Service Manual

ViewSonic VE710b/s-1

Model No. VLCDS27998-2W/-1W

17” Color TFT LCD Display

(VE710b/s-1_SM_736 Rev. 1c Apr. 2005)

ViewSonic® 381 Brea Canyon Road, Walnut, California 91789 USA - (800) 888-8583

Revision History

Revision	SM Editing Date	Documents Number		Description of Changes	Editor
		DCN Number	ECR Number		
1a	25/12/03	3742		Initial Release	A. Lu
1b	06/07/04	4527	4342	To solve CPT panel shortage, phase in QDI panel as the 2nd source	A .Lu
1c	04/19/05	5244	5218	Panel change from QDI QD17EL07 REV.03 25ms to QD17EL0709 8ms	A .Lu

TABLE OF CONTENTS

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.

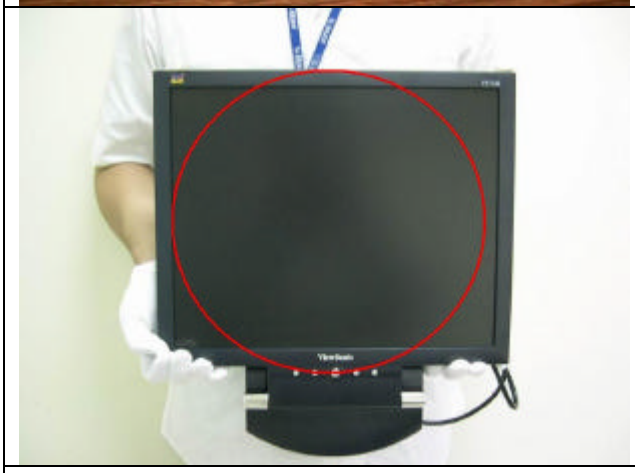
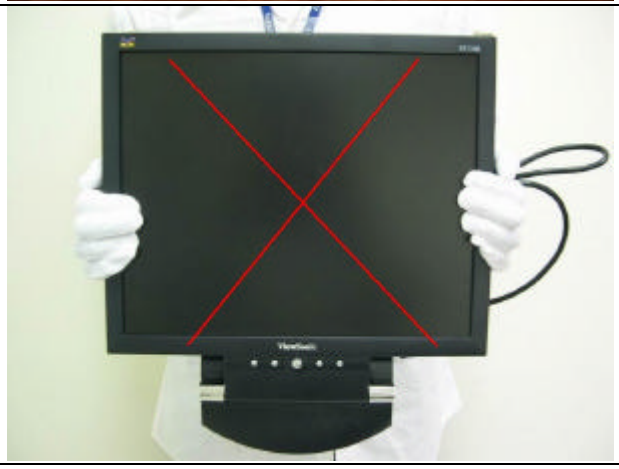
(11) After installation of the TFT Module into an enclosure (LCD monitor housing, for example), do not twist or bend the TFT Module even momentarily. When designing the enclosure, it should be taken into consideration that no bending/twisting forces may be applied to the TFT Module from outside. Otherwise the TFT Module may be damaged.

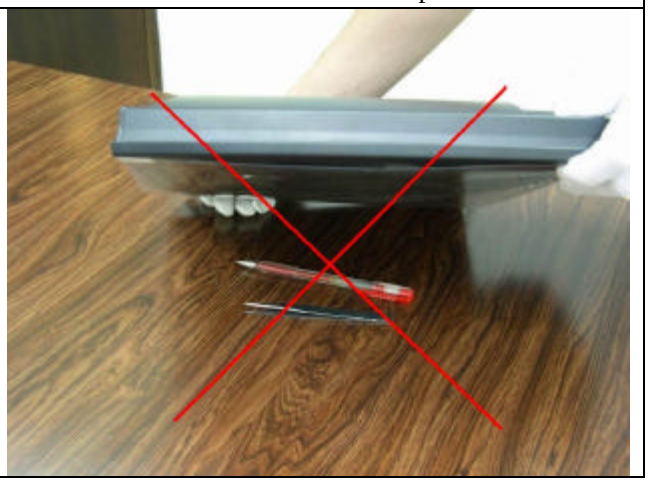
(12) The cold cathode fluorescent lamp in the LCD contains a small amount of mercury. Please follow local ordinances or regulations for disposal.

(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."
	
	
Take out the monitor by grasping the cushion.	If the monitor is removed by grasping the LCD panel, that may cause "MURA."
	

Correct methods :	Incorrect Methods :
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.

• **LCD Panel**

1st Source Panel	QD17EL0709
Type	Normally white, TN, Optical compensation film
Active Size	337.920 (H) x 270.336 (V)
Pixel Arrangement	RGB Vertical Stripe
Pixel Pitch	0.264 mm
GLASS TREATMENT	Anti Glare
# OF BACKLIGHTS	4 CCFL edge-light (2 top / 2 bottom)
BACKLIGHT LIFE	50,000 Hours (Typ) / 40,000 Hours (Min)
Luminance – Condition: CT = 6500K, Contrast = Max, Brightness = Max	300 cd/m2 (Typ after 30 minute warm up) 240 cd/m2 (Min after 30 minute warm up)
Brightness Uniformity	75 % Entire Area (minimum)
Contrast Ratio	500:1 (Typ), 300:1 (Min)
Color Depth	16 million colors (6 bit panel)
Viewing Angle (Horizontal)	140 deg @ CR>10, 160 deg @ CR>5
VIEWING ANGLE (VERTICAL)	125 deg @ CR>10, 145 deg @ CR>5
Response Time 10%-90% @ Ta=25°C	8 ms (Tr= 6 ms, Tf = 2 ms) (Typ) TBD ms (Tr= TBD ms, Tf = TBD ms) (Max)
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)

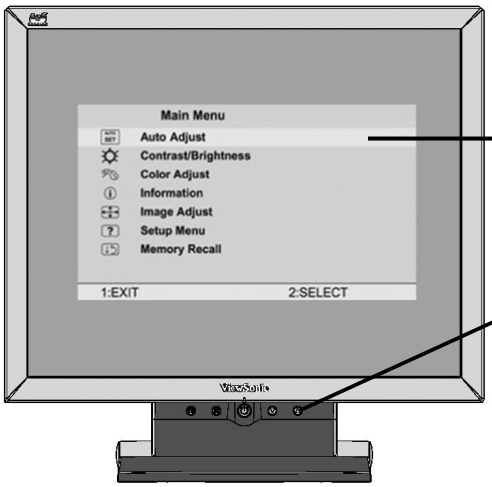
• Environmental Conditions

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.



Main Menu
With OnView controls

Front Control Panel shown below in detail

Displays the control screen for the highlighted control.

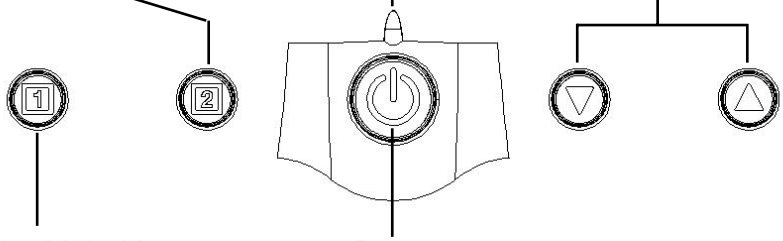
Also toggles between two controls on some screens.

Also a shortcut to Auto Image Adjust.

Power light
Green = ON
Orange = Power Saving

Scrolls through menu options and adjusts the displayed control.

Also a shortcut to display the Contrast adjustment control screen.

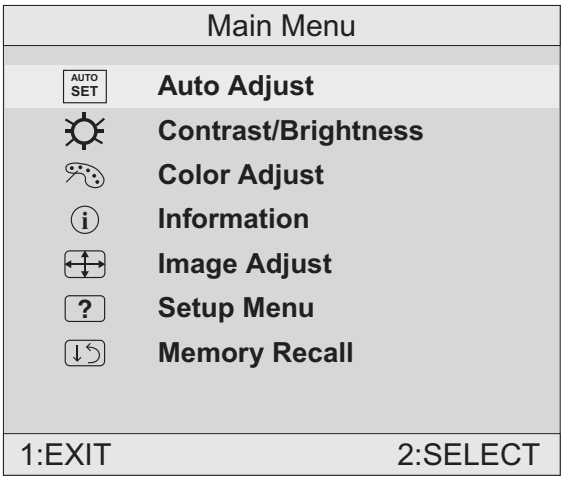


Displays the Main Menu or exits the control screen and saves adjustments.

Power On/Off

Do the following to adjust the screen image:

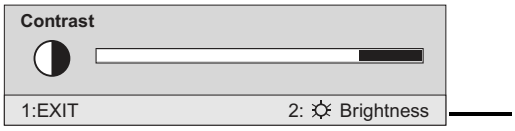
1 To display the Main Menu, press button [1].



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 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*.

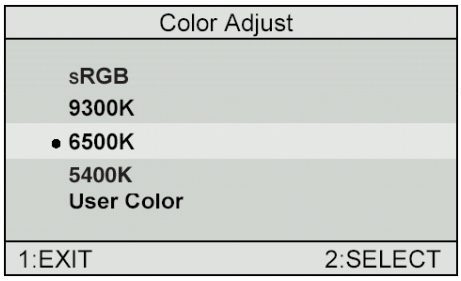
The following tips may help you optimize your display:

- Adjust your computer's graphic card so that it outputs a video signal 1280 x 1024 @ 60 Hz to the LCD dislay. (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 dislay.)

Main Menu Controls

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

Control	Explanation
AUTO SET	**Auto Image Adjust** automatically sizes, centers, and fine tunes the video signal to eliminate waviness and distortion. Press the [2] button to obtain a sharper image. **NOTE:** **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. **2.** The Auto Image Adjust and most Manual Image Adjust functions are not available for DVI input.
	**Contrast** adjusts the difference between the image background (black level) and the foreground (white level).
	**Brightness** adjusts background black level of the screen image.
	**Color Adjust** 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).



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.

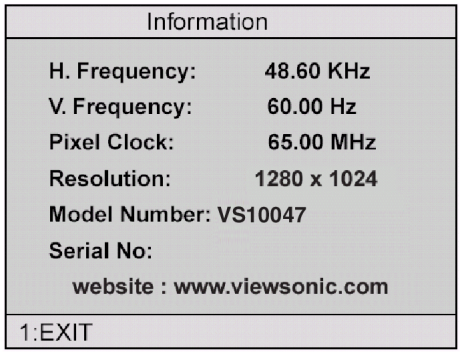
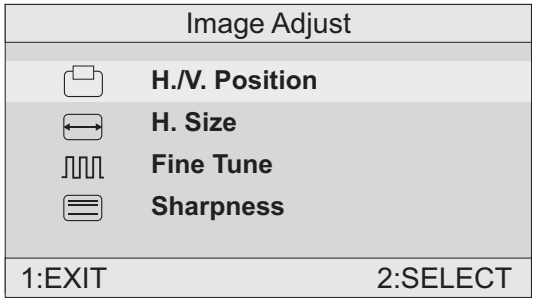


Image Adjust



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 dislay.

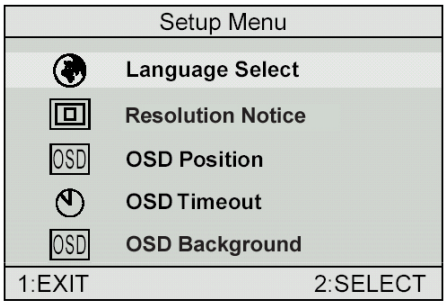
Control Explanation

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.

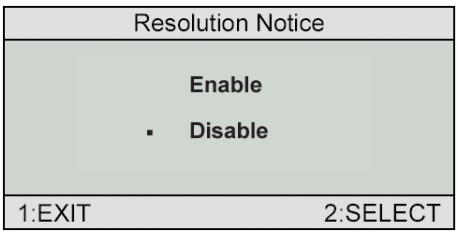
Setup Menu displays the menu shown below.



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
	**OSD Background** 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.
	**Memory Recall** returns adjustments to the original factory settings if the display is operating in a factory Preset Timing Mode listed in this user guide.

4. Circuit Description

1. Outline

1.1 Buttons on the front panel: Power On/Off button, button 2 (ENTER / INPUT SELECT), up arrow button, down arrow button, button 1 (MENU).

1.2 D-sub 15-pin connector, DVI-I connector and AC-IN jack are located on the back side of the cabinet.

1.3 OSD menu includes the following function;

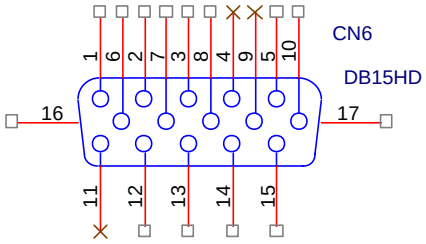
Auto Image Adjust (only active under analog input)
Contrast/Brightness
Audio Adjust
Color Adjust
Information
Manual Image Adjust
Setup Menu
Memory Recall

1.4 Contrast and Brightness can be directly controlled with UP / DOWN buttons.

2. Connectors

2.1 AC inlet: CEE22 type connector

2.2 Video signal connector for analog input: 15P Mini D-Sub



PIN	MNEMONIC	SIGNAL
1	RV	Red Video
2	GV	Green Video
3	BV	Blue Video
4	NC	None
5	GND	Ground (DDC return)
6	RG	Red GND
7	GG	Green GND
8	BG	Blue GND
9	+5V	+5V (for DDC)
10	SG	Sync GND
11	NC	None
12	SDA	DDC Data
13	HS	Horizontal Sync
14	VS	Vertical Sync
15	SCL	DDC Clock

3. ELECTRICAL SPECIFICATIONS

3.1 Standard conditions

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

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	1 8	F 5	0 1	0 1	0 1	0 1	0 1	0 F	0 1	0 3
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

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	1 8	F 6	0 1	0 1	0 1	0 1	0 1	0 F	0 1	0 3
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, Volt = 1.25 (1 + R67 / R66). 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, Volt = 1.25 (1 + R85 / R86). 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.

Input	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
Output	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 postion 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:

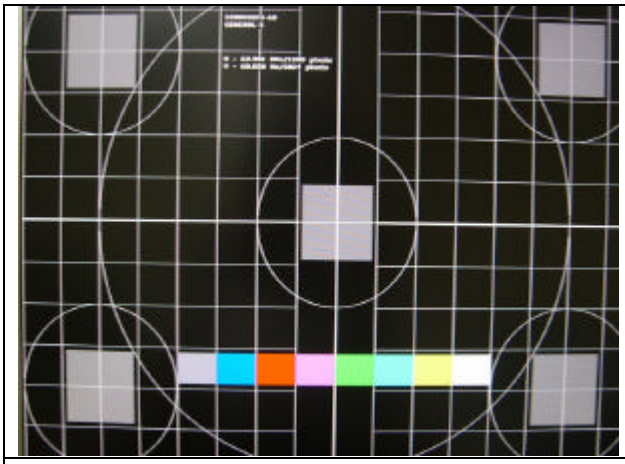
1. Room temperature
2. With full-white screen, RGB, black pattern
3. With cycled display modes

4. Test display modes

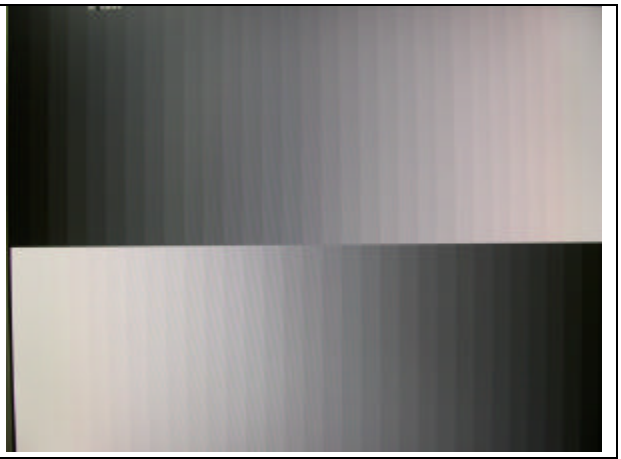
Item	Timing	Analog
1	640 x 350 @ 70Hz, 31.5kHz	Yes
2	640 x 400 @ 60Hz, 31.5kHz	Yes
3	640 x 400 @ 70Hz, 31.5kHz	Yes
4	640 x 480 @ 50Hz, 24.7kHz	Yes
5	640 x 480 @ 60Hz, 31.5kHz	Yes
6	640 x 480 @ 67Hz, 35.0kHz	Yes
7	640 x 480 @ 72Hz, 37.9kHz	Yes
8	640 x 480 @ 75Hz, 37.5kHz	Yes
9	640 x 480 @ 85Hz, 43.27kHz	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

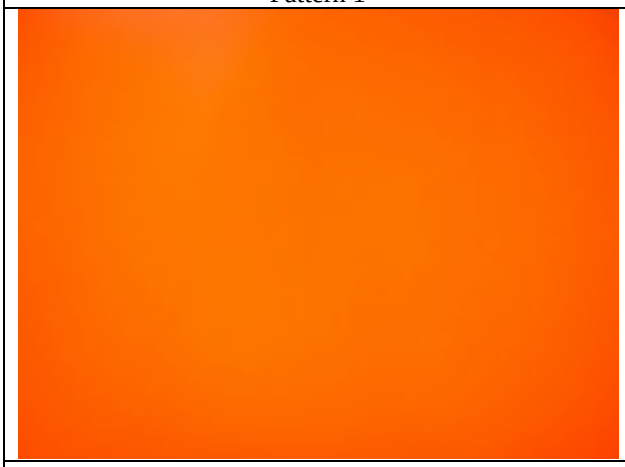
Item	Test condition	Pattern	Specification	Remark
1	Frequency & performance	Cross-hatch pattern	No noise is allowed, all colors must be clear	Pattern 1
2	Monitor saturation	16-gray scale pattern	3 to 4 levels must be saturated when brightness and contrast are set to 100%	Pattern 2
3	RGB color performance	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



Pattern 1

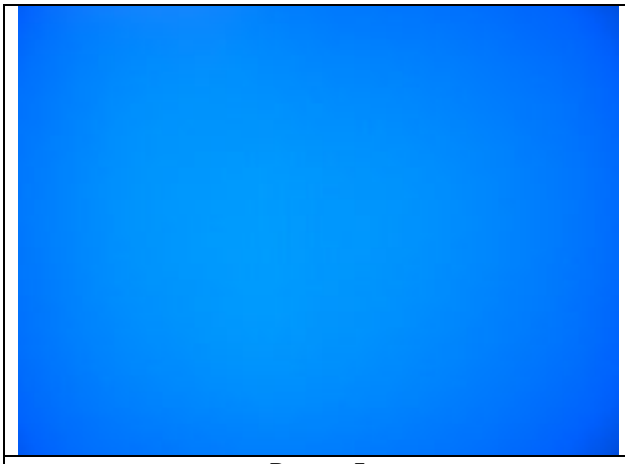
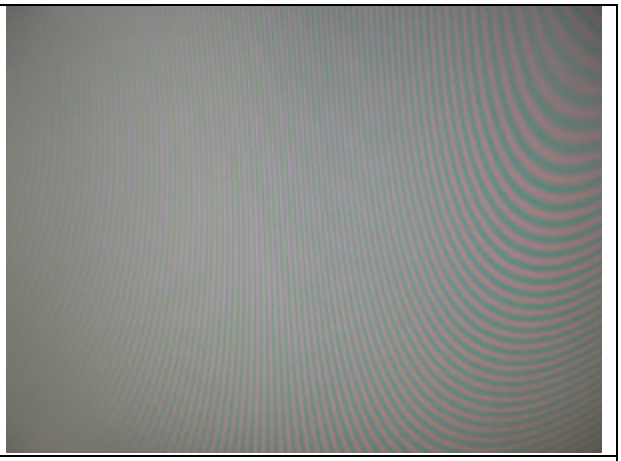
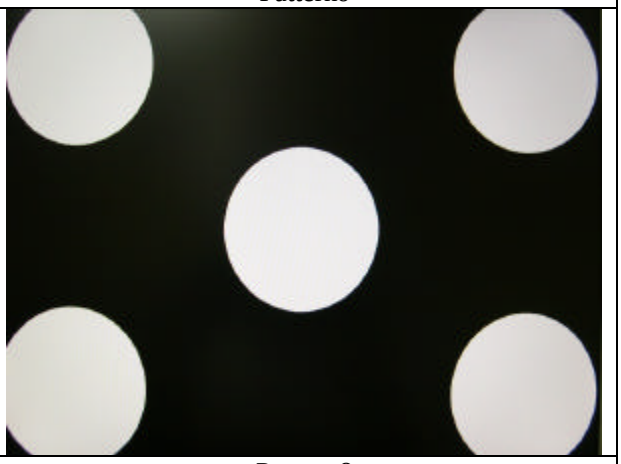


