Service Manual

ViewSonic VX2255wmb-4

VX2255wmh-4

Model No. VS11661

22” wide Color TFT LCD Display

(VX2255wmb-4_VX2255wmh-4_SM Rev. 1a Sep. 2007)

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

Disclaimer

ViewSonic makes no representations or warranties, either expressed or implied, with respect to the contents hereof and specifically disclaims any warranty of merchantability or fitness for any particular purpose. Further, ViewSonic reserves the right to revise this publication and to make changes from time to time in the contents hereof without obligation of ViewSonic to notify any person of such revision or changes.

Trademarks

Optiquest is a registered trademark of ViewSonic Corporation.
ViewSonic is a registered trademark of ViewSonic Corporation.
All other trademarks used within this document are the property of their respective owners.

Product disposal at end of product life

The lamp in this product contains mercury. Please dispose of in accordance with local, state or federal laws.

Revision History

Revision	SM Editing Date	ECR Number	Description of Changes	Editor
1a	9/14/2007		Initial Release	Jamie Chang

TABLE OF CONTENTS

1. Precautions and Safety Notices

1. SAFETY PRECAUTIONS

This monitor is manufactured and tested on a ground principle that a user's safety comes first. However, improper used or installation may cause damage to the monitor as well as to the user.

WARNINGS:

- This monitor should be operated only at the correct power sources indicated on the label on the rear of the monitor. If you're unsure of the power supply in you residence, consult your local dealer or Power Company.
- Use only the special power adapter that comes with this monitor for power input.
- Do not try to repair the monitor by yourself, as it contains no user-serviceable parts. Only the qualified technician can repair it.
- Do not remove the monitor cabinet. There are high-voltage parts inside that may cause electric shock to human bodies.
- Stop using the monitor if the cabinet is damaged. Have it checked by a service technician.
- Put your monitor only in a lean, cool, dry environment. If it gets wet, unplug the power cable immediately and consult your closed dealer.
- Always unplug the monitor before cleaning it. Clean the cabinet with a clean, dry cloth. Apply non-ammonia based cleaner onto the cloth, not directly onto the glass screen.
- Do not place heavy objects on the monitor or power cord.

2. PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in this chassis have special safety visual inspections and the protection afforded by them cannot necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Before replacing any of these components read the parts list in this manual carefully. The use of substitute replacement parts, which do not have the same safety characteristics as specified in the parts list, may create shock, fire, or other hazards.

3. SERVICE NOTES

- When replacing parts or circuit boards, clamp the lead wires around terminals before soldering.
- Keep wires away from high voltage, high temperature components and sharp edges.
- Keep wires in their original position so as to reduce interference.
- Adjustment of this product please refers to the user' manual.

4. Handing and Placing Methods

Correct Methods:	Incorrect Methods:
Only touch the metal frame of the LCD panel or the front cover of the monitor, Do not touch the surface of the panel.	Surface of the panel is pressed by fingers and that may cause “Mura”
	
	
Take out the monitor with cushions	Take out the monitor by grasping the LCD panel, and that may cause “Mura”.
	

Correct Methods:	Incorrect Methods:
Place the monitor on a clean and soft foam pad.	Place the monitor on foreign objects. That could Scratch the surface of the panel or cause “Mura”.
	
	The panel is placed facedown on the lap. That may cause “Mura”
	

2. Specification

FEATURES		VX2255wmb/wmh-4
TFTLCD PANEL	Size	22" wide
	Luminance (Typ)	300 cd/㎡
	Contrast Ratio (Typ)	1000:1
	Colors	16.7 M (6 bits + 2 bits FRC)
	Response Time	5 ms(on/off) / 3ms(G to G / avg)
	Viewing Angle (H/V)	170° / 160 °
	Recommend resolution	1680x1050@60Hz
Input Signal	Analog	Yes (75ohms, 0.7/1.0 Vp-p)
	Digital	Yes
Sync Compatibility	Separate Sync	Yes
	Composite Sync	Yes
	Sync on Green	Yes
Compatibility	PC	Yes
	Power Mac	Yes
	TV Box	Yes
Power Voltage	AC 100-240V, 50/60Hz	Yes
Power Consumption	On Mode(Typ)	< 45 W (without audio)
	Off Mode (Max)	≦1 W
Audio	2W / THD 10% (Max)	Yes
WebCam	1.3M / USB2.0 / Windows XP Cable (type A to type B)	Yes
Ergonomics	Tilt	Yes (20 ° and -5 °)
	Swivel	360°
	Pivot	No
	Height Adjust	80mm
OSD Control	[1] [▲] [▼] [2] // [⏻]	Yes
Dimension	Physical (W x H x D)	528(W) x 450(H) x 225(D) mm
	Package (W x H x D)	572(W) x 525(H) x 267(D) mm
Weight	Physical (Net Weight)	6.0 Kg / 13.3 lbs
	Package (Gross Weight)	8.4 Kg / 18.6 lbs
Operating Condition	Temperature (℉/℃)	32℉-104℉/+0℃-+40℃
	Humidity (%)	10 % - 90 %
Storage Condition	Temperature (℉/℃)	-4℉-140℉/-20℃-60℃
	Humidity (%)	10 % - 90 %
Regulation	Global: CB, MPR II,WEEE,ROHS VSA:UL, cUL, FCC-B, TUV-S, NOM, Energy Star VSE:TUV/ERGO(covers ISO13406-2&MPR II),CE GOST-R+Hygienic ,SASO , ENERGY, Ukraine VSI: BSMI, PSB, C-TICK, MIC, VCCI, Green Mark VSCN:CCC	

Product definition and specification

Region	VSA	VSAP	VSE	VSCN
	(M)	(A)/(P)/(J)/(U)/(N)	(E)/(U)/(EU)	(G)
Product Name	VX2255wmb/wmh-4			
Model Number	VS11661			
OSD Languages	English, French, German, Italian, Spanish, Finnish, Russian, Korean, Japanese, Traditional Chinese, Simplified Chinese			
TFT LCD Panel and Model #	1st INN MT220W W01 V.0 2nd CMO M220Z1-L03 3rd INN MT220W W01 V2			
Scalar	Mstar, Model # : TSUMO58CWHJ-LF			
Input Signal	D-Sub / DVI-D			
Sync Compatibility	Separate / Composite / SOG			
Audio	2W			
Power Consumption	Built-in/ under 50 W (max) / 45 W(typ) (without audio)			
Power Cable	Refer to Appendix G			
Analog Cable (1.8 m, color : black), with PC 2001 and Hot Plug Detect &DDC	**YES**			
DVI-D Cable	**YES**			
WebCam	Hardware spec --- 1.3M pixel OS support --- Windows XP/ Vista Interface support --- USB 2.0 (type A to type B) Program support --- Skype / Windows Live Messenger			
ViewSonic CD Wizard	Arabic, English, Finnish, Spanish, German, Italian, Japanese, Swedish, Polish, Korean Portuguese, Russian, French, Greek, Dutch, Turkish, Simplified Chinese, Traditional Chinese, Czech, Hungarian			
ViewSonic Quick Start Guide				
WebCam AP Wizard				
Screen Protector Mylar	**YES**			
Extrme Label (?ms)	**NO**			
DCR sticker (4000:1) / 2pcs	**YES**			
Service Insert (new version)	**YES**	**NO**	**NO**	**NO**
Warranty Sticker	**NO**	**NO**	**NO**	**No**
Warranty Card (China only / new version)	**NO**	**NO**	**NO**	**YES**
Carton Sticker (China only / new version)	**NO**	**NO**	**NO**	**YES**
PE bag of Carton	**NO**	**NO**	**NO**	**YES**

2-1 GENERAL specification

Test Resolution & Frequency	1680x1050@ 60Hz
Test Image Size	Full Size
Contrast and Brightness Controls	Factory Default: Contrast = 70%, Brightness = 100%

2-2 VIDEO INTERFACE

Analog Input Connector	DB-15 (Analog), refer the appendix A			
Digital Input Connector	DVI-D			
Audio input 1	3.5Mini Jack			
Headphone output	3.5Mini Jack			
Default Input Connector	Defaults to the first detected input			
Video Cable Strain Relief	Equal to twice the weight of the monitor for five minutes			
Video Cable Connector DB-15 Pin out	Compliant DDC/CI / DDC/2B			
Video Signals	1. Video RGB (Analog) Separate, Composite, and Sync on Green 2. TMDS (Digital)			
Video Impedance	75 Ohms (Analog), 100 Ohms (Digital)			
Maximum PC Video Signal	950 mV with no damage to monitor			
Maximum Mac Video Signal	1250 mV with no damage to monitor			
Sync Signals	TTL			
DDC/2B	Compliant with Revision 1.3			
DDC/CI	Compliant with Revision 1.1			
HDCP	HDCP code inside and compatible			
Sync Compatibility	Separate Sync, Composite Sync, SOG			
Video Compatibility	Shall be compatible with all PC type computers, Macintosh computers, and after market video cards			
Resolution Compatibility	640x350	640x400	640x480	720x400
	720x480	800x600	832x624	1024x768
	1152x864	1152x870	1280x720	1280x768
	1280x960	1280x1024	1360x768	1400x1050
	1440x900	1600x1200	1680x1050	
	The image vertical size might not be full screen. But the image vertical position should be at the center.			
Exclusions	Not compatible with interlaced video			

2-3 POWER SUPPLY

Internal Power Supply	Part Number: 790961400600R
Input Voltage Range	AC90~264 (WORLDWIDE)
Input Frequency Range	47 TO 64 HERTZ
Short Circuit Protection	OUTPUT CAN BE SHORTED WITHOUT DAMAGE
Over Current Protection	3.3~4.5A TYP. AT 5 VDC (PROTECT WHEN SHORT CIRCUIT)
Leakage Current	3.5MA (MAX) AT 264VAC / 50HZ
Efficiency	80 % TYPICAL AT 115VAC FULL LOAD
Fuse	INTERNAL AND NOT USER REPLACEABLE
Power Dissipation	< 45 WATTS (TYP) (without audio)
Max Input AC Current	1.6A (MAX)
Inrush Current (Cold Start)	80 A MAX./ 240V_{AC} / 50HZ (COLD START AT 25℃,FULL LOAD)
Power Supply Cold Start	SHALL START AND FUNCTION PROPERLY WHEN UNDER FULL LOAD, WITH ALL COMBINATIONS OF INPUT VOLTAGE, INPUT FREQUENCY, AND OPERATING TEMPERATURE
Power Supply Transient Immunity	SHALL BE ABLE TO WITHSTAND AN ANSI/IEEE C62.41-1980 6000V 200 AMPERE RING WAVE TRANSIENT TEST WITH NO DAMAGE
Power Supply Line Surge Immunity	Shall be able to withstand 1.5 times nominal line voltage for one cycle with no damage
Power Supply Missing Cycle Immunity	Shall be able to function properly, without reset or visible screen artifacts, when ½ cycle of AC power is randomly missing at nominal input
Power Supply Acoustics	The power supply shall not produce audible noise that would be detectable by the user. Audible shall define to be in compliance with ISO 7779 (DIN EN27779:1991) Noise measurements of machines acoustics. Power Switch noise shall not be considered
US Type Power Cable Color = Black	Separate 3-prong NEMA 5-15P type plug. Length = 1.8m. Connects to display.
European Type Power Cable Color = Black	Schuko CEE7-7 type plug. Length = 1.8m, Connects to display.
CCC Type Power Cable Color = Black	Separate 3-prong type plug. Length = 1.8m. Connects to display.
PSE Type Power Cable Color = Black	Separate 2-prong NEMA 1-15P type plug. Length = 1.8m. Connects to display.
Power Saving Operation(Method)	VESA DPMS Signaling
Power Consumption	On Mode <45W (Typ) / under 50W (Max) (without audio) Saving Mode < 2 W@230VAC 50Hz Off Mode < 1 W @230VAC 50Hz (DC Power Off; Meet to Energy Star Ver4.0 Tier2)
Recovery Time	On Mode = N/A, Active Off < 3 sec

2-4 ELECTRICAL REQUIREMENT

Horizontal / Vertical Frequency

Horizontal Frequency	24 – 82 kHz
Vertical Refresh Rate	50 – 85* Hz
Maximum Pixel Clock	165MHz,
Sync Polarity	Independent of sync polarity.

Timing Table

Item	Timing						Analog			Digital - TMDS	Remark
							Separate	Composite	SOG		
1	640 x 350	@	70	Hz,	32	kHz	V	V	V	V	
2	640 x 400	@	60	Hz,	32	kHz	V	V	V	V	
3	640 x 400	@	70	Hz,	32	kHz	V	V	V	V	
4	640 x 400	@	85	Hz,	38	kHz	V	V	V	V	
5	640 x 480	@	50	Hz,	25	kHz	V	V	V	V	
6	640 x 480	@	60	Hz,	32	kHz	V	V	V	V	
7	640 x 480	@	67	Hz,	35	kHz	V	V	V	V	
8	640 x 480	@	72	Hz	38	kHz	V	V	V	V	
9	640 x 480	@	75	Hz,	38	kHz	V	V	V	V	
10	640 x 480	@	85	Hz,	43	kHz	V	V	V	V	
11	720 x 400	@	70	Hz,	32	kHz	V	V	V	V	
12	720 x 400	@	85	Hz,	38	kHz	V	V	V	V	
13	720 x 480	@	60	Hz,	29.8	kHz	V	V	V	V	
14	720 x 576	@	50	Hz,	31.3	kHz	V	V	V	V	
15	800 x 600	@	56	Hz,	35.1	kHz	V	V	V	V	
16	800 x 600	@	60	Hz,	38	kHz	V	V	V	V	
17	800 x 600	@	72	Hz,	48	kHz	V	V	V	V	
18	800 x 600	@	75	Hz,	47	kHz	V	V	V	V	
19	800 x 600	@	85	Hz,	54	kHz	V	V	V	V	
20	832 x 624	@	75	Hz,	50	kHz	V	V	V	V	
21	1024 x 768	@	50	Hz,	40	kHz	V	V	V	V	
22	1024 x 768	@	60	Hz,	48	kHz	V	V	V	V	
23	1024 x 768	@	70	Hz,	57	kHz	V	V	V	V	
24	1024 x 768	@	72	Hz,	58.1	KHz	V	V	V	V	
25	1024 x 768	@	75	Hz,	60	KHz	V	V	V	V	
26	1024 x 768	@	75	Hz,	60.2	KHz	V	V	V	V	
27	1024 x 768	@	85	Hz,	69	KHz	V	V	V	V	
28	1152 x 864	@	75	Hz,	68	KHz	V	V	V	V	

29	1152 x 870	@	75	Hz,	69	KHz	V	V	V	V	
30	1152 x 900	@	67	Hz,	62.5	KHz	V	V	V	V	
31	1280 x 720	@	50	Hz,	37	KHz	V	X	X	V	
32	1280 x 720	@	60	Hz,	45	KHz	V	V	V	V	
33	1280 x 768	@	50	Hz,	40	KHz	V	V	V	V	
34	1280 x 768	@	60	Hz,	47.8	KHz	V	V	V	V	
35	1280 x 768	@	75	Hz,	60	KHz	V	V	V	V	
36	1280 x 768	@	85	Hz,	69	KHz	V	V	V	V	
37	1280 x 960	@	50	Hz,	49	KHz	V	V	V	V	
38	1280 x 960	@	60	Hz,	60	KHz	V	V	V	V	
39	1280 x 960	@	75	Hz,	75	KHz	V	V	V	V	
40	1280 x 1024	@	50	Hz,	53	KHz	V	V	V	V	
41	1280 x 1024	@	60	Hz,	64	KHz	V	V	V	V	
42	1280 x 1024	@	75	Hz,	80	KHz	V	V	V	V	
43	1360 x 768	@	60	Hz,	48	kHz	V	V	V	V	
44	1400 x 1050	@	50	Hz,	54	kHz	V	V	V	V	
45	1400 x 1050	@	60	Hz,	65.3	kHz	V	V	X	V	For analog sync, Switch 1400 x 1050@60Hz and 1680 x 1050@60Hz by [1]+[2] short cut key (primary = 1680 x 1050@60Hz) Auto image should be executed when Switch 1400 x 1050@60Hz and 1680 x 1050@60Hz by [1]+[2] short cut key
46	1440 x 900	@	60	Hz,	55.9	kHz	V	V	V	V	
47	1440 x 900	@	75	Hz,	70.6	kHz	V	V	V	V	
48	1600 x 1200	@	60	Hz,	75	kHz	V	V	V	V	
49	1680 x 1050	@	60	Hz,	65.3	kHz	ü	V	X	V	

*1. Tolerance ≧ ±2KHz. (if the range dose not cover other timing mode)

*2. Any timing not in the list, it should display as normal or show on “OUT OF RANGE” OSD message with blanking.

*3. The image quality of 85Hz mode might be worse than 75Hz.

Primary Presets

1680x1050 @ 60Hz

User Presets

Number of User Presets (recognized timings) Available: 10 presets total in FIFO configuration

Changing Modes

Maximum Mode Change Blank Time for image stability : 3 seconds (Max), excluding “Auto Image Adjust” time

Under DOS mode (640 x 350, 720 x 400 & 640 x 400), it should recall factory setting when execute “Auto Image Adjust”

The monitor needs to do “Auto Adjust” the first time when a new mode is detected

(See section “0-Touch™ Function Actions”)

2-5 FRONT PANEL CONTROLS AND INDICATORS

Front Panel Hardware Controls

Power Switch (Front Head)	Power Control, soft Power Switch.
Power LED (Front Head)	Blue – ON Amber – Active Off (Sleeping Mode) Dark = Soft Power Switch OFF
Front Panel Controls (Head) 1. [⏻] --- Position in the center of front bezel bottom. 2. [1] [▲] [▼] [2] --- Position in right side	[1] BUTTON 1 [2] Button 2 [⏻] Power [▼] DOWN ARROW BUTTON [▲] UP ARROW BUTTON Note: Power Button, Button 1 and Button 2 must be one-shot logic operation. (i.e. there should be no cycling)
Reaction Time	OSD must fully appear within 0.5s after pushing Button 1

Short Cuts Function from the button(s)

[1]	Main Menu
[2]	Input toggle (Analog / Digital)
[▼] or [▲]	To immediately activate Audio menu.
[▲]	Press the [▲] 3 seconds to switch the OD on / off
[▼]+[▲]	Recall both of audio and mute to default
[1] + [2]	Toggle 1400x1050 and 1680x1050 mode when input 1400x1050 or 1680x1050 mode
[1] + [▼] + [▲] (Keep pushing 3 sec)	White Balance. (Not shown on user's guide)
[1] + [▼]	Power Lock
[1] + [▲]	OSD Lock
[2] + [▼]	DDC/CI switch → on = DDC/CI ; off = DDC2B
[▼] +[▲] + [⏻]	Factory Mode
Remark : All the short cuts function are only available while OSD off	

Main Menu Controls

Auto Image Adjust[*1]

Contrast/Brightness[*2*4]

Input Select

Analog, Digital

Audio Adjust

Volume[*4], Mute[*4]

Color Adjust

sRGB, 9300K,7500K, 6500K(default), 5400,User Color [R, G, B]

Information

[H Frequency, V Frequency, Resolution, Pixel Clock, Serial Number, Model Number, ["www.ViewSonic.com"]

Manual Image Adjust

Horizontal Size[*1], H/V. Position[*1], Fine Tune[*1], Sharpness[*3]

Setup Menu

Language [English, French, German, Italian, Spanish, Finnish, Russian, Korean, Japanese, Simplified Chinese, Traditional Chinese], Resolution Notice, OSD Position, OSD Timeout, OSD Background

Memory Recall

[*1] These functions are not available in Digital Mode

[*2] These functions are not available under sRGB Mode.

[*3] These functions are not available under Native Resolution Mode

[*4] These functions setting can be recalled to default value by pressing [▼]+[▲]

[Remark] Please refer to the detail in the Appendix C

Function descriptions

OSD Lock short cuts function for the buttons

The OSD lock will be activated by pressing the front panel control buttons "(1), & (▲)" for 10 seconds.

If the user then tries to access the OSD by pressing any of the buttons "1", "▼", "▲", "2" a message will appear on the screen for 3 seconds showing "OSD Locked".

The OSD lock will be deactivated by pressing the front panel control buttons "(1), & (▲)" again for 10 seconds.

Note1: When the OSD is locked will lock all functions, including “Volume” and “Mute”

Note2: Status bar indicating OSD Lock or Unlock is in progress and when complete it will indicate “OSD Locked”

Note3: OSD Lock should not lock Power Button and Power Lock function

Power Lock short cuts function for the buttons

The power button lock will be activated by pressing the front panel control buttons "(1), & (▼)" for 10 seconds.

Locking the power button means that the user won't be able to turn off the LCD while the power button is locked. If the user presses the power button while it is locked, a message will appear on the screen for 3 seconds showing "Power Button Locked". It also means that with the power button locked, the LCD would automatically turn back

"On" when power is restored after a power failure. If the power button is not in the locked mode, then power should return to it's previous state when power is restored after a power failure.
The power button lock will be deactivated by pressing the front panel control buttons "(1), & (▼)" again for 10 seconds.

Note 1: Status bar indicating Power Button lock or unlock is in progress and when complete it will indicate “Power Button Locked”
Note 2: Power should only be lockable in the “On State”

Memory Recall Actions
Memory Recall action on the analog and digital mode as below
1. Set the factory defaults as shown in Section 2-8
2. Clean all the mode setting buffer
3. Execute Auto Image Adjust

Note: Memory Recall should have no effect for Language, Power Lock, User Color Settings or Input Priority

Resolution Notice Actions
Resolution Notice OSD should show on screen after changing to non-native mode for 30 sec
The OSD should disappear after 10 sec or by pushing button [1] or [2]
Resolution Notice function should be disabled when push button [2] under Resolution Notice OSD

0-Touch™ Function Actions
1. Execute Auto Image Adjust when new mode detected, and save the settings to buffer for further use
2. It should be reset by Memory Recall function
(Should not reset by power off, power unplug and others)

OSD Auto Save
The OSD shall save new settings when it is turned off by the user or when it times out. There shall not be a separate save

Input Priority
This function is defined the auto detect priority when the display has several inputs. Please refer to the detail flow chart as the appendix D

2-6 AUDIO INTERFACE (SPEAKER SPECIFICATION)

Line input signal	1.0 Vrms @1kHz
Line input impedance	10 kOhm
Maximum Amp power output (Watt)	2 W (RL=8Ω)
Amp -THD	< 10 % THD @1kHz
Speaker Power rating(Ω/Watt)	8Ω/ 2 W
Signal to Noise Ratio	72 dB
Frequency response	Fo – 20kHz
SPL.	80 ± 3 dB (at 0.5m)
FO	900 Hz
Line input connection	3.5 mm stereo jack
Vibration	There should be no audible vibration resonance at volume=100% & any Freq.
Screen image	There should be no affect on the screen image stability under any conditions
Connector PC99 requirement Audio in	Lime Green pantone # 577C
Cable type / length	3.5mm stereo cable / 1.8m length
Audio DPMS	Speakers stay off when the rest of the monitor is in power saving Note: There is no guarantee <1 W at power consumption in Active Off mode, when the Audio Cable is connected

WebCam

Input interface	USB 2.0
Maximum Amp power output (Watt)	0.8 W
Webcam action indicator	AP (on) --- Blue AP (off) --- dark Monitor power off --- dark (Webcam power off the same time) When the monitor into sleeping mode, The webcam power off the same time
Pixel	Real 1.3M / CMOS
Resolution	1280 x 1024 (Static status / Max) 1024 x768 (Dynamic status / max)
Input connection	USB type B
Screen image	There should be no affect on the screen image stability under any conditions
Cable color requirement	VX2255wmb --- black VX2255wmh --- white
Cable type / length	USB2.0 type A to type B cable / 1.8m length
System requisition (at least)	OS --- Windows XP / Windows Vista CPU --- P4 1.4Ghz or AMD Athlon 1Ghz Memory --- 128MB H.D. --- 200MB

2-7 TFT LCD PANEL

Panel Characteristics:

1st Source Panel

Model number	INN MT220W W01 V.0	
Type	TN type with LVDS interface	
Active Size	22” wide; 473.76(H) x 296.1(V)	
Pixel Arrangement	RGB Vertical Stripe	
Pixel Pitch	0.282(H) x 0.282(H) mm	
Glass Treatment	Anti Glare (Hard coating 3H)	
# of Backlights	4CCFL	
Backlight Life	40000Hours (Min) at 7.0mA	
Luminance (5-point) – Condition: CT = User Color, Contrast = Max, Brightness = Max	300cd/㎡ (Typ after 30 minute warm up) 250cd/㎡ (Min after 30 minute warm up)	
Brightness Uniformity	≧80%(typ) / 75%(min)	
Contrast Ratio	1000:1 (typ), TBD(min)	
Color Depth	16.7 million colors (6 bits + 2 bits FRC)	
Viewing Angle (Horizontal) Ultra –TN type	@ CR>10 Typical: 170 Minimum: 140	@ CR>5 Typical: 178 Minimum:160
Viewing Angle (Vertical) Ultra –TN type	@ CR>10 Typical: 160 Minimum: 140	@ CR>5 Typical:170 Minimum:150
Response Time 10%-90% @ Ta=25°C	Typical = 5ms (on/off) Maxmum =10 ms (on/off)	
Panel Defects	Please see Panel Quality Specifications.	

