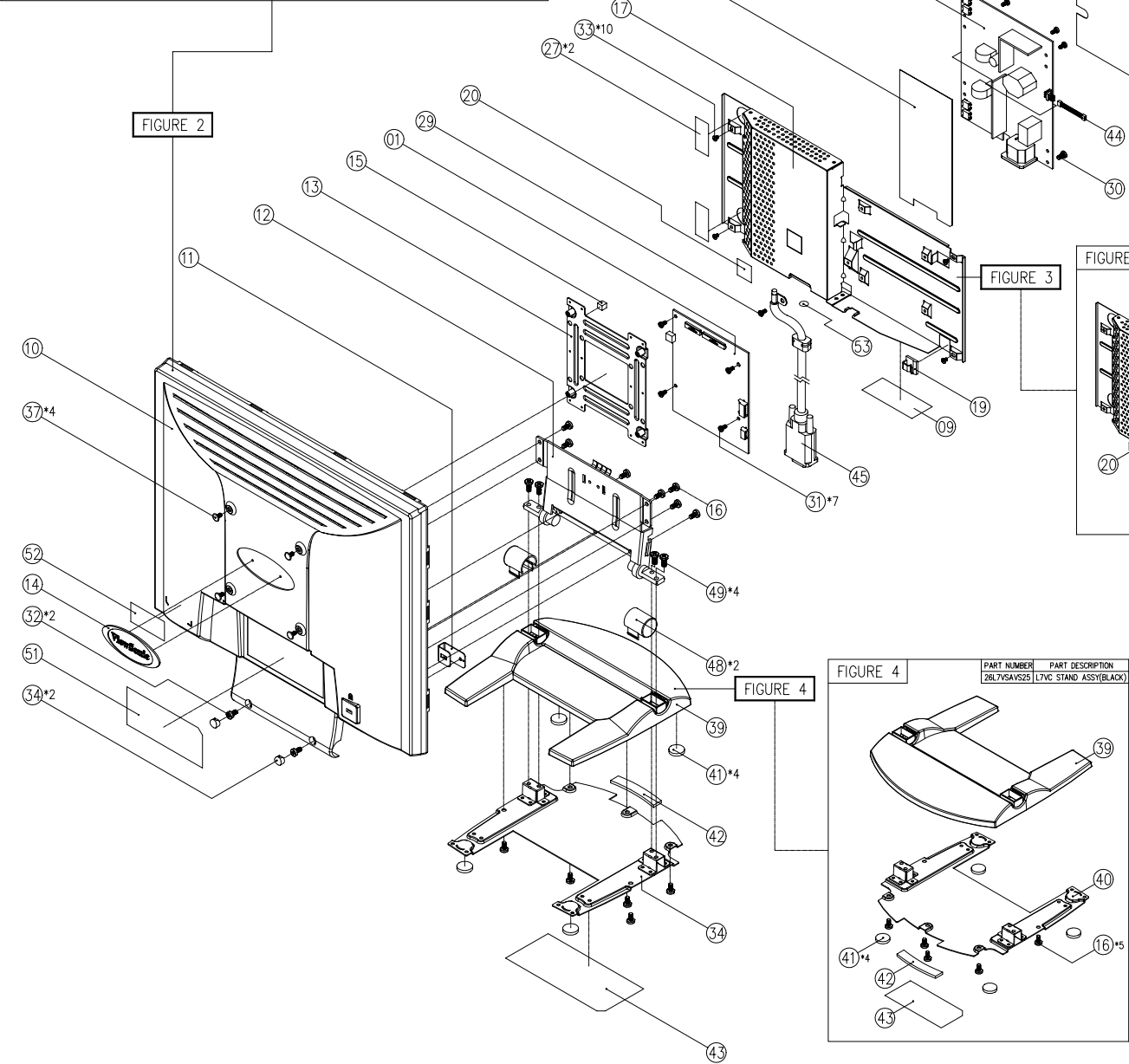
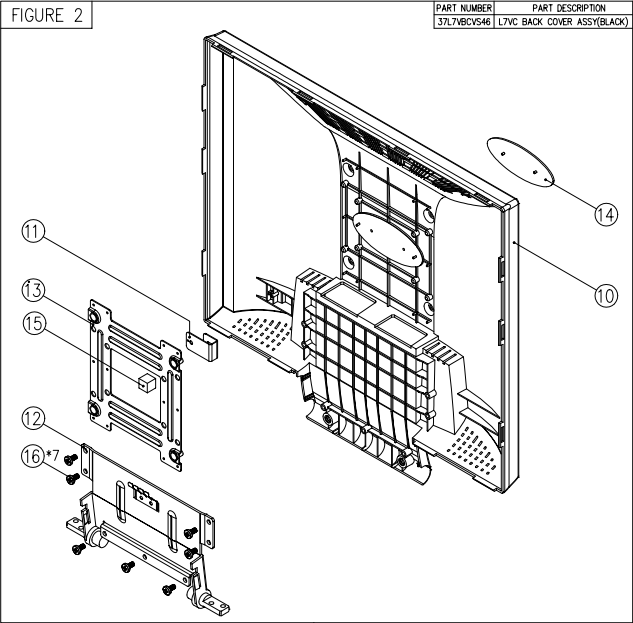
EXPLODED PARTS LIST (VE710b-5)