Pattern2



Pattern 3

Pattern4

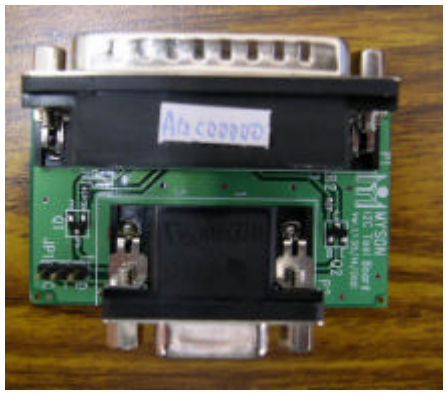
	
Pattern 5	Pattern6
	
Pattern 7	Pattern 8
	
Pattern 9	

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

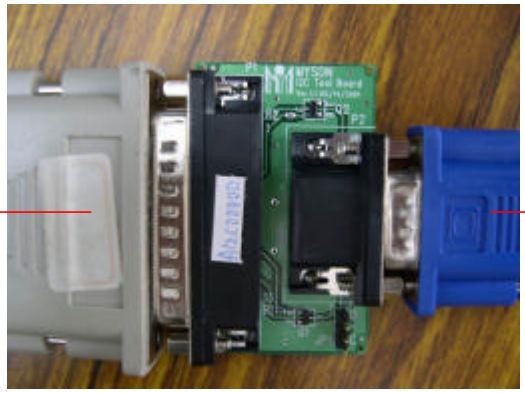


Fixture

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

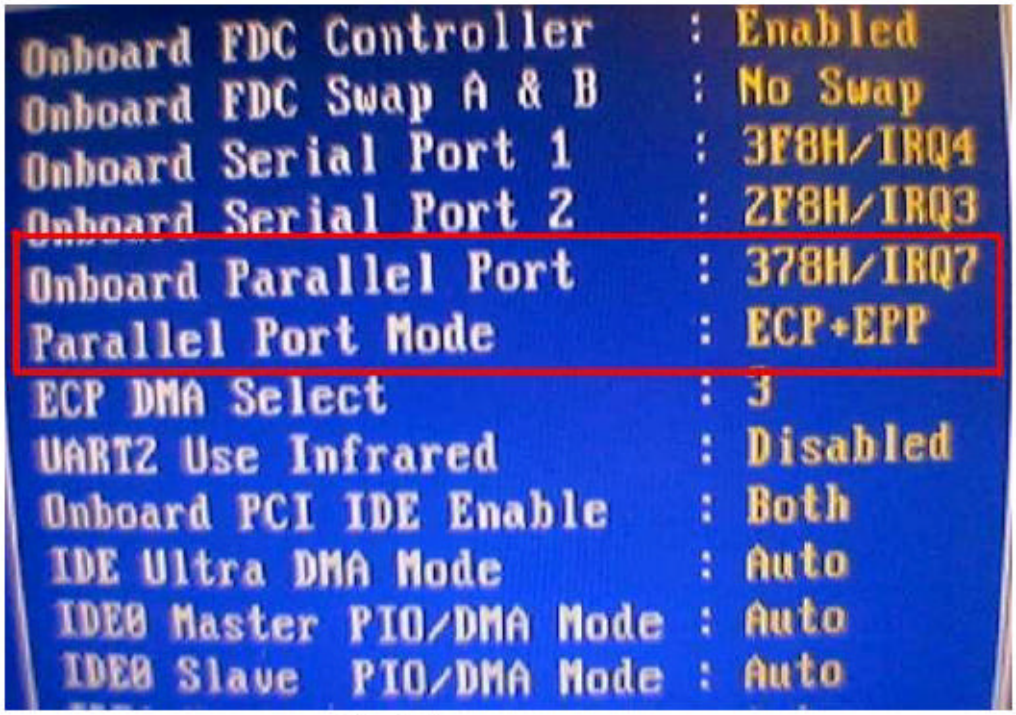


Fig 0.1

1. Install ISP

1.1 User could download ISP river and PORT95NT install from Myson Century website (www.myson.com.tw)

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

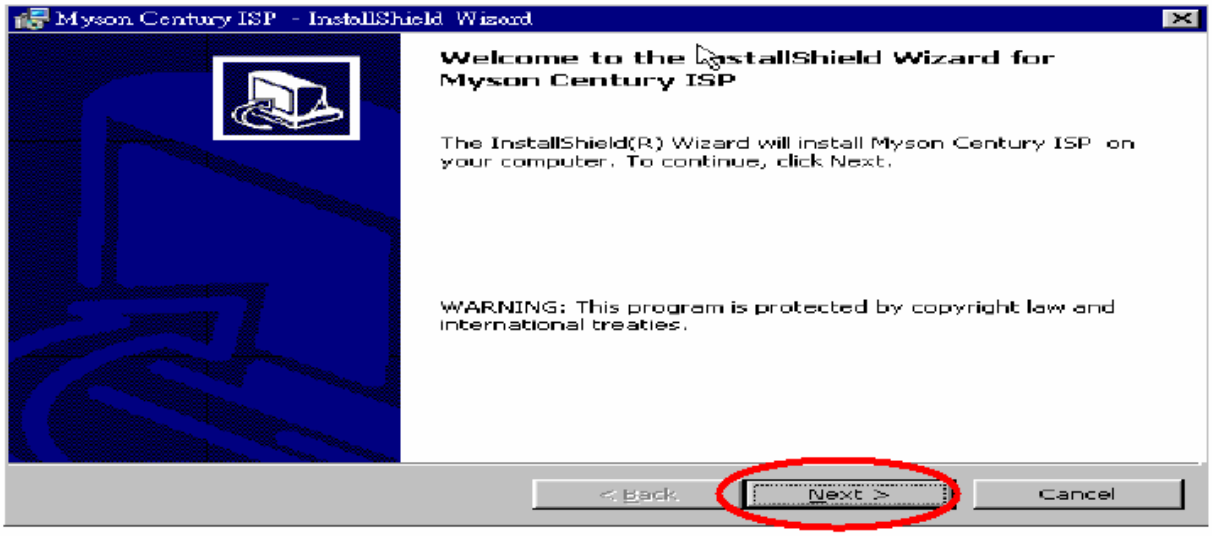


Fig 1.3

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 .

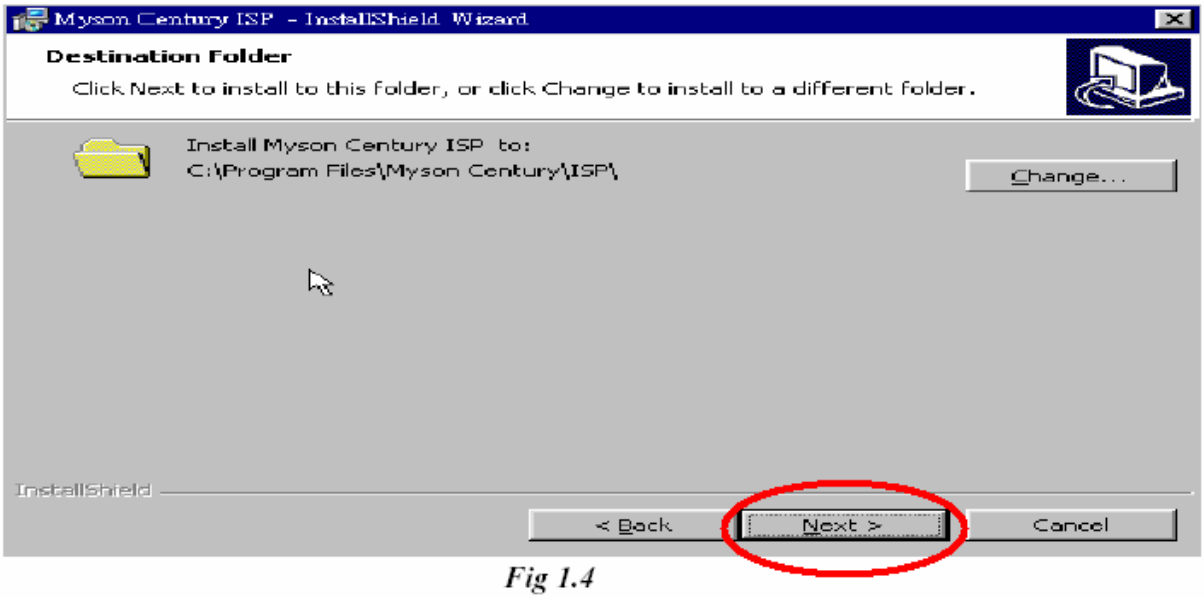


Fig 1.4

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

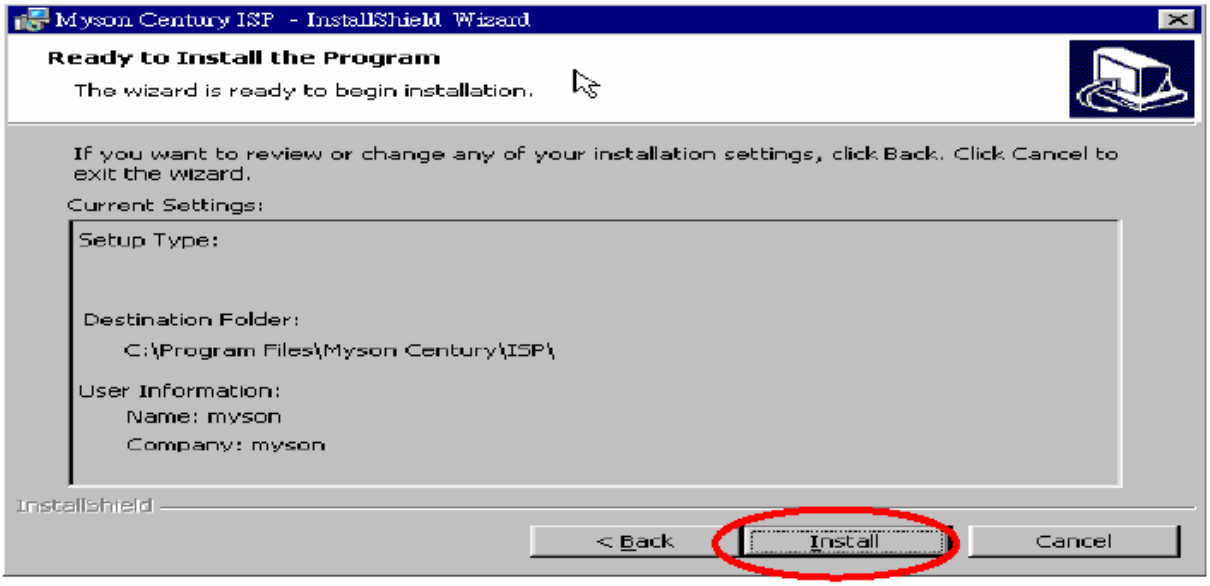


Fig 1.5

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

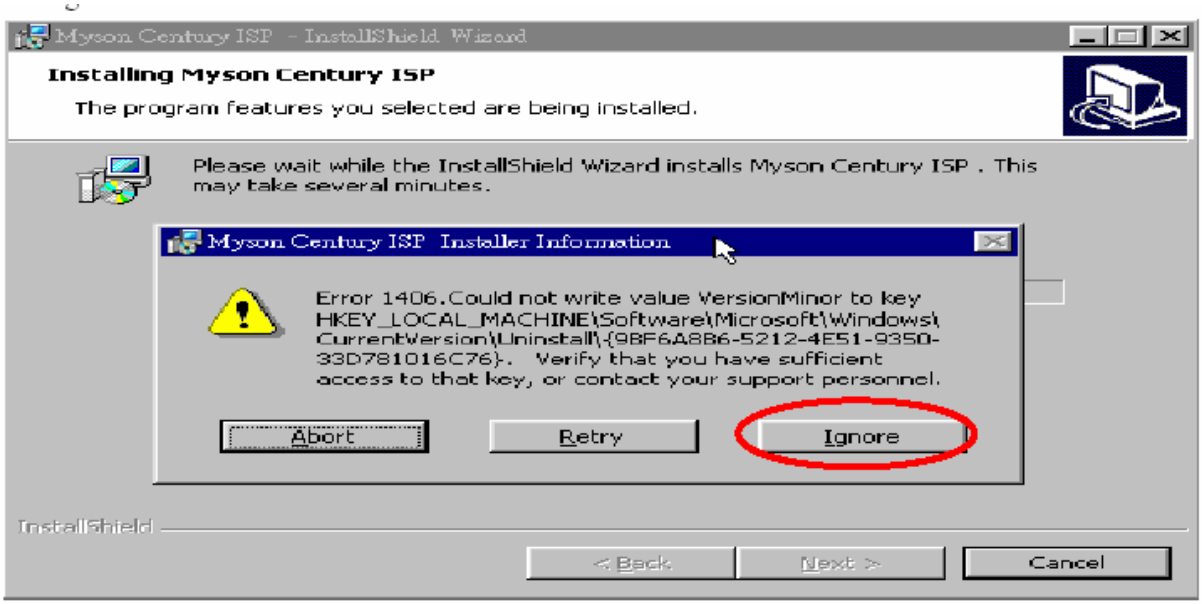


Fig 1.6

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

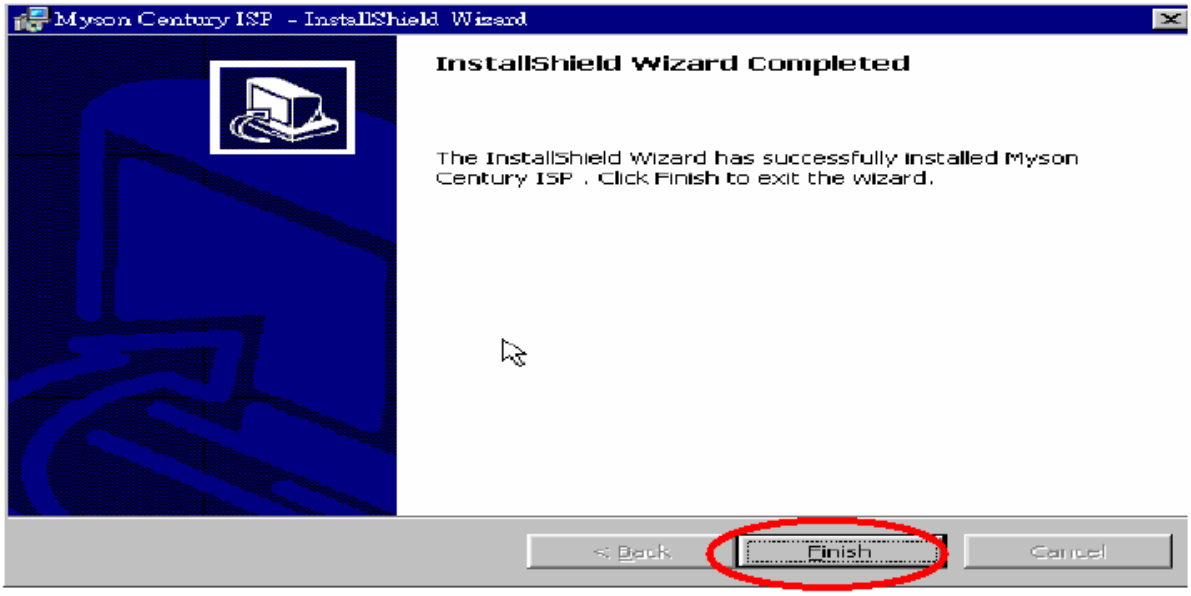


Fig. 1.7

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.

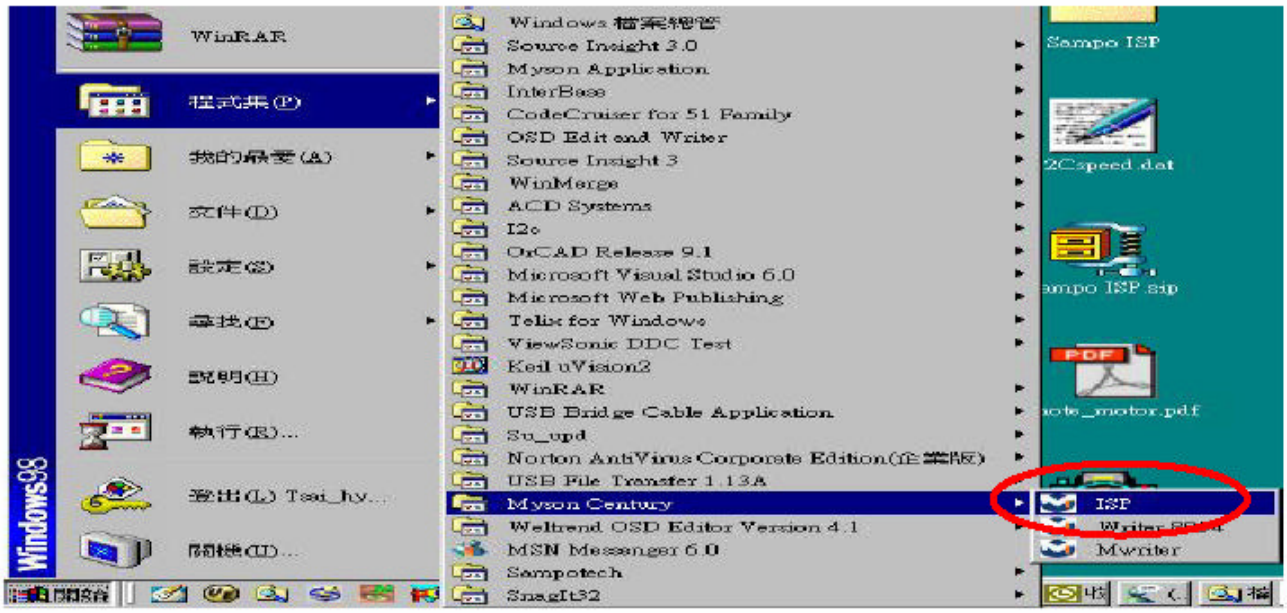


Fig 2.1

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

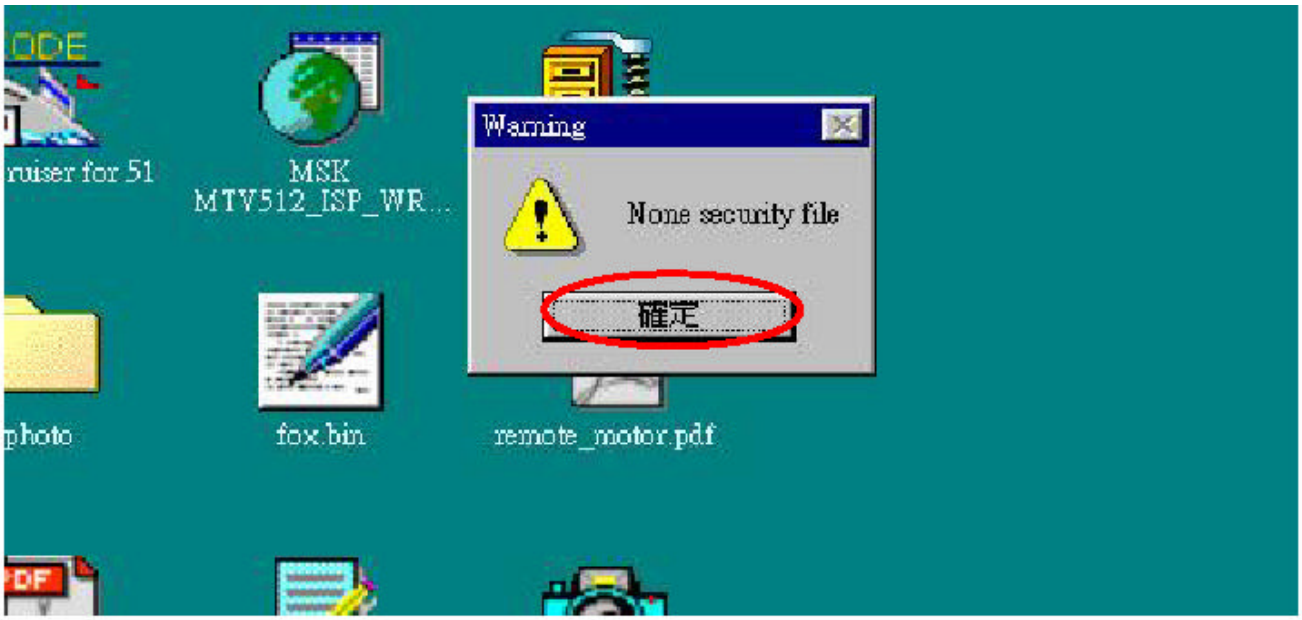


Fig 2.2

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.

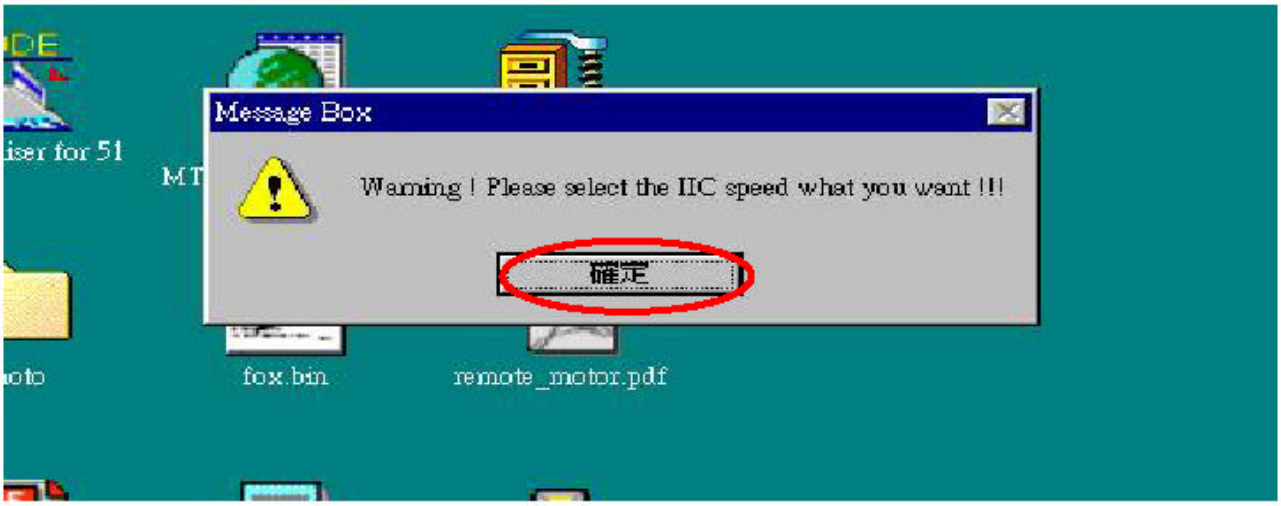


Fig 2.3

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

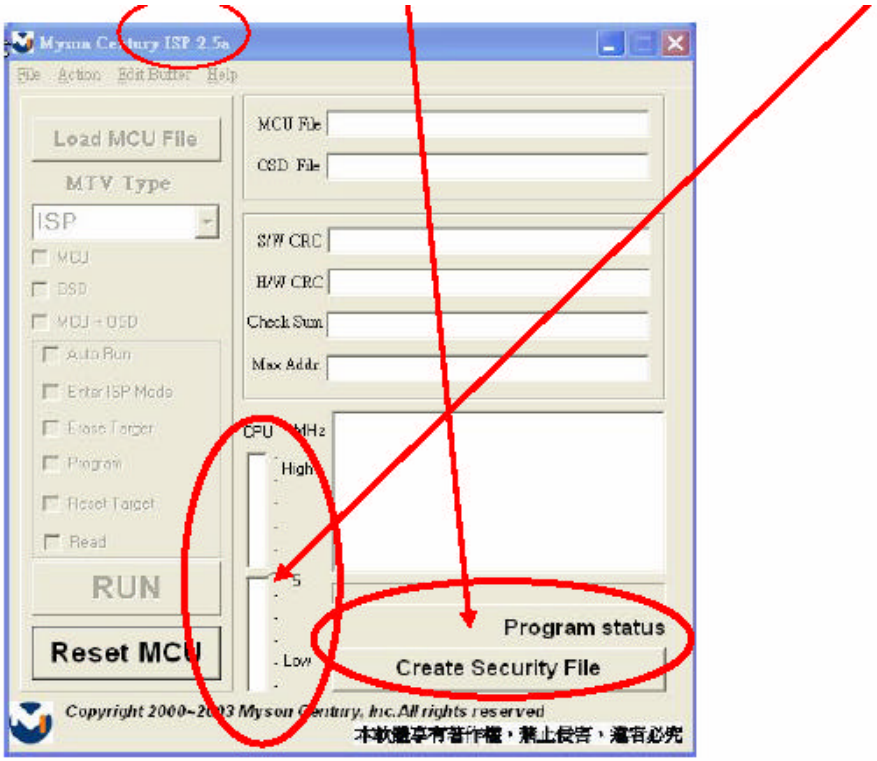


Fig 2.4

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.