2nd Source Panel

Model number	CMO M220Z1-L03	
Type	TN type with LVDS interface	
Active Size	22” wide; 473.76(H) x 296.1(V)	
Pixel Arrangement	RGB Vertical Stripe	
Pixel Pitch	0.282(H) x 0.282(H) mm	
Glass Treatment	Anti Glare (Hard coating 3H)	
# of Backlights	4CCFL	
Backlight Life	40000Hours (Min) at 7.0mA	
Luminance (5-point) – Condition: CT = User Color, Contrast = Max, Brightness = Max	300cd/㎡ (Typ after 30 minute warm up) 250cd/㎡ (Min after 30 minute warm up)	
Brightness Uniformity	≧76%(typ) / 70%(min)	
Contrast Ratio	1000:1 (typ), 700:1(min)	
Color Depth	16.7 million colors (6 bits + 2 bits FRC)	
Viewing Angle (Horizontal) Ultra –TN type	@ CR>10 Typical: 170 Minimum: 150	@ CR>5 Typical: TBD Minimum: TBD
Viewing Angle (Vertical) Ultra –TN type	@ CR>10 Typical: 160 Minimum: 140	@ CR>5 Typical: TBD Minimum: TBD
Response Time 10%-90% @ Ta=25°C	Typical = 5ms (on/off) Maxmum =8 ms (on/off)	
Panel Defects	Please see Panel Quality Specifications.	

3rd Source Panel

Model number	INN MT220W W01 V.2	
Type	TN type with LVDS interface	
Active Size	22” wide; 473.76(H) x 296.1(V)	
Pixel Arrangement	RGB Vertical Stripe	
Pixel Pitch	0.282(H) x 0.282(H) mm	
Glass Treatment	Anti Glare (Hard coating 3H)	
# of Backlights	4CCFL	
Backlight Life	40000Hours (Min) at 7.0mA	
Luminance (5-point) – Condition: CT = User Color, Contrast = Max, Brightness = Max	300cd/㎡ (Typ after 30 minute warm up) 250cd/㎡ (Min after 30 minute warm up)	
Brightness Uniformity	≧80%(typ) / 75%(min)	
Contrast Ratio	1000:1 (typ), 700:1(min)	
Color Depth	16.7 million colors (6 bits + 2 bits FRC)	
Viewing Angle (Horizontal) Ultra –TN type	@ CR>10 Typical: 170 Minimum: 150	@ CR>5 Typical: 178 Minimum:160
Viewing Angle (Vertical) Ultra –TN type	@ CR>10 Typical: 160 Minimum: 140	@ CR>5 Typical:170 Minimum:150
Response Time 10%-90% @ Ta=25°C	Typical = 5ms (on/off) Maxmum =10 ms (on/off)	
Panel Defects	Please see Panel Quality Specifications.	

Appendix E : EDID

VX2255wm-4_A

Time: 15:34:51

Date: Mon May 21, 2007

VIEWSONIC CORPORATION

EDID Version # 1, Revision # 3

DDCTest For: ViewSonic VX2255wm-4

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	1F	9B	01	01	01	01	01	11	01	03
20	0E	2F	1E	78	2E	DC	55	A3	59	48
30	9E	24	11	50	54	BF	EF	80	B3	00
40	A9	40	95	00	90	40	81	80	81	40
50	71	4F	01	01	21	39	90	30	62	1A
60	27	40	68	B0	36	00	D6	2C	11	00
70	00	1C	00	00	00	FF	00	51	52	4C
80	30	37	30	31	30	30	30	30	31	0A
90	00	00	00	FD	00	32	4B	18	52	11
100	00	0A	20	20	20	20	20	20	00	00
110	00	FC	00	56	58	32	32	35	35	77
120	6D	2D	34	0A	20	20	00	E4		

(08-09) ID Manufacturer Name _____ = VSC

(11-10) Product ID Code _____ = 9B1F

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

(16) Week of Manufacture _____ = 01

(17) Year of Manufacture _____ = 2007

(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)

Separate Syncs, Composite Sync, Sync on Green

(21) Maximum Horizontal Image Size _____ = 470 mm

(22) Maximum Vertical Image Size _____ = 300 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 - 0.640 Green X - 0.284 Blue X - 0.142 White X - 0.313

Red Y - 0.349 Green Y - 0.617 Blue Y - 0.067 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:

1680 X 1050 @60Hz

1600 X 1200 @60Hz

1440 X 900 @60Hz

1400 X 1050 @60Hz

1280 X 1024 @60Hz

1280 X 960 @60Hz

1152 X 864 @75Hz

Not Used

(52-71) Detailed Timing / Descriptor Block 1:

1680x1050 Pixel Clock: 146.25 MHz

Horizontal Image Size: 470 mm Vertical Image Size: 300 mm

Refreshed Mode: Non-Interlaced Normal Display - No Stereo

Horizontal:

Active Time: 1680 pixels Blanking Time: 560 pixels

Sync Offset: 104 pixels Sync Pulse Width: 176 pixels

Border: 0 pixels Frequency: 65.29 KHz

Vertical:

Active Time: 1050 lines Blanking Time: 39 lines

Sync Offset: 3 lines Sync Pulse Width: 6 lines

Border: 0 lines Frequency: 59.95 Hz

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

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

Monitor Serial Number:

QRL070100001

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

Monitor Range Limits:

Min Vertical Freq - 50 Hz

Max Vertical Freq - 75 Hz

Min Horiz. Freq - 24 KHz

Max Horiz. Freq - 82 KHz

Pixel Clock - 170 MHz

Secondary GTF - Not Supported

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

Monitor Name:

VX2255wm-4

(126) No Extension EDID Block(s)

(127) CheckSum OK

Time: 15:34:30

Date: Mon May 21, 2007

VIEWSONIC CORPORATION

EDID Version # 1, Revision # 3

DDCTest For: ViewSonic VX2255wm-4

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	1F	9B	01	01	01	01	01	11	01	03
20	80	2F	1E	78	2E	DC	55	A3	59	48
30	9E	24	11	50	54	BF	EF	80	B3	00
40	A9	40	95	00	90	40	81	80	81	40
50	71	4F	31	0A	21	39	90	30	62	1A
60	27	40	68	B0	36	00	D6	2C	11	00
70	00	1C	00	00	00	FF	00	51	52	4C
80	30	37	30	31	30	30	30	30	31	0A
90	00	00	00	FD	00	32	4B	18	52	11
100	00	0A	20	20	20	20	20	20	00	00
110	00	FC	00	56	58	32	32	35	35	77
120	6D	2D	34	0A	20	20	00	39		

(08-09) ID Manufacturer Name _____ = VSC

(11-10) Product ID Code _____ = 9B1F

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

(16) Week of Manufacture _____ = 01

(17) Year of Manufacture _____ = 2007

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

(18) EDID Version Number _____ = 1

(19) EDID Revision Number _____ = 3

(20) VIDEO INPUT DEFINITION:

Digital Signal

Non - VESA DFP 1.x Compatible

(21) Maximum Horizontal Image Size _____ = 470 mm

(22) Maximum Vertical Image Size _____ = 300 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 - 0.640 Green X - 0.284 Blue X - 0.142 White X - 0.313

Red Y - 0.349 Green Y - 0.617 Blue Y - 0.067 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:

1680 X 1050 @60Hz

1600 X 1200 @60Hz

1440 X 900 @60Hz

1400 X 1050 @60Hz

1280 X 1024 @60Hz

1280 X 960 @60Hz

1152 X 864 @75Hz

640 X 400 @70Hz

(52-71) Detailed Timing / Descriptor Block 1:

1680x1050 Pixel Clock: 146.25 MHz

Horizontal Image Size: 470 mm Vertical Image Size: 300 mm

Refreshed Mode: Non-Interlaced Normal Display - No Stereo

Horizontal:

Active Time: 1680 pixels	Blanking Time: 560 pixels
Sync Offset: 104 pixels	Sync Pulse Width: 176 pixels
Border: 0 pixels	Frequency: 65.29 KHz

Vertical:

Active Time: 1050 lines	Blanking Time: 39 lines
Sync Offset: 3 lines	Sync Pulse Width: 6 lines
Border: 0 lines	Frequency: 59.95 Hz

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

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

Monitor Serial Number:
QRL070100001

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

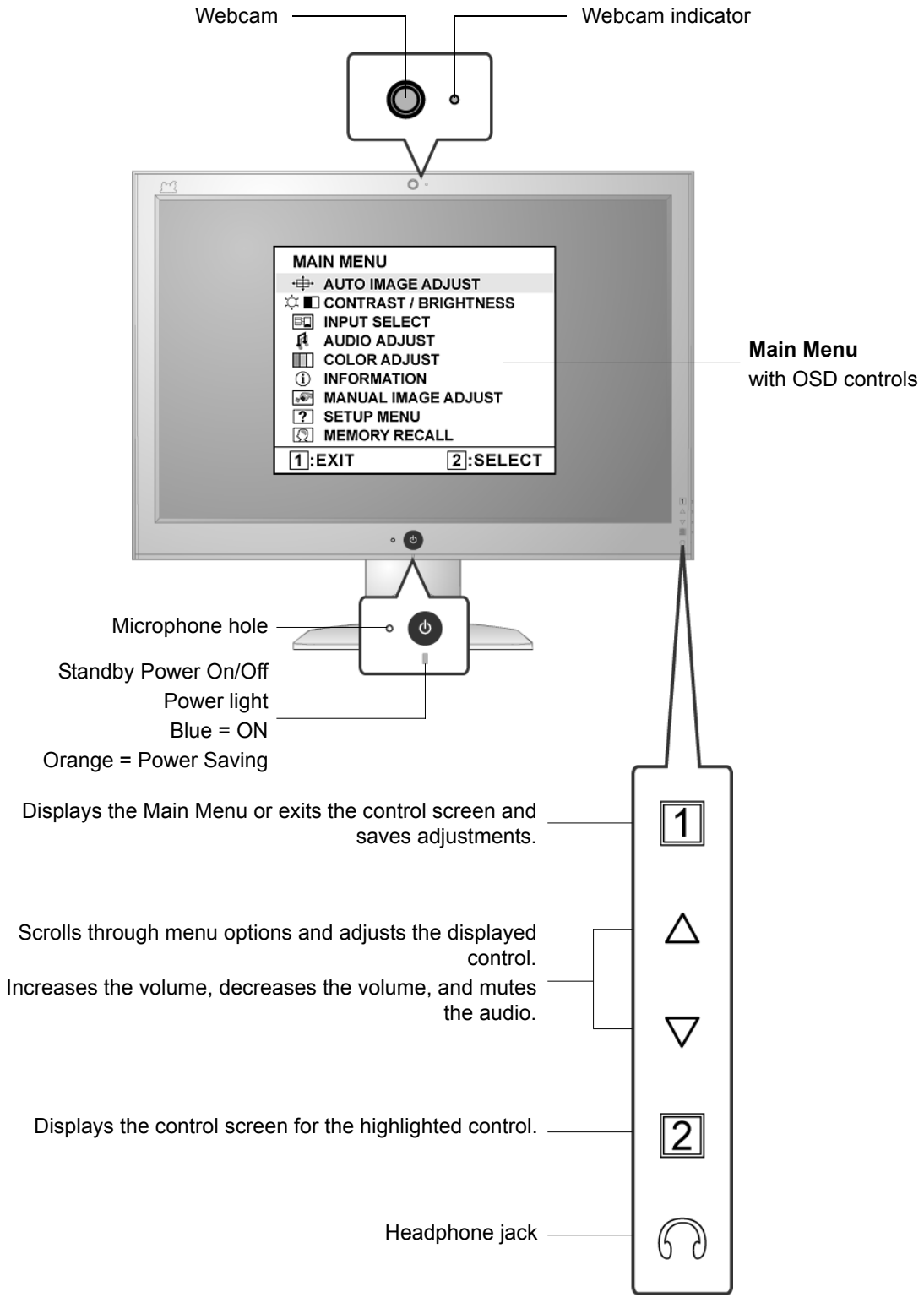
Monitor Range Limits:
Min Vertical Freq - 50 Hz
Max Vertical Freq - 75 Hz
Min Horiz. Freq - 24 KHz
Max Horiz. Freq - 82 KHz
Pixel Clock - 170 MHz
Secondary GTF - Not Supported

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

Monitor Name:
VX2255wm-4

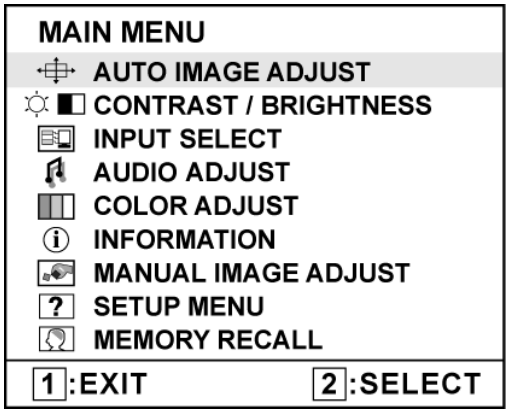
(126) No Extension EDID Block(s)
(127) CheckSum OK

Adjusting the Screen Image



Do the following to adjust the display setting:

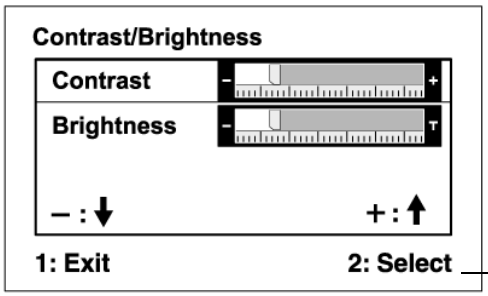
1. To display the Main Menu, press button [1].



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

4. To adjust the setting, 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 the computer's graphics card so that it outputs a 1680 x 1050 @ 60Hz video signal to the LCD display. (Look for instructions on "changing the refresh rate" in the graphics card's user guide.)
- If necessary, make small adjustments using H. POSITION and V. POSITION until the screen image is completely visible. (The black border around the edge of the screen should barely touch the illuminated "active area" of the LCD display.)

Main Menu Controls

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

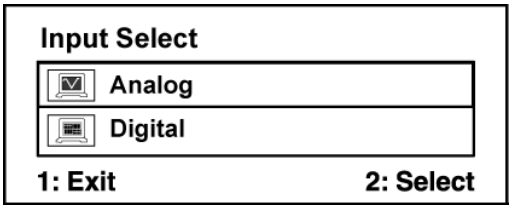
Control	Explanation

Auto Image Adjust sizes and centers the screen image automatically.

Contrast adjusts the difference between the image background (black level) and the foreground (white level).

Brightness adjusts background black level of the screen image.

Input Select toggles between inputs if you have more than one computer connected to the VX2255wmb/VX2255wmh.

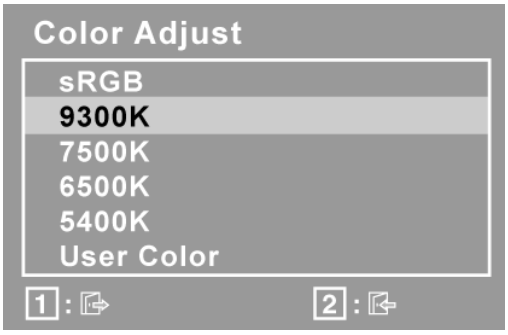


Audio Adjust

Volume increases the volume, decreases the volume, and mutes the audio.

Mute temporarily silences audio output.

Color Adjust provides several color adjustment modes, including preset color temperatures and a User Color mode which allows independent adjustment of red (R), green (G), and blue (B). The factory setting for this product is 6500K (6500 Kelvin).



sRGB-This 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).

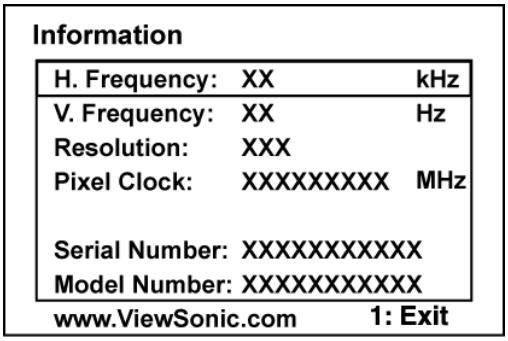
7500K - Adds blue to the screen image for cooler white (used in most office settings with fluorescent lighting).

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

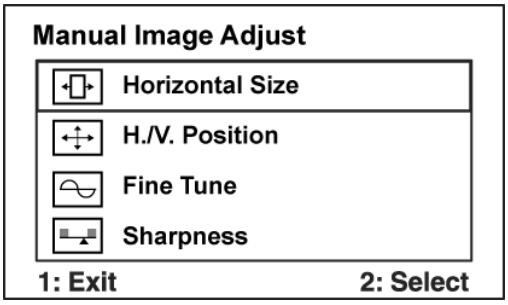
5400K-Adds green to the screen image for a darker color.

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

Information displays the timing mode (video signal input) coming from the graphics card in the computer, the LCD model number, the serial number, and the ViewSonic® website URL. See your graphics card's user guide for instructions on changing the resolution and refresh rate (vertical frequency).
NOTE: VESA 1680 x 1050 @ 60Hz (recommended) means that the resolution is 1680 x 1050 and the refresh rate is 60 Hertz.



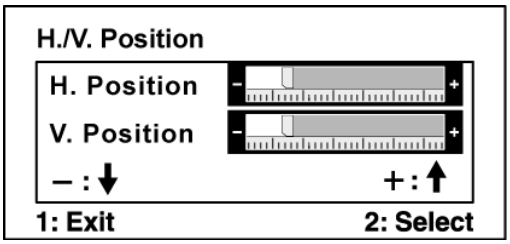
Manual Image Adjust



Control	Explanation

Horizontal Size adjusts the width of the screen image.

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

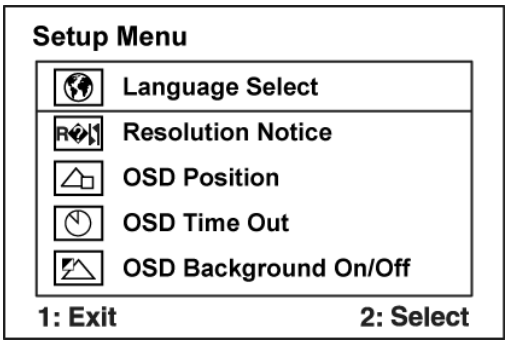


Fine Tune sharpens the focus by aligning text and/or graphics with pixel boundaries.

NOTE: Try Auto Image Adjust first.

Sharpness adjusts the clarity and focus of the screen image.

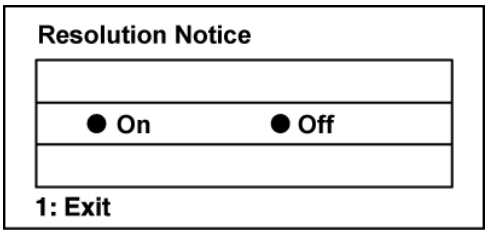
Setup Menu displays the menu shown below:



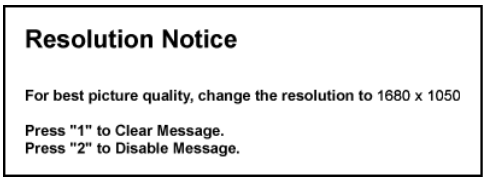
Language Select allows the user to choose the language used in the menus and control screens.

Control	Explanation

Resolution Notice allows the user to enable or disable this notice.



If you enable the Resolution Notice shown above and your computer is set at a resolution other than 1680 x 1050, the following screen appears.



OSD Position allows the user to move the OSD menus and control screens.

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

OSD Background allows the user to turn the OSD background On or Off.

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

4. Circuit Description

4.1 MAIN BOARD

The main board is a two-layer, single-landed design with ground and ground planes provided.

The VGA cable is a signal cable that contains video signal, sync signal and DDC signal from PC VGA adapter.

This system board consists of 3 functional areas: flat panel controller, Micro controller and audio controller.

4.1.1 Flat panel controller…NT68625F (U3)

The heart of the system board is NovaTek NT68625F. The NT68625F is a graphics processing IC for LCD monitor. It provides all key IC control functions required for LCD panel. On-chip functions include a high-speed triple-ADC, TMDS receiver, PLL, high scaling engine Micro processor and OSD controller, manages other devices in the system such as the keypad, the backlight, LED and audio general purpose input/output pins.

Pin number	Pin name	Pin function
39	**PA6**	**Key-Menu**
125	**AD1**	**Key-Sel/Auto**
124	**PC5**	**Key-Power on/off**
125	**PB0**	**Key-Right**
126	**PB0**	**Key-Left**
66	**PA0**	**LED-amber**
65	**PA2**	**LED-green**
28	**PA3**	
40	**PA7**	
118	**PWMB**	**Backlight-adj.**
49	**DDCD_SDA**	**SDA-VGA (Debug)**
50	**DDCD_SCL**	**SCL-VGA (Debug)**
31	**DDCA_SDA/RS232_TX**	**SDA (Debug)**
32	**DDCA_SCL/RS232_RX**	**SDA (Debug)**

a) Clock Generation:

Crystal Input Clock (OSCI and OSCO). This is the input pair to an internal crystal oscillator and Corresponding logic. A 12MHz crystal is recommended.

b) Hardware Reset (Pin 48)

Hardware Reset signal is generated by NT68625F (U3/Pin 48). It assert a reset signal at least 1ms.

c) Analog to Digital Converter

The NT68625F chip has three ADC's (analog-to-digital converters), one for each color (red, green and blue). The analog RGB signals are connected to NT68625F as described below

Pin Name	Pin Number
R+	24
R-	25
G+	22
G-	23
B+	19
B-	20

d) OSD:

The NT68625F has a fully programmable, high-quality OSD controller. The on-chip static RAM (256 different fonts at size of 12X18) stores the cell map and the cell definitions.

e) Panel Power Sequencing (LCD-ON, BL-ON) (Pin 108&Pin29)

The NT68625F has two dedicated outputs LCD-ON and BL-ON (Pin108 and Pin29) to control LCD power sequencing once data and control signals are stable.

f) Inverter Brightness control (PWMB) (Pin 118)

The NT68625F has one PWM output PWMB (Pin118) to control Inverter Brightness Range.

g) Panel LVDS interface (Pin68~77, Pin80~88)

The NT68625F driver interface is highly programmable. It supports LVDS port for panel.