ViewSonic Model Number: VLCDS27998-3W

Rev: 1b

Serial No. Prefix: PUD

Item	ViewSonic P/N	Ref. P/N	Description	Q'ty
1	#N/A	29L7VCMB024	L7VC M/B ASSY for L7VC-CL	1
2	B-SB-0221-0686	AS020126104	ADP/INV ADP-40AFB, 90-264VAC	1
3	B-CB-0206-0170	23L7VBB0026	L7VC BUTTON/B ASSY	1
4	C-FP-0301-1067	EAL7V012022	LCD BEZEL L7VC	1
5	M-MS-0808-9242	EBL7V021014	LENS L7VC	1
6	PL-BT-0706-0179	EBL7V022011	CONTROL BUTTON L7VC	1
7	M-MS-0808-9243	FEL7V003019	LOGO FRONT-VSC-38MM L7VC	1
8	M-MS-0808-9244	FEL7V004015	BIRD LOGO-10MM L7VC	1
9	M-CV-0830-2618	EAL7V013029	LCD COVER(BLACK) L7VC	1
10	M-CV-0830-2484	FBL7V007011	KENSINGTON CAP	1
11	M-CV-0830-2617	FBL7V034019	HINGE ASSY L7VC	1
12	M-BK-0805-0125	FBL7V036011	VESA BKT-LONG L7VC	1
13	#N/A	EBL5VC01020	VSC Ellipse Logo Polish-G	1
14	M-MS-0808-9236	GAL7V008017	RUBBER PLUG VESA/BK L7VC	4
15	M-MS-0808-9246	GBLM7003017	GASKET-3 LM7S	1
16	M-SCW-0824-6797	MF40080BJ29	SCREW F4.0*8-B (BNI)	15
17	M-BK-0805-0126	FAL7V011018	PCB BRACKET L7VC	1
18	M-MS-0808-7301	FCL7V011010	P/B MYLAR-UP L7VC	1
19	M-MS-0808-9247	EBL70023013	WIRE MOUNT L70L-E	1
20	M-LB-0813-0894	HCL7V005010	WARNING LABEL INVETER	1
21	E-00003433	AA0170EA224	LCD(TFT) CPT CLAA170EA07Q	1
22	M-BK-0805-0127	FAL7V016010	LCD BKT-L L7VC	1
23	M-BK-0805-0128	FAL7V017016	LCD BKT-R L7VC	1
24	M-MS-0808-9248	FCL7A001014	AL FOIL L7A	2
25	M-MS-0808-7302	FCL7V012016	P/B MYLAR-DOWN L7VC	1
26	M-MS-0808-9249	JXLM7002011	FOIL LM7S	1
27	M-SCW-0824-6798	MM30080BBJ2	SCREW M3.0*8-B (NI)	1
28	M-SCW-0824-6799	MM35080BBW2	SCREW M3.5*8-B (NI , WASHER)	1
29	M-SCW-0824-6800	MM30060IBJ8	SCREW M3.0*6.0-I(NI)	11
30	HW-00002361	MM40080PBJ6	SCREW F4.0*8-P(NI)	2
31	M-SCW-0824-6802	MM30040IBJ9	SCREW M3.0*4.0-I(NI)	10
32	M-CV-0830-0283	GAL7V010011	RUBBER PLUG COVER/BK L7VC	2
33	C-BS-0303-0563	EAL7V014025	BASE(BLACK) L7VC	1
34	M-MS-0808-7304	FBL7V035015	BASE PLATE L7VC	1
35	M-MS-0808-9251	GAL5V002013	RUBBER FOOT L5VC	4
36	M-MS-0808-7305	GAL7V007011	RUBBER FOOT FRONT L7VC	1
37	M-LB-0813-1055	HCL7V020019	STAND LABEL L7VC	1
38	CB-00002263	DDL7VCPB101	CABLE ASSY L7VC POWER-MB	1
39	CB-00000182	DDL7VCPB001	CABLE ASSY L7VC MB-VGA	1
40	CB-00002362	DDL7VBCB004	CABLE ASSY L7VC BUTTON-MB	1
41	M-FC-0809-0795	DDL70LLC201	CABLE MB-LCD (30P, 120MM, LG)	1
42	M-MS-0808-7306	EBL7V023017	HINGE CAP L7VC	2
43	M-SCW-0824-0816	MM40100BCI2	SCREW M4*10.0-B(NI,NYLOCK)	4
44	#N/A	HCL7VC03011	ID LABEL L7VC	1
45	M-LB-0813-0745	HCL7V002011	SERIAL LABEL	1
46	M-MS-0808-7399	JXL7V003017	LCD FILM L7VC	1