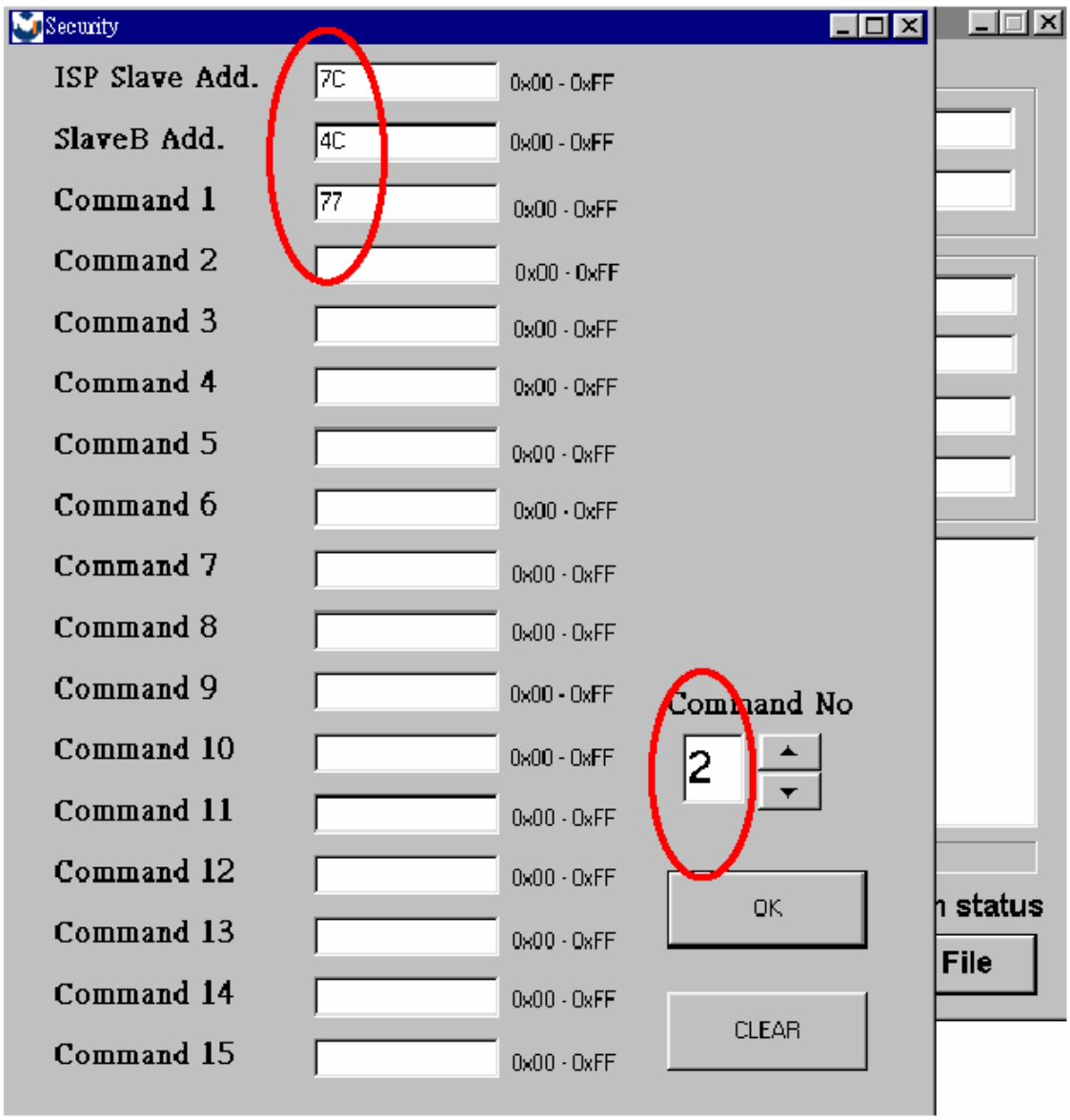


Fig 2.7

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 .

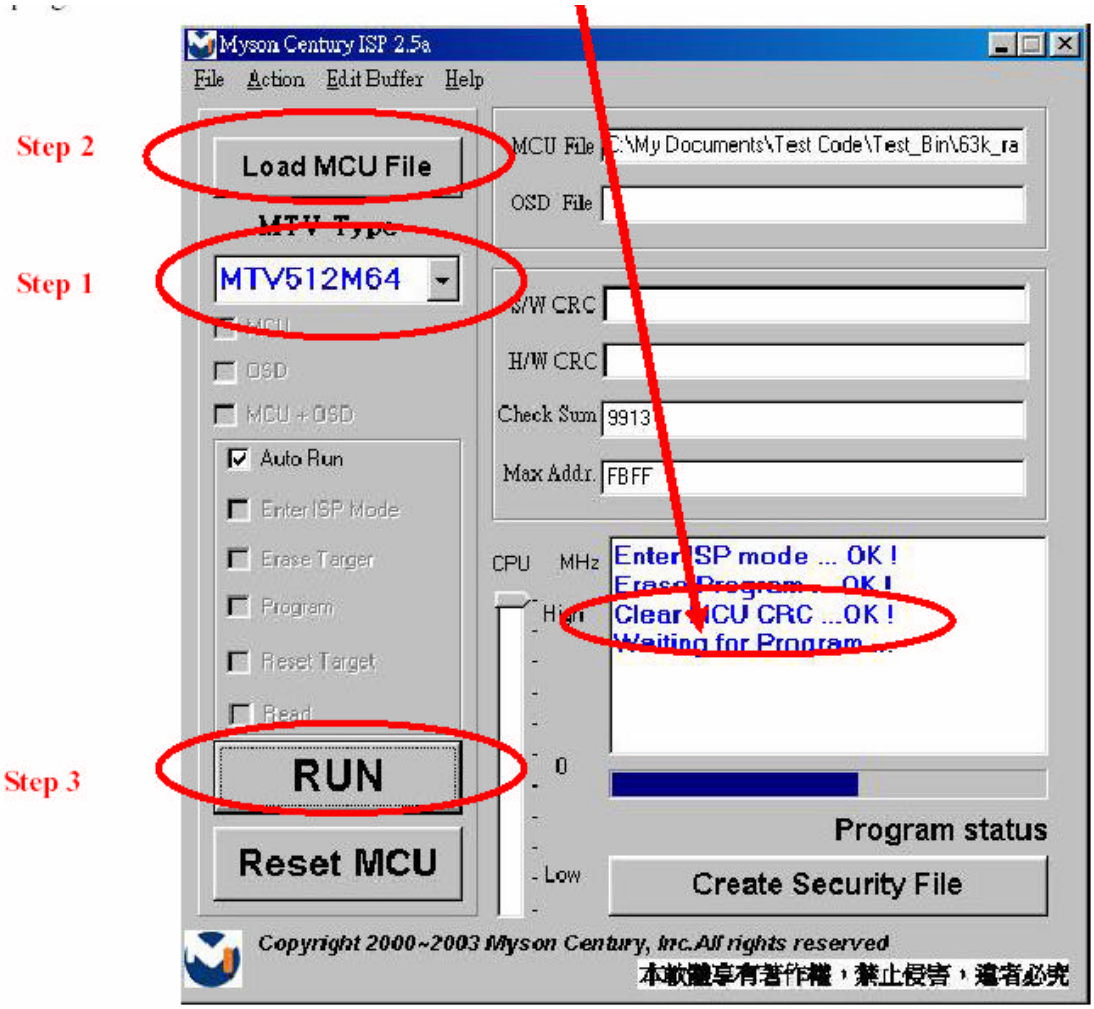
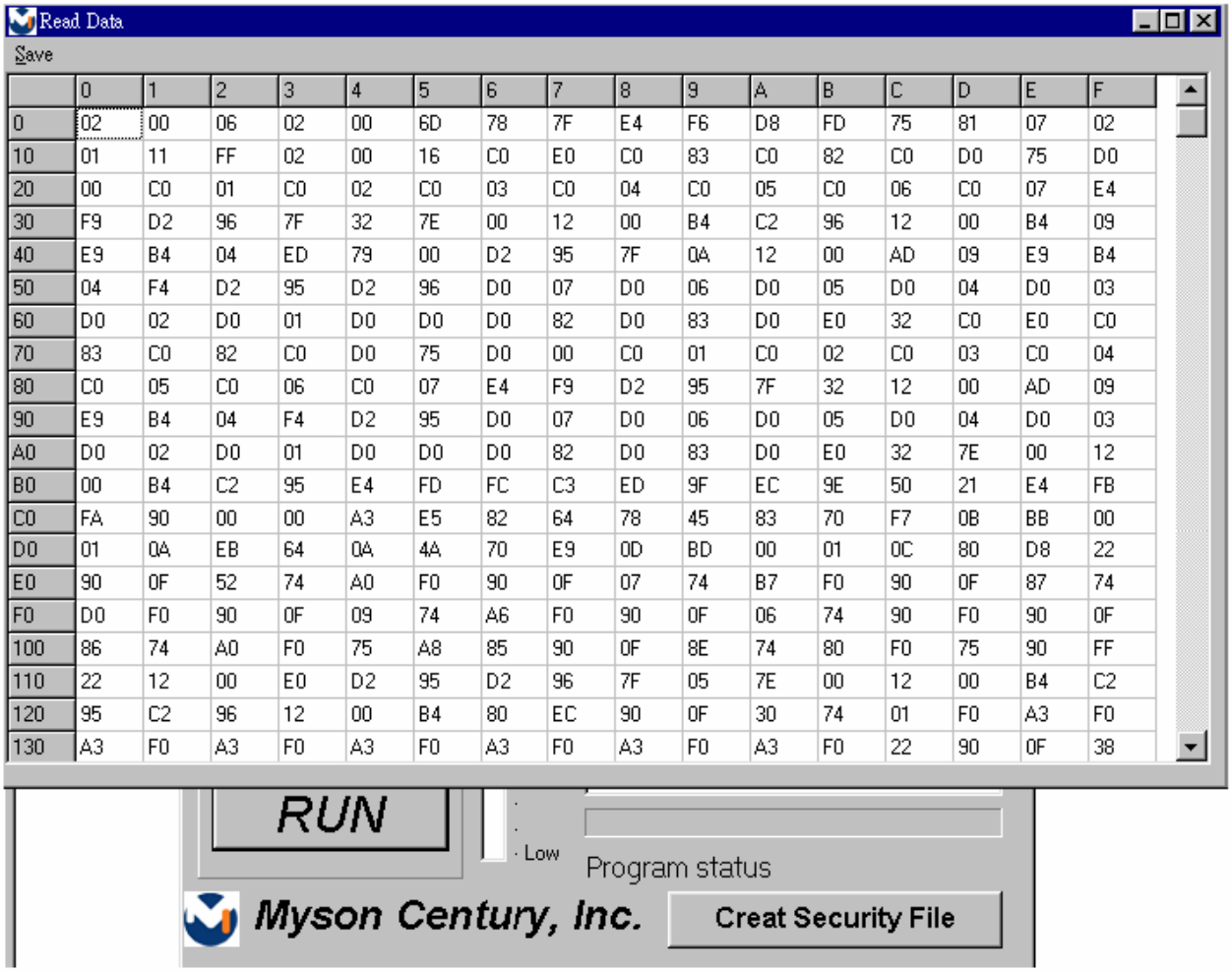


Fig 3.1

10. Use ISP to rea d MCU content

1 0 . 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

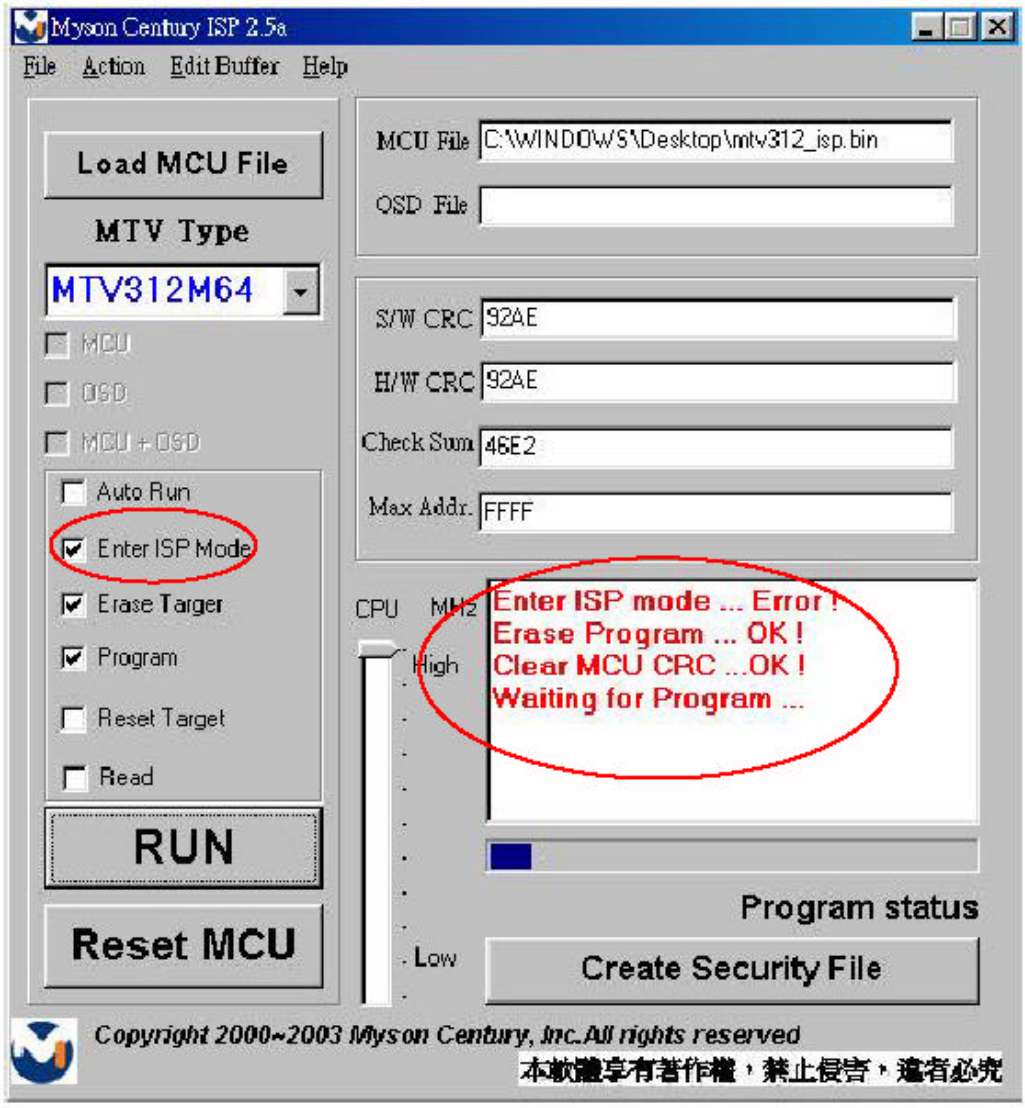


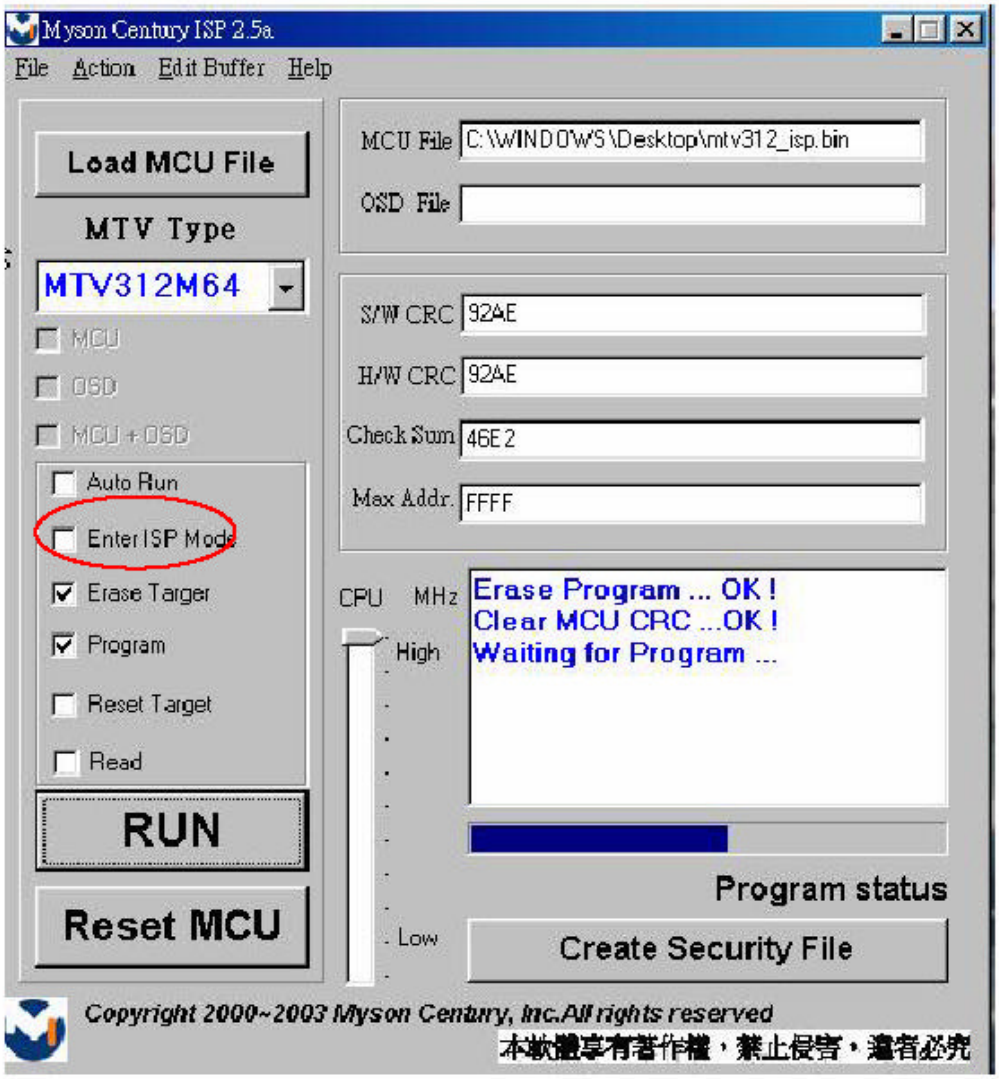
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	02	00	06	02	00	6D	78	7F	E4	F6	D8	FD	75	81	07	02
10	01	11	FF	02	00	16	C0	E0	C0	83	C0	82	C0	D0	75	D0
20	00	C0	01	C0	02	C0	03	C0	04	C0	05	C0	06	C0	07	E4
30	F9	D2	96	7F	32	7E	00	12	00	B4	C2	96	12	00	B4	09
40	E9	B4	04	ED	79	00	D2	95	7F	0A	12	00	AD	09	E9	B4
50	04	F4	D2	95	D2	96	D0	07	D0	06	D0	05	D0	04	D0	03
60	D0	02	D0	01	D0	D0	D0	82	D0	83	D0	E0	32	C0	E0	C0
70	83	C0	82	C0	D0	75	D0	00	C0	01	C0	02	C0	03	C0	04
80	C0	05	C0	06	C0	07	E4	F9	D2	95	7F	32	12	00	AD	09
90	E9	B4	04	F4	D2	95	D0	07	D0	06	D0	05	D0	04	D0	03
A0	D0	02	D0	01	D0	D0	D0	82	D0	83	D0	E0	32	7E	00	12
B0	00	B4	C2	95	E4	FD	FC	C3	ED	9F	EC	9E	50	21	E4	FB
C0	FA	90	00	00	A3	E5	82	64	78	45	83	70	F7	0B	BB	00
D0	01	0A	EB	64	0A	4A	70	E9	0D	BD	00	01	0C	80	D8	22
E0	90	0F	52	74	A0	F0	90	0F	07	74	B7	F0	90	0F	87	74
F0	D0	F0	90	0F	09	74	A6	F0	90	0F	06	74	90	F0	90	0F
100	86	74	A0	F0	75	A8	85	90	0F	8E	74	80	F0	75	90	FF
110	22	12	00	E0	D2	95	D2	96	7F	05	7E	00	12	00	B4	C2
120	95	C2	96	12	00	B4	80	EC	90	0F	30	74	01	F0	A3	F0
130	A3	F0	A3	F0	A3	F0	A3	F0	A3	F0	A3	F0	22	90	0F	38

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 :





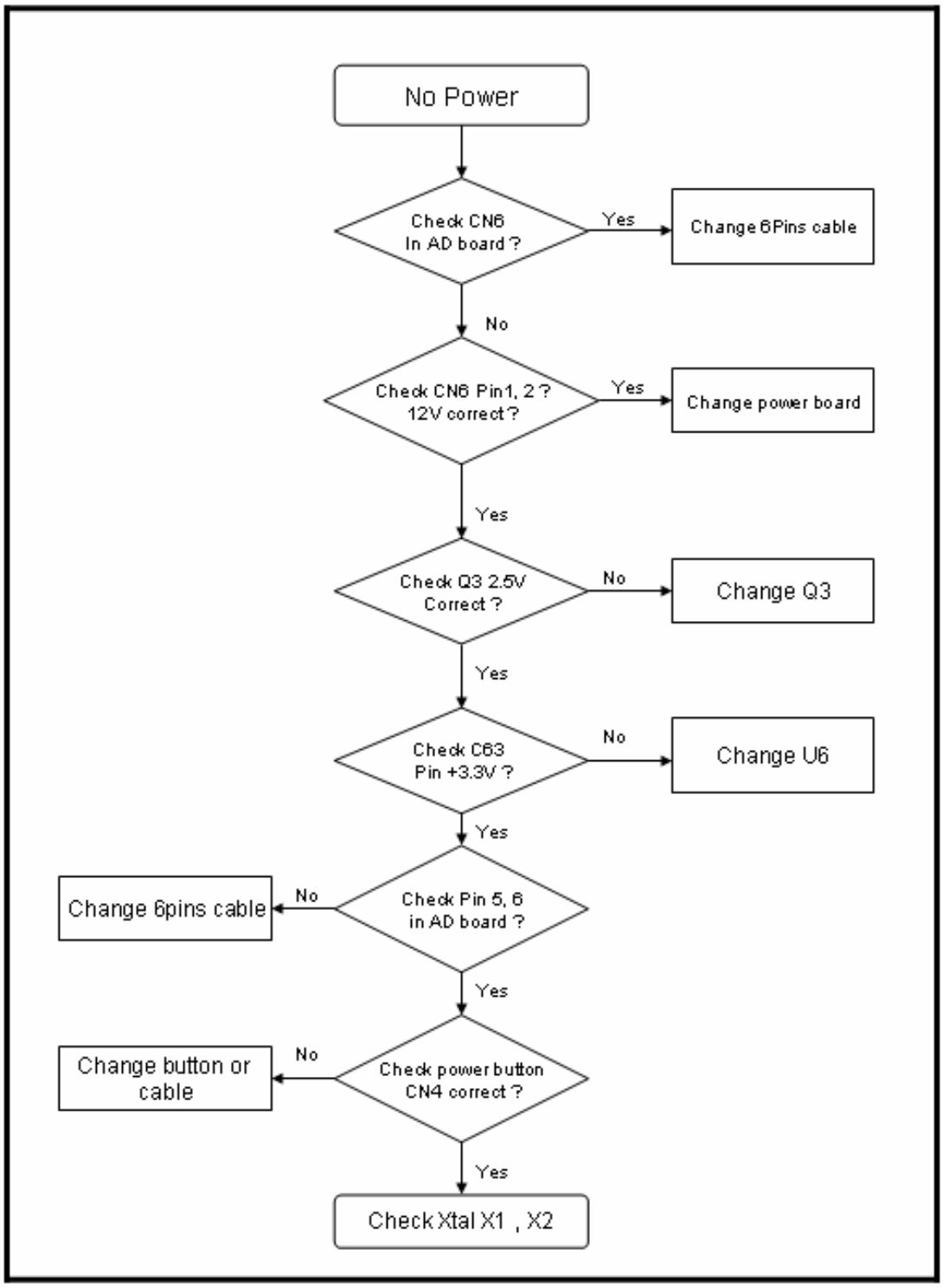
Note :