4.2 Power Module

The power module includes an Inverter and Power regulator. The electrical specification described as followings:

4.2.1 Power characteristics.

Input	**Rated Input Voltage**	**100~240 Vac, 50/60Hz**
	Operation Input Voltage Range	**90~264 Vac, 47~63Hz**
	Max Input AC Current	**< 2A**
	Efficiency	**5Vdc load 3A** **Brightness Voltage from 0.3~3.3Vdc** **ON/OFF Voltage: High (3.0Vdc)/Low (0Vdc)**
	Brightness Voltage (Vadj)	**0.3Vdc(Max) ~ 3.0Vdc(Min)**
	On/Off Voltage	**High (3.0Vdc)/Low (0Vdc)**
Output	**Static Output Characteristics**	**5V/0~3A Output: 4.94Vdc ~ 5.46Vdc**

4.2.2 Inverter output characteristics.

Rated Output Kick-off Voltage	**1800~2300 Vrms**
Rated output Voltage	**625Vrms**
Rated Output Frequency	**40 ~ 60 Khz**
Rated Output Current per tube	**6~8.5mArms**

4.2.3 Power module of connector definition;

CN101;

Pin 1 & 2 ----> GND
Pin 3 & 4 -------> Vdc Output (5.2V +/- 5%)
Pin 5 ---------> Brightness Control Voltage
Pin 6 ---------> On /Off (“High" set Lamp on)

CN401 ~ CN402;

Pin 1 ---------> HV (High Voltage for CCFL)
Pin 2 ---------> Return (Low Voltage for CCF)

5. Adjustment Procedure

Key Function Description

CONTROL KEY	KEYS FUNCTION
[AUTO] [2]	By pressing [AUTO] key, “Auto Image Adjust” is performed
[MENU] [1]	By pressing [MENU] key, Main menu display
[▼] [▲]	A. When “MENU OSD” display, press these keys to change the contents of an adjustment item, or change an adjustment value B. When “MENU OSD” is un-display, press these keys to change brightness and contrast
[POWER] [⏻]	Power on or power off the monitor

Hot Key Operation

[1]	Main Menu
[2]	Input toggle (Analog / Digital)
[▼]	To immediately activate Brightness/Contrast menu.
[▼] +[▲]	Recall both of Contrast and Brightness to default
[1] + [2]	Toggle 720x400 and 640x400 mode when input 720x400 or 640x400 mode
[1] + [▼] + [▲] (Keep pushing 3 sec)	White Balance. (Not shown on user’s guide)
[1] + [▼]	Power Lock
[1] + [▲]	OSD Lock
[2] + [▼]	HDCP switch → on = DDC/CI ; off = DDC2B
[▼] +[▲] + [⏻]	Factory Mode
Remark : All the short cuts function are only available while OSD off	

OSD Control

5.3.1 OSD table

Layer 1	Layer 2	Layer 3
Auto Image Adjust		
Contrast/Brightness	Contrast (+ / -)	
	Brightness (+ / -)	
Audio	Volume	Volume (+ / -)
	Mute	On/Off
Color Adjust	sRGB	
	9300K	
	7500K	
	6500K	

	5400K	
	User Color	Red (+ / -)
		Green (+ / -)
		Blue (+ / -)
Information		
Manual Image Adjust	H/V Position	H Position (+ / -)
		V Position (+ / -)
	H Size	+ / -
	Fine Tune	+ / -
	Sharpness	+ / -
Setup Menu	Language Select	English
		French
		German
		Italian
		Spanish
		Finnish
		Japanese
		Simplified Chinese
		Traditional Chinese
	Resolution Notice	On/Off
	OSD Position	H Position (+ / -)
		V Position (+ / -)
	OSD Time Out	
	OSD Background	On/Off
Memory Recall		

5.3.2 OSD lock Menu function

OSD Lock Menu Function Check		
Item	**Method**	**Phenomenon**
Activate OSD lock	[1] + [▲] 10S	Press any of buttons"1", "▼", "▲", "2" will appear "OSD Locked" 3s
Deactivate OSD lock:	[1] + [▲] 10S(again)	
NOTICE: When the OSD is locked will lock all functions. Status bar indicating OSD Lock or Unlock is in progress and when complete it will indicate “OSD Locked” OSD Lock should not lock Power Button and Power Lock function		

5.3.3 Power lock Menu function

Power Lock Menu Function Check		
Item	**Method**	**Phenomenon**
Activate Power Lock	[1] + [▼] 10S	Can not turn off the LCD; Press the power button will appear "Power Button Locked" OSD 3s; LCD would automatically turn back "On" when power is restored after a power failure
Deactivate Power Lock	[1] + [▼] 10S(again)	
NOTICE: Status bar indicating Power Button lock or unlock is in progress and when complete it will indicate "Power Button Locked" Power should only be lockable in the "On State"		

5.3.4 Resolution notice function

Resolution Notice Menu		
Item	Method	Phenomenon
Activate Resolution Notice Menu	Resolution Notice OSD should show on screen after changing to non-native mode for 30 sec, And it should disappear after 10s or by pushing button [1] or [2]	------
Deactivate Resolution Notice Menu	Push button [2] under Resolution Notice OSD, select Disable	-------

5.3.5 Factory Mode Introduction

When input the signal, press "power key" to turn off the monitor. Press" **[2] +[⏻]** "at the same time so as to enter factory mode. After power on, press ''Menu[1]'' key, you can see the Factory menu.

INL MT220WW01 : Currently using panel model name

V2 070328 : Currently using firmware version information.

Auto Color : Automatically calibrate chip ADC parameter by using chip internal DAC

Color Temperature : The R, G, B of 9300K and 7500K and 6500K and 5400K and User Mode

Colors are all generated from scaling back end.

Burn-in pattern

If it is a new monitor, and in factory mode, if no VGA signal input, Burn-in pattern will self generate automatically. Burn in patterns are: full Red, Green, Blue, White and Black. You can not escape from Burn-in pattern until plug in VGA Cable or press the power key to turn the monitor off and then turn it on.

Auto Color (Automatically calibrate chip ADC parameter by using chip internal DAC)

If it is a new-built set and it is first time to do the “auto color”, please confirm the following steps:

-Connect the VGA cable with the standard video pattern generator and display 5-mosic pattern on the monitor.

- Press “Power” to power off the monitor.

- Press” [▼] +[▲] + [⏻] “simultaneously to enter factory mode.

- Press ‘’Menu[1]”, then press ‘’Auto[2]” to execute Auto color item.

- After the “Auto Color” process finished, please press “Power” to restart monitor.

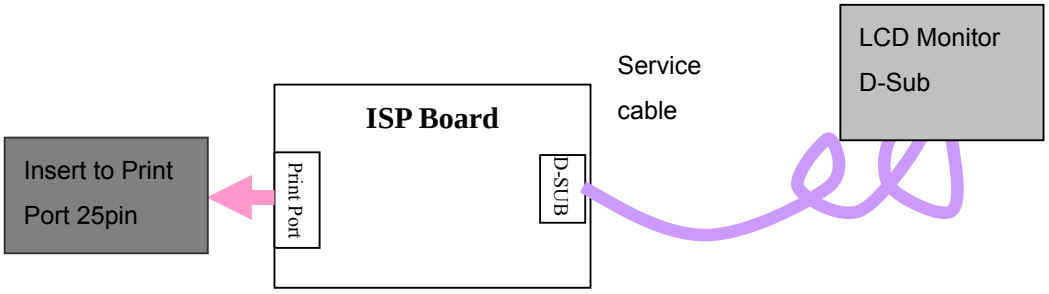
EDID (Rewrite EDID data to EEPROM)

If we need to rewrite the EEPROM data, please confirm the following steps.

1. Plug in VGA Cable; we can rewrite the EDID data to EEPROM by using “EDID Rewrite” program.
2. If the “EDID Rewrite” process finished, please pull out VGA cable and press ‘’2”+”▲” at the same time.
3. Pull out AC power cable or press power key to restart.

Upload firmware to MCU via VGA Cable

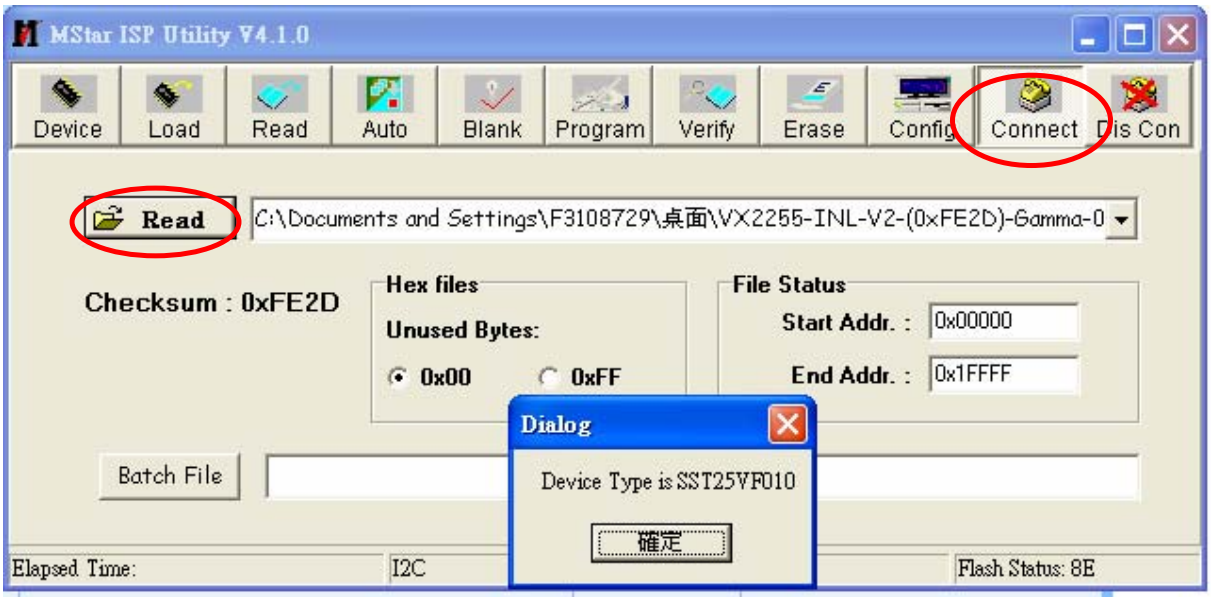
5.7.1 Connect ISP board between monitor and PC as below configure



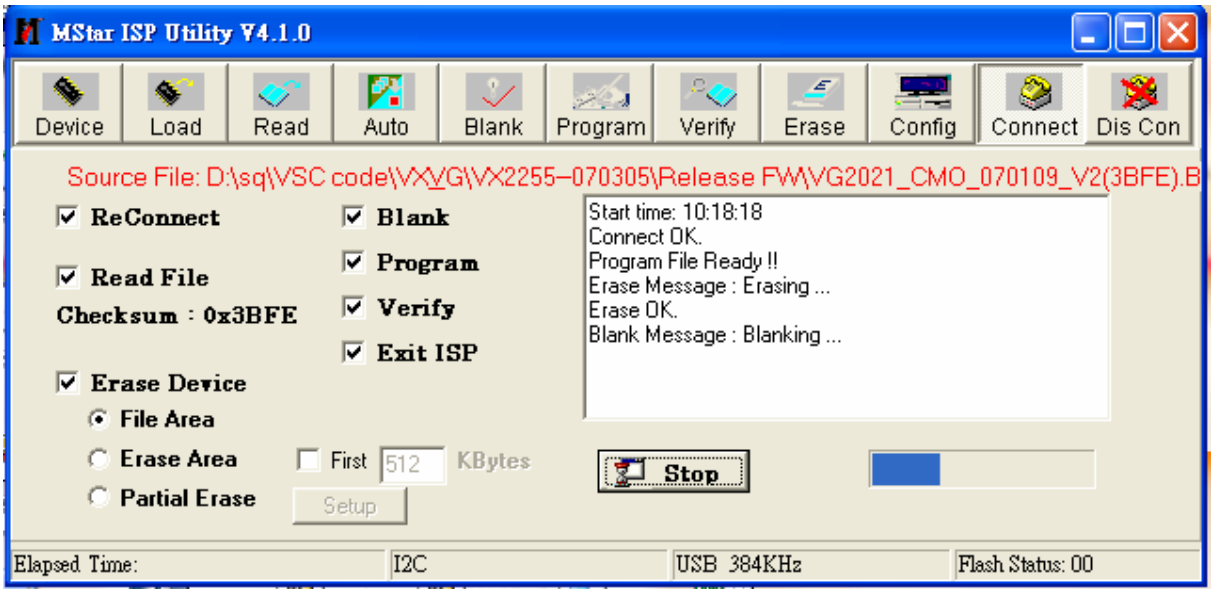
5.7.2 Using mStar ISP Tool Update FW:

(1). Seletct “Read”, Choose the corresponding firmware, load to MCU.

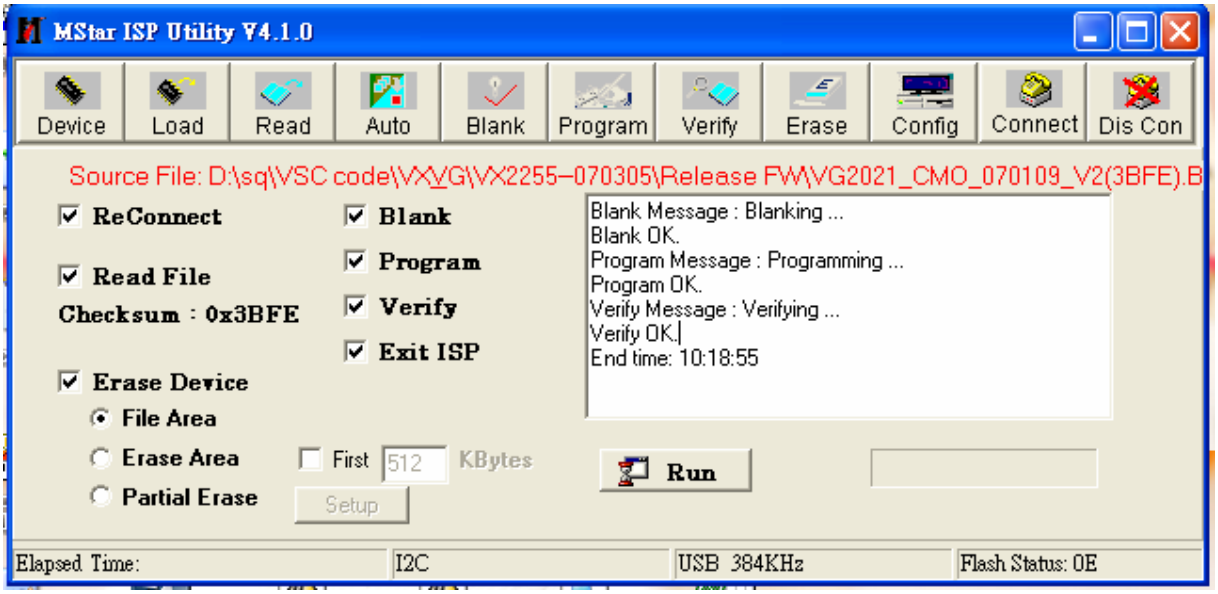
(2). Select “Connect”, auto connect for ISP.



(3). Select “Run”, start ISP.



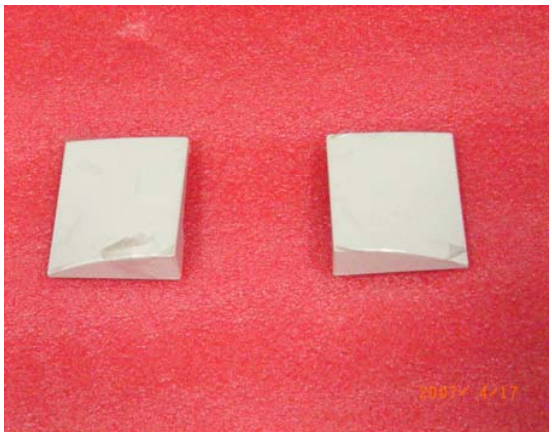
(4). When the picture show “Verify OK”, ISP finished.



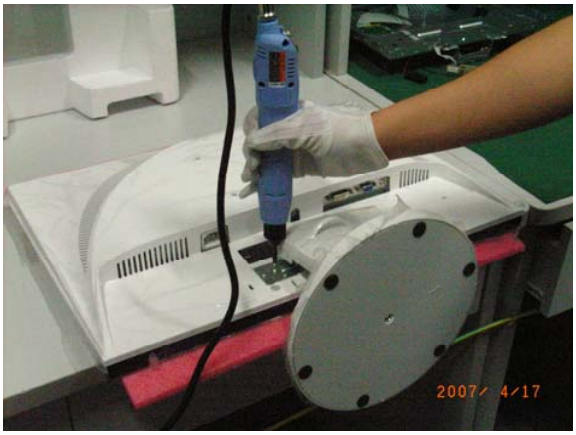
5.7.3 After repair, to ensure the quality you should do the following test and adjustment

<table>
<tr><th>Item</th><th>Content</th><th>Equipment</th></tr>
<tr><td>Test OSD function</td><td>1.Signal is set as 1680x1050@60Hz
2. LCM button are from left to right, checking whether each single function key and compound function key can be worked.</td><td>Chroma
Signal Generator</td></tr>
<tr><td>Contrast Check</td><td>1. Set input mode to 1680x1050@60Hz
2. Set Pattern to 32 gray shades
3. Set contrast to the max. The brightest 6~8 shades brightness cannot be distinguished.</td><td>Chroma
Signal Generator</td></tr>
<tr><td>Color Temperature</td><td>1. Do “Auto color” at 1680 x 1050@60Hz, 5-Mosic pattern
2. Measure color temperature, check it complies with the following temperature:
5400K x=0.335 +/- 0.02, y=0.350 +/- 0.02
6500K x=0.313 +/- 0.02, y=0.329 +/- 0.02
7500K x=0.299 +/- 0.02,y=0.315 +/- 0.02
9300K x=0.283 +/- 0.02, y=0.298 +/- 0.02</td><td>Chroma Signal Generator and color analyzer</td></tr>
<tr><td>Modes switching check</td><td>1. Use Chroma Pattern Generator to make sequence.
VESA (640x480 800x600 1024x768 1280x1024), MAC 832x624
DOS (640x350 720x400), the detail supported modes and power saving signal.
2. Confirm the above timing modes must be full screen and the picture must be normal.
3. LED is Orange at power saving mode.</td><td>Chroma Signal Generator</td></tr>
<tr><td>Y measurement at default setting</td><td>1. Set brightness to default value 100 and contrast to default value 70 at 6500K
2. At full white patter, Measure Y, which should be ≥ 250cd/m²</td><td>Chroma Signal Generator and Color Analyzer</td></tr>
<tr><td>Panel Flicker check</td><td>1. Mode: 1680x1050@60Hz
2. Set Brightness& contrast to default value
3. Do “Auto Image Adjust”
4. Shut down PC to check whether there’s glitter on the center of the picture.</td><td>Equipment::
Chroma Signal Generator & PC</td></tr>
<tr><td>Power saving</td><td>Mode: 1680x1050@60Hz
Pattern: full white
Brightness: Max.
Contrast: Default
Check power consumption at each modes
<table>
<tr><th>State</th><th>Power Consumption</th><th>LED color</th></tr>
<tr><td>Normal</td><td>≤ 42W</td><td>Blue</td></tr>
<tr><td>Stand By</td><td>< 2W</td><td>Orange</td></tr>
<tr><td>Power Key Off</td><td>＜1W</td><td>No</td></tr>
</table></td><td>Chroma signal generator and Power meter
AC input: 230V/50Hz</td></tr>
</table>