### EXPLODED PARTS LIST (VE710s-5)

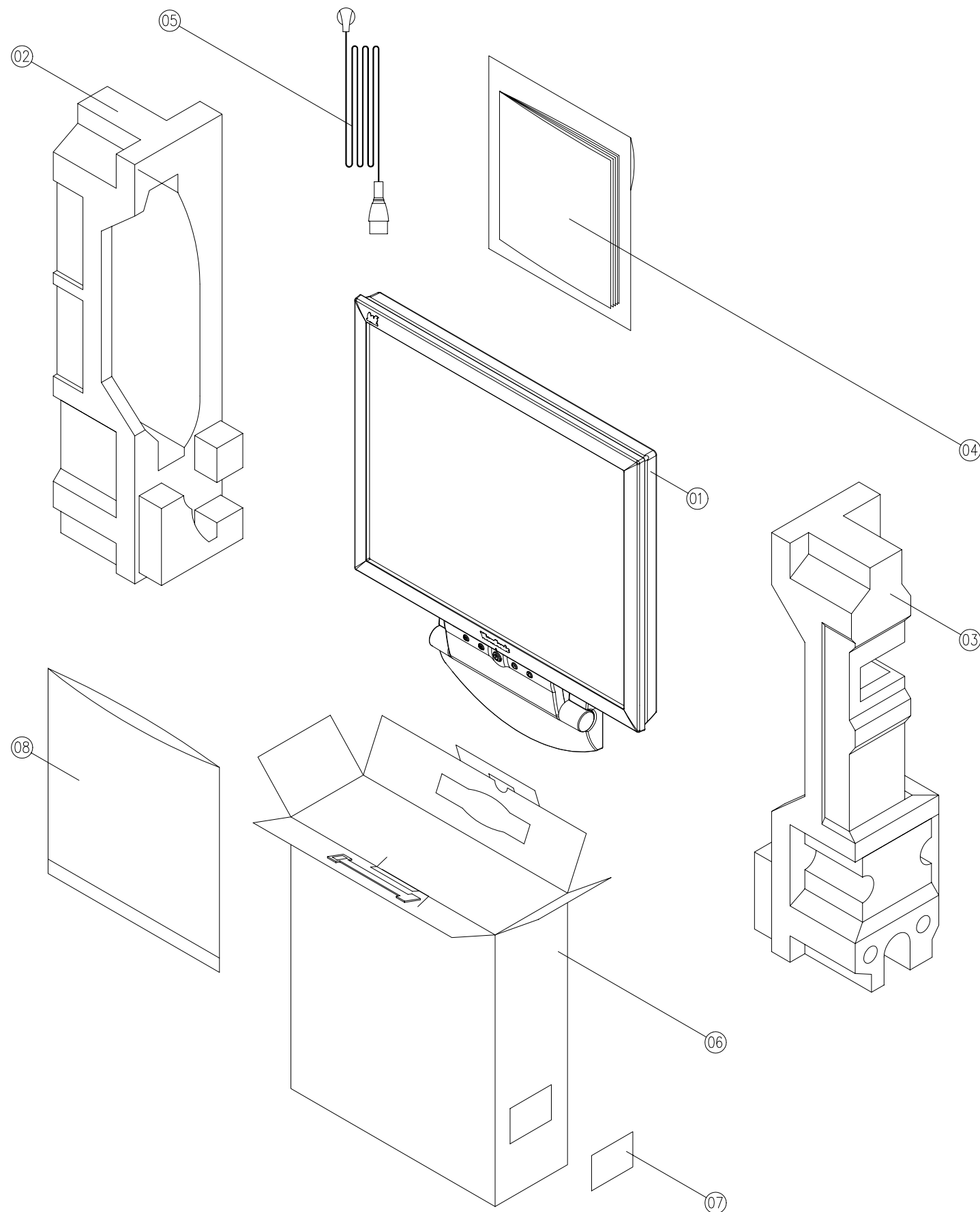
ViewSonic Model Number: VLCD

Rev: 1a

Serial No. Prefix: PUE

Item	ViewSonic P/N	Ref. P/N	Description	Q'ty
1	#N/A	29L7VCMB083	L7VC M/B ASSY (For L7VC-CL)	1
2	B-SB-0221-0686	AS020126104	ADP/INV ADP-40AFB, 90-264VAC	1
3	B-CB-0206-0170	23L7VBB0026	L&VC BUTTON/B ASSY	1
4	C-FP-0301-1066	EAL7V012014	LCD BEZEL SILVER L7VC	1
5	M-MS-0808-9242	EBL7V021014	LENS L7VC	1
6	PL-BT-0706-0179	EBL7V022011	CONTROL BUTTON L7VC	1
7	M-MS-0808-9243	FEL7V003019	LOGO FRONT-VSC-38MM L7VC	1
8	M-MS-0808-9244	FEL7V004015	BIRD LOGO-10MM L7VC	1
9	M-CV-0830-2616	EAL7V013011	LCD COVER(BLACK) L7VC	1
10	M-CV-0830-2484	FBL7V007011	KENSINGTON CAP	1
11	M-CV-0830-2617	FBL7V034019	HINGE ASSY L7VC	1
12	M-BK-0805-0125	FBL7V036011	VESA BKT-LONG L7VC	1
13	#N/A	EBL5VC01011	VSC ellipse logo plate polish	1
14	M-MS-0808-9237	GAL7V006014	RUBBER PLUG VESA/BK L7VC	4
15	M-MS-0808-9246	GBLM7003017	GASKET-3 LM7S	1
16	M-SCW-0824-6797	MF40080BJ29	SCREW F4.0*8-B (BNI)	15
17	M-BK-0805-0126	FAL7V011018	PCB BRACKET L7VC	1
18	M-MS-0808-7301	FCL7V011010	P/B MYLAR-UP L7VC	1
19	M-MS-0808-9247	EBL70023013	WIRE MOUNT L70L-E	1
20	M-LB-0813-0894	HCL7V005010	WARNING LABEL INVETER	1
21	E-00003433	AA0170EA224	LCD(TFT) CPT CLAA170EA07Q	1
22	M-BK-0805-0127	FAL7V016010	LCD BKT-L L7VC	1
23	M-BK-0805-0128	FAL7V017016	LCD BKT-R L7VC	1
24	M-MS-0808-9248	FCL7A001014	AL FOIL L7A	2
25	M-MS-0808-7302	FCL7V012016	P/B MYLAR-DOWN L7VC	1
26	M-MS-0808-9249	JXLM7002011	FOIL LM7S	1
27	M-SCW-0824-6798	MM30080BBJ2	SCREW M3.0*8-B (NI)	1
28	M-SCW-0824-6799	MM35080BBW2	SCREW M3.5*8-B (NI , WASHER)	1
29	M-SCW-0824-6800	MM30060IBJ8	SCREW M3.0*6.0-I(NI)	11
30	HW-00002361	MM40080PBJ6	SCREW F4.0*8-P(NI)	2
31	M-SCW-0824-6802	MM30040IBJ9	SCREW M3.0*4.0-I(NI)	10
32	M-CV-0830-0284	GAL7V009013	RUBBER PLUG COVER/BK L7VC	2
33	C-BS-0303-0562	EAL7V014017	BASE(BLACK) L7VC	1
34	M-MS-0808-7304	FBL7V035015	BASE PLATE L7VC	1
35	M-MS-0808-9251	GAL5V002013	RUBBER FOOT L5VC	4
36	M-MS-0808-7305	GAL7V007011	RUBBER FOOT FRONT L7VC	1
37	M-LB-0813-1055	HCL7V020019	STAND LABEL L7VC	1
38	CB-00002263	DDL7VCPB101	CABLE ASSY L7VC POWER-MB	1
39	CB-00000182	DDL7VCPB001	CABLE ASSY L7VC MB-VGA	1
40	CB-00002362	DDL7VBCBTH004	CABLE ASSY L7VC BUTTON-MB	1
41	M-FC-0809-0795	DDL70LLC201	CABLE MB-LCD(30P, 120MM, LG)	1
42	M-MS-0808-7306	EBL7V023017	HINGE CAP L7VC	2
43	M-SCW-0824-0816	MM40100BCI2	SCREW M4*10.0-B(NI,NYLOCK)	4
44	#N/A	HCL7VC03011	ID LABEL L7VC	1
45	M-LB-0813-0745	HCL7V002011	SERIAL LABEL	1
46	M-MS-0808-7399	JXL7V003017	LCD FILM L7VC	1

Packing for shipping



EXPLODED PARTS LIST (VE710s/b-5)