(1) Disable the " Enter ISP Mode " option to avoid the error message display

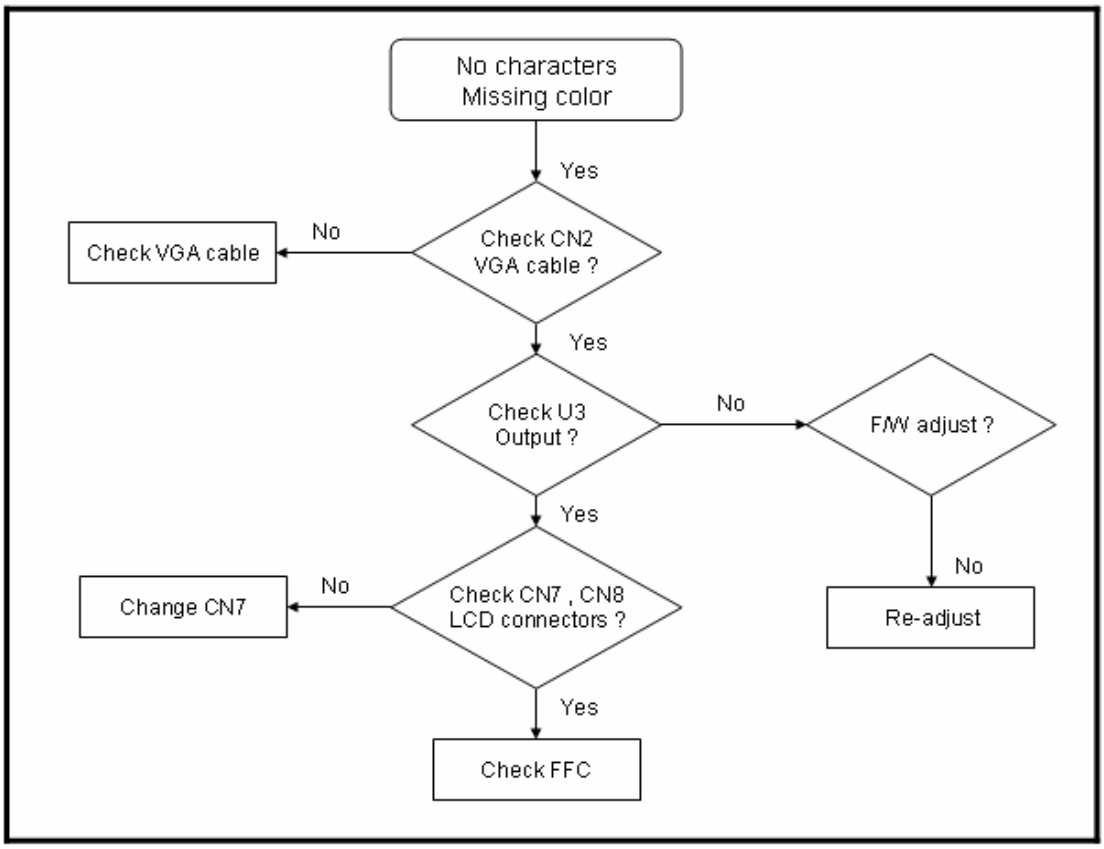
(2) If you using the MTV312M64 or before MCU serials , the MCU will always in " ISP Mode " even Programming fail or erase MCU that instead of select or press " Reset MCU "

6. Troubleshooting Flow Chart

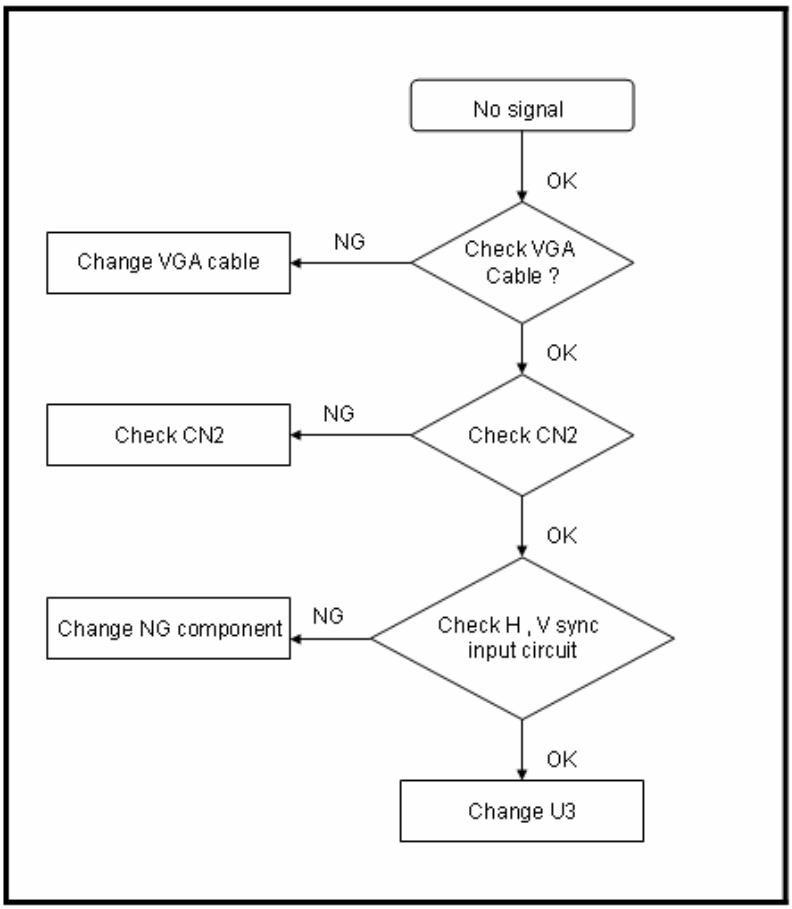
1. No Power



2. No Characters , Missing Color



3 Always show NO SIGNEL



7. Recommended Spare Parts List

RECOMMENDED SPARE PARTS LIST (VE710b-1)

ViewSonic Model Number: VLCDS27998-2W

Rev: 1c

Item	Description		ECR/ECN	ViewSonic P/N	Ref. P/N	Location	Q'ty
1	**Board Assembly:**	Button board ass'y		B-CB-0206-0170	23L7VBB0026	button board	1
2		Chassis ass'y		B-MB-0201-0828	23L7VCSVS36	Chassis ass'y	1
		~~Main Board~~	Removed 03/24/05	~~B-MB-0201-2765~~	~~29L7VMB00A8~~	~~Scaler board~~	~~1~~
3		Main Board (2nd Source)	Added 07/01/04	B-MB-0201-2726	29L7VMB0000	Scaler board	1
		~~Power board~~	Removed 03/24/05	~~B-SB-0221-0595~~	~~AS02B012009~~	~~power board / inverter~~	~~1~~
4		Power board (2nd Source)	Added 07/01/04	B-SB-0221-0686	AS020126104	power board / inverter	1
5	**Cabinets:**	Front enclosure		C-FP-0301-9923	33L7VFBVS29	front bezel ass'y	1
6		Rear enclosure		C-BC-0302-0575	37L7VBCVS38	back cover ass'y	1
7		Stand ass'y		C-BS-0303-0506	26L7VSAVS17	Base ass'y	1
8	**Cables:**	Cable for MB-LCD (30P. Rev.2A)	Added 03/24/05	CB-00002261	DDL7VXLC004	MB-LCD cable	**1**
9		Cable for MB-B/B (8P/10P. Rev.1A)	Added 03/24/05	CB-00002262	DDL7VCTH004	M/B-B/B cable	1
10		Cable for PB-MB	Added 03/24/05	CB-00002263	DDL7VCPB101	P/B -M/B cable	1
11		VGA cable	Added 03/24/05	CB-00000182	DDL7VCPC001	VGA cable	**1**
	Documentation:	~~CD wizard~~	Removed and Replaced:	~~A-CD-VE710B~~	~~HGL7V005013~~	~~CD + user menu~~	~~1~~
12		User manual + CD wizard	ECR 5218	DC-00002229	HGL7V016015	user's manual	1
13		ID label		M-LB-0813-0918	HCL7V017018	ID label on carton	1
	Electronic Components:	~~LCD panel (CPT)~~		~~M-LCD-0826-0193~~	~~AA0170EA101~~	~~CPT LCD panel~~	~~1~~
		~~LCD panel (QDI)~~	Removed and Replaced:	~~M-LCD-0826-0195~~	~~AA17EL07063~~	~~QDI LCD panel~~	~~1~~
14		17" QDI TFT LCD panel	ECR 5218	E-00002216	AA17EL07055	LCD panel	**1**
15	**Hardware:**	PCB BKT ass'y		M-BK-0805-0059	34L7VBAVS00	PCB BKT ass'y	1
16		Screw (To assembly the cabinet)		M-SCW-0824-6797	MF40080BJ29	Screw	3
17		Screw (To assembly the cabinet)		M-SCW-0824-6798	MM30080BBJ2	Screw	1
18		Screw (To assembly the cabinet)		M-SCW-0824-6799	MM35080BBW2	Screw	1
19		Screw (To assembly the cabinet)		M-SCW-0824-6800	MM30060IBJ8	Screw	11
20		Screw (To assembly the cabinet)		M-SCW-0824-6801	MF40080PBJ6	Screw	2
21		Screw (To assembly the cabinet)		M-SCW-0824-6802	MM30040IBJ9	Screw	10
22	**Miscellaneous:**	LCD film L7VC	Added 03/24/05	M-MS-0808-7399	JXL7V003017	LCD film	**1**
23		VESA rubber plug	Added 03/24/05	M-MS-0808-9237	GAL7V006014	VESA RUBBER PLUG	4
24		8ms sticker	Added 03/24/05	M-00002264	HCL7V028010	8ms sticker	**1**
25	**Packing Material:**	Carton		P-BX-0601-0933	HFL7V006019	carton	1
26		PE bag		M-MS-0808-7710	HAL7E002013	PE bag	1
27		Polyform (R)		P-FM-0602-0841	HBL7V006015	end cap(R)	1
28		Polyform (L)		P-FM-0602-0840	HBL7V005019	end cap(L)	1

(VE710b-1M)

Item	Description		ECR/ECN	ViewSonic P/N	Ref. P/N	Location	Q'ty
1	**Accessories:**	Power cord (US)		A-PC-0106-0224	DM333181G97	AC power cord	1

(VE710b-1P)

Item	Description		ECR/ECN	ViewSonic P/N	Ref. P/N	Location	Q'ty
1	**Accessories:**	Power cord (US)		A-PC-0106-0224	DM333181G97	AC power cord	1

(VE710b-1G)

Item	Description		ECR/ECN	ViewSonic P/N	Ref. P/N	Location	Q'ty
1	**Accessories:**	Power cord (China)		A-PC-0106-0306	DM333181S01	AC power cord	1

(VE710b-1E)

Item	Description		ECR/ECN	ViewSonic P/N	Ref. P/N	Location	Q'ty
1	**Accessories:**	Power Cord (Europe)		A-PC-0106-0227	DM333181801	AC power cord	1

RECOMMENDED SPARE PARTS LIST (VE710s-1)

ViewSonic Model Number: VLCDS27998-1W

Rev: 1c

Item	Description		ECR/ECN	ViewSonic P/N	Ref. P/N	Location	Q'ty
1	**Board Assembly:**	Button board ass'y		B-CB-0206-0170	23L7VBB0026	button board	1
2		Chassis ass'y		B-MB-0201-0828	23L7VCSVS36	Chassis ass'y	1
		~~Main Board~~	Removed 03/24/05	~~B-MB-0201-2765~~	~~29L7VMB00A8~~	~~Scaler board~~	~~1~~
3		Main Board (2nd Source)	Added 07/01/04	B-MB-0201-2726	29L7VMB0000	Scaler board	1
		~~Power board~~	Removed 03/24/05	~~B-SB-0221-0595~~	~~AS02B012009~~	~~power board / inverter~~	~~1~~
4		Power board (2nd Source)	Added 07/01/04	B-SB-0221-0686	AS020126104	power board / inverter	1
5	**Cabinets:**	back cover assy		C-BC-0302-0576	37L7VBCVS46	back cover	**1**
6		Front bezel assy		C-FP-0301-9924	33L7VFBVS37	front bezel ass'y	**1**
7		Stand ass'y		C-BS-0303-0509	26L7VSAVS25	Stand ass'y	**1**
8	**Cables:**	Cable for MB-B/B (8P/10P. Rev.1A)		CB-00002262	DDL7VCTH004	M/B-B/B cable	1
9		Cable for MB-LCD (30P. Rev.2A)		CB-00002261	DDL7VXLC004	MB-LCD cable	**1**
10		Cable for PB-MB		CB-00002263	DDL7VCPB101	P/B -M/B cable	1
11		VGA cable	Added 03/24/05	CB-00000182	DDL7VCPC001	VGA cable	**1**
12	**Documentation:**	User manual + CD wizard		DC-00002227	HGL7V018018	user's manual	1
	Electronic Components:	~~LCD panel (CPT)~~	Removed and Replaced: ECR 5218	~~M-LCD-0826-0193~~	~~AA0170EA101~~	~~CPT LCD panel~~	~~1~~
		~~LCD panel (QDI)~~		~~M-LCD-0826-0195~~	~~AA17EL07063~~	~~QDI LCD panel~~	~~1~~
13		17" QDI TFT LCD panel		E-00002216	AA17EL07055	LCD panel	**1**
14	**Hardware:**	PCB BKT ass'y		M-BK-0805-0059	34L7VBAVS00	PCB BKT ass'y	1
15		Screw (To assembly the cabinet)		M-SCW-0824-6797	MF40080BJ29	Screw	3
16		Screw (To assembly the cabinet)		M-SCW-0824-6798	MM30080BBJ2	Screw	1
17		Screw (To assembly the cabinet)		M-SCW-0824-6799	MM35080BBW2	Screw	1
18		Screw (To assembly the cabinet)		M-SCW-0824-6800	MM30060IBJ8	Screw	11
19		Screw (To assembly the cabinet)		M-SCW-0824-6801	MF40080PBJ6	Screw	2
20		Screw (To assembly the cabinet)		M-SCW-0824-6802	MM30040IBJ9	Screw	10
21	**Miscellaneous:**	8ms sticker	Added 03/24/05	M-00002264	HCL7V028010	8ms sticker	**1**
22		LCD film L7VC	Added 03/24/05	M-MS-0808-7399	JXL7V003017	LCD film	**1**
23		VESA rubber plug	Added 03/24/05	M-MS-0808-9237	GAL7V006014	VESA RUBBER PLUG	4
24	**Packing Material:**	8ms sticker		M-00002264	HCL7V028010	8ms sticker	**1**
25		Carton		P-BX-0601-0934	HFL7V008011	carton	**1**
26		End cap (L)		P-FM-0602-0840	HBL7V005019	cushion	**1**
27		End cap (R)		P-FM-0602-0841	HBL7V006015	cushion	**1**
28		EPE bags		M-MS-0808-8981	HAL7V001012	EPE bags	**1**

M-Model (VE710s-1M)

Item	Description		ECR/ECN	ViewSonic P/N	Ref. P/N	Location	Q'ty
1	**Accessories:**	Power cord (US)		A-PC-0106-0224	DM333181G97	AC power cord	1

P-Model (VE710s-1P)

Item	Description		ECR/ECN	ViewSonic P/N	Ref. P/N	Location	Q'ty
1	**Accessories:**	Power cord (US)		A-PC-0106-0224	DM333181G97	AC power cord	1

G-Model (VE710s-1G)

Item	Description		ECR/ECN	ViewSonic P/N	Ref. P/N	Location	Q'ty
1	**Accessories:**	Power cord (China)		A-PC-0106-0306	DM333181S01	AC power cord	1

E-Model (VE710s-1E)

Item	Description		ECR/ECN	ViewSonic P/N	Ref. P/N	Location	Q'ty
1	**Accessories:**	Power Cord (Europe)		A-PC-0106-0227	DM333181801	AC power cord	1

BOM LIST (VE710b-1)

ViewSonic Model Number: VLCDS27998-2W

Rev: 1b

Item	ViewSonic P/N	Ref. P/N	Description	Location	Q'ty
1	#N/A	1L7VCZQVS41	L7VC LCD MONITOR(QDI-V09)USA		
2	B-00002217	29L7VMB02X9	L7VC M/B ASSY(QDI V09)MST8111A		1
3	#N/A	3BL7VSS0068	L7VC M/B S/S ASSY(QDI)LVDS		1
4	#N/A	DAL7VCMB2D8	PCB(M/B) L7VC MB(2L,12.5*11,REVD)		1
5	#N/A	AJ08111CC07	IC(128P) MST8111A(135MHZ,FQFP)	U3	1
6	#N/A	AKE3I8B0602	IC EEPROM(8P)M24C08-WMN6T(1K*8,400K,SO8)	U4	1
7	#N/A	AJ00312VP18	IC(44P) MTV312MV64AJ(12MHZ,PLCC)	U5	1
8	E-IC-0450-0036	AL034063015	IC(8P) MC34063ECD-TR(SOP)	U6,U7	2
9	E-IC-0450-0016	AL034063023	IC(8P) MC34063A(SOP)	U6,U7	2
10	#N/A	BAM23010Z05	TRANSISTOR MOSFET SI2301DS(-12V,-2.3A)	Q6,Q7	2
11	#N/A	BA001430Z22	TRANSISTOR SMD DTC143EUA(50V,100MA)	Q9	1
12	#N/A	BA039060Z01	TRANSISTOR,SMD MMBT3906(40V,200MA)	Q1,Q2,Q3,Q10,Q11	5
13	#N/A	AL001739001	IC(3P) AIC1739-25CX(SOT89)	Q4	1
14	#N/A	BA039040Z01	TRANSISTOR,SMD MMBT3904(40V,200MA)	Q12	1
15	#N/A	BAN70020Z13	TRANSISTOR MOSFET 2N7002E(60V,250MA)	Q5	1
16	#N/A	BC000014Z01	DIODE SMD SSM14(40V,1A)SCHOTTK	D26,D29	2
17	#N/A	BCAN217T003	DIODE DAN217(80V,100MA)	D24,D25,D33,D34,D35	5
18	#N/A	CH51004MA32	CAP CHIP 1UF 25V(+-20%,Y5V,0805) GP	C65,C86	2
19	#N/A	CH02206J909	CAP CHIP 22P 50V(+-5%,NPO,0603) GP	C41,C42,C50,C51,C52,C53	6
20	#N/A	CH14706K919	CAPACITOR CHIP 470P 50V(+-10%,X7R,0603)	C60,C87	2
21	#N/A	CH22206K917	CAP CHIP 2200P 50V(+-10%,X7R,0603) GP	C76,C77	2
22	#N/A	CH34703K916	CAP CHIP 0.047UF 16V(+-10%,X7R,0603) GP	C1,C3,C4,C6,C8,C10	6
23	#N/A	CH31006K919	CAP CHIP 0.01U 50V(+-10%,X7R,0603) GP	C7,C45,C88	3
24	#N/A	CH41004Z931	CAP CHIP 0.1U,25V(+80-20%,Y5V,0603) GP	C18,C19,C20,C21,C22,C23,C24,C26,C27,C29,C31,C32,C34,C35,C37,C38,C39,C40,C43,C44,C46,C47,C48,C55,C56,C59,C61,C64,C68,C69,C78,C82,C89,C92,C93	35
25	#N/A	CH03306J905	CAP CHIP 33P 50V(+-5%,NPO,0603) GP	C11,C13	2
26	#N/A	CS00006J205	RESISTOR CHIP 0 1/4W+-5%(3216)	FUSE1,R83,R108	3
27	#N/A	CS00004JA07	RESISTOR CHIP 0 1/8W +-5%(0805)	L13,L18,R104	3
28	#N/A	CS00003J900	RESISTOR CHIP 0 1/10W+-5%(0603)	L23,L35,R64	3
29	#N/A	CS+3006J204	RESISTOR CHIP 0.3 1/4W,+-5%(3216)	R63	1
30	#N/A	CS02203J902	RES CHIP 22 1/10W +-5%(0603)	R48,R49,R50,R51,R59	5
31	#N/A	CS03303J909	RES CHIP 33 1/10W +-5%(0603)	R1,R4,R8,R98	4
32	#N/A	CS07503F905	RESISTOR CHIP 75 1/10W +-1%(1608)	R2,R5,R9	3
33	#N/A	CS11003J904	RESISTOR CHIP 100 1/10W +-5%(0603)	L1,L5,L7,R7,R11,R13,R14,R18,R19,R28,R29,R46,R47,R60,R89	15
34	#N/A	CS13303F909	RESISTOR CHIP 330 1/10W +-1%(0603)	L16,L17	2
35	#N/A	CS13903F901	RESISTOR CHIP 390 1/10W+-1%(0603)	R27	1
36	#N/A	CS21003J906	RES CHIP 1K 1/10W +-5%(0603)	L14,L15,L37,L38,L39,R68,R70,R93	8
37	#N/A	CS22003J909	RES CHIP 2K 1/10W +-5%(0603)	R12,R15,R35,R36,R53,R54,R92,R112,R113	9
38	#N/A	CS22203F904	RES CHIP 2.2K 1/10W,+-1%(0603)	R67	1
39	#N/A	CS23603F901	RESISTOR CHIP 3.6K, 1/10W,+-1%(0603)	R66,R85	2
40	#N/A	CS24703F908	RESISTOR CHIP 4.7K 1/10W+-1%(0603)	R91,R96,R97	3
41	#N/A	CS31003J908	RES CHIP 10K 1/10W +-5%(0603)	L22,R37,R38,R44,R52,R61,R65,R71,R75,R88,R90	11
42	#N/A	CS38203J904	RES CHIP 82K 1/10W +-5%(0603)	R41,R74,R77	3
43	#N/A	CX0E601R009	EMI FILTER CHIP HZ0805E601R(600,500MA)	L8,L9,L10,L11,L12	5
44	#N/A	CS-3303J901	RESISTOR CHIP 3.3 1/10W +-5%(1608)	R114	1
45	#N/A	CS04703J906	RES CHIP 47 1/10W +-5%(0603)	R111	1
46	#N/A	CS26803J909	RESISTOR CHIP 6.8K 1/10W +-5%(1608)	R94	1
47	#N/A	CS33303J904	RESISTOR CHIP 33K 1/10W +-5%(0603)	R39,R40,R87,R99,R100,R101	6
48	#N/A	CS06803J905	RESISTOR CHIP 68 1/10W +-5%(1608)	R3,R6,R10	3
49	#N/A	BDGZ5226Z03	DIODE ZENER SMD MMGZ5226B(3.3V)	D30	1
50	#N/A	CX000300104	EMI FILTER CHIP FCM1608C-300T06 30,600MA	L2,L3,L6	3
51	#N/A	CS21203F901	RES CHIP 1.2K 1/10W +-1%(0603)	R86	1
52	#N/A	CH51001K991	CAP CHIP 1U 6.3V(+-10%,X5R,0603)	C101	1
53	#N/A	CC62204MD23	CAP ELEC 22U 25V(+-20%,105C,5*11,2000HR)	C17,C25,C28,C30,C33,C36,C49,C70	8