Disassembly Procedure

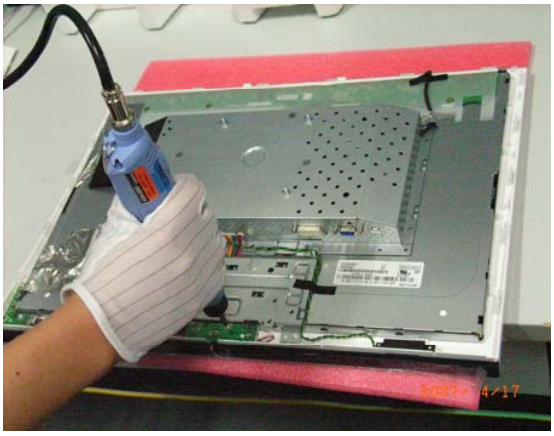


HINGE COVER

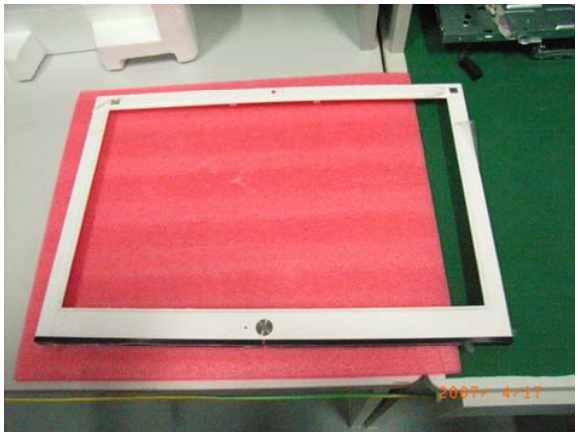


Adjust BASE

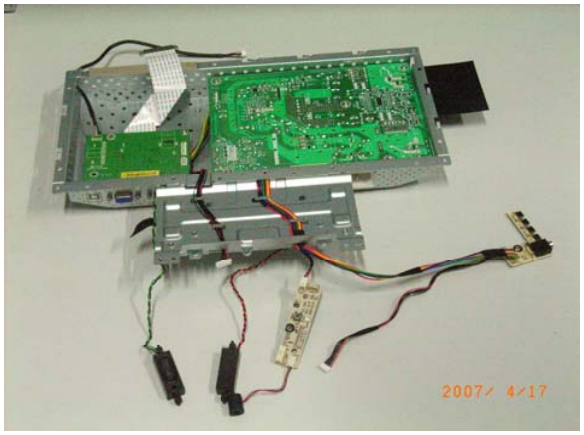
BACK COVER



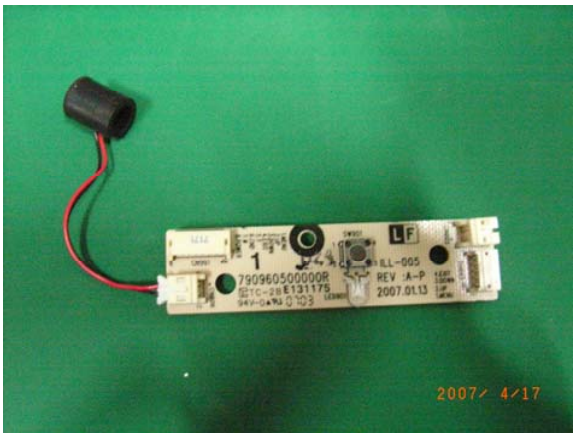
Web camera



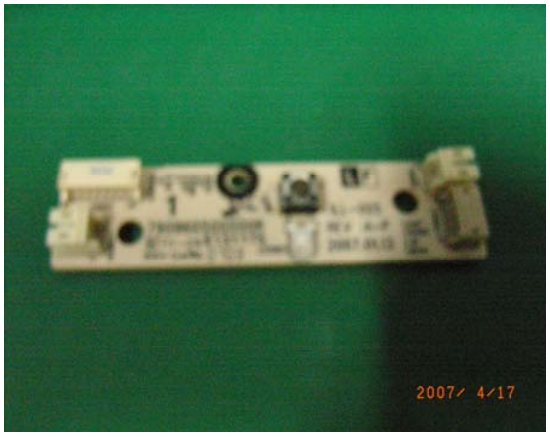
BEZEL



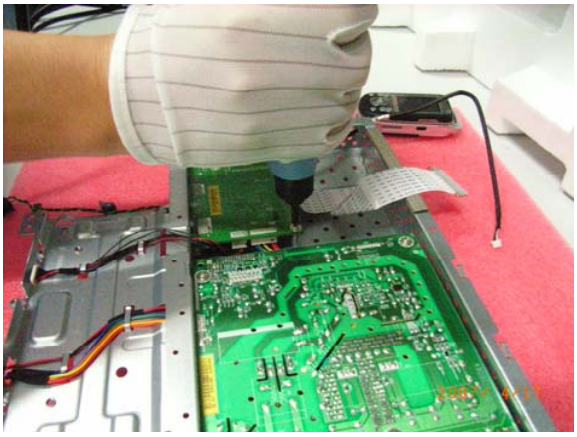
PANEL

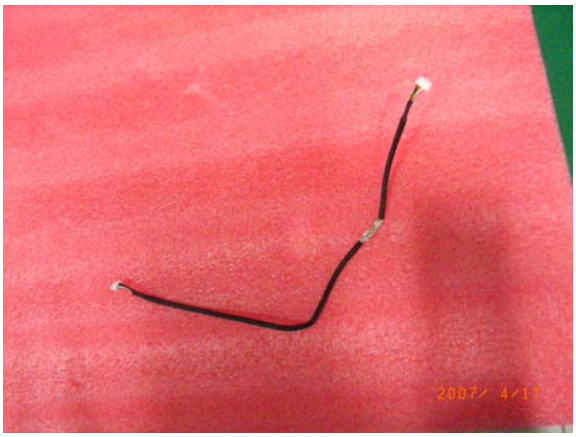


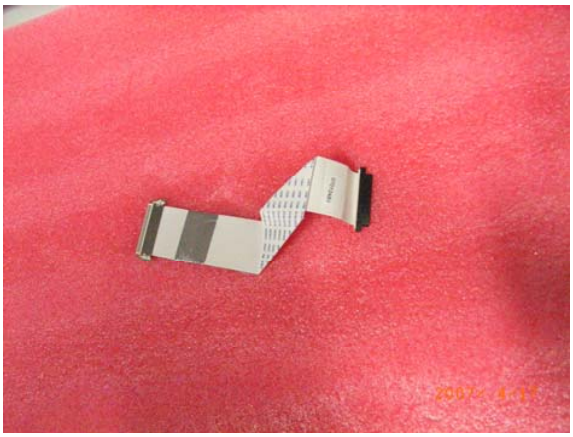
MICROPHONE



Power key board

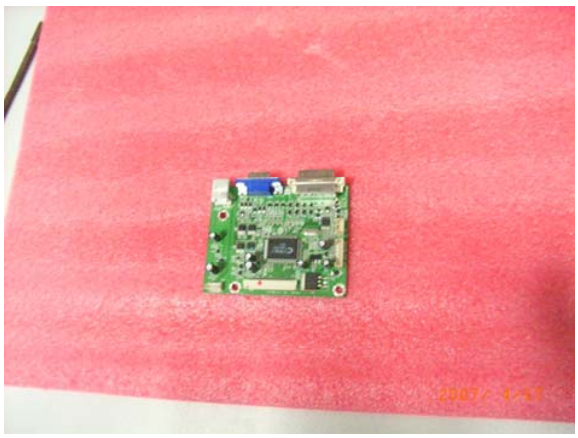




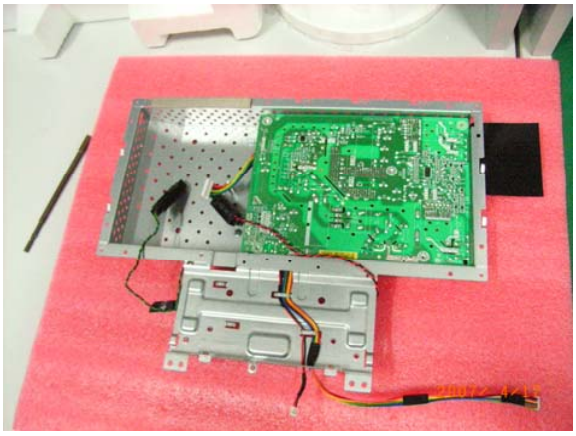


LVDS CABLE

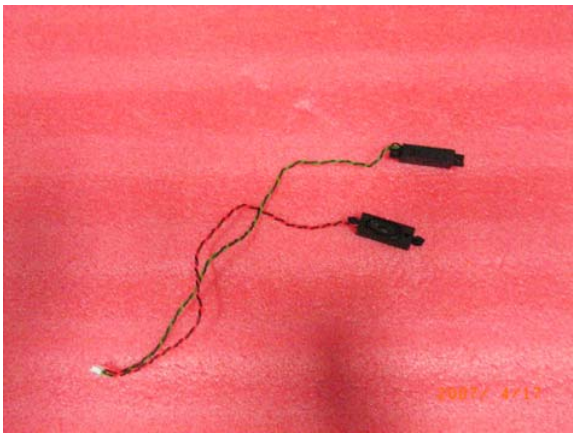
KEYPOWER CABLE



I/F BOARD

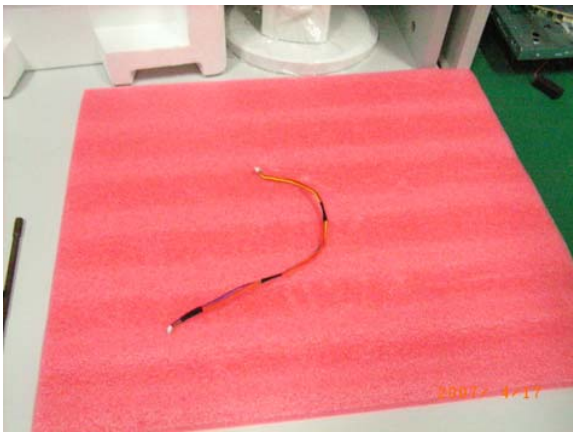


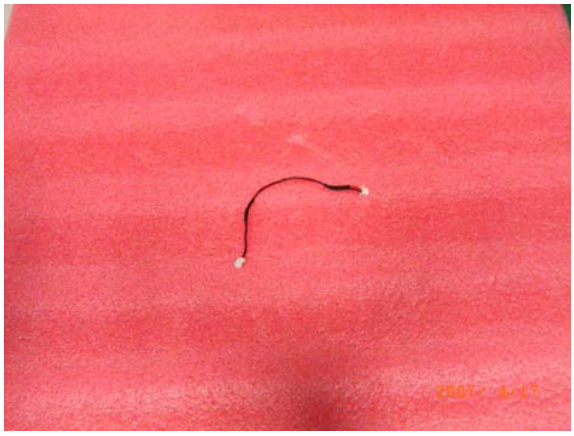
CHASSIS



SPEAKER

P/I BOARD





Packing For Shipping

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

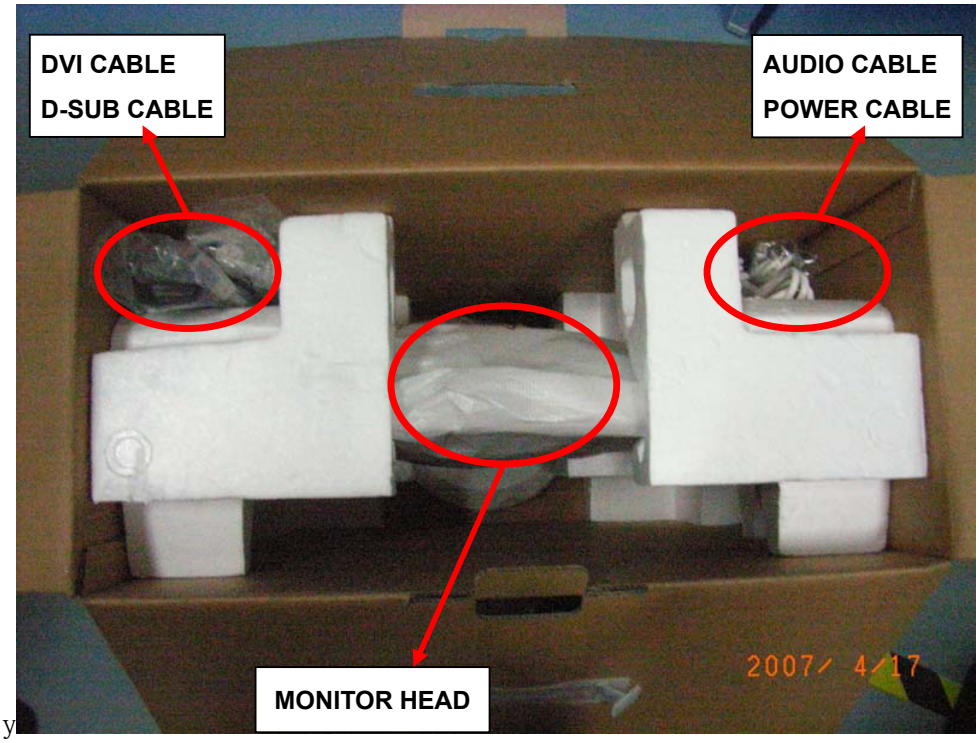
1.2 Put the monitor in the PE bag and seal the bag with tape. (Figure 2)

Figure 1

Figure 2

1.3 Put the cushions on the monitor.

Place the monitor into the carton and then put all the accessories into the carton. At last, close the carton and seal it with tape.(Figure3)



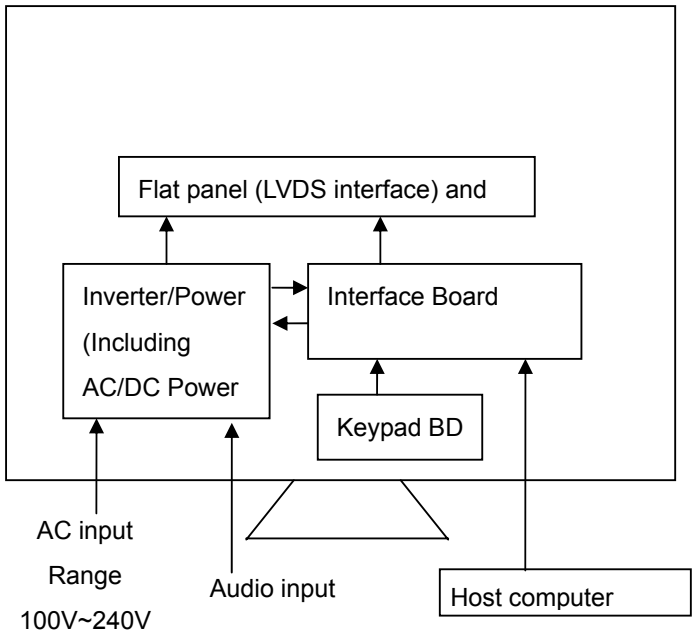
y

Figure 3

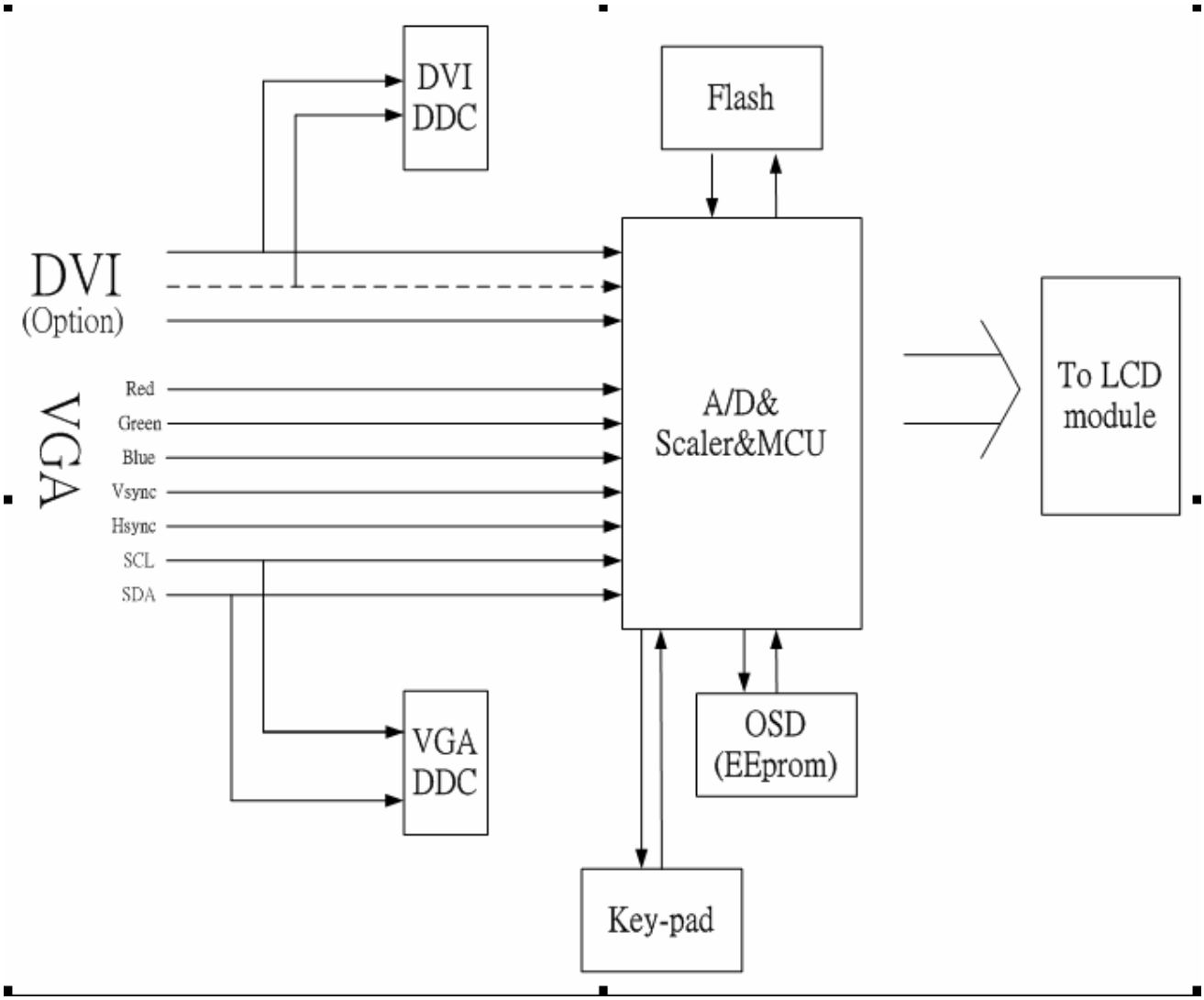
6. Troubleshooting Flow Chart

Common Acknowledge

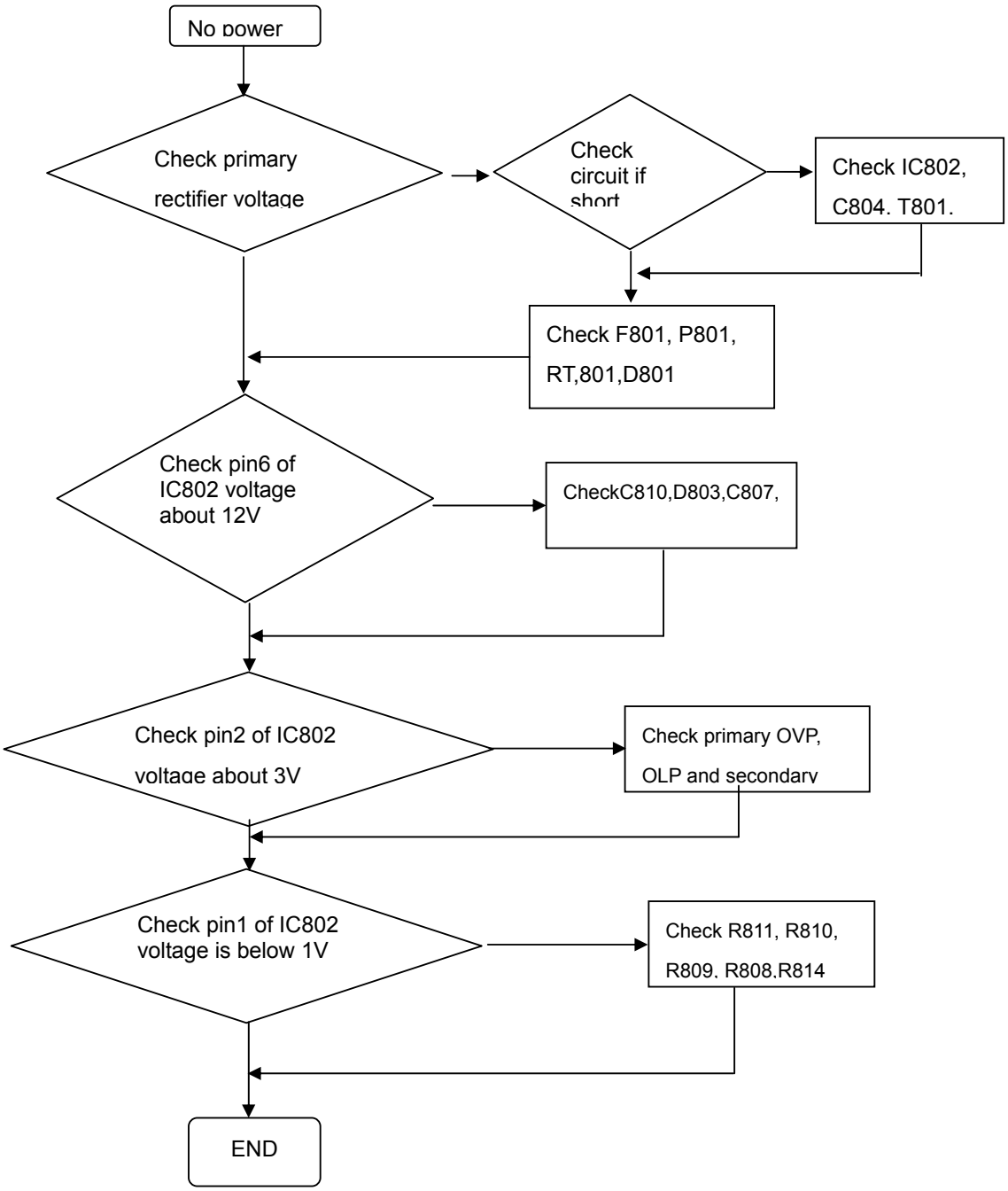
- If you change the interface board, be sure that the U103, U105, U106 and U108 these three components also changed to the new I/F board because there was program inside. If not, please re-write EDID and upload firmware into U106 via VGA Cable.
- If you adjust clock and phase, please do it at the condition of Windows shut down pattern.
- If you confirm the R.G.B. color is normal or not, please do it under 16-grey scalar pattern.
- This LCM is analog interface. So if the entire screen is an abnormal color that means the problem happen in the analog circuit part, if only some scale appears abnormal color that stand the problem happen in the digital circuit part.
- If you check the H/V position, please use the crosshatch pattern.
- This LCM support more than 30 timing modes, if the input timing mode is out of specification, the picture may appears abnormally.
- If brightness uneven, repairs Inverter circuit or change a new panel.
- If you find the vertical line or horizontal line lost on the screen, please change panel.
- If you find the speaker don't working, please don't plug in audio cable, unless change new speaker.