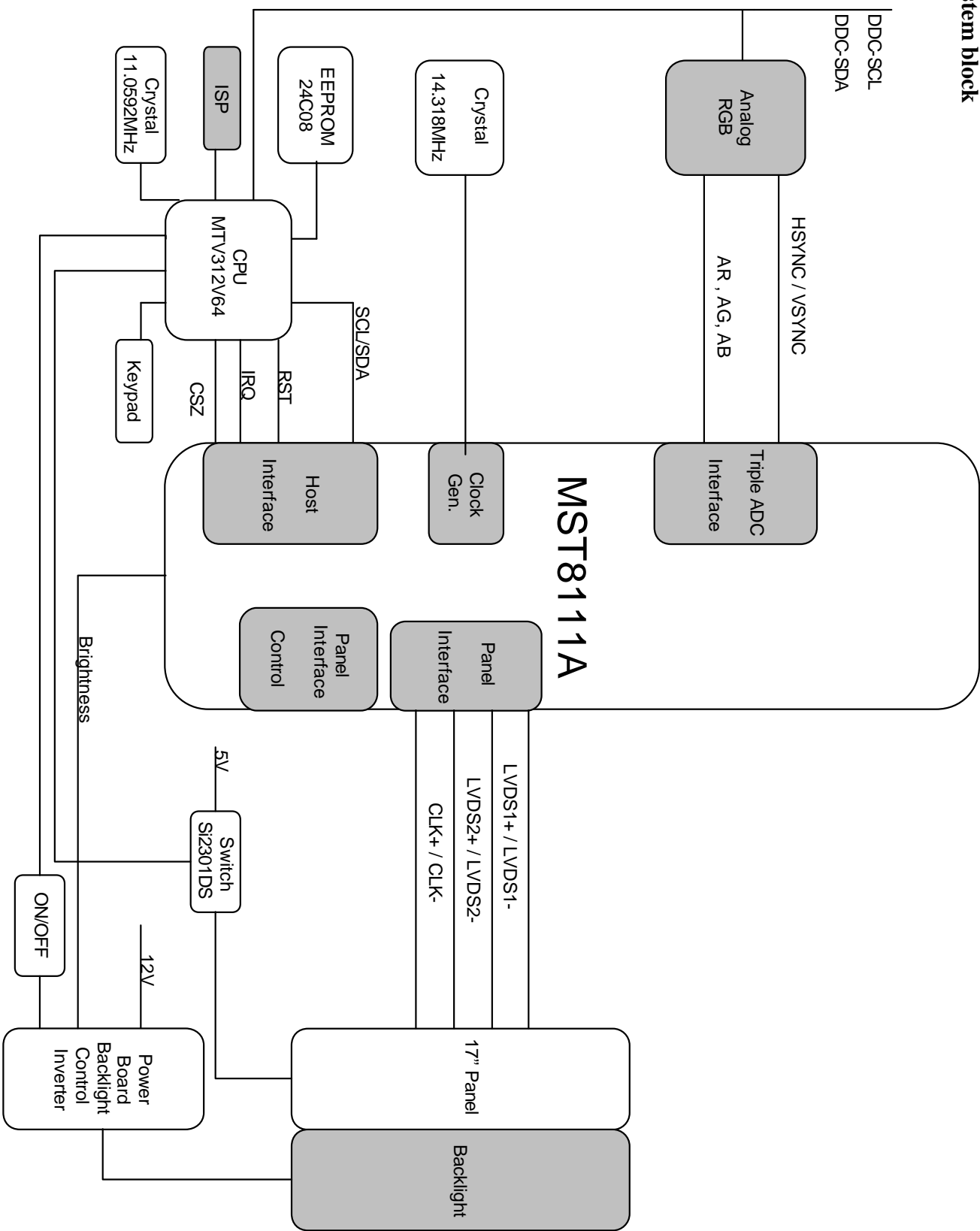
ViewSonic Model Number: VLCDS27998-3W

Rev: 1a

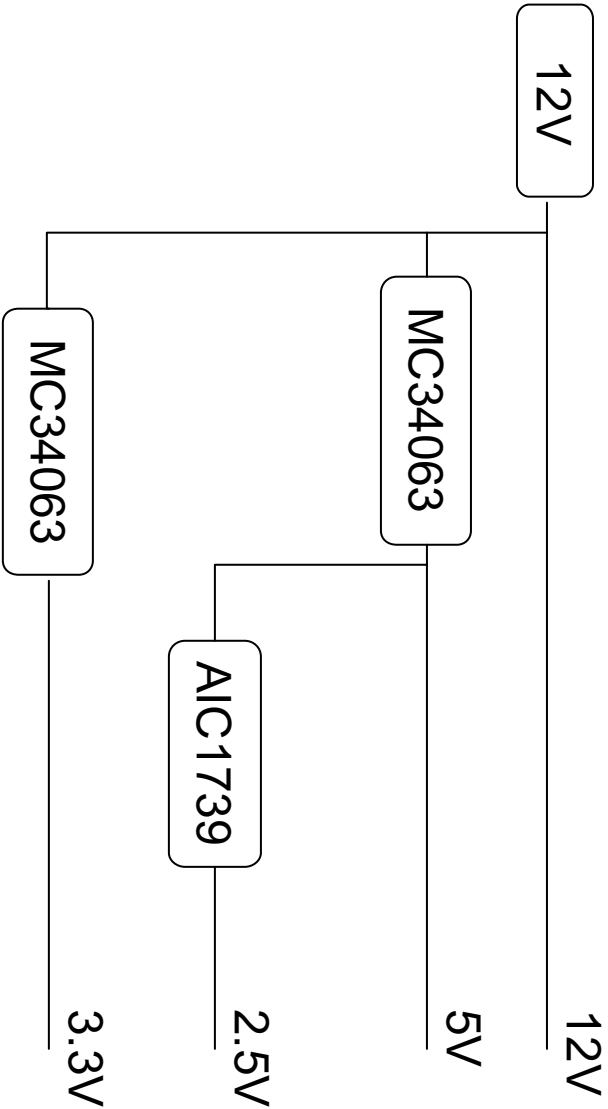
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1	#N/A	1L7VCZCVS70	VE710b MONITOR	1
2	P-FM-0602-0840	HBL7V005019	END CAP (L)	1
3	P-FM-0602-0841	HBL7V006015	END CAP (R)	1
4	#N/A	HGL7VC050017	USER'S MANUAL & CD	1
5	A-PC-0106-0224	DM333181G97	POWER CORD 3P 1.8M	1
6	P-00003680	HFL7VC02017	CARTON	1
7	#N/A	HCL7VC01018	CARTON LABEL	1
8	M-MS-0808-8981	HAL7V001012	PE BAG	1