Item	ViewSonic P/N	Ref. P/N	Description	Location	Q'ty
54	#N/A	CC622L4MD06	CAP ELEC DIP 22U 25V(+-20%,105C,5*11)LXN	C17,C25,C28,C30,C33,C36,C49,C70	8
55	#N/A	CC73303MD51	CAP ELEC 330U 16V(+-20%,105C,8*11,2000HR	C58,C62,C79,C90	4
56	#N/A	CC733L3MD09	CAP ELEC DIP330U 16V(+-20%,105C,8*11)LXN	C58,C62,C79,C90	4
57	E-L-0407-1563	DC04725K002	CHOKE COIL 47UH(2.5A,+-10%,T07473)	L21,L32	2
58	M-MS-0808-9809	DFHD30MR259	CONN DIP HEADER 30P 2R MR(P2.0,H4.0)	CN9	1
59	#N/A	DFHD14MS264	CONN DIP HEADER 14P 2R MS(P2.0,H6.0)	CN2	1
60	M-MS-0808-9810	DFHD10MR316	CONN DIP HEADER 10P 1R MR(P2.0,H4.1)	CN4	1
61	#N/A	DFHD08MS439	CONN DIP HEADER 8P 2R MS(P2.54,H6.0)	CN6	1
62	#N/A	BG611059319	CRYSTAL DIP 11.0592MHZ(+-30PPM,49/US)	X2	1
63	E-X-0415-0128	BG614318D55	XTAL DIP 14.318MHZ(+-30PPM,07010-X-136-2	X1	1
64	#N/A	AZL7VC0Q003	L7VC SW BIOS IMAGE(QDI)		1
65	B-SB-0221-0686	AS020126104	ADP/INV ADP-40AFA, 90~264V REV1A		1
66	B-00000936	AS05B310202	ADD/INV,SLV0315A0450-1057,90~264V REV1A		1
67	B-CB-0206-0170	23L7VBB0026	L7VC BUTTON/B ASSY		1
68	#N/A	DFHD08MR301	CONN DIP HEADER 8P 1R MR(P2.0,H4.1)	CN1	1
69	#N/A	BEYG0013DA3	LED(DIP) YELLOW/GREEN(L-3WYGW)	LED1	1
70	#N/A	DAL7VCTB1C5	PCB(BUTTON) L7VC TL(1L,125*23,REVC)		1
71	#N/A	DHP0002B205	SWITCH PUCH BUTTON(PT-002-B2,50MA,12V)	SW1,SW2,SW3,SW4,SW5	5
72	#N/A	22L7VLAVSE9	L7VC-Q LCD MODULE ASSY(QDI)BLACK		1
73	C-FP-0301-9923	33L7VFBVS29	L7VC FRONT BEZEL ASSY		1
74	C-FP-0301-1066	EAL7V012014	LCD BEZEL L7VC(EAL7V012,REV3C)		1
75	M-MS-0808-9242	EBL7V021014	LENS L7VC(EBL7V021,REV3A)		1
76	PL-BT-0706-0179	EBL7V022011	CONTROL BUTTON L7VC(EBL7V022,REV3A)		1
77	M-MS-0808-9243	FEL7V003019	LOGO FRONT-VSC-38MM L7VC(FEL7V003,REV3A)		1
78	M-MS-0808-9244	FEL7V004015	BIRD LOGO-10MM L7VC(FEL7V004,REV3A)		1
79	M-MS-0808-9249	JXLM7002011	FOIL LM7S(JXLM7002,REV3B)		1
80	C-BC-0302-0575	37L7VBCVS38	L7VC BACK COVER ASSY		1
81	M-CV-0830-2616	EAL7V013011	LCD COVER L7VC(EAL7V013,REV3C)		1
82	M-CV-0830-2484	FBL7V007011	KENSINGTON CAP(FBL7V007,REV3A)		1
83	M-CV-0830-2617	FBL7V034019	HINGE ASSY L7VC(FBL7V034,REV3A)		1
84	M-BK-0805-0125	FBL7V036011	VESA BKT-LONG L7VC(FBL7V036,REV3A)		1
85	M-MS-0808-8718	EBL7V003016	LOGO PLATE(EBL7V003,REV3A)		1
86	M-MS-0808-9246	GBLM7003017	GASKET-3 LM7S(GBLM7003,REV3A)		1
87	M-SCW-0824-6797	MF40080BJ29	SCREW F4.0*8-B(BNI)		7
88	M-BK-0805-0059	34L7VBAVS00	L7VC PCB BKT ASSY		1
89	M-BK-0805-0126	FAL7V011018	PCB BRACKET L7VC(FAL7V011,REV3A)		1
90	M-MS-0808-7301	FCL7V011010	P/B MYLAR-UP L7VC(FCL7V011,REV3A)		1
91	M-MS-0808-9247	EBL70023013	WIRE MOUNTS L70L-E(EBL70023,REV3A)		1
92	M-LB-0813-0894	HCL7V005010	WARNING LABEL, INVERTOR(HCL7V005,3A)		1
93	E-00002216	AA17EL07055	LCD(TFT) 17" QD17EL07 REV:09		1
94	M-BK-0805-0127	FAL7V016010	LCD BKT-L-QDI L7VC(FAL7V016,REV3A)		1
95	M-BK-0805-0128	FAL7V017016	LCD BKT-R-QDI L7VC(FAL7V017,REV3A)		1
96	M-MS-0808-8984	FCL70004010	LCD MYLAR L70L-E(FCL70004,REV3A)		1
97	M-MS-0808-9248	FCL7A001014	AL FOIL L7A(FCL7A001,REV3A)		2
98	M-MS-0808-7302	FCL7V012016	P/B MYLAR-DOWN L7VC(FCL7V012,REV3A)		1
99	M-SCW-0824-6797	MF40080BJ29	SCREW F4.0*8-B(BNI)		3
100	M-SCW-0824-6798	MM30080BBJ2	SCREW M3.0*8,B(NI)		1
101	M-SCW-0824-6799	MM35080BBW2	SCREW M3.5*8-B (NI,WASHER)		1
102	M-SCW-0824-6800	MM30060IBJ8	SCREW M3.0*6.0-I(NI)		7
103	M-SCW-0824-6801	MF40080PBJ6	SCREW F4.0*8-P(NI)		2
104	M-SCW-0824-6802	MM30040IBJ9	SCREW M3.0*4.0-I(NI)		10
105	M-CV-0830-0284	GAL7V009013	RUBBER PLUG COVER L7VC(GAL7V009,REV3A)		2
106	M-SCW-0824-0728	MM30050IBJ3	SCREW M3.0*5.0-I(NI)		2
107	M-SCW-0824-6948	MM30050FCI5	SCREW M3.0*5-F(NI,NYLOK)		2
108	M-MS-0808-9237	GAL7V006014	RUBBER PLUG VESA L7VC(GAL7V006,REV3C)		4
109	C-BS-0303-0506	26L7VSAVS17	L7VC STAND ASSY		1
110	C-BS-0303-0562	EAL7V014017	BASE L7VC(EAL7V014,REV3A)		1
111	M-MS-0808-7304	FBL7V035015	BASE PLATE L7VC(FBL7V035,REV3A)		1
112	M-MS-0808-9251	GAL5V002013	RUBBER FOOT L5VC(GAL5V002,REV3A)		4
113	M-MS-0808-7305	GAL7V007011	RUBBER FOOT-FRONT L7VC(GAL7V007,R3A)		1
114	M-SCW-0824-6797	MF40080BJ29	SCREW F4.0*8-B(BNI)		5
115	M-LB-0813-1055	HCL7V020019	STAND LABEL L7VC(HCL7V020,REV3A)		1
116	#N/A	23L7VCSVS87	L7VC-Q CHASSIS ASSY(QDI)		1
117	CB-00002263	DDL7VCPB101	CABLE ASSY L7VC POWER-MB(8P/8P,REV1A)		1
118	CB-00000182	DDL7VCPC001	CABLE ASSY L7VC MB-VGA(14/15P,REV1A)		1
119	CB-00002262	DDL7VCTH004	CABLE ASSY L7VC BUTTON-MB(8P/10P,REV1A)		1
120	CB-00002261	DDL7VXLC004	CABLE ASSY L7VX MB-LCD(30P,REV1A)		1
121	M-MS-0808-7306	EBL7V023017	HINGE CAP L7VC(EBL7V023,REV3A)		2
122	M-SCW-0824-0816	MM40100BCI2	SCREW M4*10.0-B(NI,NYLOK)		4
123	#N/A	24L7VPKVSP4	L7VC-Q PACKING ASSY(USA)		1

Item	ViewSonic P/N	Ref. P/N	Description	Location	Q'ty
124	A-PC-0106-0224	DM333181G97	POWER CORD 3P 1.8M(USA)V04VS35001218000		1
125	M-MS-0808-7399	JXL7V003017	LCD FILM L7VC(JXL7V003,REV3B)		1
126	M-MS-0808-7710	HAL7E002013	PE BAG L7E(HAL7E002,REV3C)		1
127	P-FM-0602-0840	HBL7V005019	END CAP(L) L7VC(HBL7V005,REV3B)		1
128	P-FM-0602-0841	HBL7V006015	END CAP(R) L7VC(HBL7V006,REV3B)		1
129	M-LB-0813-0747	HCL7V004013	CORE LABEL(HCL7V004,REV3A)		1
130	M-LB-0813-0918	HCL7V017018	ID LABEL L7VC(HCL7V017,REV3D)		1
131	M-LB-0813-0745	HCL7V002011	SERIAL LEBAL L7V(HCL7V002,REV3A)		1
132	M-LB-0813-1042	HCL7V019011	CARTON LABEL L7VC(HCL7V019,REV3B)		1
133	P-BX-0601-0933	HFL7V006019	CARTON L7VC(HFL7V006,REV3B)		1
134	DC-00002229	HGL7V016015	CD+QSG VE710B L7VC-Q US(HGL7V016,REV3A)		1
135	#N/A	JXLM5003011	HANDLE LM5S(JXLM5003,REV 3B)		1
136	#N/A	HFL7V009018	SPACE PLATE L7VC(HFL7V009,REV3B)		0.028
137	M-LB-0813-1043	HCL70021011	HI-POT LABEL L70L(HCL70021,REV3A)		1
138	DC-00000426	HCL5V004018	WARNING LABEL L5VC(HCL5V004,REV3A)		1
139	M-00002264	HCL7V028010	8MS STICKER L7VC(HCL7V028,REV3A)		1

BOM LIST (VE710s-1)

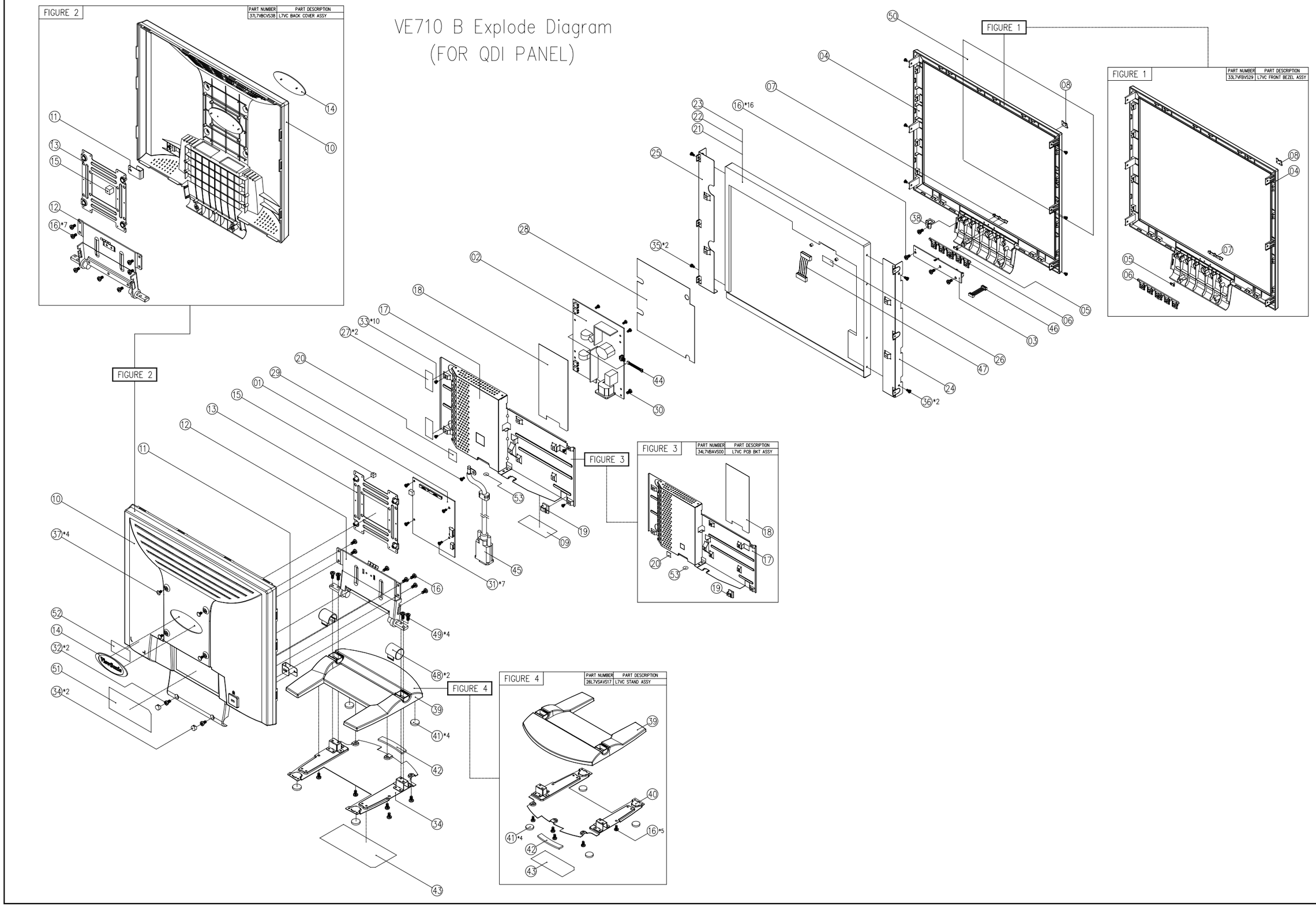
ViewSonic Model Number: VLCDS27998-1W

Rev: 1b

Item	ViewSonic P/N	Ref. P/N	Description	Location	Q'ty
1	#N/A	1L7VCZQVS09	L7VC LCD MONITOR(QDI-V09/SILVER)USA		
2	B-00002217	29L7VMB02X9	L7VC M/B ASSY(QDI V09)MST8111A		1
3	#N/A	3BL7VSS0068	L7VC M/B S/S ASSY(QDI)LVDS		1
4	#N/A	DAL7VCMB2D8	PCB(M/B) L7VC MB(2L,12.5*11,REVD)		1
5	#N/A	AJ08111CC07	IC(128P) MST8111A(135MHZ,FQFP)	U3	1
6	#N/A	AKE3I8B0602	IC EEPROM(8P)M24C08-WMN6T(1K*8,400K,SO8)	U4	1
7	#N/A	AJ00312VP18	IC(44P) MTV312MV64AJ(12MHZ,PLCC)	U5	1
8	E-IC-0450-0036	AL034063015	IC(8P) MC34063ECD-TR(SOP)	U6,U7	2
9	E-IC-0450-0016	AL034063023	IC(8P) MC34063A(SOP)	U6,U7	2
10	#N/A	BAM23010Z05	TRANSISTOR MOSFET SI2301DS(-12V,-2.3A)	Q6,Q7	2
11	#N/A	BA001430Z22	TRANSISTOR SMD DTC143EUA(50V,100MA)	Q9	1
12	#N/A	BA039060Z01	TRANSISTOR,SMD MMBT3906(40V,200MA)	Q1,Q2,Q3,Q10,Q11	5
13	#N/A	AL001739001	IC(3P) AIC1739-25CX(SOT89)	Q4	1
14	#N/A	BA039040Z01	TRANSISTOR,SMD MMBT3904(40V,200MA)	Q12	1
15	#N/A	BAN70020Z13	TRANSISTOR MOSFET 2N7002E(60V,250MA)	Q5	1
16	#N/A	BC000014Z01	DIODE SMD SSM14(40V,1A)SCHOTTK	D26,D29	2
17	#N/A	BCAN217T003	DIODE DAN217(80V,100MA)	D24,D25,D33,D34,D35	5
18	#N/A	CH51004MA32	CAP CHIP 1UF 25V(+-20%,Y5V,0805) GP	C65,C86	2
19	#N/A	CH02206J909	CAP CHIP 22P 50V(+-5%,NPO,0603) GP	C41,C42,C50,C51,C52,C53	6
20	#N/A	CH14706K919	CAPACITOR CHIP 470P 50V(+-10%,X7R,0603)	C60,C87	2
21	#N/A	CH22206K917	CAP CHIP 2200P 50V(+-10%,X7R,0603) GP	C76,C77	2
22	#N/A	CH34703K916	CAP CHIP 0.047UF 16V(+-10%,X7R,0603) GP	C1,C3,C4,C6,C8,C10	6
23	#N/A	CH31006K919	CAP CHIP 0.01U 50V(+-10%,X7R,0603) GP	C7,C45,C88	3
24	#N/A	CH41004Z931	CAP CHIP 0.1U,25V(+80-20%,Y5V,0603) GP	C18,C19,C20,C21,C22,C23,C24,C26,C27,C29,C31,C32,C34,C35,C37,C38,C39,C40,C43,C44,C46,C47,C48,C55,C56,C59,C61,C64,C68,C69,C78,C82,C89,C92,C93	35
25	#N/A	CH03306J905	CAP CHIP 33P 50V(+-5%,NPO,0603) GP	C11,C13	2
26	#N/A	CS00006J205	RESISTOR CHIP 0 1/4W+-5%(3216)	FUSE1,R83,R108	3
27	#N/A	CS00004JA07	RESISTOR CHIP 0 1/8W +-5%(0805)	L13,L18,R104	3
28	#N/A	CS00003J900	RESISTOR CHIP 0 1/10W+-5%(0603)	L23,L35,R64	3
29	#N/A	CS+3006J204	RESISTOR CHIP 0.3 1/4W,+-5%(3216)	R63	1
30	#N/A	CS02203J902	RES CHIP 22 1/10W +-5%(0603)	R48,R49,R50,R51,R59	5
31	#N/A	CS03303J909	RES CHIP 33 1/10W +-5%(0603)	R1,R4,R8,R98	4
32	#N/A	CS07503F905	RESISTOR CHIP 75 1/10W +-1%(1608)	R2,R5,R9	3
33	#N/A	CS11003J904	RESISTOR CHIP 100 1/10W +-5%(0603)	L1,L5,L7,R7,R11,R13,R14,R18,R19,R28,R29,R46,R47,R60,R89	15
34	#N/A	CS13303F909	RESISTOR CHIP 330 1/10W +-1%(0603)	L16,L17	2
35	#N/A	CS13903F901	RESISTOR CHIP 390 1/10W+-1%(0603)	R27	1
36	#N/A	CS21003J906	RES CHIP 1K 1/10W +-5%(0603)	L14,L15,L37,L38,L39,R68,R70,R93	8
37	#N/A	CS22003J909	RES CHIP 2K 1/10W +-5%(0603)	R12,R15,R35,R36,R53,R54,R92,R112,R113	9
38	#N/A	CS22203F904	RES CHIP 2.2K 1/10W,+-1%(0603)	R67	1
39	#N/A	CS23603F901	RESISTOR CHIP 3.6K, 1/10W,+-1%(0603)	R66,R85	2
40	#N/A	CS24703F908	RESISTOR CHIP 4.7K 1/10W+-1%(0603)	R91,R96,R97	3
41	#N/A	CS31003J908	RES CHIP 10K 1/10W +-5%(0603)	L22,R37,R38,R44,R52,R61,R65,R71,R75,R88,R90	11
42	#N/A	CS38203J904	RES CHIP 82K 1/10W +-5%(0603)	R41,R74,R77	3
43	#N/A	CX0E601R009	EMI FILTER CHIP HZ0805E601R(600,500MA)	L8,L9,L10,L11,L12	5
44	#N/A	CS-3303J901	RESISTOR CHIP 3.3 1/10W +-5%(1608)	R114	1
45	#N/A	CS04703J906	RES CHIP 47 1/10W +-5%(0603)	R111	1
46	#N/A	CS26803J909	RESISTOR CHIP 6.8K 1/10W +-5%(1608)	R94	1
47	#N/A	CS33303J904	RESISTOR CHIP 33K 1/10W +-5%(0603)	R39,R40,R87,R99,R100,R101	6
48	#N/A	CS06803J905	RESISTOR CHIP 68 1/10W +-5%(1608)	R3,R6,R10	3
49	#N/A	BDGZ5226Z03	DIODE ZENER SMD MMGZ5226B(3.3V)	D30	1
50	#N/A	CX000300104	EMI FILTER CHIP FCM1608C-300T06 30,600MA	L2,L3,L6	3
51	#N/A	CS21203F901	RES CHIP 1.2K 1/10W +-1%(0603)	R86	1
52	#N/A	CH51001K991	CAP CHIP 1U 6.3V(+-10%,X5R,0603)	C101	1
53	#N/A	CC62204MD23	CAP ELEC 22U 25V(+-20%,105C,5*11,2000HR)	C17,C25,C28,C30,C33,C36,C49,C70	8
54	#N/A	CC622L4MD06	CAP ELEC DIP 22U 25V(+-20%,105C,5*11)LXN	C17,C25,C28,C30,C33,C36,C49,C70	8
55	#N/A	CC73303MD51	CAP ELEC 330U 16V(+-20%,105C,8*11,2000HR	C58,C62,C79,C90	4
56	#N/A	CC733L3MD09	CAP ELEC DIP330U 16V(+-20%,105C,8*11)LXN	C58,C62,C79,C90	4