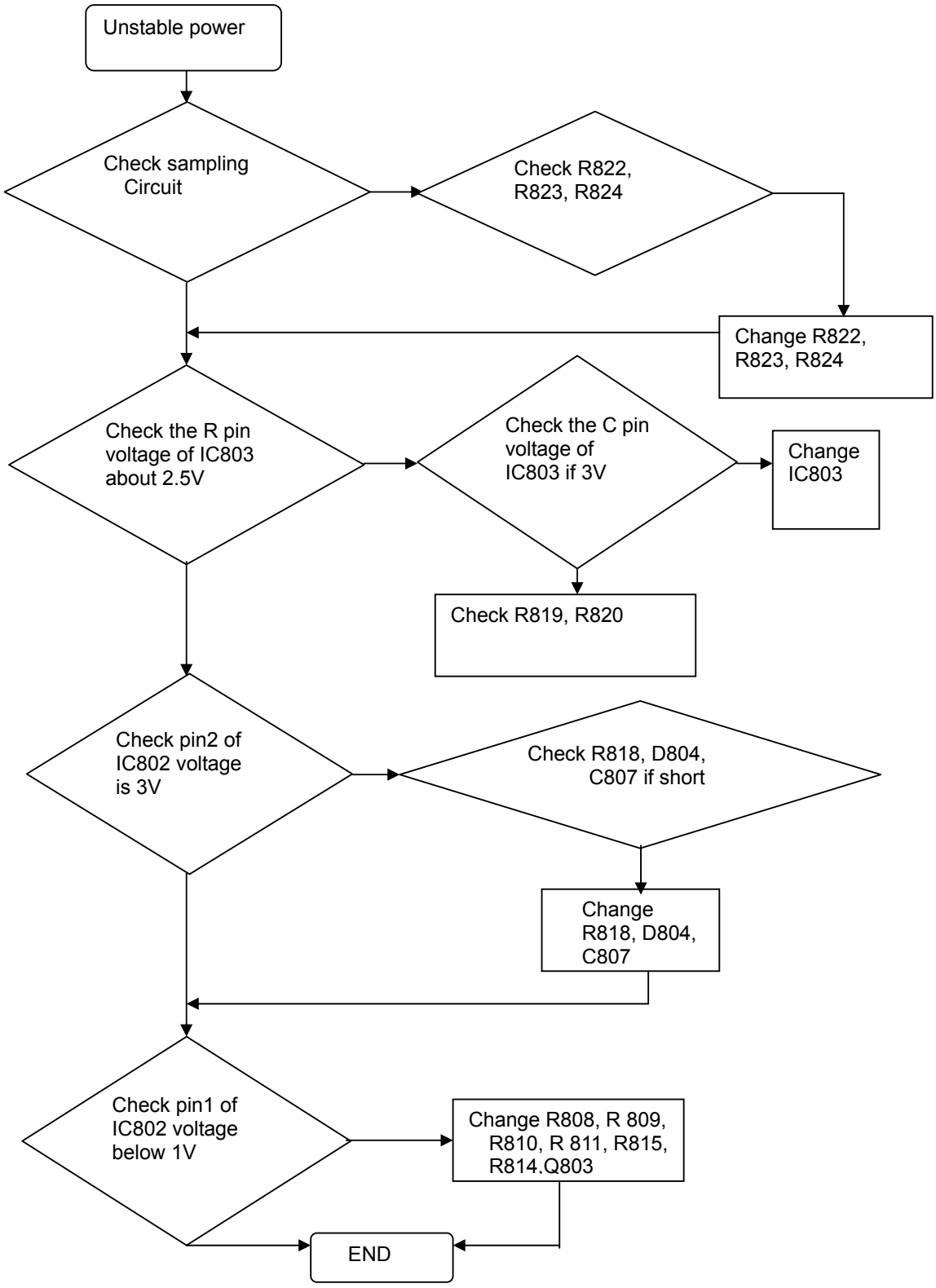
Interface BOARD DIAGRAM



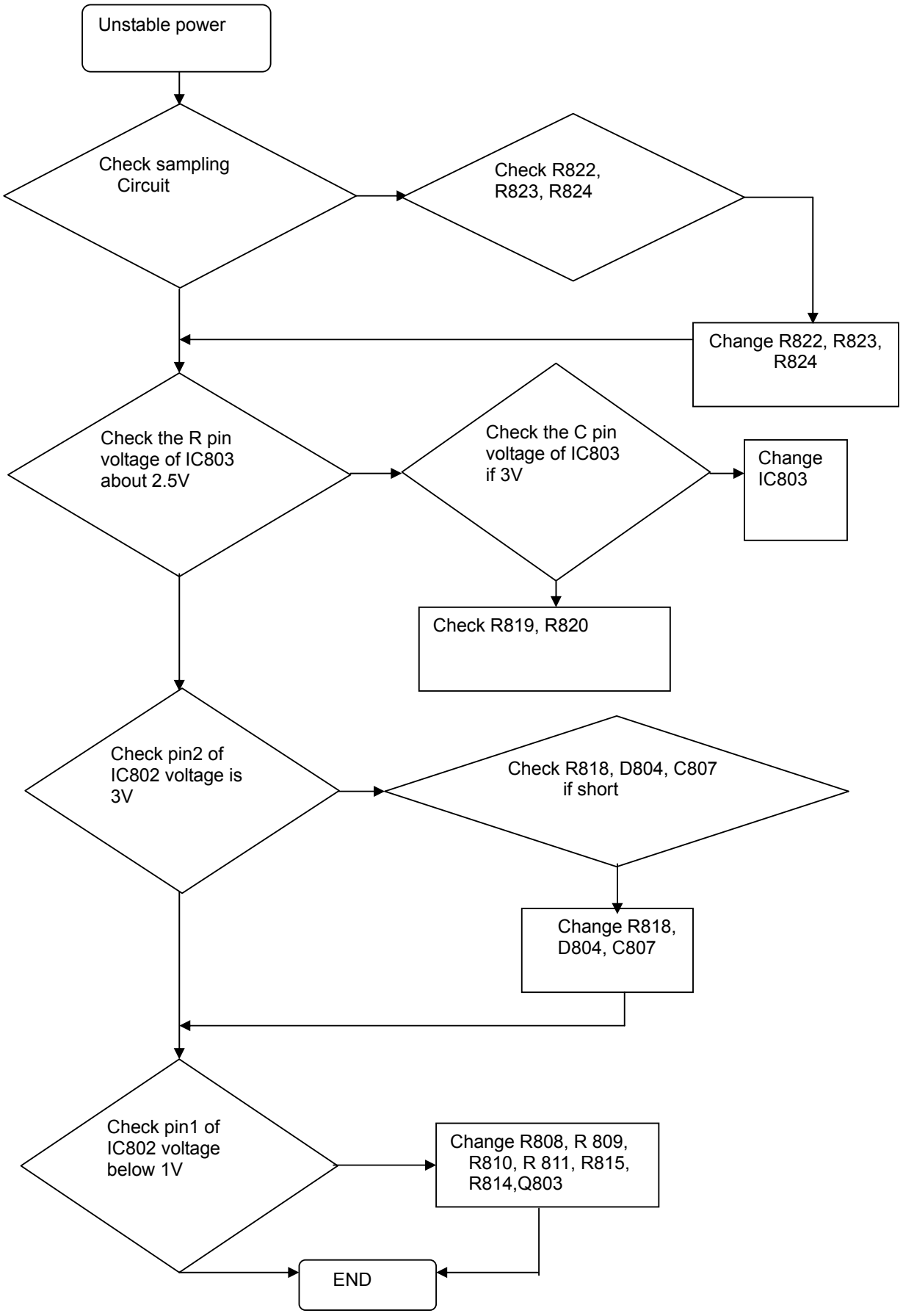
No Power & Power LED Off



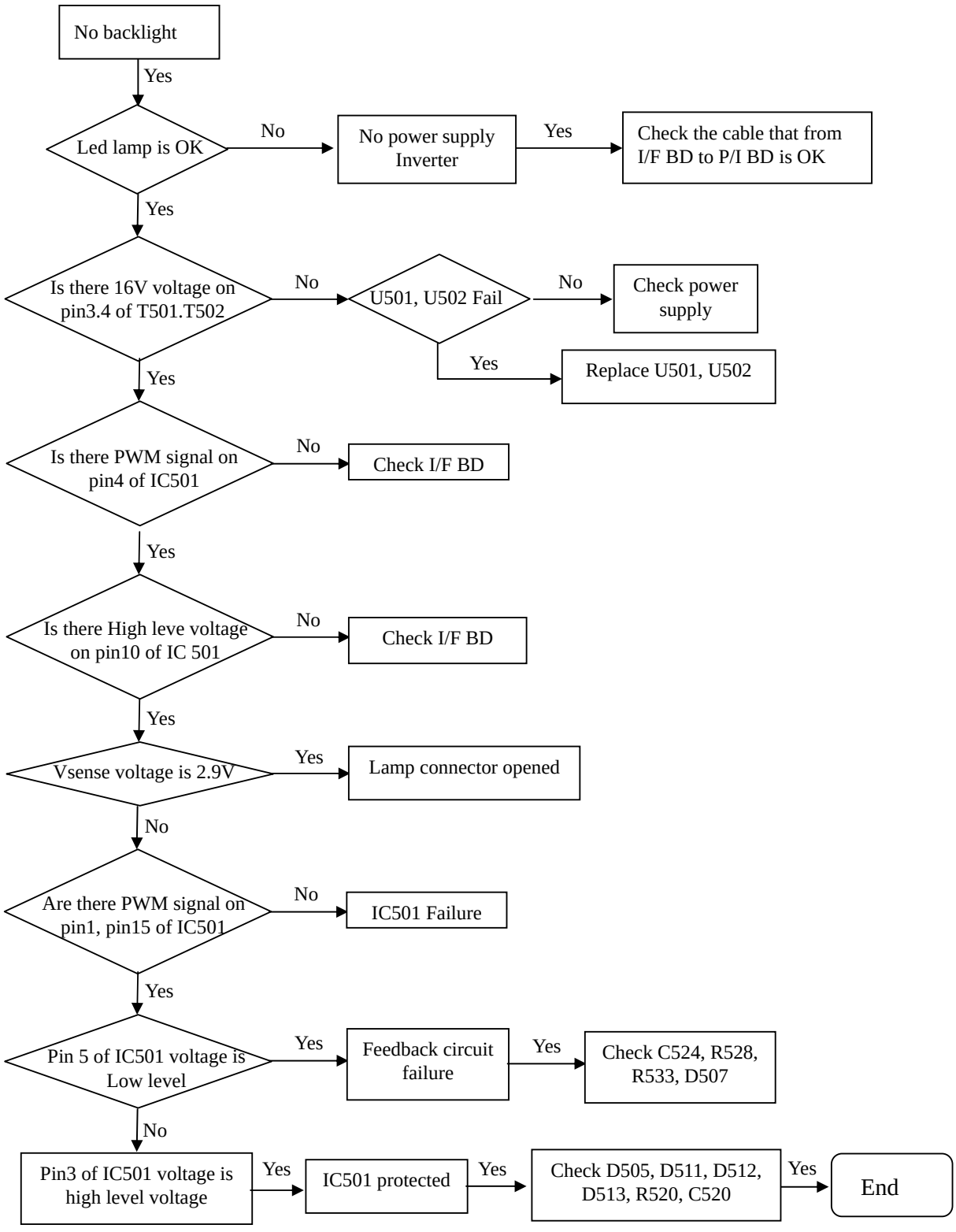
DC output voltage is unstable



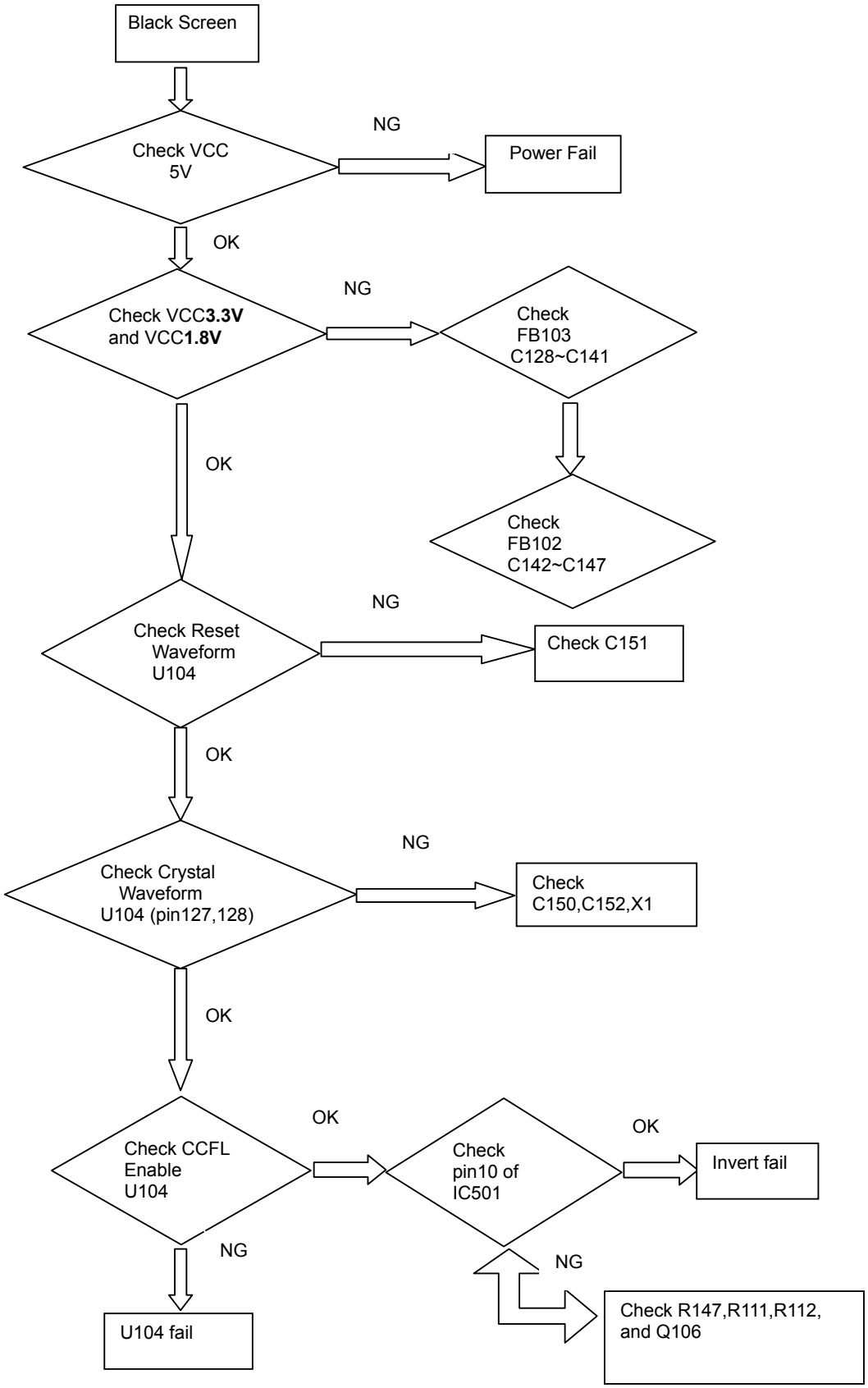
Output power is unstable



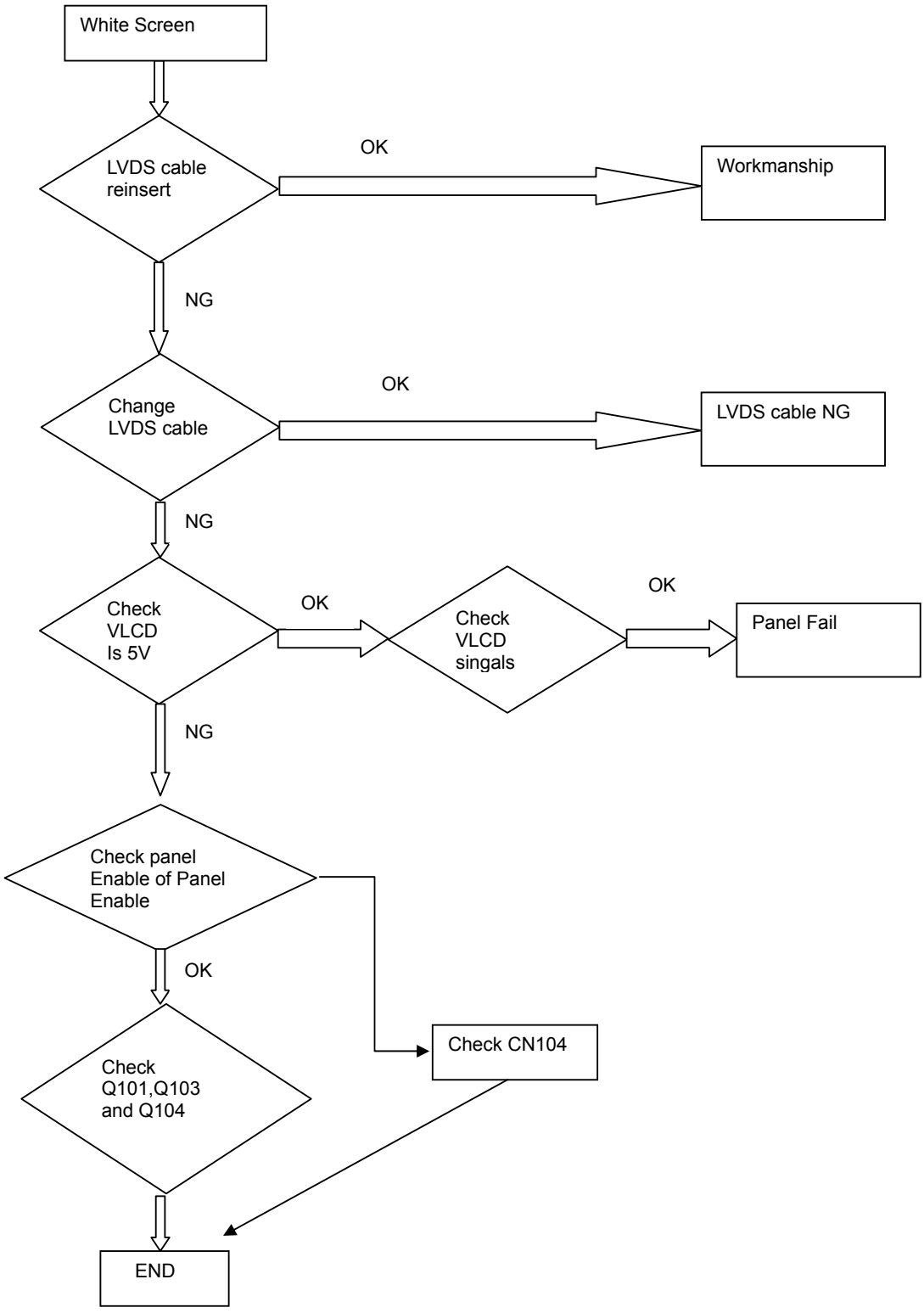
Backlight can’t be turned on



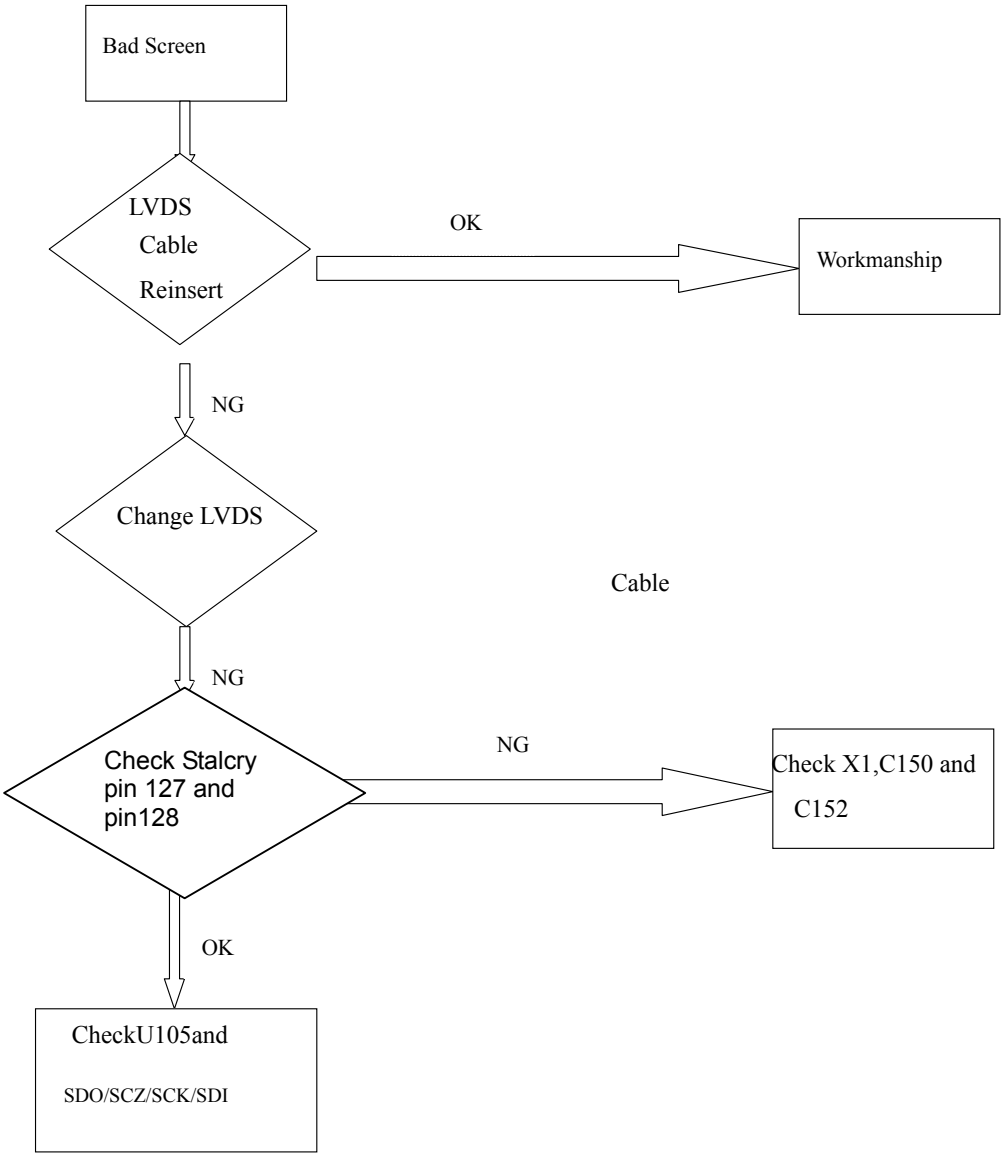
Black Screen and backlight turn on



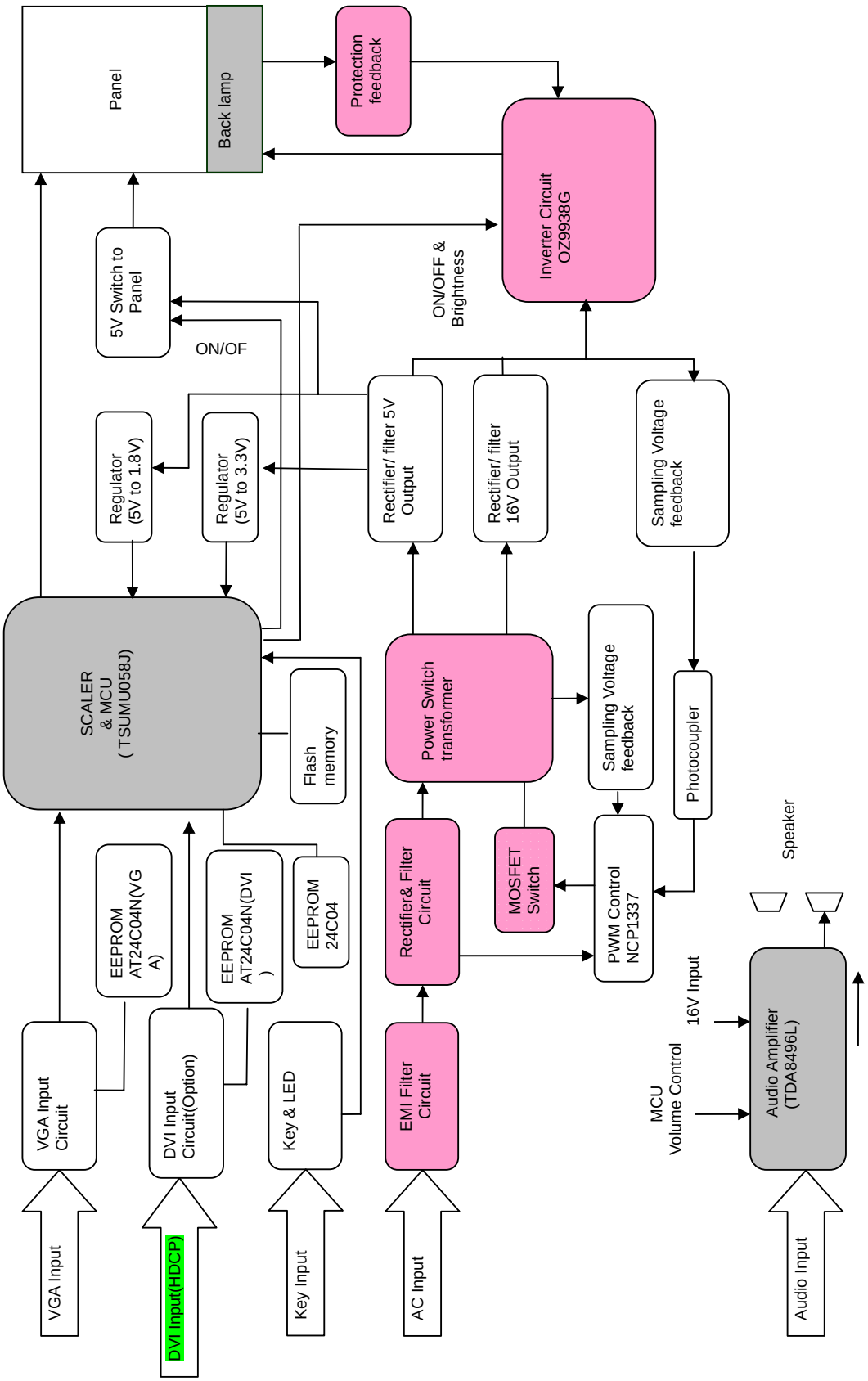
White Screen



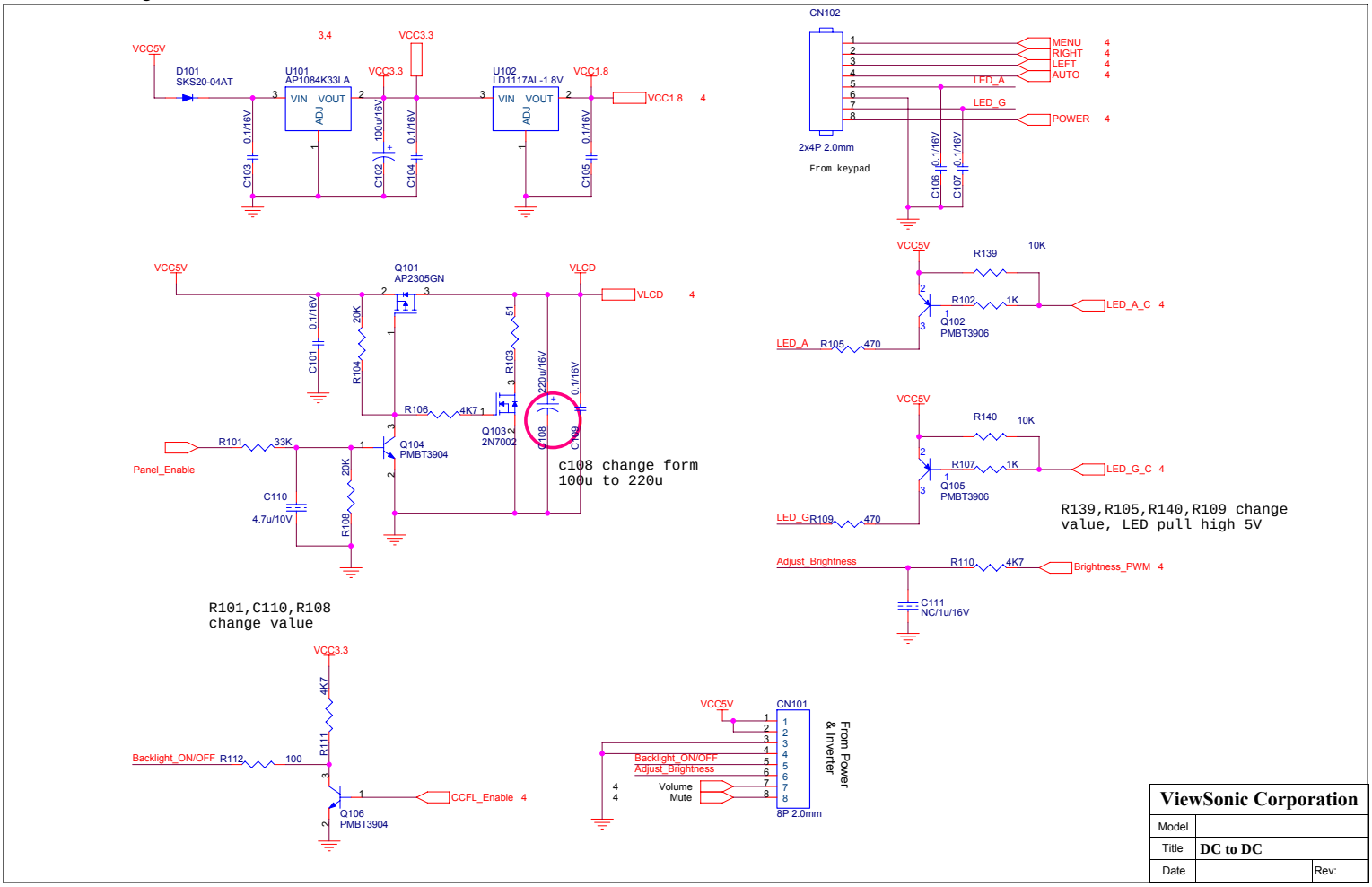