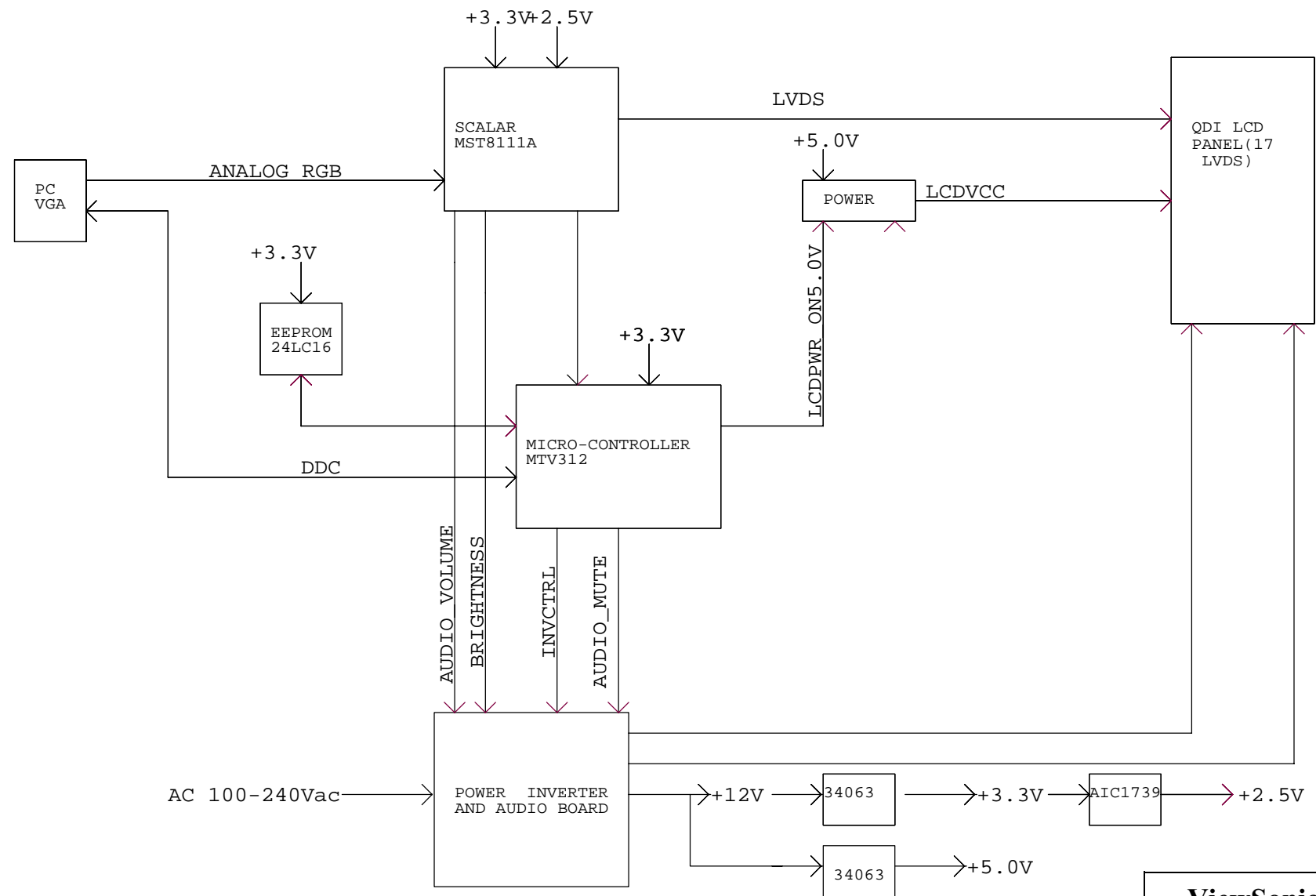
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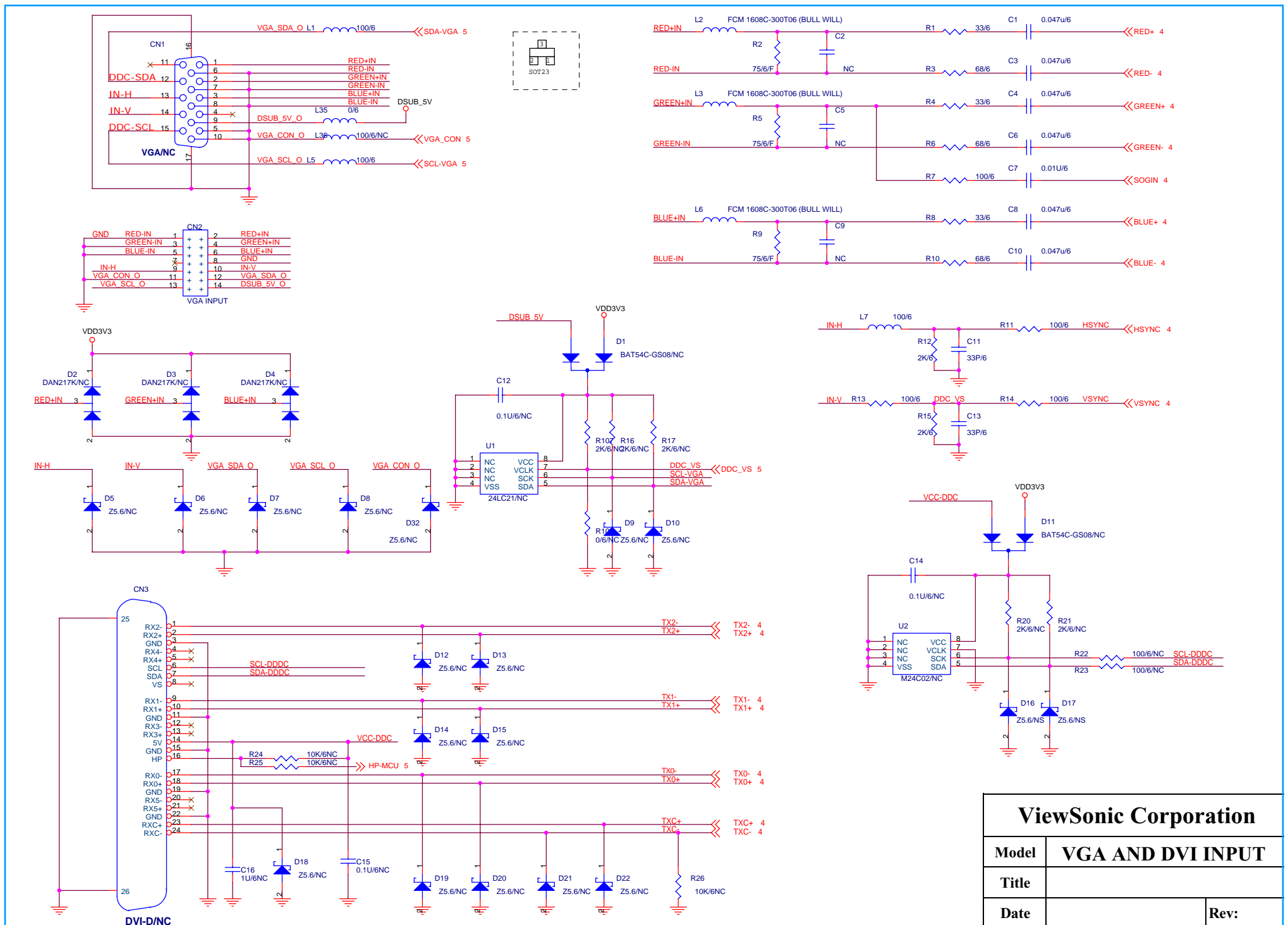
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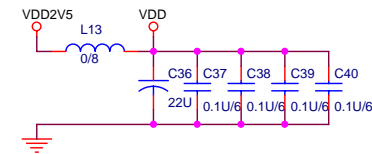
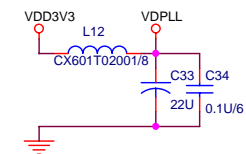
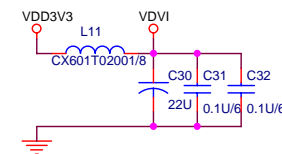
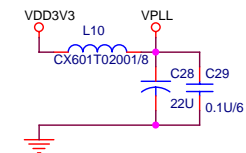
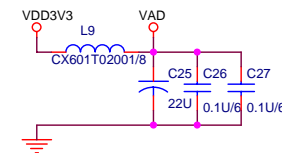
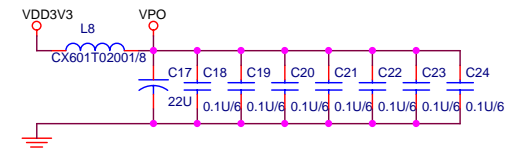
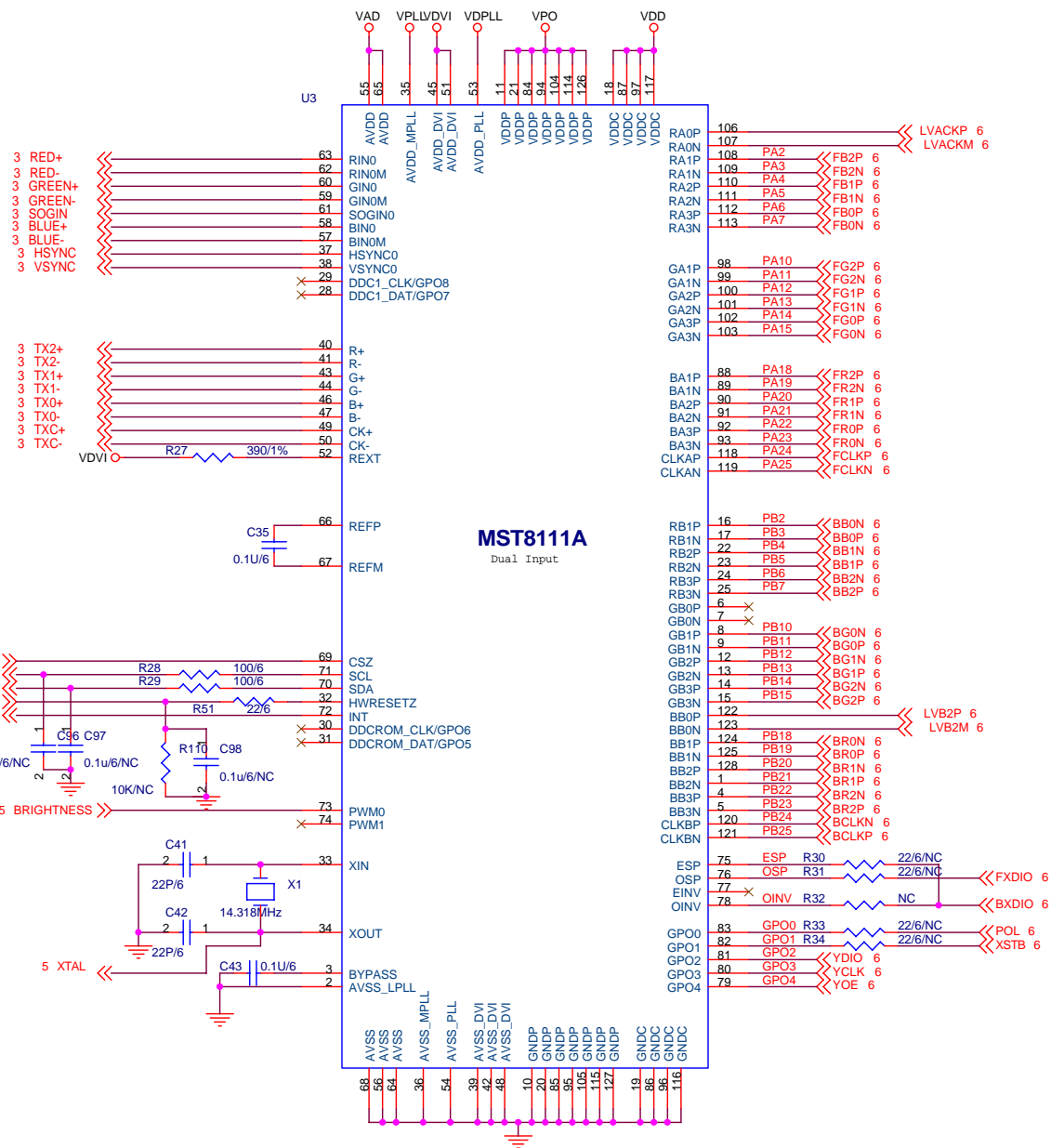
10. Schematic Diagrams