Item	ViewSonic P/N	Ref. P/N	Description	Location	Q'ty
57	E-L-0407-1563	DC04725K002	CHOKE COIL 47UH(2.5A,+-10%,T07473)	L21,L32	2
58	M-MS-0808-9809	DFHD30MR259	CONN DIP HEADER 30P 2R MR(P2.0,H4.0)	CN9	1
59	#N/A	DFHD14MS264	CONN DIP HEADER 14P 2R MS(P2.0,H6.0)	CN2	1
60	M-MS-0808-9810	DFHD10MR316	CONN DIP HEADER 10P 1R MR(P2.0,H4.1)	CN4	1
61	#N/A	DFHD08MS439	CONN DIP HEADER 8P 2R MS(P2.54,H6.0)	CN6	1
62	#N/A	BG611059319	CRYSTAL DIP 11.0592MHZ(+-30PPM,49/US)	X2	1
63	E-X-0415-0128	BG614318D55	XTAL DIP 14.318MHZ(+-30PPM,07010-X-136-2	X1	1
64	#N/A	AZL7VC0Q003	L7VC SW BIOS IMAGE(QDI)		1
65	B-SB-0221-0686	AS020126104	ADP/INV ADP-40AFA, 90~264V REV1A		1
66	B-00000936	AS05B310202	ADD/INV,SLV0315A0450-1057,90~264V REV1A		1
67	B-CB-0206-0170	23L7VBB0026	L7VC BUTTON/B ASSY		1
68	#N/A	DFHD08MR301	CONN DIP HEADER 8P 1R MR(P2.0,H4.1)	CN1	1
69	#N/A	BEYG0013DA3	LED(DIP) YELLOW/GREEN(L-3WYGW)	LED1	1
70	#N/A	DAL7VCTB1C5	PCB(BUTTON) L7VC TL(1L,125*23,REVC)		1
71	#N/A	DHP0002B205	SWITCH PUCH BUTTON(PT-002-B2,50MA,12V)	SW1,SW2,SW3,SW4,SW5	5
72	#N/A	22L7VLAVSD1	L7VC-Q LCD MODULE ASSY(QDI)SILVER		1
73	C-FP-0301-9924	33L7VFBVS37	L7VC FRONT BEZEL ASSY(SILVER)		1
74	C-BC-0302-0576	37L7VBCVS46	L7VC BACK COVER ASSY(BLACK)		1
75	M-BK-0805-0059	34L7VBAVS00	L7VC PCB BKT ASSY		1
76	E-00002216	AA17EL07055	LCD(TFT) 17" QD17EL07 REV:09		1
77	M-BK-0805-0127	FAL7V016010	LCD BKT-L-QDI L7VC(FAL7V016,REV3A)		1
78	M-BK-0805-0128	FAL7V017016	LCD BKT-R-QDI L7VC(FAL7V017,REV3A)		1
79	M-MS-0808-8984	FCL70004010	LCD MYLAR L70L-E(FCL70004,REV3A)		1
80	M-MS-0808-9248	FCL7A001014	AL FOIL L7A(FCL7A001,REV3A)		2
81	M-MS-0808-7302	FCL7V012016	P/B MYLAR-DOWN L7VC(FCL7V012,REV3A)		1
82	M-MS-0808-9249	JXLM7002011	FOIL LM7S(JXLM7002,REV3B)		1
83	M-SCW-0824-6797	MF40080BJ29	SCREW F4.0*8-B(BNI)		3
84	M-SCW-0824-6798	MM30080BBJ2	SCREW M3.0*8,B(NI)		1
85	M-SCW-0824-6799	MM35080BBW2	SCREW M3.5*8-B (NI,WASHER)		1
86	M-SCW-0824-6800	MM30060IBJ8	SCREW M3.0*6.0-I(NI)		7
87	M-SCW-0824-6801	MF40080PBJ6	SCREW F4.0*8-P(NI)		2
88	M-SCW-0824-6802	MM30040IBJ9	SCREW M3.0*4.0-I(NI)		10
89	M-CV-0830-0283	GAL7V010011	RUBBER PLUG COVER /BK L7VC(GAL7V010,R3A)		2
90	M-SCW-0824-0728	MM30050IBJ3	SCREW M3.0*5.0-I(NI)		2
91	M-SCW-0824-6948	MM30050FCI5	SCREW M3.0*5-F(NI,NYLOK)		2
92	M-MS-0808-9236	GAL7V008017	RUBBER PLUG VESA/BK L7VC(GAL7V008,R3B)		4
93	C-BS-0303-0509	26L7VSAVS25	L7VC STAND ASSY(BLACK)		1
94	C-BS-0303-0563	EAL7V014025	BASE(BLACK) L7VC(EAL7V014,REV3A)		1
95	M-MS-0808-7304	FBL7V035015	BASE PLATE L7VC(FBL7V035,REV3A)		1
96	M-MS-0808-9251	GAL5V002013	RUBBER FOOT L5VC(GAL5V002,REV3A)		4
97	M-MS-0808-7305	GAL7V007011	RUBBER FOOT-FRONT L7VC(GAL7V007,R3A)		1
98	M-SCW-0824-6797	MF40080BJ29	SCREW F4.0*8-B(BNI)		5
99	M-LB-0813-1055	HCL7V020019	STAND LABEL L7VC(HCL7V020,REV3A)		1
100	#N/A	23L7VCSVS87	L7VC-Q CHASSIS ASSY(QDI)		1
101	CB-00002263	DDL7VCPB101	CABLE ASSY L7VC POWER-MB(8P/8P,REV1A)		1
102	CB-00000182	DDL7VCPC001	CABLE ASSY L7VC MB-VGA(14/15P,REV1A)		1
103	CB-00002262	DDL7VCTH004	CABLE ASSY L7VC BUTTON-MB(8P/10P,REV1A)		1
104	CB-00002261	DDL7VXLC004	CABLE ASSY L7VX MB-LCD(30P,REV1A)		1
105	M-MS-0808-7306	EBL7V023017	HINGE CAP L7VC(EBL7V023,REV3A)		2
106	M-SCW-0824-0816	MM40100BCI2	SCREW M4*10.0-B(NI,NYLOK)		4
107	#N/A	24L7VPKVSK1	L7VC-Q PACKING ASSY(USA)SILVER		1
108	A-PC-0106-0224	DM333181G97	POWER CORD 3P 1.8M(USA)V04VS35001218000		1
109	M-MS-0808-7399	JXL7V003017	LCD FILM L7VC(JXL7V003,REV3B)		1
110	M-MS-0808-8981	HAL7V001012	EPE BAG L7V(HAL7V001,REV3A)		1
111	P-FM-0602-0840	HBL7V005019	END CAP(L) L7VC(HBL7V005,REV3B)		1
112	P-FM-0602-0841	HBL7V006015	END CAP(R) L7VC(HBL7V006,REV3B)		1
113	M-LB-0813-0747	HCL7V004013	CORE LABEL(HCL7V004,REV3A)		1
114	M-LB-0813-0919	HCL7V018014	ID LABEL (SILVER) L7VC(HCL7V018,REV3D)		1
115	M-LB-0813-0745	HCL7V002011	SERIAL LEBAL L7V(HCL7V002,REV3A)		1
116	M-LB-0813-1042	HCL7V019011	CARTON LABEL L7VC(HCL7V019,REV3B)		1
117	P-BX-0601-0934	HFL7V008011	CARTON (FOR SILVER) L7VC(HFL7V008,R3B)		1
118	DC-00002227	HGL7V018018	CD+QSG VE710S L7VC-Q US(HGL7V018,REV3A)		1
119	#N/A	JXLM5003011	HANDLE LM5S(JXLM5003,REV 3B)		1
120	#N/A	HFL7V009018	SPACE PLATE L7VC(HFL7V009,REV3B)		0.028
121	M-LB-0813-1043	HCL70021011	HI-POT LABEL L70L(HCL70021,REV3A)		1
122	DC-00000426	HCL5V004018	WARNING LABEL L5VC(HCL5V004,REV3A)		1
123	M-00002264	HCL7V028010	8MS STICKER L7VC(HCL7V028,REV3A)		1

8. Exploded Diagram And Spare Parts List



VE710 S Explode Diagram (FOR QDI PANEL)

FIGURE 2

PART NUMBER	PART DESCRIPTION
33L7VBCVS46	L7VC BACK COVER ASSY(BLACK)

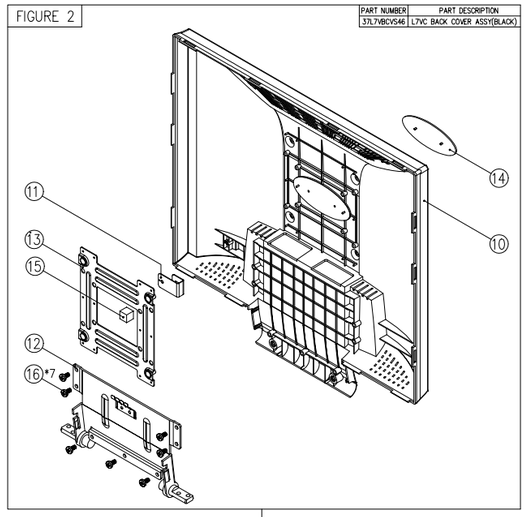
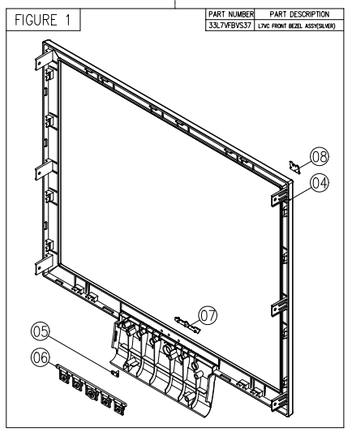


FIGURE 1

PART NUMBER	PART DESCRIPTION
33L7VFBVS37	L7VC FRONT BEZEL ASSY(SILVER)



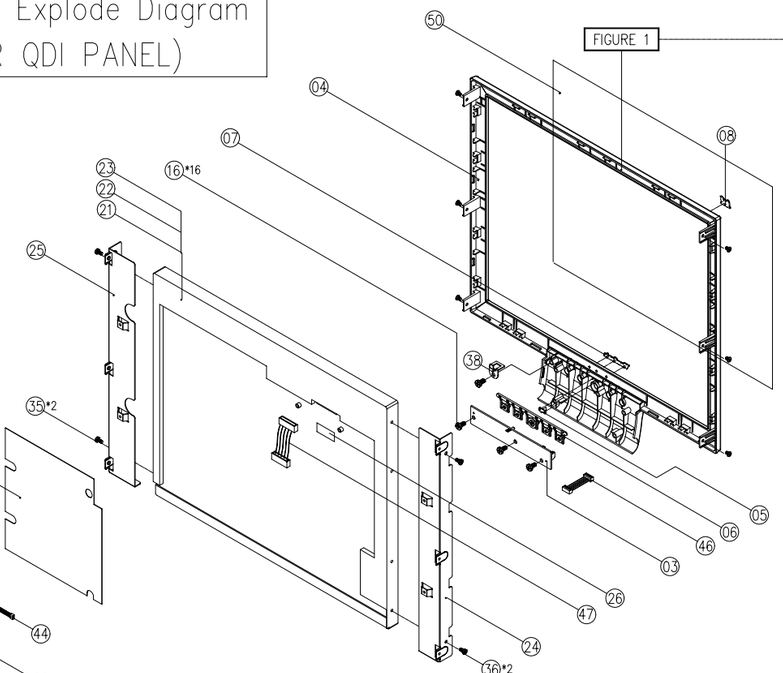


FIGURE 2

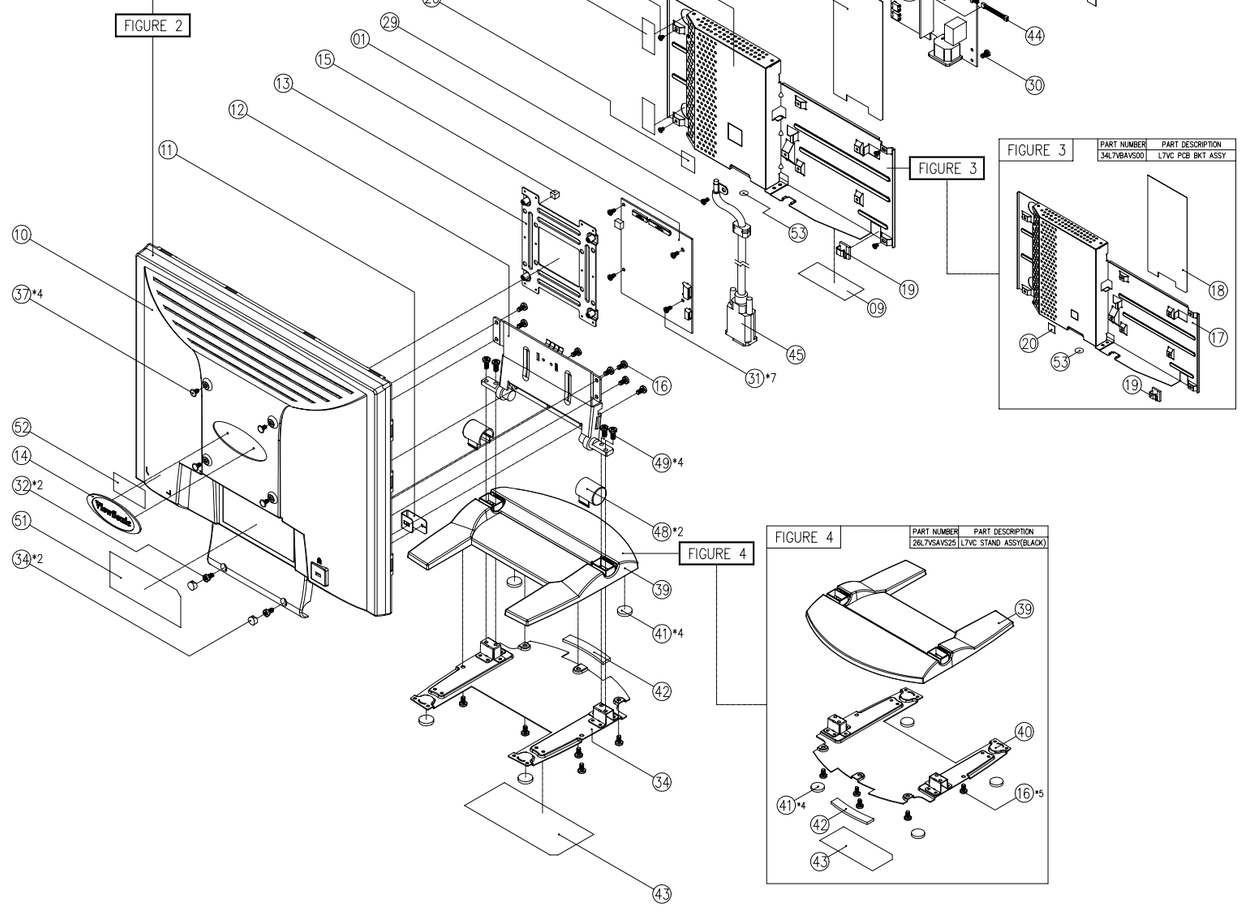


FIGURE 3

PART NUMBER	PART DESCRIPTION
34L7VBAVS00	L7VC PCB BKT ASSY

FIGURE 4

PART NUMBER	PART DESCRIPTION
26L7VSAVS25	L7VC STAND ASSY(BLACK)

EXPLODED PARTS LIST (VE710b-1)

ViewSonic Model Number: VLCDS27998-2W

Rev: 1b

Item	ViewSonic P/N	Ref. P/N	Location	Ot'y
1	B-00002217	29L7VMB02X9	L7VC M/B ASSY	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	PL-00001507	EBL7V005011	LOGO PLATE ELLIPSE L7VC	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-00002216	AA17EL07055	LCD(TFT) QDI QD17EL07 V9	1
22	M-BK-0805-0080	FAL7V012014	LCD BKT-L L7VC	1
23	M-BK-0805-0129	FAL7V013011	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	DDL7VCPC001	CABLE ASSY L7VC MB-VGA	1
40	CB-00002362	DDL7VBCTH004	CABLE ASSY L7VC BUTTON-MB	1
41	CB-00002261	DDL7VXLC004	CABLE ASSY L7VX MB-LCD, 30P	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	M-LB-0813-0919	HCL7V018014	ID LABEL L7VC	1
45	M-LB-0813-0745	HCL7V002011	SERIAL LABEL	1
46	M-MS-0808-7399	JXL7V003017	LCD FILM L7VC	1

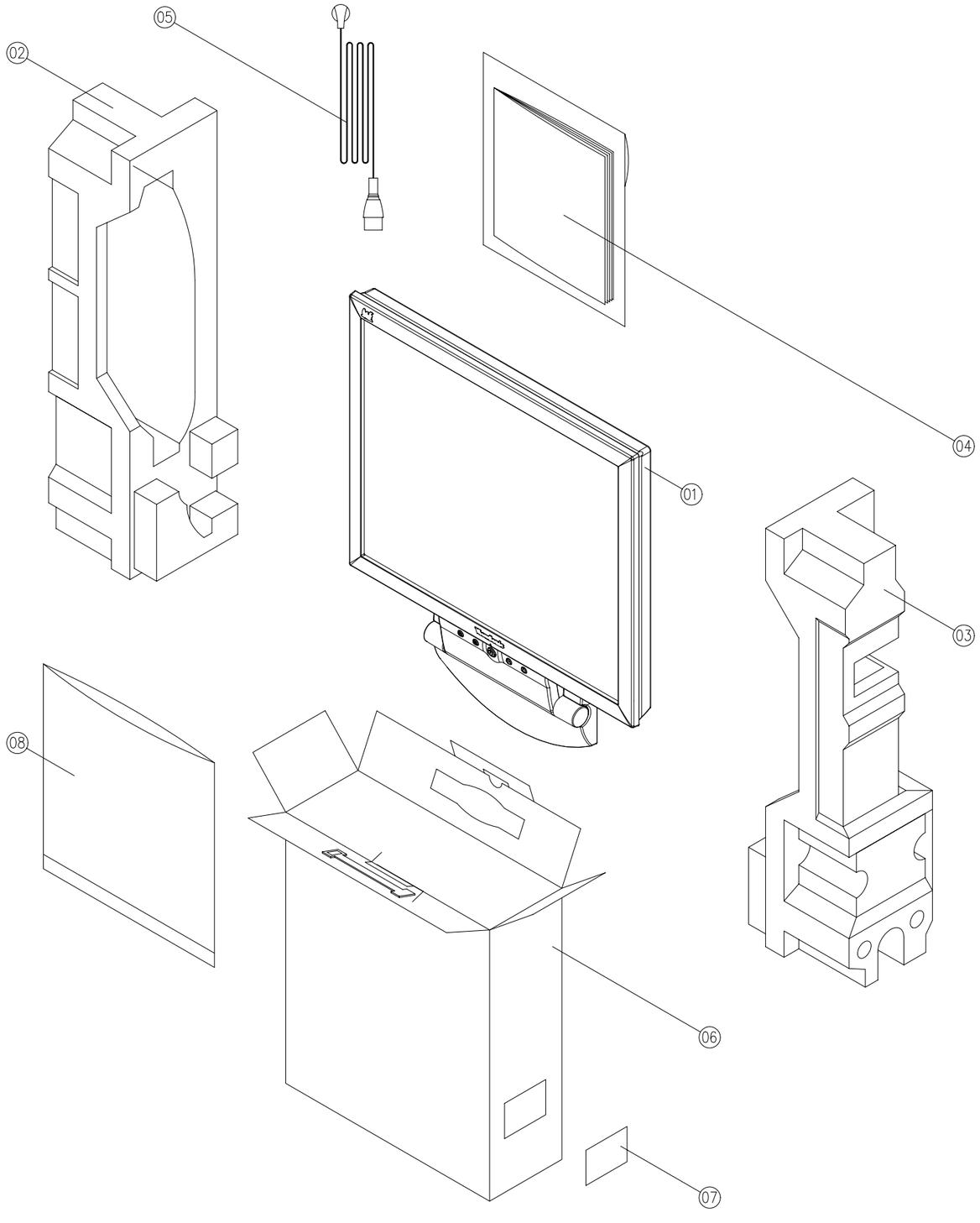
EXPLODED PARTS LIST (VE710s-1)

ViewSonic Model Number: VLCDS27998-1W

Rev: 1b

Item	ViewSonic P/N	Ref. P/N	Location	Qt'y
1	B-00002217	29L7VMB02X9	L7VC M/B ASSY	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	M-MS-0808-8718	EBL7V003016	LOGO PLATE ELLIPSE L7VC	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-00002216	AA17EL07055	LCD(TFT) QDI QD17EL07 V9	1
22	M-BK-0805-0080	FAL7V012014	LCD BKT-L L7VC	1
23	M-BK-0805-0129	FAL7V013011	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	DDL7VCPC001	CABLE ASSY L7VC MB-VGA	1
40	CB-00002362	DDL7VBCTH004	CABLE ASSY L7VC BUTTON-MB	1
41	CB-00002261	DDL7VXLC004	CABLE ASSY L7VX MB-LCD, 30P	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	M-LB-0813-0918	HCL7V017018	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



PACKING PART LIST (VE710s-1)

ViewSonic Model Number: VLCDS27998-
Rev: 1b

Item	ViewSonic P/N	Ref. P/N	Location	Q'ty
1	B-00002217	1L7VCZQVS41	VE710b MONITOR	1
2	B-SB-0221-0686	HBL7V005019	END CAP (L)	1
3	B-CB-0206-0170	HBL7V006015	END CAP (R)	1
4	C-FP-0301-1066	HGL7V016015	USER'S MANUAL & CD	1
5	M-MS-0808-9242	DM333181G97	POWER CORD 3P 1.8M	1
6	PL-BT-0706-0179	HCL7V006019	CARTON	1
7	M-MS-0808-9243	HCL7V019011	CARTON LABEL	1
8	M-MS-0808-9244	HAL7E002013	PE BAG	1

1. Packing procedure

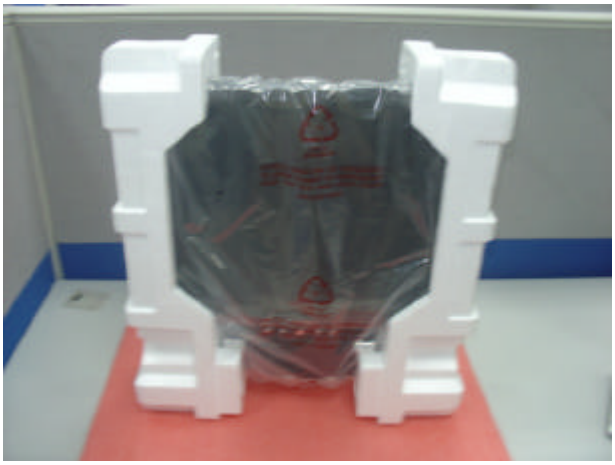
1.1 Paste protection film to protect the monitor (Figure.1)