Bad Screen



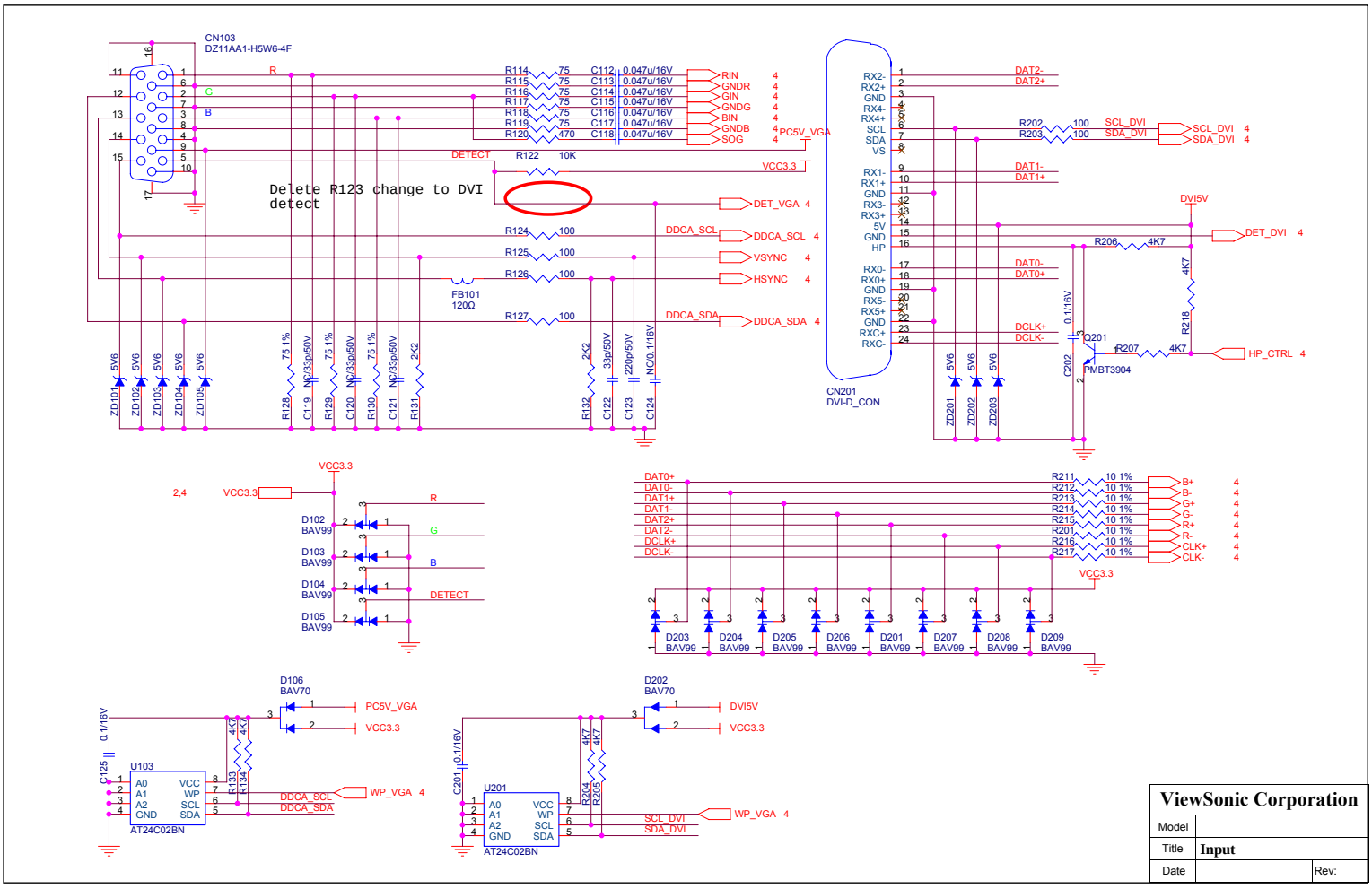
7. Block Diagram

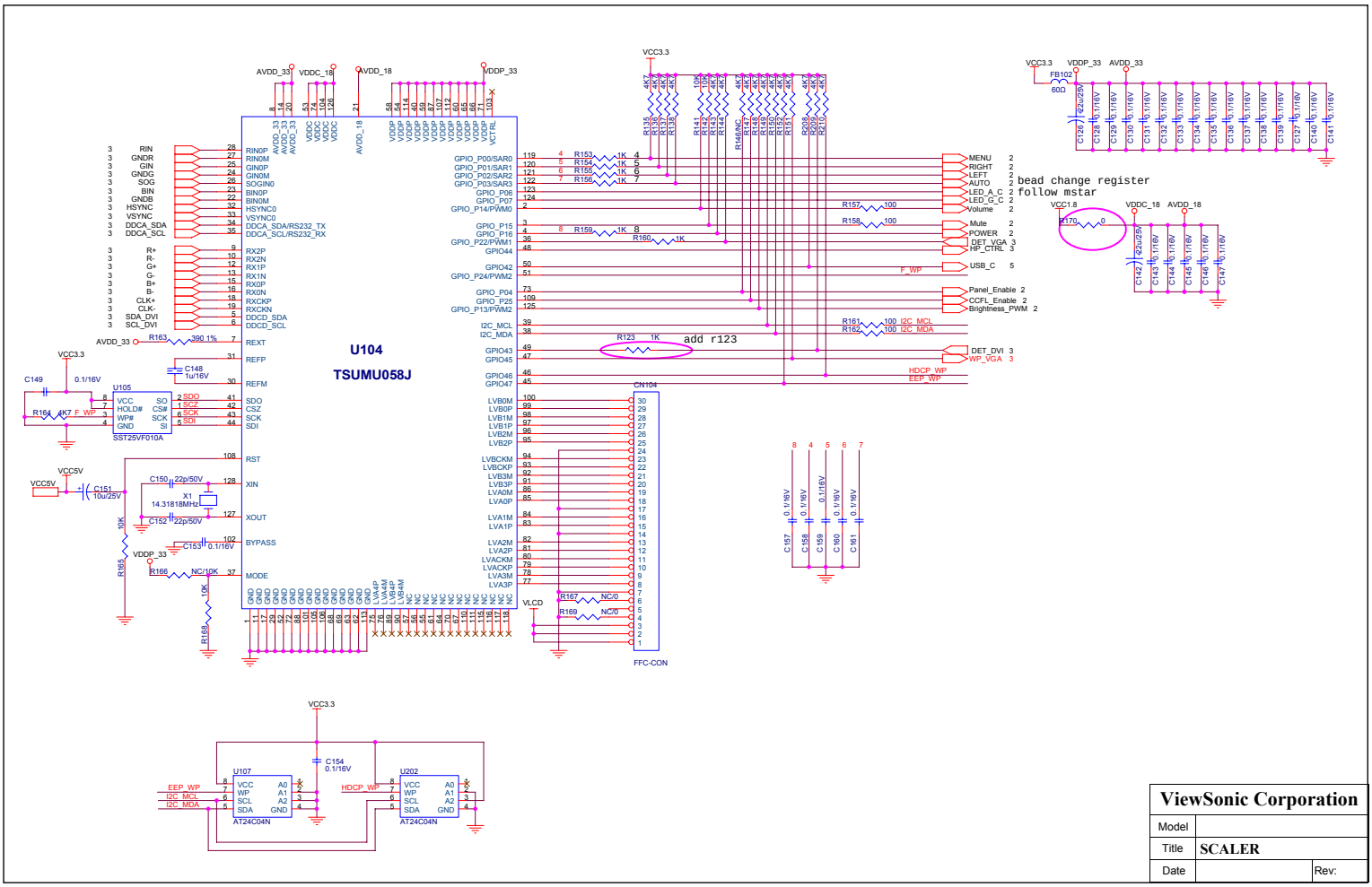


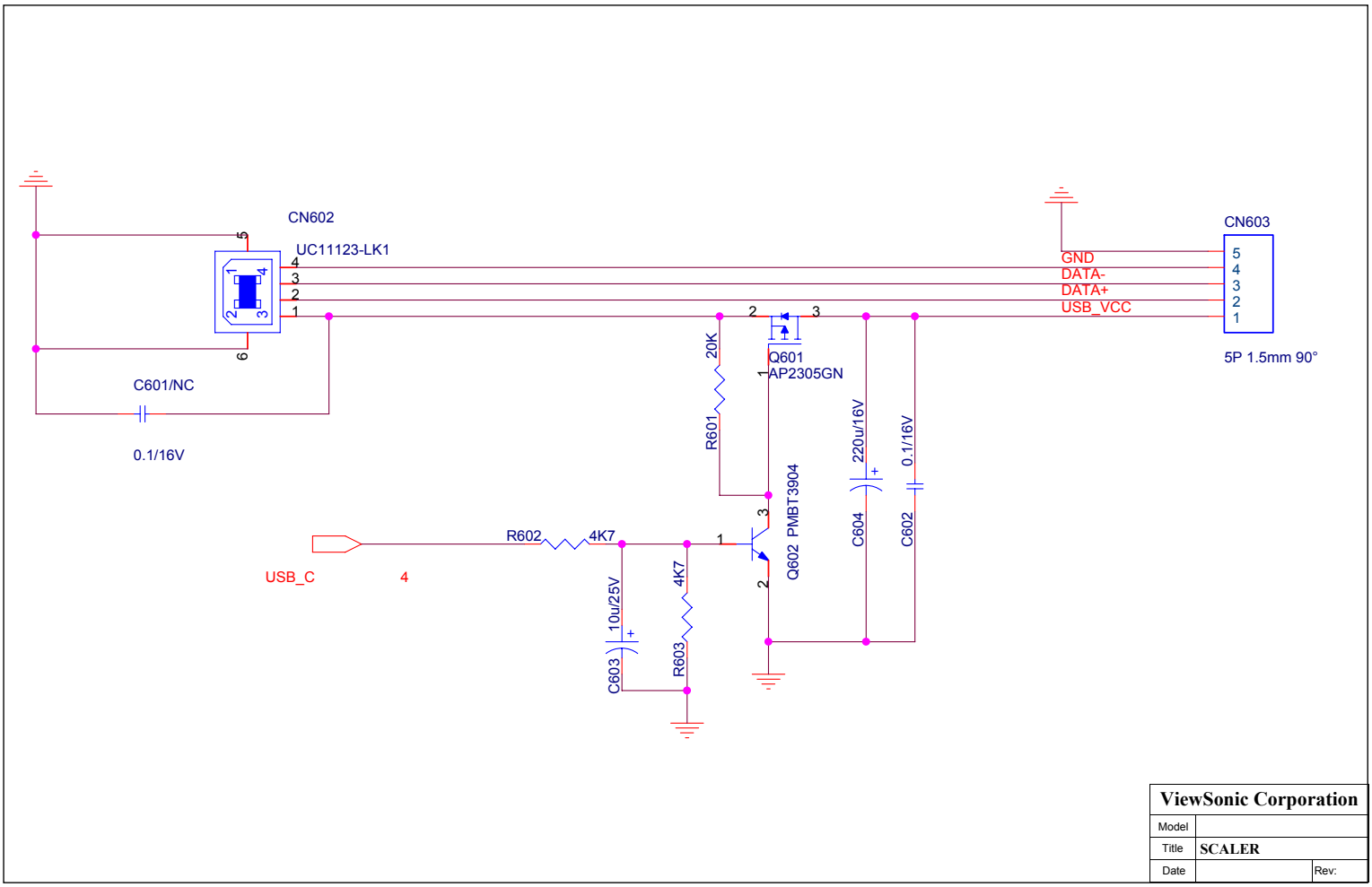
8. Schematic Diagrams



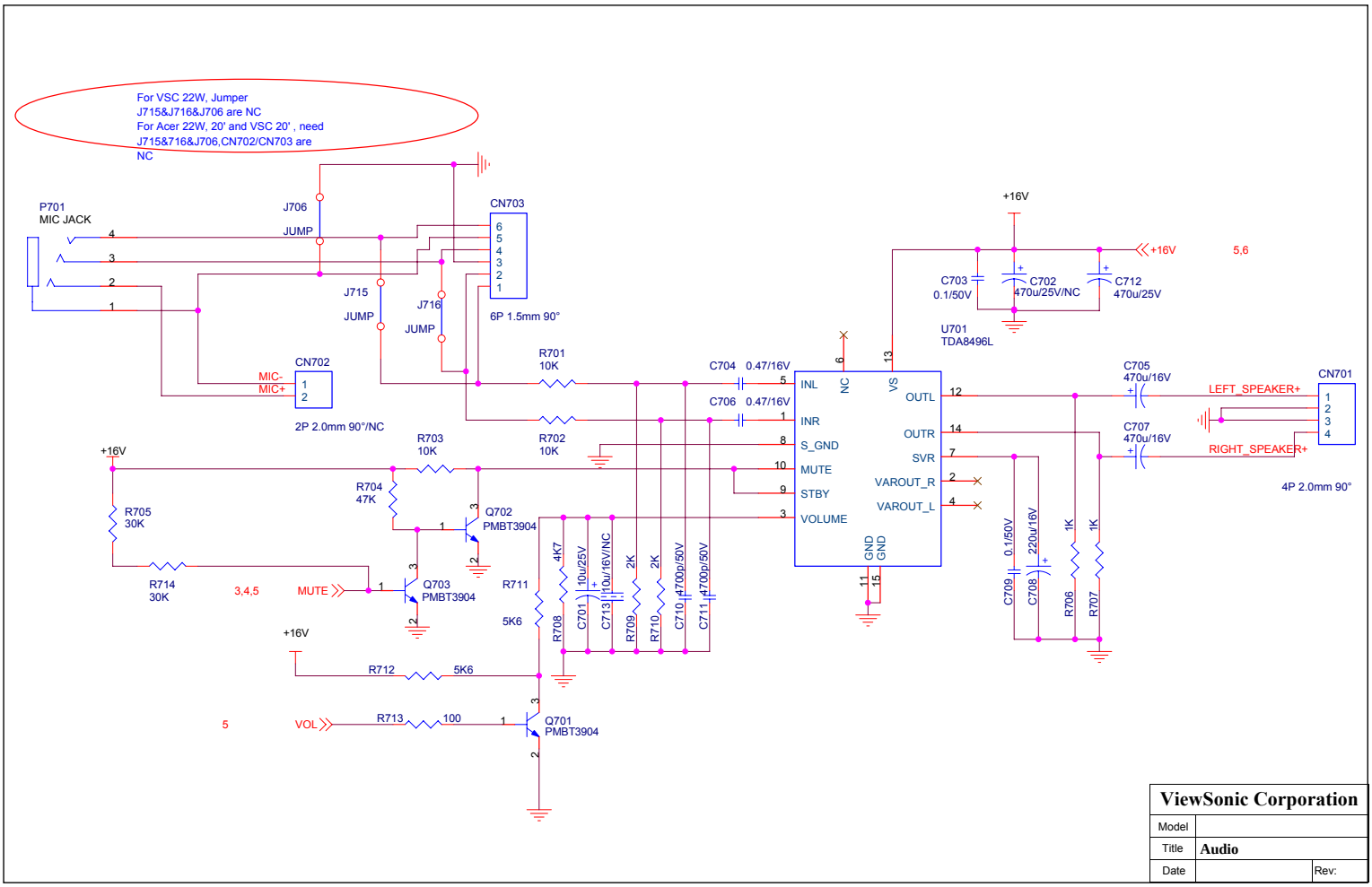
ViewSonic Corporation		
Model		
Title	DC to DC	
Date		Rev:



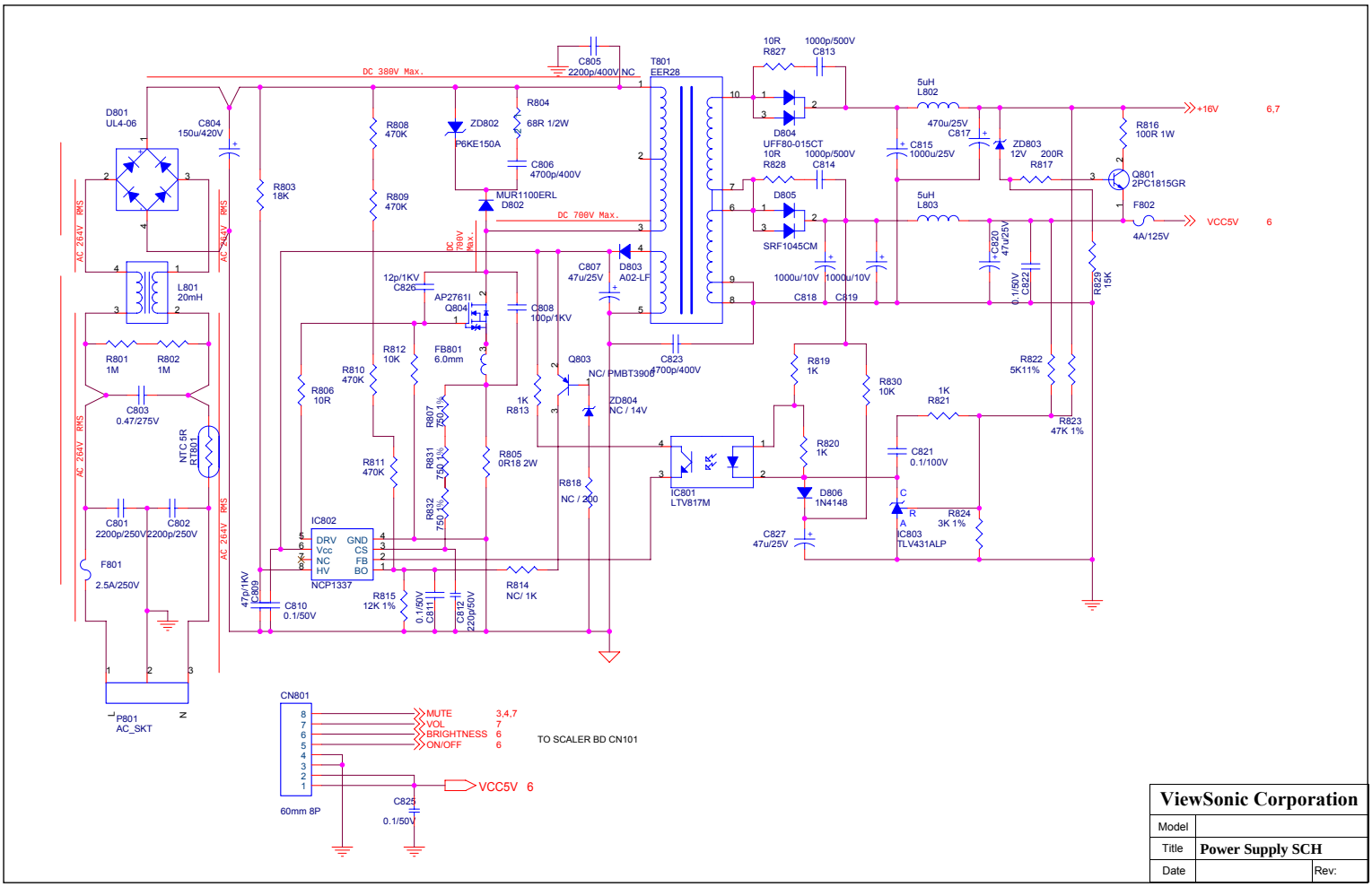




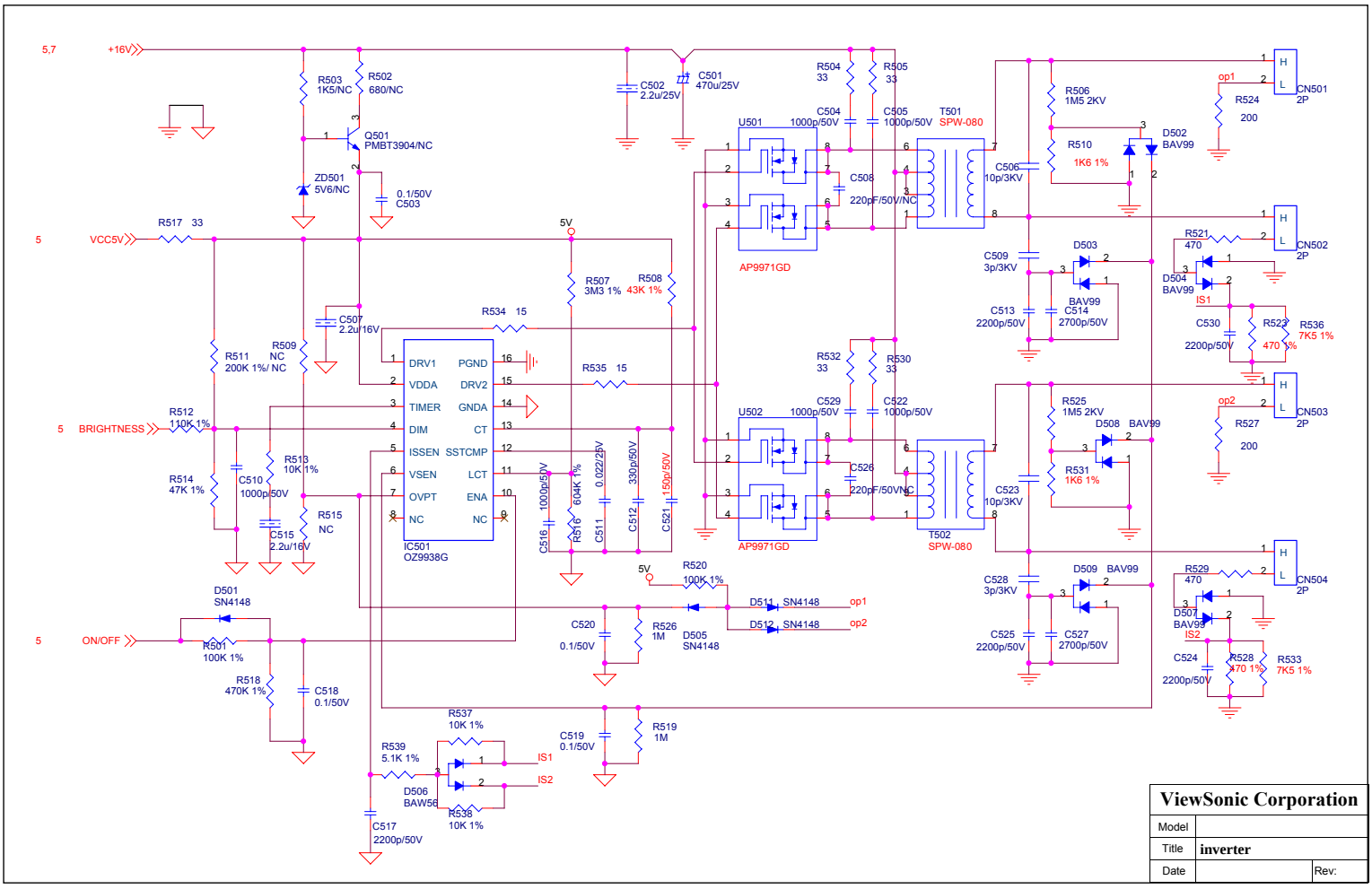
ViewSonic Corporation		
Model		
Title	SCALER	
Date		Rev:



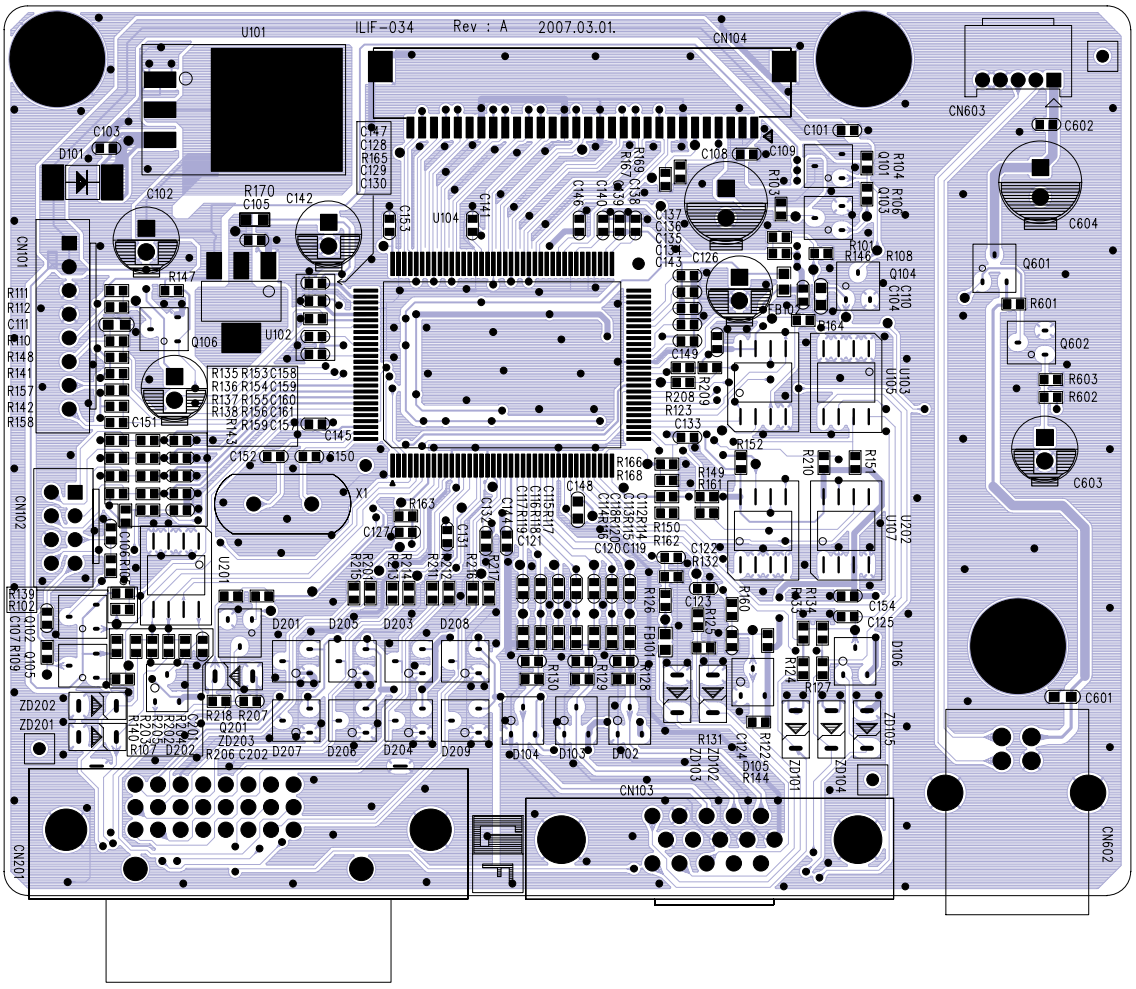
ViewSonic Corporation		
Model		
Title	Audio	
Date		Rev:

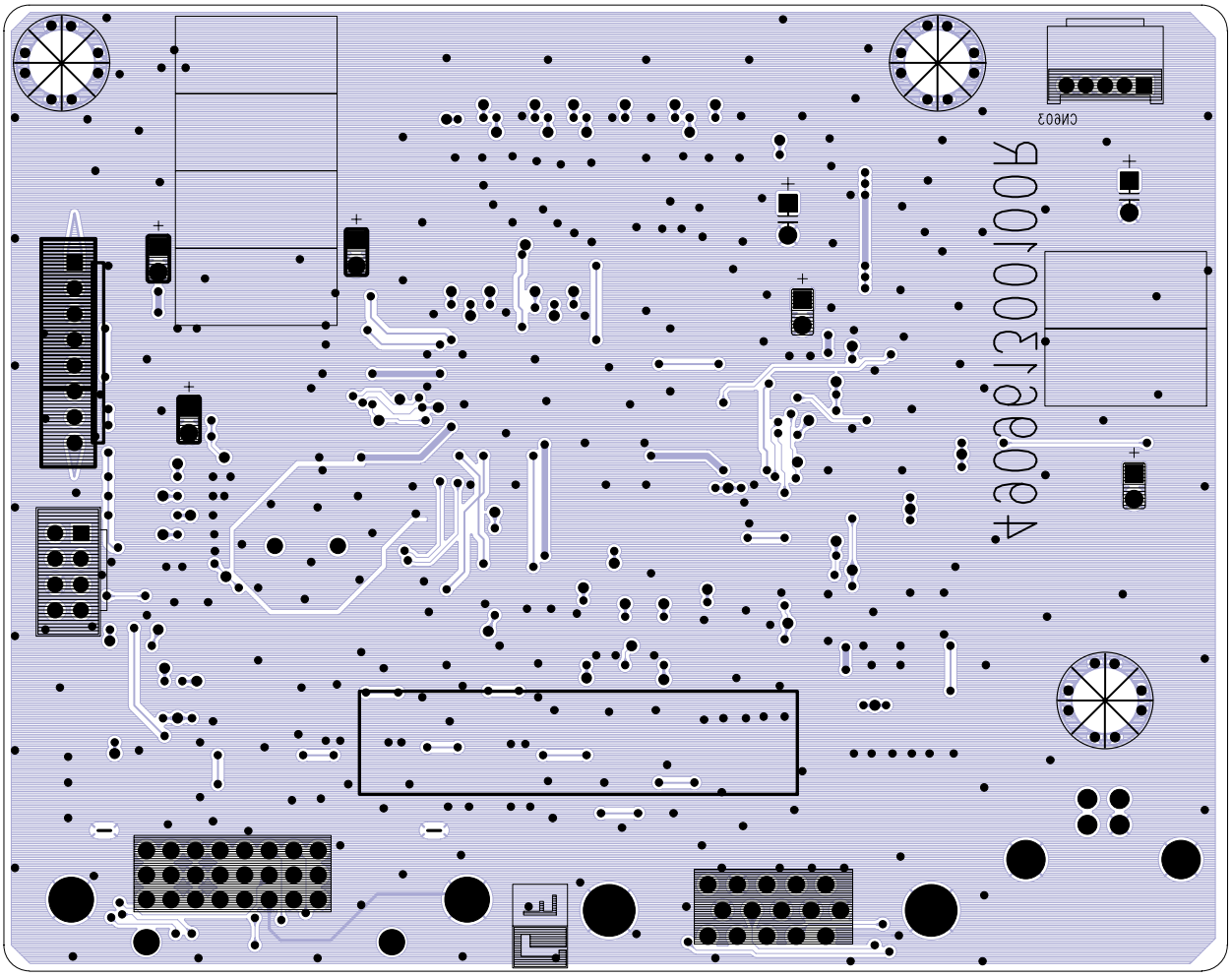


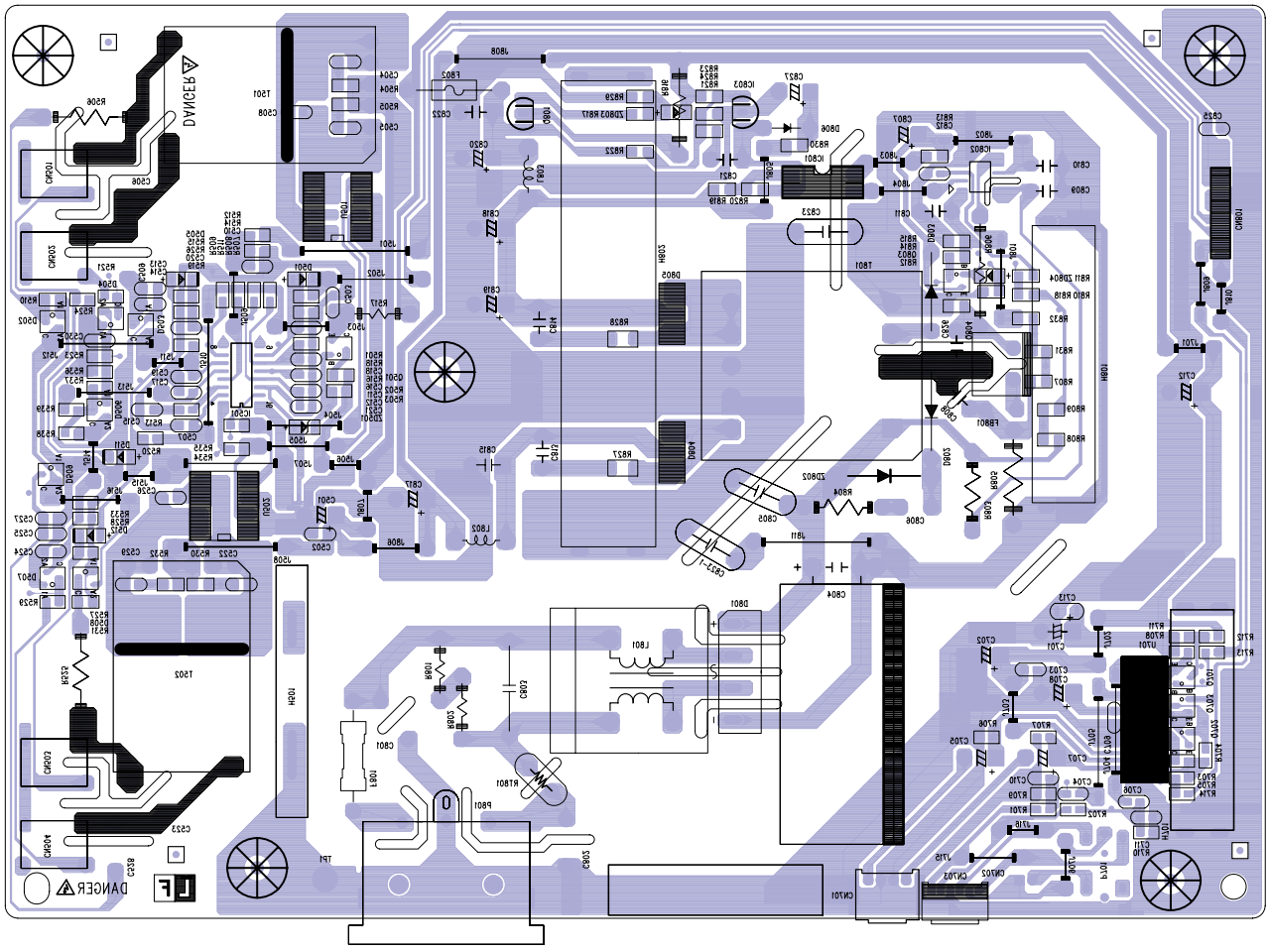
ViewSonic Corporation		
Model		
Title	Power Supply SCH	
Date		Rev:

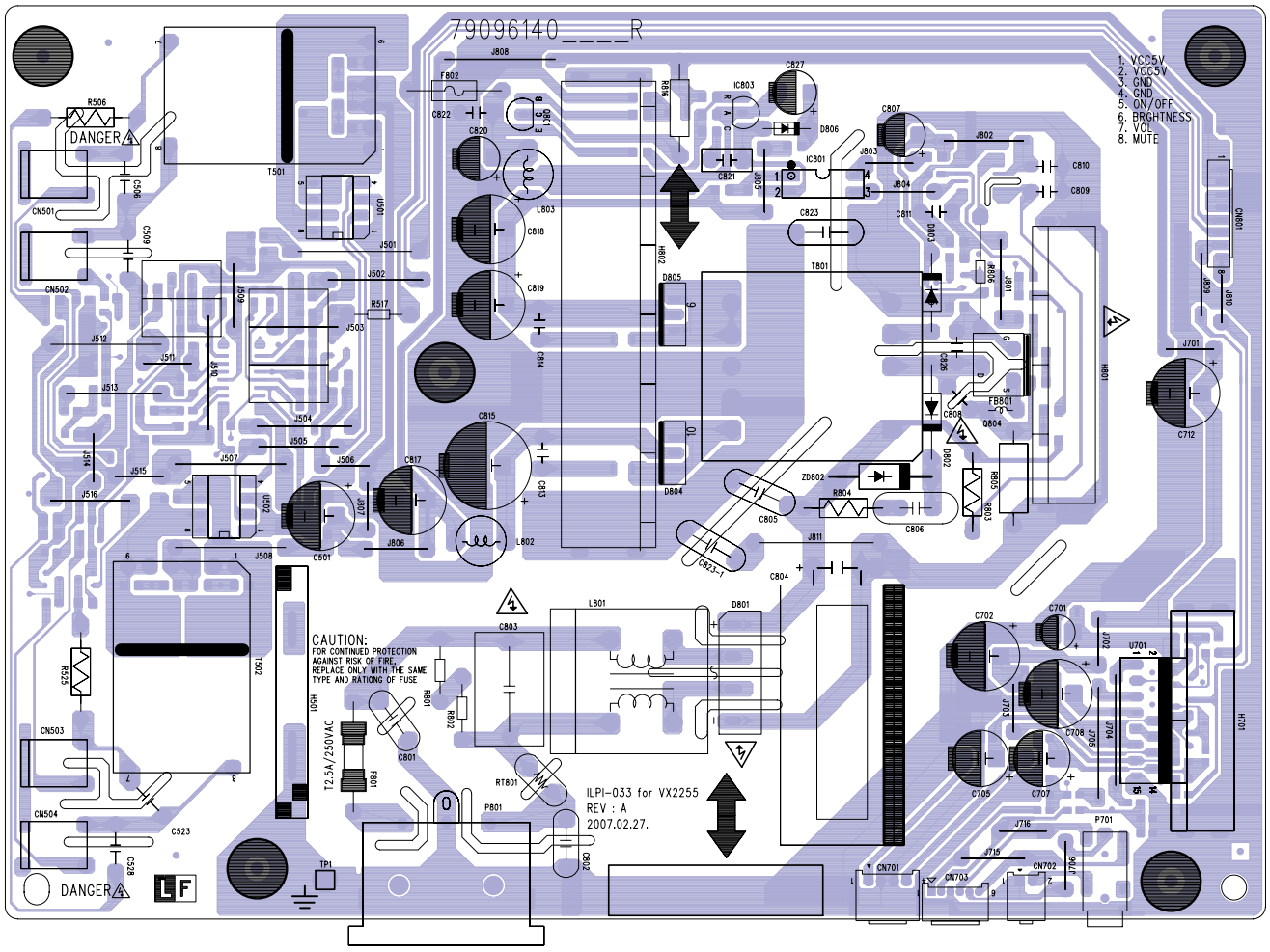


9. PCB Layout Diagrams

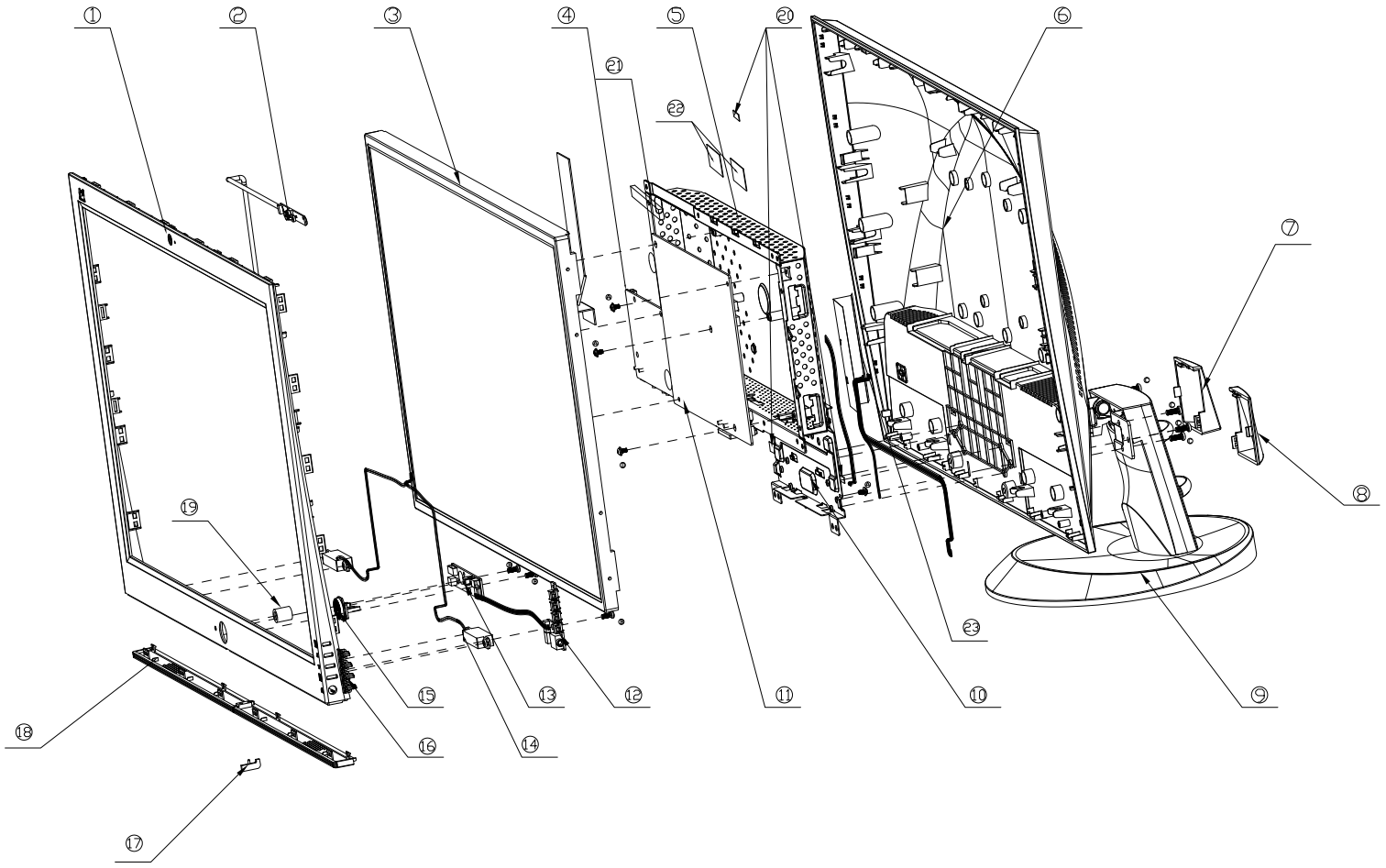








10. Exploded Diagram and Exploded Parts List



EXPLODED PARTS LIST (VX2255wmh-4)

ViewSonic Model Number: VS11661

Rev: 1a

Serial No. Prefix: QRM

Item	ViewSonic P/N	Ref. P/N	Description	Q'ty
1	N/A	501010210200R	BEZEL(W) LP2260	1
2	E-00008422	630421000100R	WEB CAMERA, LP2260	1
3	E-00008424	631102220091R	LCP 22"MT220WW01-V0-G1,AM2200001001(INNO	1
4	B-00008623	790961300610R	IF BOARD	1
5	N/A	502090305900R	CHASSIS, MASTER, LP2260	1
6	C-00008402	501020213300R	COVER BACK(W) LP2260	1
7	C-00008403	501020213400R	COVER,HINGE(W),LEFT,LP2260	1
8	C-00008404	501020213401R	COVER,HINGE(W),RIGHT,LP2260	1
9	PL-00008132	714010009900R	ASSY,STAND(W),LP2260	1
10	N/A	502020303500R	BRACKET, HINGE,LP2260	1
11	N/A	714031760001R	POWER BOARD,LP2260	1
12	N/A	79096150000R	OSD KEYPAD, LP2260	1
13	N/A	79096050000R	LENS KEYPAD, LP2260	1
14	E-00008421	618100200200R	SPEAKER, LP2260	1
15	N/A	501030206100R	BUTTON, POWER , LP2260	1
16	N/A	501030206110R	BUTTON OSD(W) LP2260	1
17	N/A	501120105420R	LENS ,LP2260	1
18	N/A	501120105410R	COLOUR BAR(B),LP2260	1
19	E-00008423	619613000100R	MIC , LP2260	1
20	N/A	506381000700R	TAPE, AGE,45mmx30m(pc=10x45mm), LE1709 ROH	3
21	N/A	503060002700R	GASKET, EMI, L105xW10xH3mm	1
22	E-00008423	619613000100R	FOIL ,AL, DOUBLE COND,50x20x0.07mm , LE17	2
23	N/A	505030300200R	MYLAR , SHIELDING , LP2260	1
A	HW-00005269	509146305300R	SCREW,PW,CROSS,W/WAS,M3*5,NI	6
B	N/A	509146306102R	SCREW,P,CROSS W/W-SPR,M3*6,Zn,ROHS	1
C	N/A	509116610110R	SCREW,P,CROSS,M4*10,Zn,NL ROHS (NYLOK)	6
D	N/A	509146306102R	W,P,CROSS W/W-SPR,M3*6,Zn,ROHS	1
E	HW-00005270	509000000700R	BOLT,#4-40x11.8,Ni FOR D-SUB/DVI CONN.RO	6

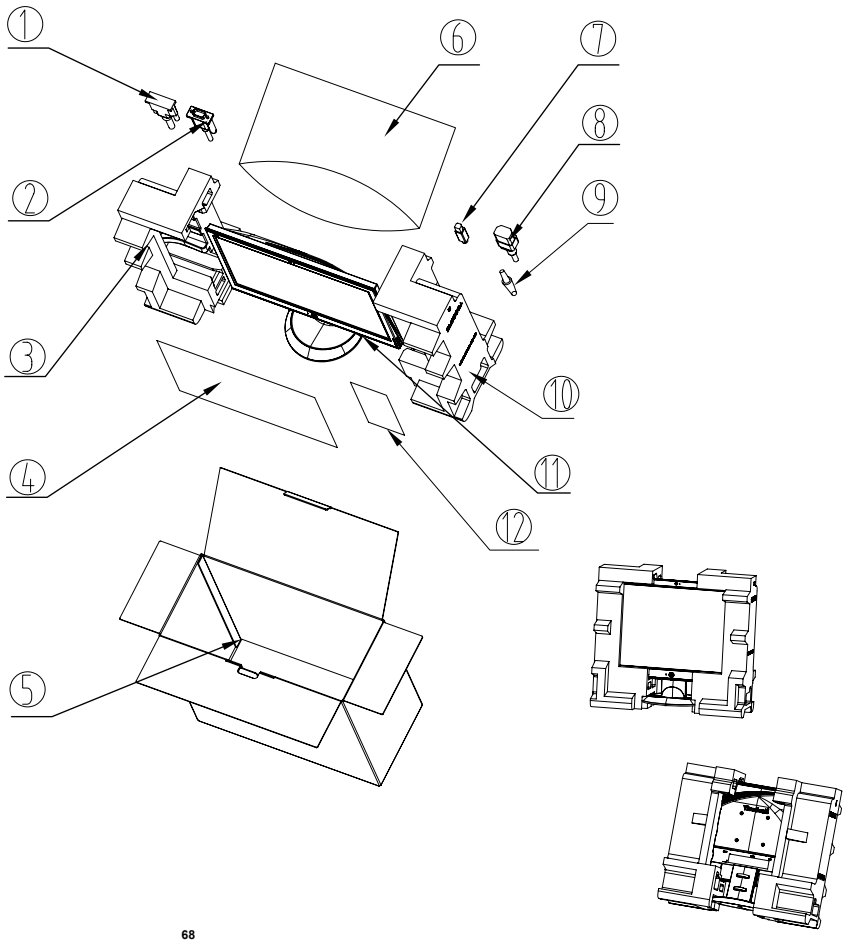
EXPLODED PARTS LIST (VX2255wmb-4)

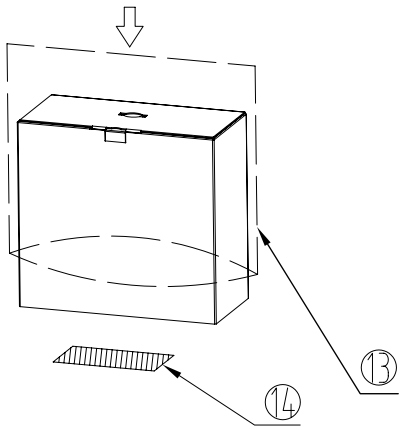
ViewSonic Model Number: VS11661

Rev: 1a

Serial No. Prefix: QRL

Item	ViewSonic P/N	Ref. P/N	Description	Q'ty
1	N/A	501010210210R	BEZEL(B) LP2260	1
2	E-00008422	630421000100R	WEB CAMERA, LP2260	1
3	E-00008424	631102220091R	LCP 22"MT220WW01-V0-G1,AM2200001001(INNO	1
4	B-00008623	790961300610R	IF BOARD	1
5	N/A	502090305900R	CHASSIS, MASTER, LP2260	1
6	C-00008395	501020213310R	COVER BACK(B),LP2260	1
7	C-00008396	501020213410R	COVER HINGE (B),LEFT ,LP2260	1
8	C-00008397	501020213411R	COVER HINGE(B), RIGHT,LP2260	1
9	PL-00008130	714010009901R	ASSY, STAND (B),LP2260	1
10	N/A	502020303500R	BRACKET, HINGE,LP2260	1
11	N/A	714031760001R	POWER BOARD,LP2260	1
12	N/A	79096150000R	OSD KEYPAD, LP2260	1
13	N/A	79096050000R	LENS KEYPAD, LP2260	1
14	E-00008421	618100200200R	SPEAKER, LP2260	1
15	N/A	501030206100R	BUTTON, POWER , LP2260	1
16	N/A	501030206111R	BUTON , OSD(B),LP2260	1
17	N/A	501120105420R	LENS ,LP2260	1
18	N/A	501120105411R	COLOUR BAR(S),LP2260	1
19	E-00008423	619613000100R	MIC , LP2260	1
20	N/A	506381000700R	TAPE, AGE,45mmx30m(pc=10x45mm), LE1709 ROH	3
21	N/A	503060002700R	GASKET, EMI, L105xW10xH3mm	1
22	E-00008423	619613000100R	FOIL ,AL, DOUBLE COND,50x20x0.07mm , LE17	2
23	N/A	505030300200R	MYLAR , SHIELDING , LP2260	1
A	HW-00005269	509146305300R	SCREW,PW,CROSS,W/WAS,M3*5,NI	6
B	N/A	509146306102R	SCREW,P,CROSS W/W-SPR,M3*6,Zn,ROHS	1
C	N/A	509116610110R	SCREW,P,CROSS,M4*10,Zn,NL ROHS (NYLOK)	6
D	N/A	509146306102R	W,P,CROSS W/W-SPR,M3*6,Zn,ROHS	1
E	HW-00005270	509000000700R	BOLT,#4-40x11.8,Ni FOR D-SUB/DVI CONN.RO	6





注：序號13，14僅出貨中國時使用！

PACKING PART LIST (VX2255wmb-4)

ViewSonic Model Number: VS11661

Rev: 1a

Item	ViewSonic P/N	Ref. P/N	Location	Q'ty
1	CB-00008191	453010100310R	CABLE D-SUB 15P MALE 6FT BLACK/BLUE ROH	1
2	CB-00008190	453030300370R	CABLE,DVI-D 18+1P MALE 6FT BLACK , ROHS	1
3	P-00008416	506040011900R	CUSHION,EPS-L,LP2260	1
4	N/A	505040201700R	INSULATOR,PET,330x510x0.1mm,LP2260	1
5	P-00008641	506020015120R	CARTON VX2255(WMB) LP2260	1
6	P-00008419	506120300430R	BAG EPE+PO L590xW530xT0.6mm(PRINTED)LE22	1
7	CB-00008188	453030300360R	CABLE,USB 6FT BLACK ,	1
8	A-00008111	453070800150R	PWR CORD 10A/125V BLK 6FT UL/CSA SVT 3Cx	1
9	CB-00008189	453030300340R	CABLE, AUDIO 1 to 2 6FT B/B/G/P ,RoHS	1
10	P-00008417	506040011910R	CUSHION,EPS-R,LP2260	1
11	N/A	714071760001R	ASSY,FINAL(W),W/SPK,LP2260-612(VX2255)	1
12	DC-00008366	703000005700R	KIT,ACCESSORY,VX2255,LP2260	1
13	P-00008420	506120007500R	BAG,PLASTIC,L810xW(275+585)xT0.05,LP2260	1
14	N/A	506380002100R	TAPE WRAPPING TYPE(VIEWSONIC) 50mmx75M L	1