ViewSonic Corporation		
Model	BLOCK DIAGRAM	
Title		
Date		Rev:

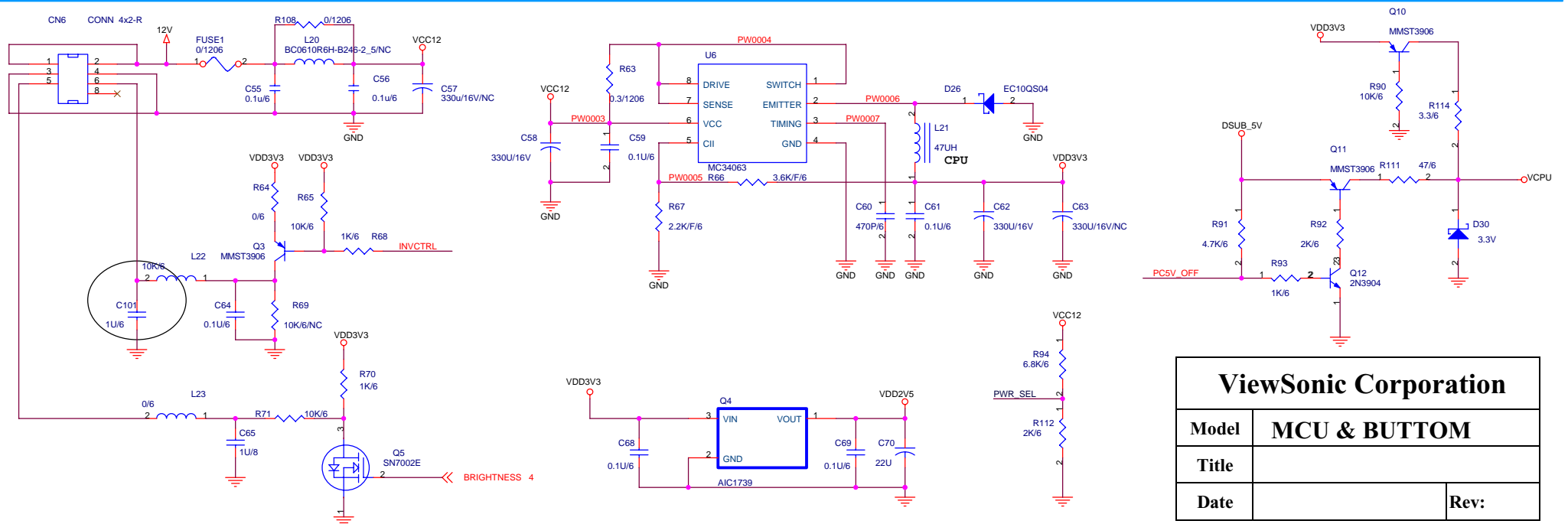
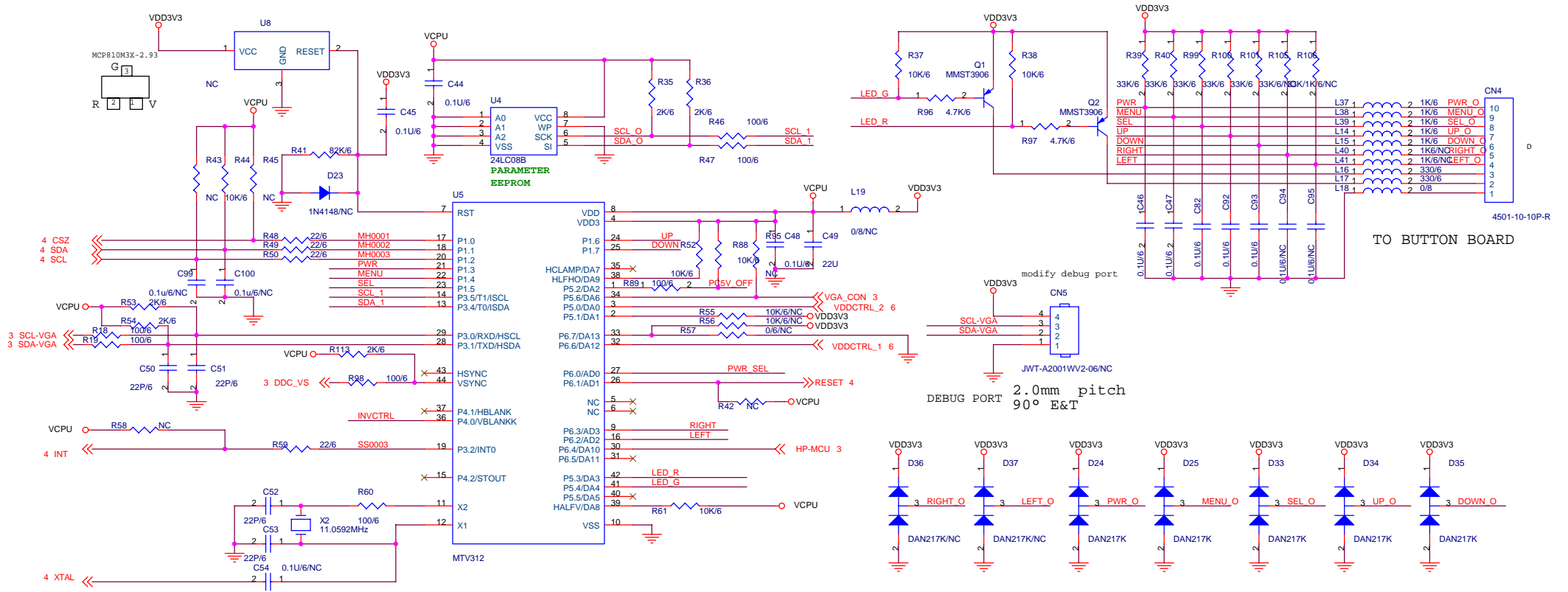