1.2 Put the monitor in PE bag & seal the with tape . (Figure.2)

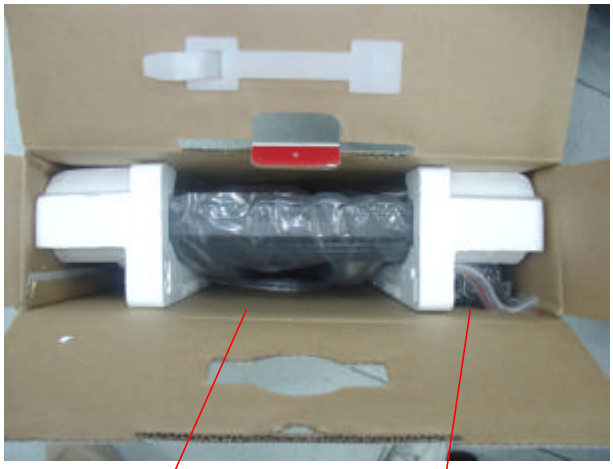
Figure.1

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)

2. Disassemble monitor

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

(Figure 5)

(Figure 6)

2.3 Remove the screw cover (Figure 7)
2.4 Take of the screws (Figure 8)

Figure 7

Figure 8

2.5 Remove the back cover (Figure 9)
2.6 Take off the screw on the VGA cable (Figure 10)

Figure 9

Figure 10

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

Figure 11

Figure 12

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

Figure 13

Figure 14

2.11 Take out the screws on M/B & remove the cable between M/B & power board (Figure 15)
2.12 Remove the M/B out (Figure 16)

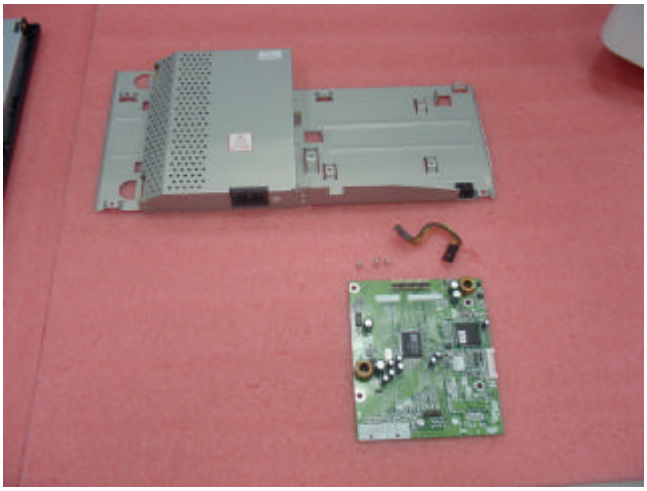


Figure 15

Figure 16

2.13 Put the PCB holder up-side-down & remove the screws on the power board (Figure 17)
2.14 Remove the power board (Figure 18)

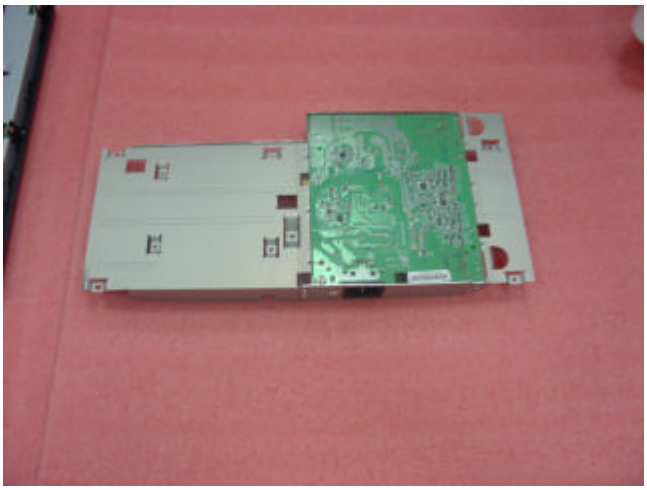


Figure 17

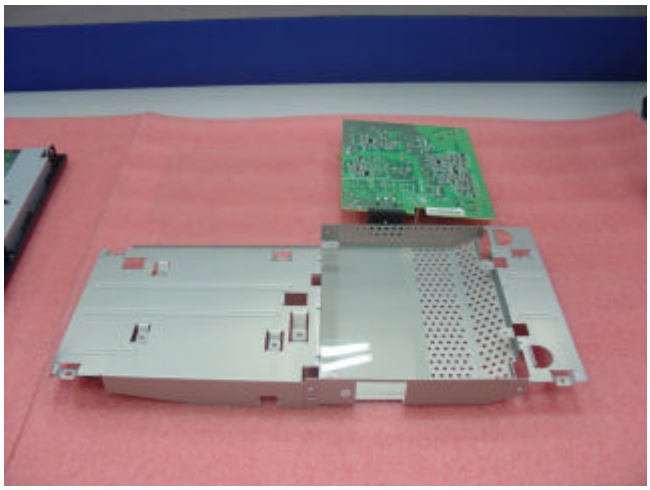


Figure 18

2.15 Separate the bezel & panel (with BKT) & remove the cable on panel (Figure 19)
2.16 Take off the L/R BKT & remove the L/R BKT . (Figure 20)

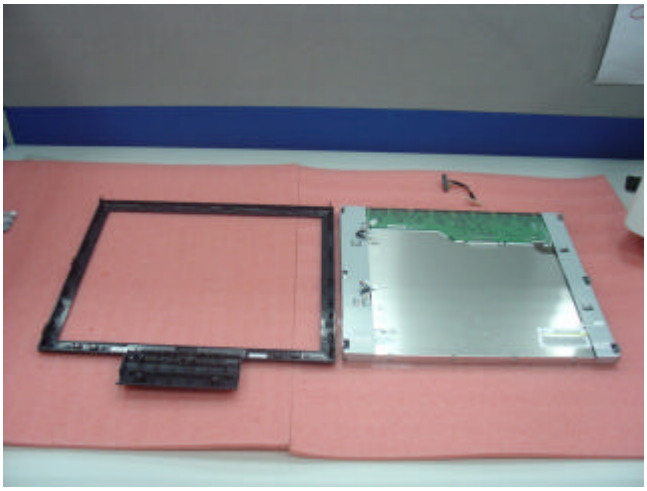


Figure 19

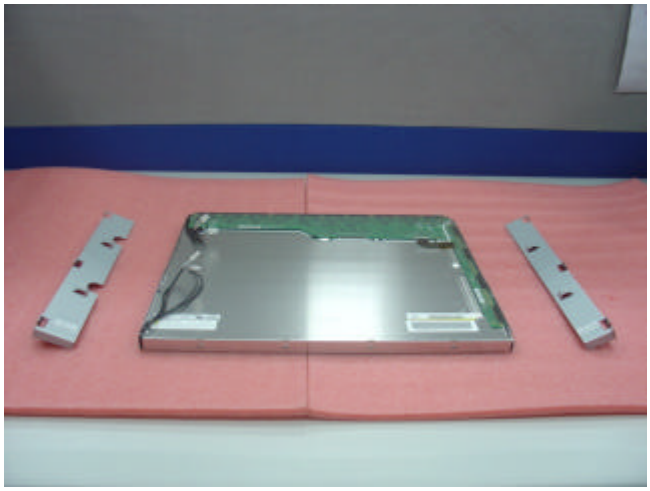
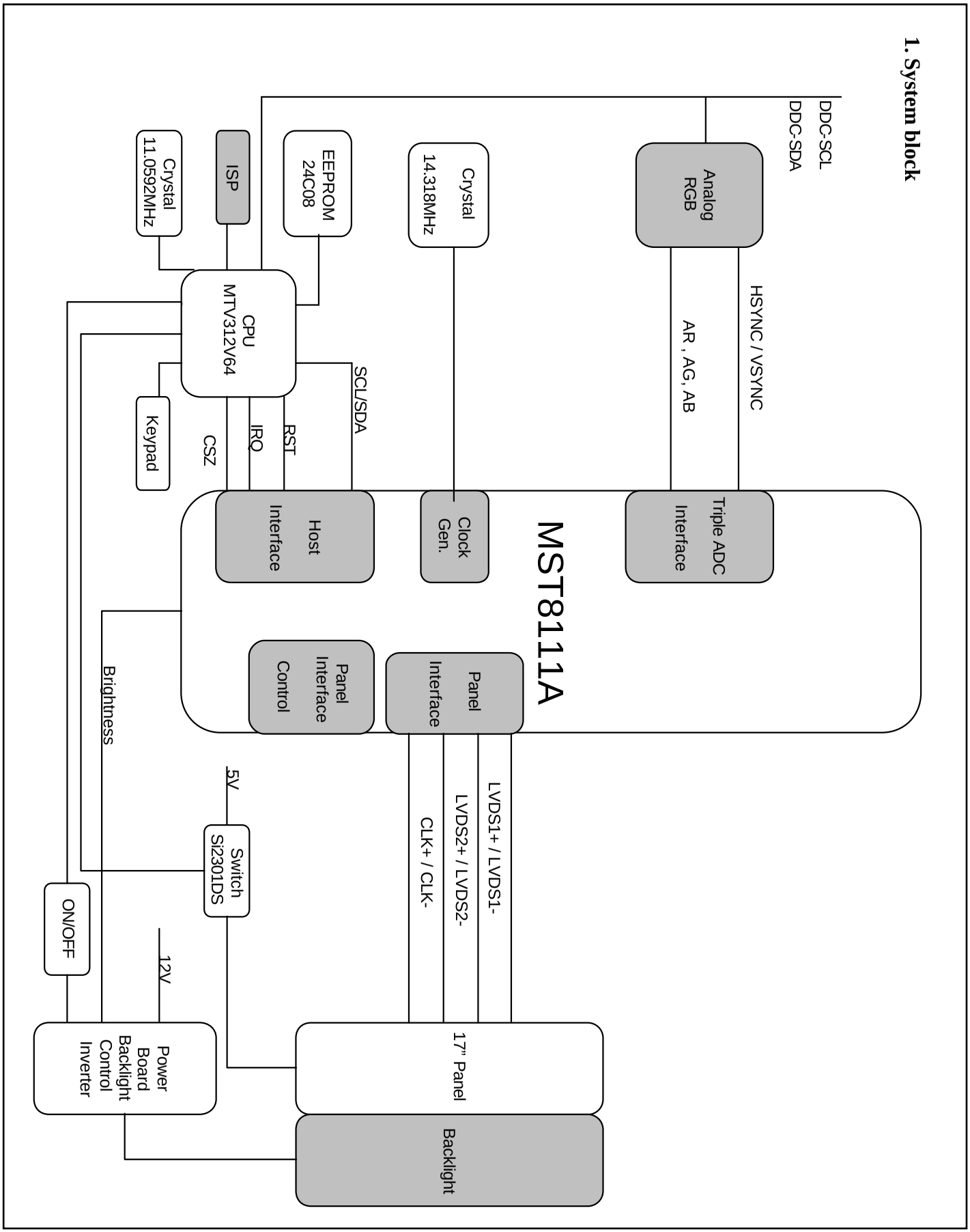
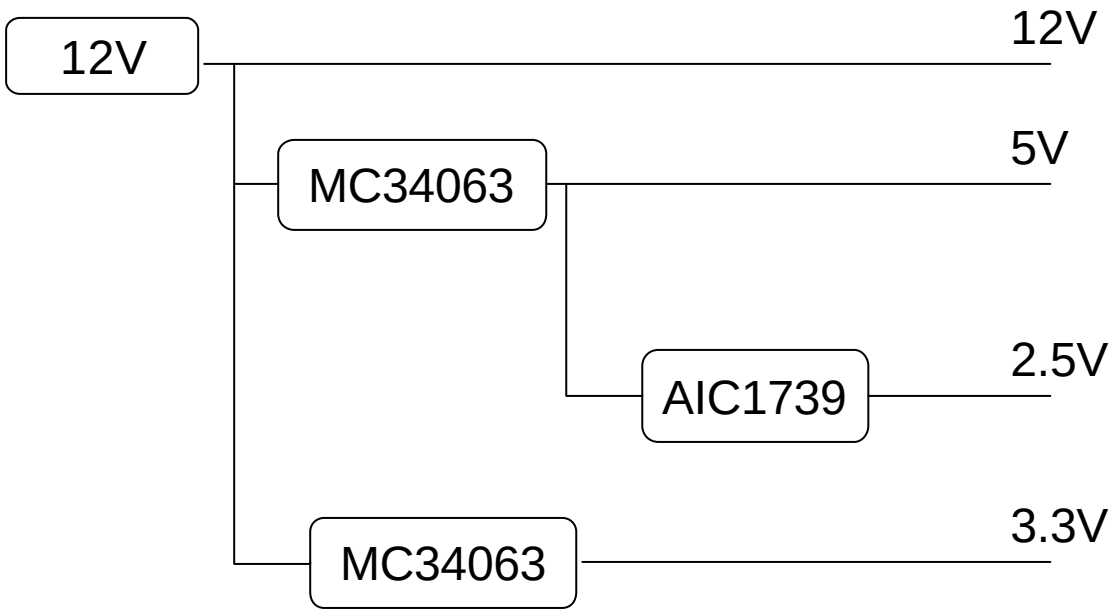