PACKING PART LIST (VX2255wmh-4)

ViewSonic Model Number: VS11661

Rev: 1a

Item	ViewSonic P/N	Ref. P/N	Location	Q'ty
1	CB-00008200	453010100360R	CABLE,D-SUB 15P MALE 6FT WHITE/BLUE,RoHS	1
2	CB-00008203	453030300380R	CABLE,DVI-D 18+1P MALE 6FT WHITE, ROHS	1
3	P-00008416	506040011900R	CUSHION,EPS-L,LP2260	1
4	N/A	505040201700R	INSULATOR,PET,330x510x0.1mm,LP2260	1
5	P-00008640	506020015130R	CARTON,VIEWSONIC,LP2260	1
6	P-00008419	506120300430R	BAG EPE+PO L590xW530xT0.6mm(PRINTED)LE22	1
7	CB-00008208	453030300390R	CABLE,USB 6FT WHITE , ROHS	1
8	A-00008139	453070800190R	PWRCORD 10A/250V WHI 6FT CHINA RVV 3Gx0	1
9	CB-00008205	453030300350R	CABLE ,AUDIO 1 to 2 6FT W/W/G/P ,RoHS	1
10	P-00008417	506040011910R	CUSHION,EPS-R,LP2260	1
11	N/A	714071760001R	ASSY,FINAL(W),W/SPK,LP2260-612(VX2255)	1
12	DC-00008366	703000005700R	KIT,ACCESSORY,VX2255,LP2260	1
13	P-00008420	506120007500R	BAG,PLASTIC,L810xW(275+585)xT0.05,LP2260	1
14	N/A	506380002100R	TAPE WRAPPING TYPE(VIEWSONIC) 50mmx75M L	1

11. Recommended Spare Parts List

RECOMMENDED SPARE PARTS LIST (VX2255wmh-4)

ViewSonic Model Number: VS11661

Serial No. Prefix: QRM **Rev: 1a**

Item	Description		ECR/ECN	ViewSonic P/N	Ref. P/N	Location	Universal number#
1	**Accessories:** [Adapter,	Cord/Cable - 10A/125V 6FT SVT 3C(USA)		A-00008134	453070800140R		
2	Remote Control;Power	Cord/Cable - 16A/250V 6FT (Europe)		A-00008135	453070801060R		
3	Cord]	Cord/Cable - 10A/250V 6FT 3Gx.75mm (UK)		A-00008136	453070800220R		
4		Cord/Cable - 16A/250V 6FT (Korea)		A-00008137	453070800980R		
5		Cord/Cable - 10A/250V 6FT (Austria)		A-00008138	453070800120R		
6		Cord/Cable - 10A/250V 6FT 3Gx0(China)		A-00008139	453070800190R		
7	**PC Board Assembly:**	Led Board RoHS		B-00008382	790960500000R		
8	**[All PCBA]**	Inverter Board - (W) RoHS		B-00008386	790961400601R		
9		Key Board (W),LP2260 RoHS		B-00008387	790961500001R		
10		Interface Board - (V0,W/SPK) RoHS		B-00008622	790961300611R		
11	**Cabinets:**	Front Panel		C-00008401	714030009900R		
12	**[Front Panel, All**	Back Cover (W)		C-00008402	501020213300R		
13	**Covers, Base**	Hinge Cover - (W) Left		C-00008403	501020213400R		
14	**Assembly]**	Hinge Cover - (W) Right		C-00008404	501020213401R		
15	**Cables: [All Cables]**	Flat Cable - 30P 187mm ROHS		CB-00008192	430303000840R		
16		Wire - 6P 305mm UL1007#26,RoHS		CB-00008193	430300600180R		
17		Wire - 5P 310mm USB BLACK RoHS		CB-00008194	430300500350R		
18		Wire - 2P 140mm UL1007#26 ROHS		CB-00008195	430300200100R		
19		Wire - 5P 200mm UL1571#28 ROHS		CB-00008196	430300500340R		
20		Wire - 2*4P TO 1*8P 160mm UL1571#28 R		CB-00008197	430300800270R		
21		Cable -D-Sub 15P MALE 6FT RoHS		CB-00008200	453010100360R		
22		DVI-D Cable - 18+1P MALE 6FT RoHS		CB-00008203	453030300380R		
23		Audio Cable - 1 to 2 6FT W/W/G/P RoHS		CB-00008205	453030300350R		
24		USB Cable - 6FT RoHS		CB-00008208	453030300390R		
25	**Documentation:**	User Guide W/Installation Software		DC-00008578	703000005710R		
26	**Electronic**	Speaker - 2.0W 8? 290mm R/G/B W/case		E-00008421	618100200200R		
27	**Components: [CRT-**	Camera Module (Web Cam) CNF6137		E-00008422	630421000100R		
28	**EEPROM, Fly Back**	Microphone - Omnidirectional?6 40db RoHS CST		E-00008423	619613000100R		
29	**Transformer,**	LCD Panel - 22" MT220WW01-V0-G1 AM2200001001		E-00008424	631102220091R		
30	**Packing Material:**	Foam - Left		P-00008416	506040011900R		
31	**[Box, Foam, Bags]**	Foam- Right		P-00008417	506040011910R		
32		PE Bag - +PO L590xW530xT0.6mm		P-00008419	506120300430R		
33		Craft Box		P-00008640	506020015130R		
34	**Plastics: [Pedestal,**	Pedestal (Stand W)		PL-00008132	714010009900R		

RECOMMENDED SPARE PARTS LIST (VX2255wmb-4)

ViewSonic Model Number: VS11661

Serial No. Prefix: QRL **Rev: 1a**

Item	Description		ECR/ECN	ViewSonic P/N	Ref. P/N	Location	Universal number#
1	**Accessories:**	Cord/Cable -10A/250V 6FT (Australia)		A-00003671	453070800420R		
2	**[Adapter, Remote**	Cord/Cable - 16A/250V 6FT (Europe)		A-00003674	453070800210R		
3	**Control;Power**	Cord/Cable - 5A/250V (Singapore)		A-00003675	453070800230R		
4	**Cord]**	Cord/Cable - 10A/250V BLK 6FT (China)		A-00005255	453070800170R		
5		Cord/Cable - 7A/125V 6FT (Taiwan)		A-00006733	453070800480R		
6		Cord/Cable - 16A/250V 6FT (Korea)		A-00006734	453070800500R		
7		Cord/Cable - 10A/125V BLK 6FT UL/CSA,SVT 3Cx (USA)		A-00008111	453070800150R		
8	**PC Board**	Inverter Board RoHS		B-00008380	790961400600R		
9	**Assembly: [All**	Key Board RoHS		B-00008381	790961500000R		
10	**PCBA]**	Led Board RoHS		B-00008382	790960500000R		
11		Interface Board - (V0,B,W/SPK)RoHS		B-00008623	790961300610R		
12	**Cabinets:**	Front Panel		C-00008394	714030009910R		
13		Back Cover		C-00008395	714050010030R		
14		Back Cover		C-00008395	501020213310R		
15		Cover Hinge (Left)		C-00008396	501020213410R		
16		Cover Hinge (Right)		C-00008397	501020213411R		
17	**Cables: [All Cables]**	USB Cable - 6FT Black RoHS		CB-00008188	453030300360R		
18		Audio Cable - 1 to 2 6FT B/B/G/P RoHS		CB-00008189	453030300340R		
19		DVI Cable - 18+1P MALE 6FT Black RoHS		CB-00008190	453030300370R		
20		D-Sub Cable - 15P MALE 6FT RoHS		CB-00008191	453010100310R		
21		Flat Cable - 30P 187mm ROHS		CB-00008192	430303000840R		
22		Wire - 6P 305mm UL1007#26,RoHS		CB-00008193	430300600180R		
23		Wire - 5P 310mm USB BLACK RoHS		CB-00008194	430300500350R		
24		Wire - 2P 140mm UL1007#26 ROHS		CB-00008195	430300200100R		
25		Wire - 5P 200mm UL1571#28 ROHS		CB-00008196	430300500340R		
26		Wire - 2*4P TO 1*8P 160mm UL1571#28 R		CB-00008197	430300800270R		
27	**Documentation:**	User Guide W/Installation Software		DC-00008578	703000005710R		
28	**[Quick Start Guide,**	User Guide W/Installation Software (Europe)		DC-00008579	703000005720R		
29	**Electronic**	Speaker - 2.0W 8? 290mm R/G/B W/case		E-00008421	618100200200R		
30	**Components: [CRT-**	Camera Module (Web Cam) CNF6137		E-00008422	630421000100R		
31	**EEPROM, Fly Back**	Microphone - Omnidirectional?6 40db RoHS CST		E-00008423	619613000100R		
32	**Transformer,**	LCD Panel - 22" MT220WW01-V0-G1 AM2200001001		E-00008424	631102220091R		
33	**Packing Material:**	Foam - Left		P-00008416	506040011900R		
34	**[Box, Foam, Bags]**	Foam- Right		P-00008417	506040011910R		
35		PE Bag - +PO L590xW530xT0.6mm		P-00008419	506120300430R		
36		Craft Box		P-00008641	506020015120R		
37	**Plastics: [Pedestal,**	Pedestal (Stand)		PL-00008130	714010009901R		

BOM LIST (VX2255wmh-4)

ViewSonic Model Number: VS11661
Rev: 1a
Serial No. Prefix: QRM

Item	ViewSonic P/N	Ref. P/N	Description	Location	Universal number#	Q'ty
1	N/A	506380002100R	TAPE WRAPPING TYPE(VIEWSONIC) 50mmx75M L			0.6
2	N/A	506431000300R	FILM,PE 500mmx900M ROHS			0.25
3	P-00008416	506040011900R	CUSHION,EPS-L,LP2260			100
4	P-00008417	506040011910R	CUSHION,EPS-R,LP2260			100
5	N/A	506039005000R	CORNER PAPER,900x50x50XT3mm,ROHS			12.5
6	N/A	506039001000R	CORNER PAPER 2000x50x50xT3mm LE1501			12.5
7	N/A	506150002700R	PALLET,1164x1088x120mm LP2260			3.1
8	N/A	506038002200R	CARDBOARD,L1164xW1088xT4mm ROHS LP2260			3.1
9	P-00008641	506020015120R	CARTON VX2255WMB-4 LP2260			100
10	P-00008419	506120300430R	BAG EPE+PO L590xW530xT0.6mm(PRINTED)LE22			100
11	N/A	505040201700R	INSULATOR,PET,330x510x0.1mm,LP2260			100
12	A-00008111	453070800150R	PWR CORD 10A/125V BLK 6FT UL/CSA SVT 3Cx			100
13	CB-00008188	453030300360R	CABLE,USB 6FT BLACK ,			100
14	CB-00008189	453030300340R	CABLE, AUDIO 1 to 2 6FT B/B/G/P ,RoHS			100
15	CB-00008190	453030300370R	CABLE,DVI-D 18+1P MALE 6FT BLACK , ROHS			100
16	CB-00008191	453010100310R	CABLE D-SUB 15P MALE 6FT BLACK/BLUE ROH			100
17	N/A	506250013710R	LABEL AGENCY VX2255(WMB) LP2260			100
18	N/A	506440002600R	LABEL,BLANK,210x65mm,LE1709(PALLET)			3.1
19	N/A	506440002300R	LABEL,BLANK,76.2x76.2mm,LE1709(UPC)			100
20	N/A	506440002400R	LABEL,BLANK,50x25mm,LE1709(S/N)			100
21	N/A	506390000600R	LABEL,HI-POT PASS, LE1709			100
22	DC-00008578	703000005710R	KIT,ACCESSORY,OD VX2255 LP2260			100
23	N/A	714071760010R	ASSY,FINAL(B),W/SPK,LP2260-622(VX2255WM/			100
24	N/A	714071760010R	ASSY,FINAL(B),W/SPK,LP2260-622(VX2255WM/			
25	C-00008397	501020213411R	COVER,HINGE(B),RIGHT,LP2260			100
26	C-00008396	501020213410R	COVER,HINGE(B),LEFT,LP2260			100
27	HW-00005265	509412610500R	SCREW,B,CROSS,T.T-4*10,BLK ,ROHS			200
28	N/A	509116610110R	SCREW,P,CROSS,M4*10,Zn,NL ROHS (NYLOK)			600
29	E-00008421	618100200200R	SPEAKER 2.0W 8Ω 290mm R/G/B W/CASE , RO			100
30	E-00008422	630421000100R	Camera Module CNF6137(Chicony)			100
31	E-00008423	619613000100R	MIC OmnidirectionalΦ6 40db,ROHS CST			100
32	C-00008394	714030009910R	ASSY,BEZEL(B),LP2260			100
33	PL-00008130	714010009901R	ASSY,STAND(B),LP2260			100
34	C-00008395	714050010030R	ASSY,BACK COVER(B) LP2260			100
35	N/A	714081760010R	ASSY,PANEL,((B),W/SPK,LP2260-622(VX2255W			100
36	C-00008394	714030009910R	ASSY,BEZEL(B),LP2260			
37	N/A	501010210210R	BEZEL(B) LP2260			100
38	N/A	506102000400R	LOGO PLATE VIEWSONIC LE1709(THREE BIRDS			100
39	N/A	501030206100R	BUTTON POWER LP2260			100
40	N/A	501120105400R	LENS CAMERA LP2260			100
41	N/A	501030206111R	BUTTON,OSD(B),LP2260			100
42	N/A	501120105411R	COLOUR BAR(S),LP2260			100
43	N/A	501120105420R	LENS,LP2260			100
44	N/A	506390500100R	LABEL,ENERGY STAR, LE1709			100
45	C-00008395	714050010030R	ASSY,BACK COVER(B) LP2260			
46	N/A	503040000500R	RUBBER,COVER,(B)LP2260			400
47	C-00008395	501020213310R	COVER BACK(B) LP2260			100
48	N/A	714081760010R	ASSY,PANEL,((B),W/SPK,LP2260-622(VX2255W			
49	N/A	511150102600R	FOIL,AL.,DOUBLE COND.LEFT,LE2239			100
50	N/A	511150103110R	FOIL AL DOUBLE COND ,DOWN,LP2260			100
51	HW-00005269	509146305300R	SCREW,PW,CROSS,W/WAS,M3*5,NI			600
52	N/A	509146306102R	SCREW,P,CROSS W/W-SPR,M3*6,Zn,ROHS			100
53	HW-00005270	509000000700R	BOLT,#4-40x11.8,Ni FOR D-SUB/DVI CONN.RO			400
54	N/A	509112306100R	SCREW,P,CROSS,T.T-3*6,ZnROHS			300
55	B-00008623	790961300610R	PCBA,I/F BOARD(V0,B,W/SPK),LP2260-622 RO			100
56	B-00008380	790961400600R	PCBA,P/I BOARD(B),LP2260-612 ROHS			100
57	B-00008381	790961500000R	PCBA,KEYPAD BOARD(B),LP2260 ROHS			100
58	B-00008382	790960500000R	PCBA,LED BOARD,LP2260 ROHS			100
59	E-00008424	631102220091R	LCP 22"MT220WW01-V0-G1,AM2200001001(INNO			100
60	N/A	701000003600R	ASSY,CHASSIS,LP2260			100
61	CB-00008192	430303000840R	HRN LVDS FFC 30P 187mm ROHS			100
62	CB-00008193	430300600180R	HRN ASS'Y 6P 320mm UL1007#26,RoHS			100
63	CB-00008194	430300500350R	HRN ASS'Y 5P 310mm USB BLACK ROHS			100
64	CB-00008195	430300200100R	HRN ASS'Y 2P 140mm UL1007#26 ROHS			100
65	CB-00008196	430300500340R	HRN ASS'Y 5P 200mm UL1571#28 ROHS			100
66	CB-00008197	430300800270R	HRN ASS'Y 2*4P TO 1*8P 160mm UL1571#28 R			100
67	N/A	503080001100R	RUBBER, SILICON, THERMAL CONDUCT 45x10xt			100
68	N/A	506381000700R	TAPE,ACE,45mmx30M(PC=10x45mm),LE1709 ROH			400
69	N/A	511150101110R	FOIL,AL.,DOUBLE COND.,50x20x0.07mm, LE17			200
70	N/A	503060002700R	GASKET,EMI,L105XW10XH3mm			100
71	N/A	505030200200R	MYLAR,SHIELDING,LP2260			100
72	N/A	503010001920R	RUBBER SPACER L15xW10xT2.0mm			100
73	N/A	701000003600R	ASSY,CHASSIS,LP2260			
74	N/A	502090305900R	CHASSIS MASTER LP2260			100
75	N/A	502020303500R	BRACKET HINGE LP2260			100

BOM LIST (VX2255wmb-4)

ViewSonic Model Number: VS11661

Rev: 1a

Serial No. Prefix: QRL

Item	ViewSonic P/N	Ref. P/N	Description	Location	Universal number#	Q'ty
1	N/A	506380002100R	TAPE WRAPPING TYPE(VIEWSONIC) 50mmx75M L			0.6
2	N/A	506431000300R	FILM,PE 500mmx900M ROHS			0.25
3	P-00008416	506040011900R	CUSHION,EPS-L,LP2260			100
4	P-00008417	506040011910R	CUSHION,EPS-R,LP2260			100
5	P-00008419	506120300430R	BAG EPE+PO L590xW530xT0.6mm(PRINTED)LE22			100
6	P-00008640	506020015130R	CARTON VX2255WMH-4 LP2260			100
7	N/A	506150002700R	PALLET,1164x1088x120mm LP2260			3.1
8	N/A	506039001000R	CORNER PAPER 2000x50x50xT3mm LE1501			12.5
9	N/A	506039005000R	CORNER PAPER,900x50x50XT3mm,ROHS			12.5
10	N/A	506038002200R	CARDBOARD,L1164xW1088xT4mm ROHS LP2260			3.1
11	N/A	505040201700R	INSULATOR,PET,330x510x0.1mm,LP2260			100
12	CB-00008200	453010100360R	CABLE,D-SUB 15P MALE 6FT WHITE/BLUE,RoHS			100
13	CB-00008203	453030300380R	CABLE,DVI-D 18+1P MALE 6FT WHITE, ROHS			100
14	CB-00008205	453030300350R	CABLE ,AUDIO 1 to 2 6FT W/W/G/P ,RoHS			100
15	CB-00008208	453030300390R	CABLE,USB 6FT WHITE , ROHS			100
16	A-00008134	453070800140R	PWR CORD 10A/125V WHI 6FT UL/CSA,SVT 3C			100
17	N/A	506250013700R	LABEL,AGENCY,VX2255,LP2260			100
18	N/A	506440002600R	LABEL,BLANK,210x65mm,LE1709(PALLET)			3.1
19	N/A	506440002300R	LABEL,BLANK,76.2x76.2mm,LE1709(UPC)			100
20	N/A	506440002400R	LABEL,BLANK,50x25mm,LE1709(S/N)			100
21	N/A	506390000600R	LABEL,HI-POT PASS, LE1709			100
22	DC-00008578	703000005710R	KIT,ACCESSORY,OD VX2255 LP2260			100
23	N/A	714071760011R	ASSY,FINAL(W),W/SPK,LP2260-622(VX2255WM/			100
24	N/A	714071760011R	ASSY,FINAL(W),W/SPK,LP2260-622(VX2255WM/			
25	E-00008421	618100200200R	SPEAKER 2.0W 8Ω 290mm R/G/B W/CASE , RO			100
26	E-00008422	630421000100R	Camera Module CNF6137(Chicony)			100
27	E-00008423	619613000100R	MIC OmnidirectionalΦ6 40db,ROHS CST			100
28	N/A	509116610110R	SCREW,P,CROSS,M4*10,Zn,NL ROHS (NYLOK)			600
29	HW-00005265	509412610500R	SCREW,B,CROSS,T.T-4*10,BLK ,ROHS			200
30	C-00008404	501020213401R	COVER,HINGE(W),RIGHT,LP2260			100
31	C-00008403	501020213400R	COVER,HINGE(W),LEFT,LP2260			100
32	C-00008401	714030009900R	ASSY,BEZEL(W),LP2260			100
33	PL-00008132	714010009900R	ASSY,STAND(W),LP2260			100
34	N/A	714050010020R	ASSY,BACK COVER(W) LP2260			100
35	N/A	714081760011R	ASSY,PANEL,((W),W/SPK,LP2260-622(VX2255W			100
36	C-00008401	714030009900R	ASSY,BEZEL(W),LP2260			
37	N/A	501010210200R	BEZEL(W) LP2260			100
38	N/A	506102000400R	LOGO PLATE VIEWSONIC LE1709(THREE BIRDS			100
39	N/A	501030206100R	BUTTON POWER LP2260			100
40	N/A	501120105400R	LENS CAMERA LP2260			100
41	N/A	501030206110R	BUTTON OSD(W) LP2260			100
42	N/A	501120105410R	COLOUR BAR(B),LP2260			100
43	N/A	501120105420R	LENS,LP2260			100
44	N/A	506390500100R	LABEL,ENERGY STAR, LE1709			100
45	N/A	714050010020R	ASSY,BACK COVER(W) LP2260			
46	N/A	503040000510R	RUBBER,COVER,(W)LP2260			400
47	C-00008402	501020213300R	COVER BACK(W) LP2260			100
48	N/A	714081760011R	ASSY,PANEL,((W),W/SPK,LP2260-622(VX2255W			
49	N/A	511150102600R	FOIL,AL.,DOUBLE COND.LEFT,LE2239			100
50	N/A	511150103110R	FOIL AL DOUBLE COND ,DOWN,LP2260			100
51	HW-00005269	509146305300R	SCREW,PW,CROSS,W/WAS,M3*5,NI			600
52	N/A	509146306102R	SCREW,P,CROSS W/W-SPR,M3*6,Zn,ROHS			100
53	HW-00005270	509000000700R	BOLT,#4-40x11.8,Ni FOR D-SUB/DVI CONN.RO			400
54	N/A	509112306100R	SCREW,P,CROSS,T.T-3*6,ZnROHS			300
55	B-00008622	790961300611R	PCBA,I/F BOARD(V0,W,W/SPK),LP2260-622 RO			100
56	B-00008386	790961400601R	PCBA,P/I BOARD(W),LP2260-612 ROHS			100
57	B-00008387	790961500001R	PCBA,KEYPAD BOARD(W),LP2260 ROHS			100
58	B-00008382	790960500000R	PCBA,LED BOARD,LP2260 ROHS			100
59	E-00008424	631102220091R	LCP 22"MT220WW01-V0-G1,AM2200001001(INNO			100
60	N/A	631102220092R	LCP 22"MT220WW01-V0-G2,AM2200001002(INNO			
61	N/A	631102220093R	LCP 22"MT220WW01-V0-G3,AM2200001003(INNO			
62	N/A	701000003600R	ASSY,CHASSIS,LP2260			100
63	CB-00008192	430303000840R	HRN LVDS FFC 30P 187mm ROHS			100
64	CB-00008193	430300600180R	HRN ASS'Y 6P 320mm UL1007#26,RoHS			100
65	CB-00008194	430300500350R	HRN ASS'Y 5P 310mm USB BLACK ROHS			100
66	CB-00008195	430300200100R	HRN ASS'Y 2P 140mm UL1007#26 ROHS			100
67	CB-00008196	430300500340R	HRN ASS'Y 5P 200mm UL1571#28 ROHS			100
68	CB-00008197	430300800270R	HRN ASS'Y 2*4P TO 1*8P 160mm UL1571#28 R			100
69	N/A	503080001100R	RUBBER, SILICON, THERMAL CONDUCT 45x10xt			100
70	N/A	506381000700R	TAPE,ACE,45mmx30M(PC=10x45mm),LE1709 ROH			400
71	N/A	511150101110R	FOIL,AL.,DOUBLE COND.,50x20x0.07mm, LE17			200
72	N/A	503060002700R	GASKET,EMI,L105XW10XH3mm			100
73	N/A	505030200200R	MYLAR,SHIELDING,LP2260			100
74	N/A	503010001920R	RUBBER SPACER L15xW10xT2.0mm			100
75	N/A	701000003600R	ASSY,CHASSIS,LP2260			
76	N/A	502090305900R	CHASSIS MASTER LP2260			100
77	N/A	502020303500R	BRACKET HINGE LP2260			100

* Reader's Response*

Dear Readers:

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

Assessment

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

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. Block Diagrams				
8. Schematic Diagrams				
9.PCB Layout Diagrams				
10. Exploded Diagram and Exploded Parts List				
11. Recommended Spare Parts List				

B. Are you satisfied with this 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 dada:

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)