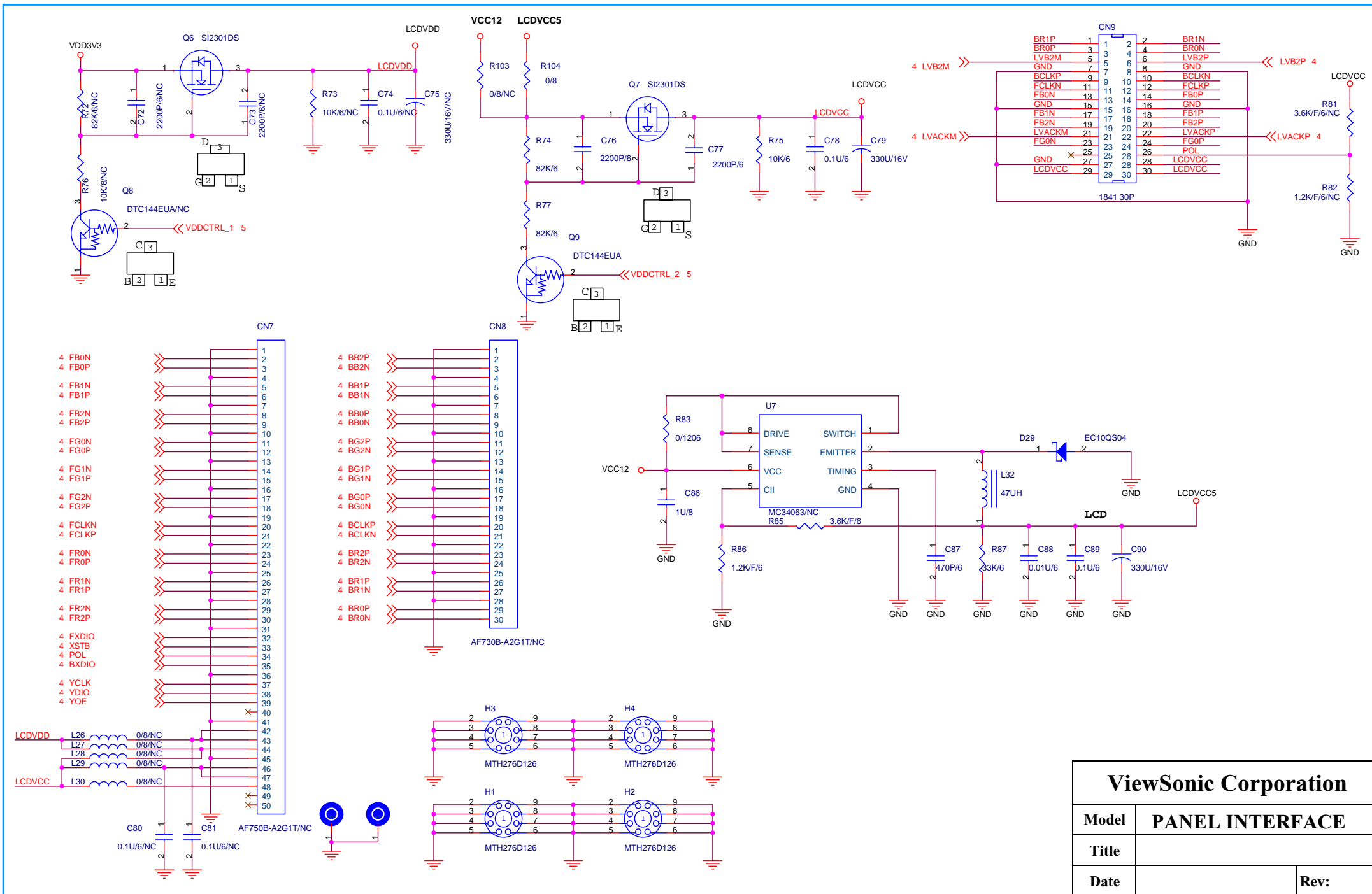


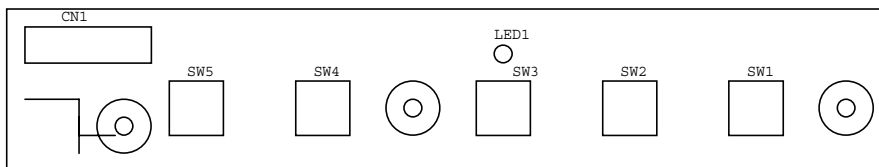
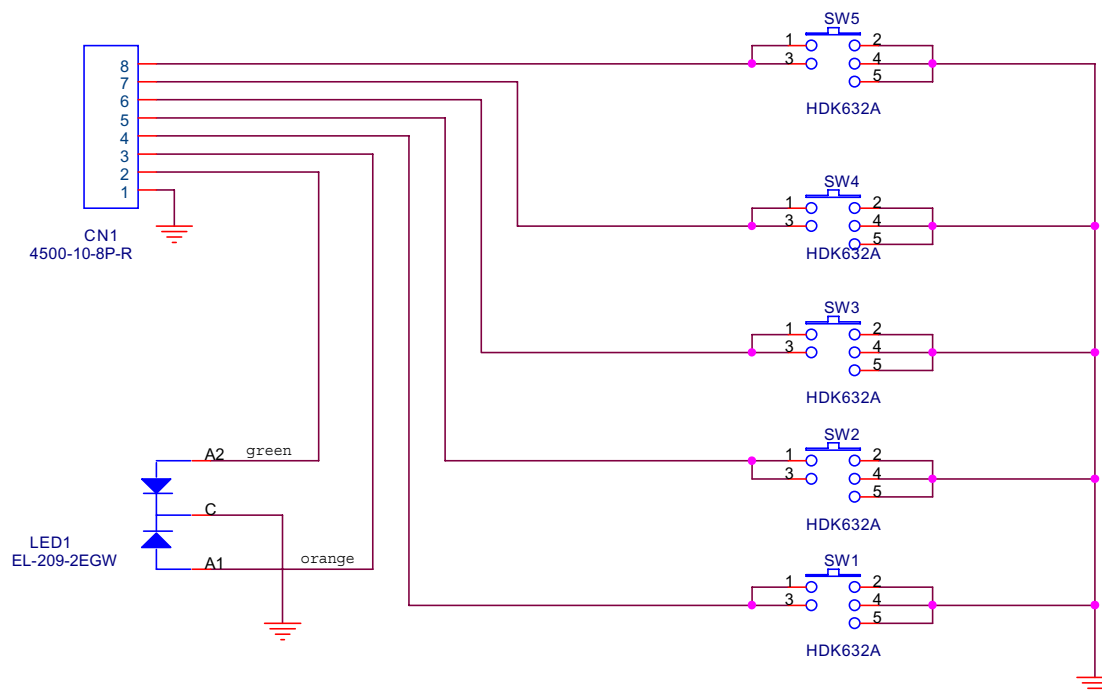


ViewSonic Corporation		
Model	MST8116/8136A	
Title		
Date		Rev:





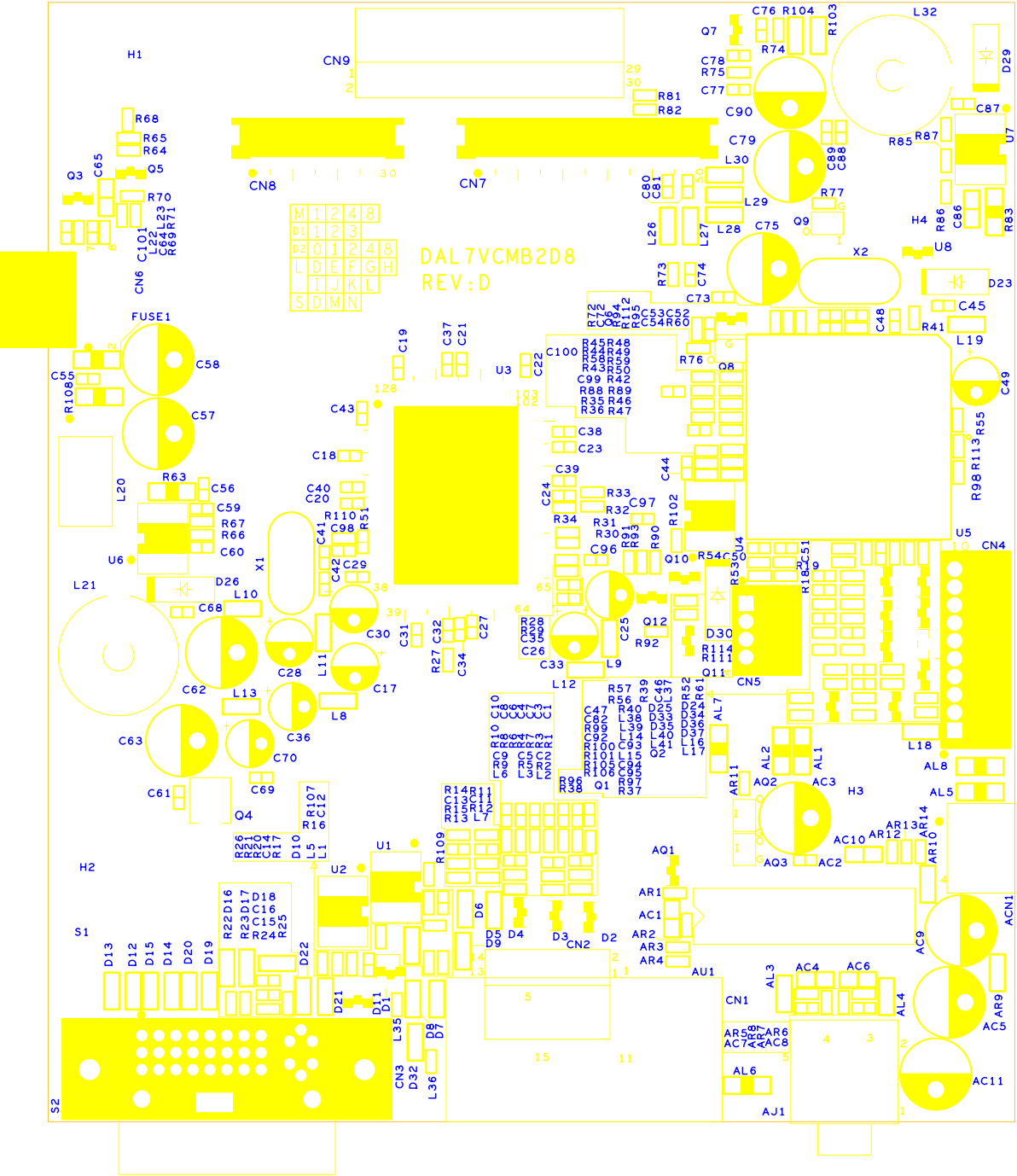




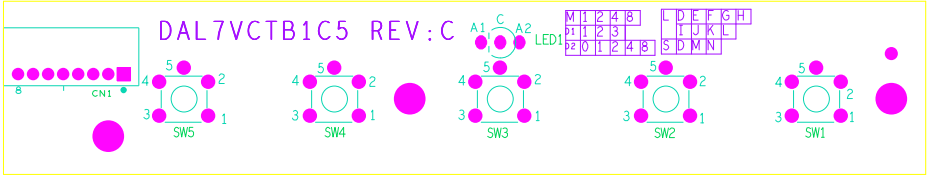
ViewSonic Corporation		
Model	BUTTOM	
Title		
Date		Rev:

11. PCB Layout Diagrams

Main board

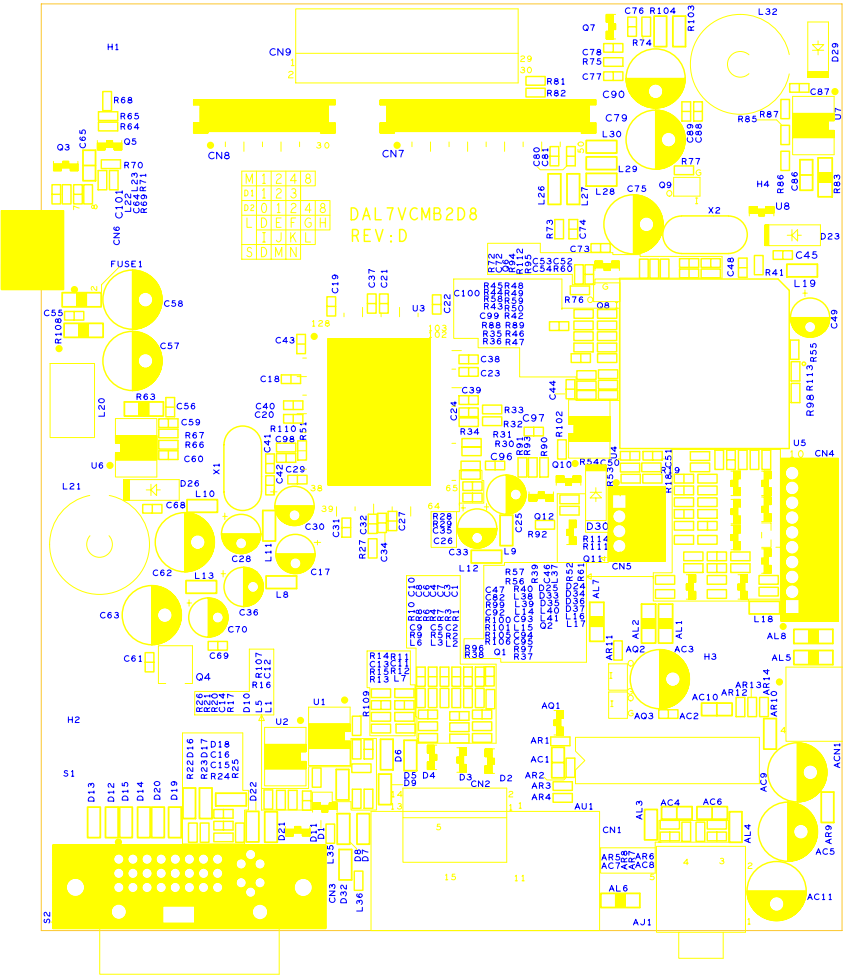


Control board

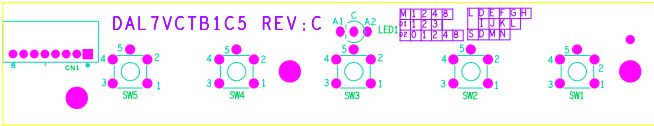


11. PCB Layout Diagrams

Main board



Control board



## **\*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 Diagram				
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)