Figure 20

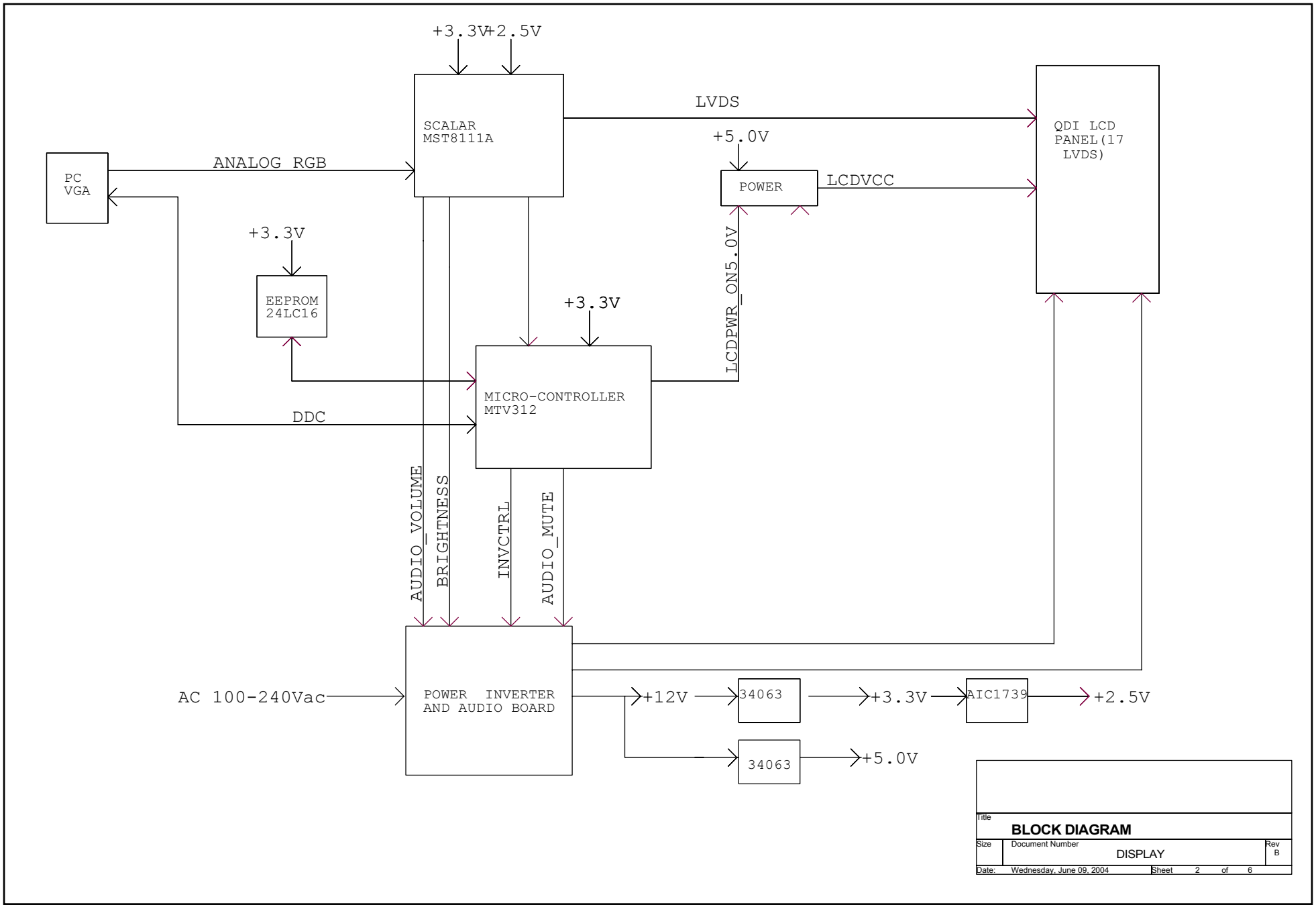
9. Block Diagram

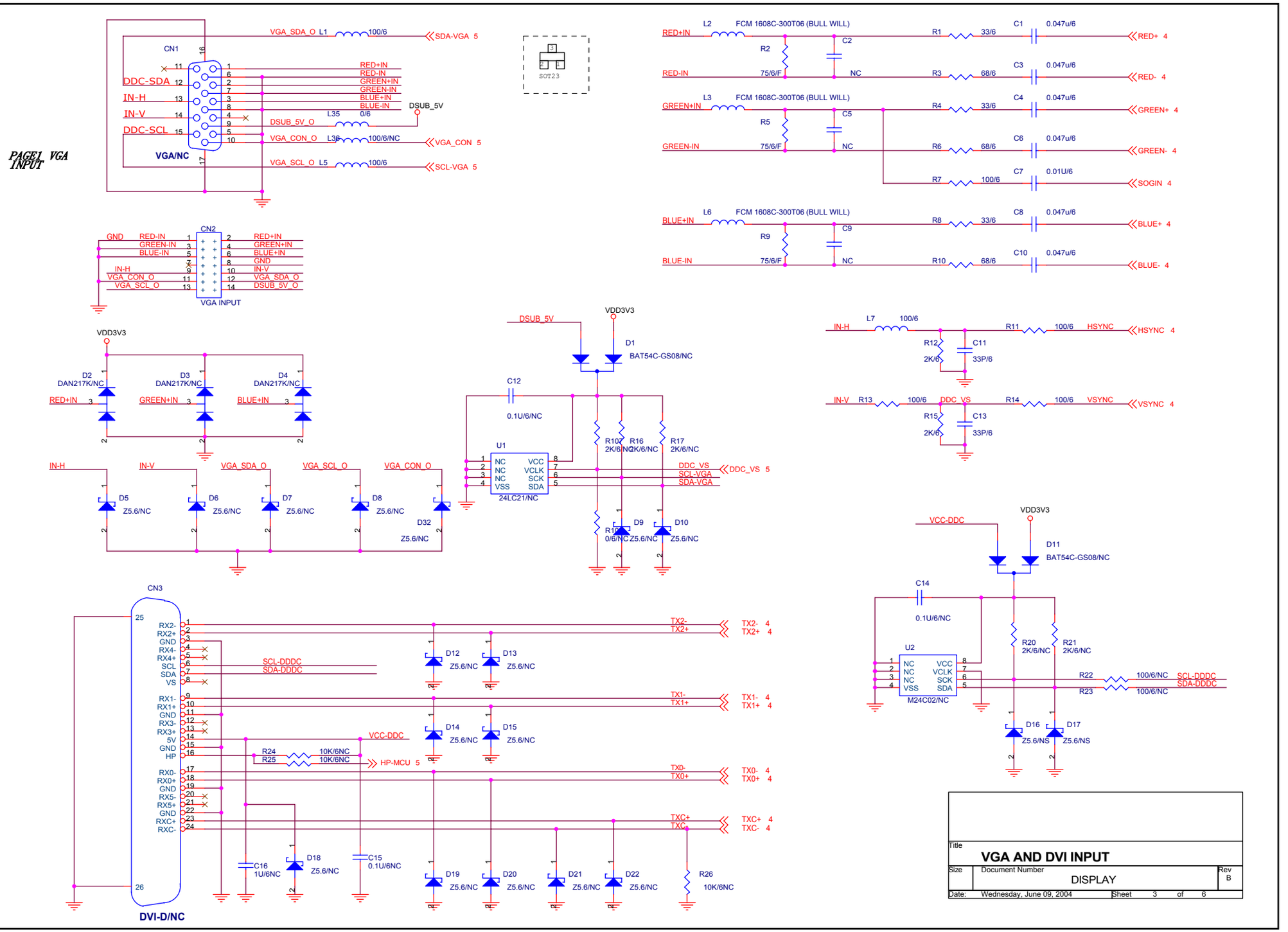


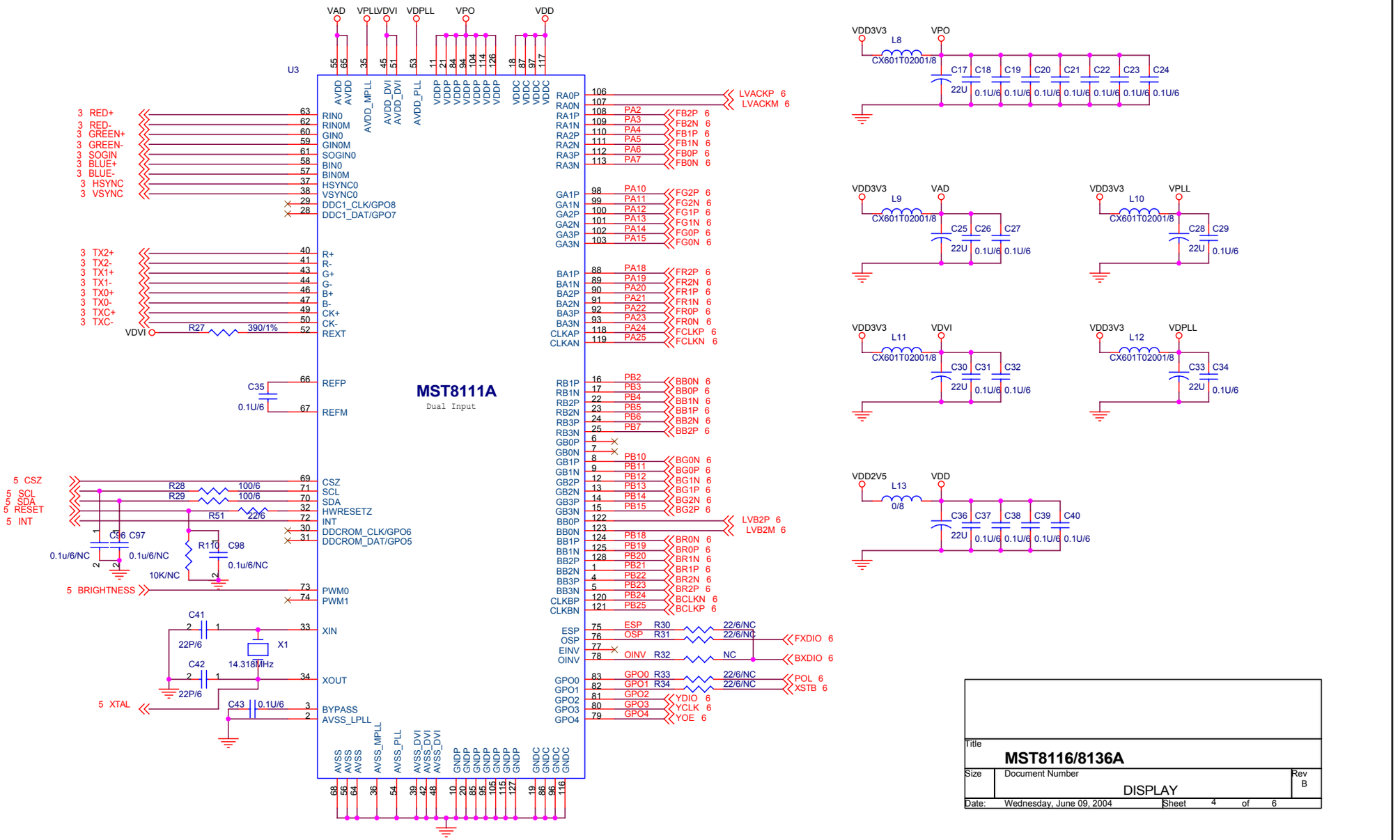
2. Power



10. Schematic Diagrams




PAGE1 VGA INPUT
CN1
VGA_SDA_O L1 100/6
SDA-VGA 5
DDC-SDA
IN-H
IN-V
DDC-SCL
RED+IN
RED-IN
GREEN+IN
GREEN-IN
BLUE+IN
BLUE-IN
DSUB_5V
L35 0/6
DSUB_5V_O
VGA_CON_O L36 100/6/NC
VGA_CON 5
VGA_SCL_O L5 100/6
SCL-VGA 5
VGA/NC
SOT23
RED+IN L2 FCM 1608C-300T06 (BULL WILL)
R2 75/6/F C2 NC
R1 33/6 C1 0.047u/6
RED+ 4
RED- 4
GREEN+IN L3 FCM 1608C-300T06 (BULL WILL)
R5 75/6/F C5 NC
R4 33/6 C4 0.047u/6
R6 68/6 C6 0.047u/6
GREEN+ 4
GREEN- 4
R7 100/6 C7 0.01U/6
SOGIN 4
BLUE+IN L6 FCM 1608C-300T06 (BULL WILL)
R9 75/6/F C9 NC
R8 33/6 C8 0.047u/6
R10 68/6 C10 0.047u/6
BLUE+ 4
BLUE- 4
CN2
GND RED-IN GREEN-IN BLUE-IN IN-H VGA_CON_O VGA_SCL_O
RED+IN GREEN+IN BLUE+IN GND IN-V VGA_SDA_O DSUB_5V_O
VGA INPUT
VDD3V3
D2 DAN217K/NC
D3 DAN217K/NC
D4 DAN217K/NC
D5 Z5.6/NC
D6 Z5.6/NC
D7 Z5.6/NC
D8 Z5.6/NC
D32 Z5.6/NC
DSUB_5V
D1 BAT54C-GS08/NC
C12 0.1U/6/NC
U1 24LC21/NC
R10 2K/6/NC
R16 2K/6/NC
R17 2K/6/NC
DDC_VS
SCL-VGA
SDA-VGA
DDC_VS 5
R18 0/6/NC
D9 Z5.6/NC
D10 Z5.6/NC
IN-H L7 100/6 R11 100/6 HSYNC
HSYNC 4
R12 2K/6 C11 33P/6
IN-V R13 100/6 DDC_VS R14 100/6 VSYNC
VSYNC 4
R15 2K/6 C13 33P/6
VCC-DDC
D11 BAT54C-GS08/NC
C14 0.1U/6/NC
U2 M24C02/NC
R20 2K/6/NC
R21 2K/6/NC
R22 100/6/NC
R23 100/6/NC
SCL-DDDC
SDA-DDDC
D16 Z5.6/NS
D17 Z5.6/NS
CN3
RX2- RX2+ GND RX4- RX4+ SCL SDA VS
RX1- RX1+ GND RX3- RX3+ 5V GND HP
RX0- RX0+ GND RX5- RX5+ GND RXC+ RXC-
TX2- TX2+
TX1- TX1+
TX0- TX0+
TXC+ TXC-
TX2- 4 TX2+ 4
TX1- 4 TX1+ 4
TX0- 4 TX0+ 4
TXC+ 4 TXC- 4
D12 Z5.6/NC
D13 Z5.6/NC
D14 Z5.6/NC
D15 Z5.6/NC
R24 10K/6NC
R25 10K/6NC
HP-MCU 5
D18 Z5.6/NC
C16 1U/6NC
C15 0.1U/6NC
D19 Z5.6/NC
D20 Z5.6/NC
D21 Z5.6/NC
D22 Z5.6/NC
R26 10K/6NC
DVI-D/NC
Title
VGA AND DVI INPUT
Size
Document Number
DISPLAY
Rev B
Date: Wednesday, June 09, 2004
Sheet 3 of 6



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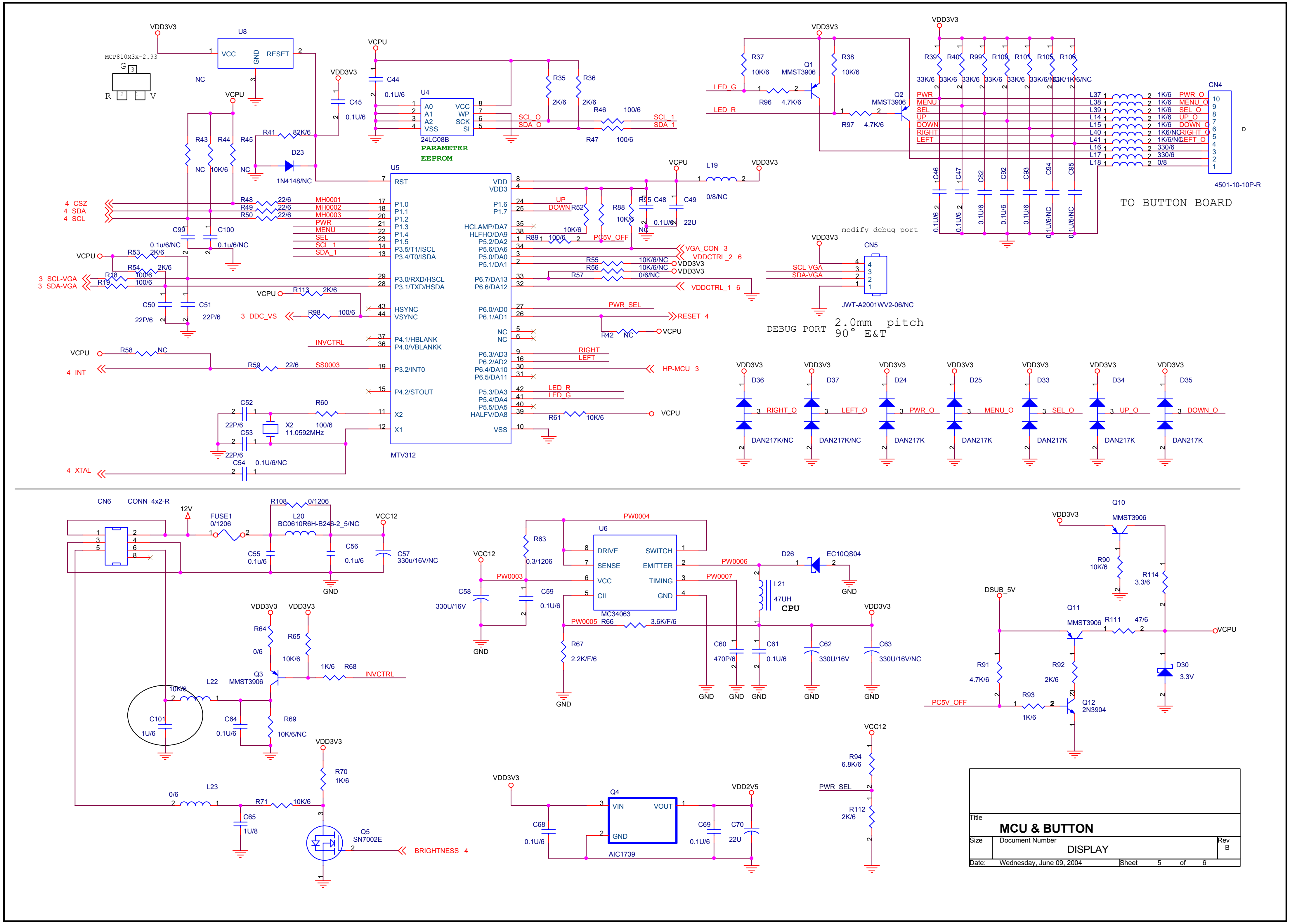
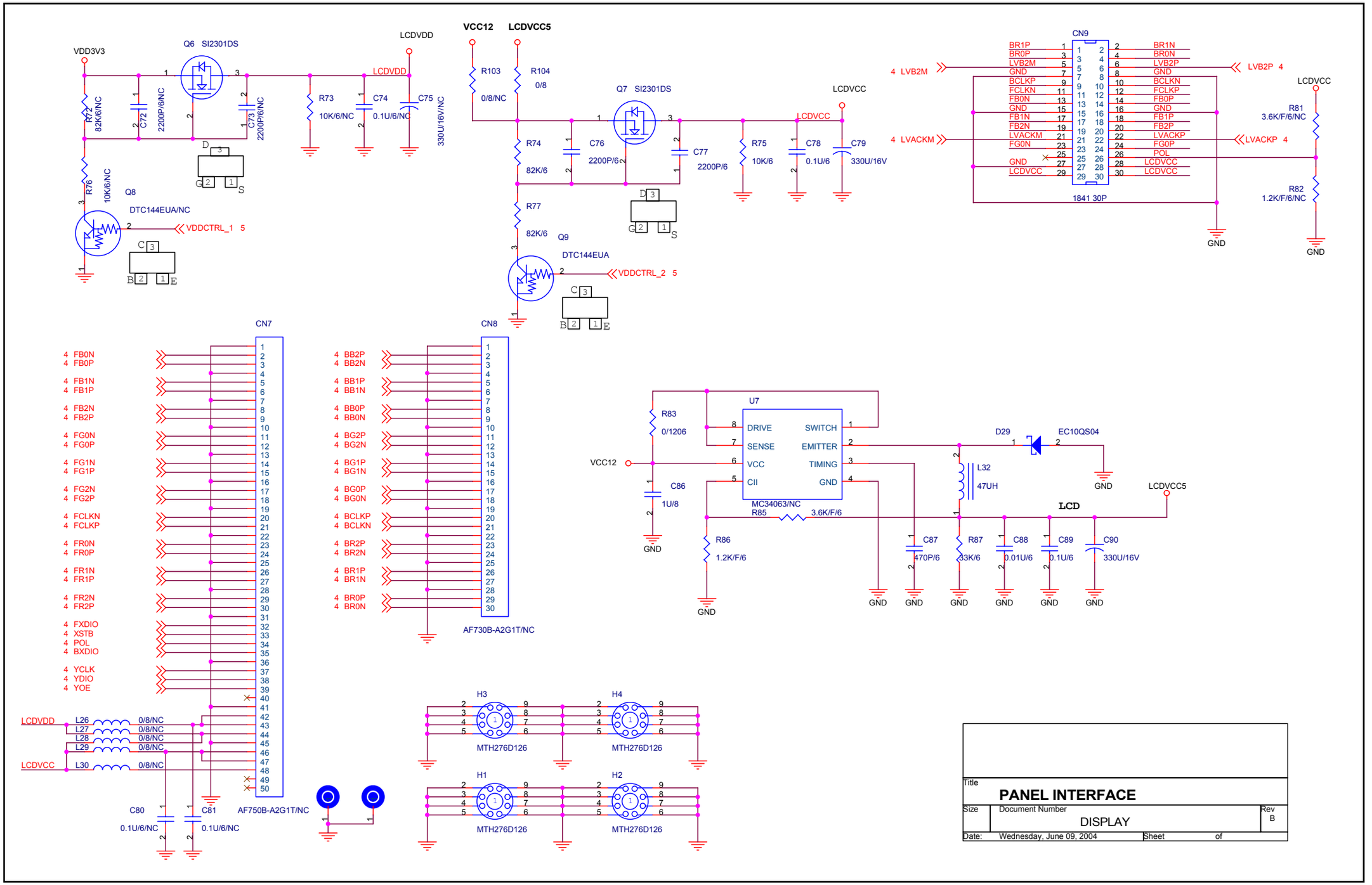
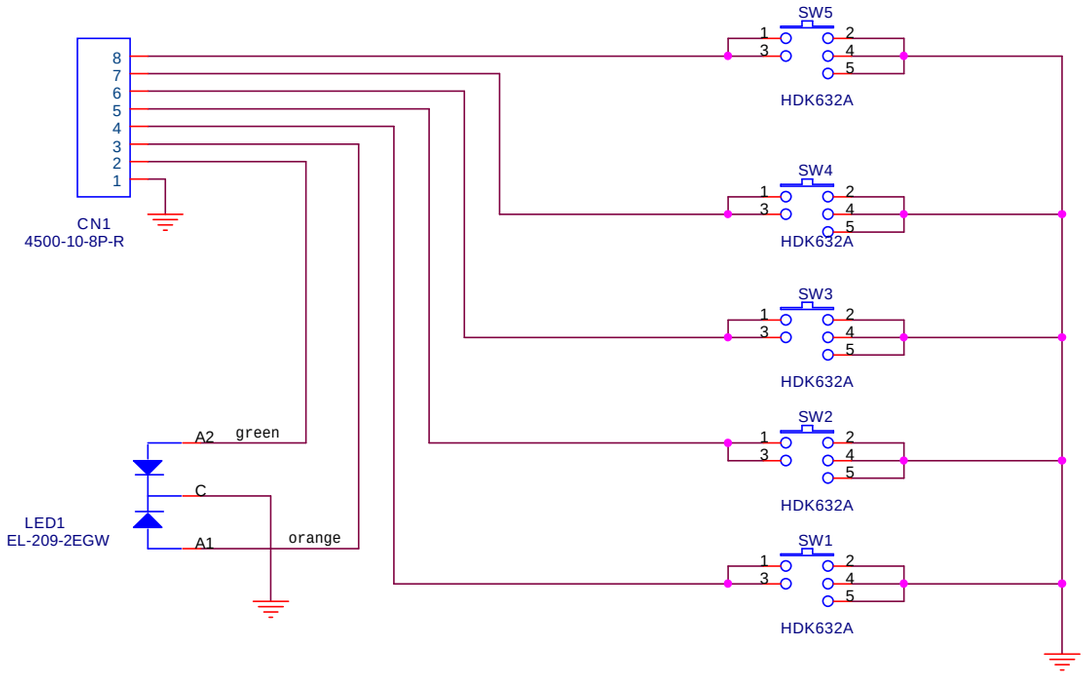
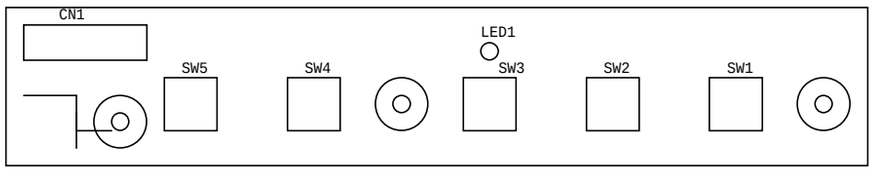
Date: Wednesday, June 09, 2004	Sheet 4 of 6	


MCP810M3X-2.93
PARAMETER
EEPROM
24LC08B
MTV312
TO BUTTON BOARD
4501-10-10P-R
modify debug port
DEBUG PORT
2.0mm pitch
90° E&T
JWT-A2001WV2-06/NC
MC34063
AIC1739
CPU
Title
MCU & BUTTON
Size
Document Number
DISPLAY
Rev
B
Date: Wednesday, June 09, 2004
Sheet 5 of 6


VDD3V3
Q6 SI2301DS
LCDVDD
R72 82K/6/NC
C72 2200P/6/NC
C73 2200P/6/NC
R73 10K/6/NC
C74 0.1U/6/NC
C75 330U/16V/NC
R76 10K/6/NC
Q8
DTC144EUA/NC
VDDCTRL_1 5
VCC12
LCDVCC5
R103 0/8/NC
R104 0/8
Q7 SI2301DS
LCDVCC
R74 82K/6
C76 2200P/6
C77 2200P/6
R75 10K/6
C78 0.1U/6
C79 330U/16V
R77 82K/6
Q9
DTC144EUA
VDDCTRL_2 5
CN9
4 LVB2M
4 LVACKM
BR1P BR0P LVB2M GND BCLKP FCLKN FB0N GND FB1N FB2N LVACKM FG0N GND LCDVCC
BR1N BR0N LVB2P GND BCLKN FCLKP FB0P GND FB1P FB2P LVACKP FG0P POL LCDVCC LCDVCC
1841 30P
LVB2P 4
LVACKP 4
R81 3.6K/F/6/NC
R82 1.2K/F/6/NC
GND
CN7
CN8
4 FB0N 4 FB0P
4 FB1N 4 FB1P
4 FB2N 4 FB2P
4 FG0N 4 FG0P
4 FG1N 4 FG1P
4 FG2N 4 FG2P
4 FCLKN 4 FCLKP
4 FR0N 4 FR0P
4 FR1N 4 FR1P
4 FR2N 4 FR2P
4 FXDIO
4 XSTB
4 POL
4 BXDIO
4 YCLK
4 YDIO
4 YOE
4 BB2P 4 BB2N
4 BB1P 4 BB1N
4 BB0P 4 BB0N
4 BG2P 4 BG2N
4 BG1P 4 BG1N
4 BG0P 4 BG0N
4 BCLKP 4 BCLKN
4 BR2P 4 BR2N
4 BR1P 4 BR1N
4 BR0P 4 BR0N
AF730B-A2G1T/NC
AF750B-A2G1T/NC
LCDVDD
LCDVCC
L26 0/8/NC
L27 0/8/NC
L28 0/8/NC
L29 0/8/NC
L30 0/8/NC
C80 0.1U/6/NC
C81 0.1U/6/NC
U7
DRIVE SENSE VCC CII
SWITCH EMITTER TIMING GND
MC34063/NC
R83 0/1206
C86 1U/8
R85 3.6K/F/6
R86 1.2K/F/6
D29 EC10QS04
L32 47UH
LCD
LCDVCC5
C87 470P/6
R87 33K/6
C88 0.01U/6
C89 0.1U/6
C90 330U/16V
H1 H2 H3 H4
MTH276D126
Title
PANEL INTERFACE
Size
Document Number
DISPLAY
Rev B
Date: Wednesday, June 09, 2004
Sheet of





PROJECT :VE710s/b

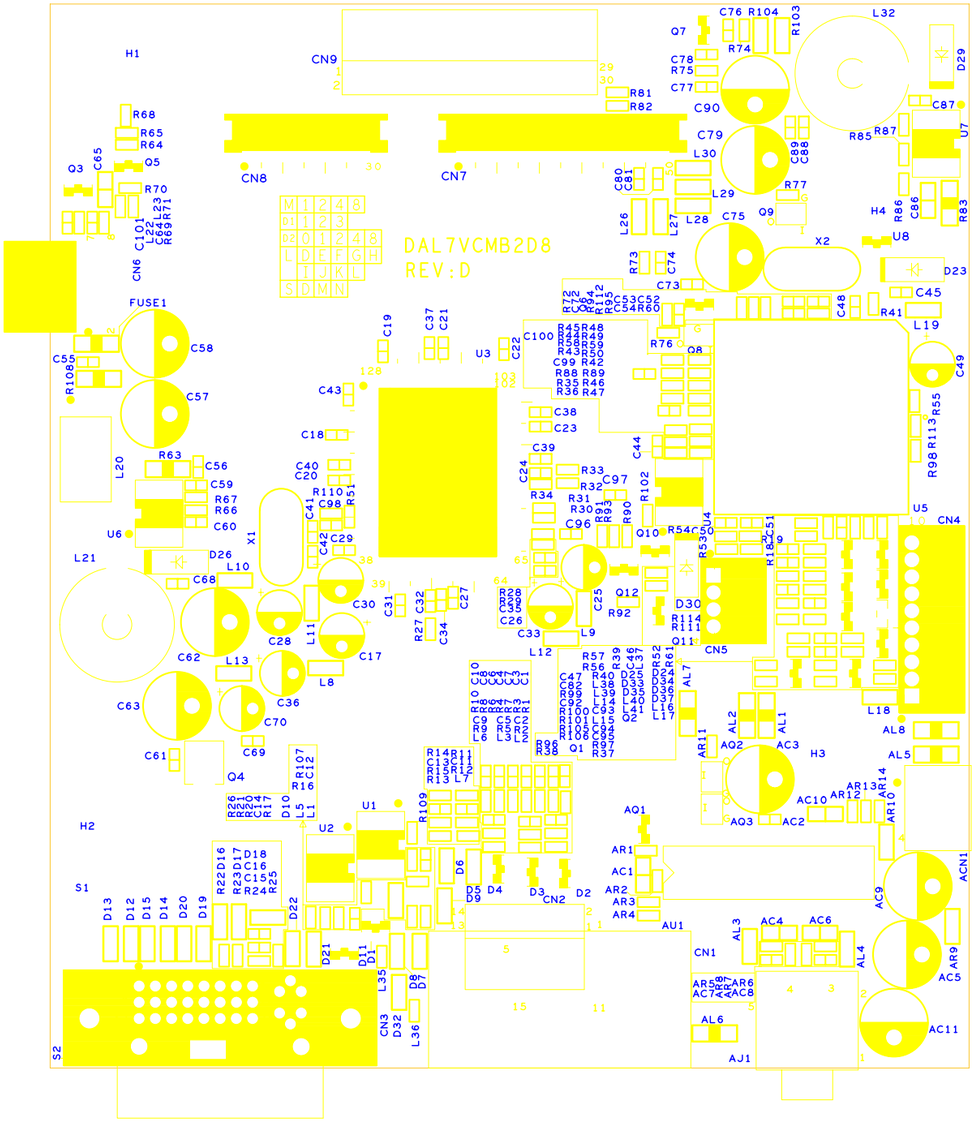
Title: **Button**

Size	Document Number	Rev
	BUTTON-BOARD	A

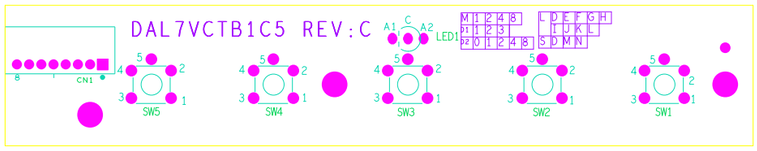
Date: Monday, November 10, 2003 Sheet of

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 the **VE710S/b-1** Service Manual?

Unit	*Excellent*	*Good*	*Fair*	*Bad*
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 the **VE710S/b-1** Service Manual?

Item	*Excellent*	*Good*	*Fair*	*Bad*
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)