Service
Service
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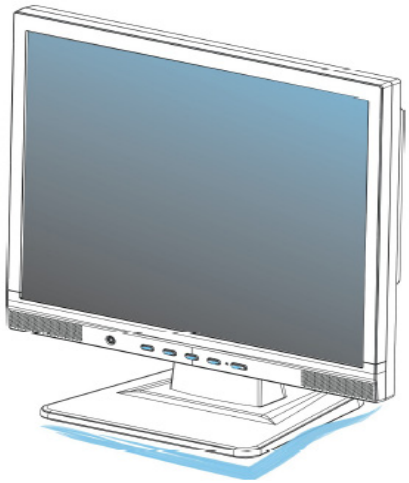


Service Manual

Horizontal Frequency
31-80 kHz

TABLE OF CONTENTS

SAFETY NOTICE

ANY PERSON ATTEMPTING TO SERVICE THIS CHASSIS MUST FAMILIARIZE HIMSELF WITH THE CHASSIS AND BE AWARE OF THE NECESSARY SAFETY PRECAUTIONS TO BE USED WHEN SERVICING ELECTRONIC EQUIPMENT CONTAINING HIGH VOLTAGES.

CAUTION: USE A SEPARATE ISOLATION TRANSFOMER FOR THIS UNIT WHEN SERVICING

Revision List

Revision	Date	Revision History	TPV Model
A00	Jan.-10-07	First Version Release	T96HM5DTG6HZAIP
			T96HM5DTG6ZHAIP
			T96HM5NTG6HZAIP
			T96HM5NTG6ZHAIP

Important Safety Notice

Proper service and repair is important to the safe, reliable operation of all AOC Company Equipment. The service procedures recommended by AOC and described in this service manual are effective methods of performing service operations. Some of these service operations require the use of tools specially designed for the purpose. The special tools should be used when and as recommended.

It is important to note that this manual contains various CAUTIONS and NOTICES which should be carefully read in order to minimize the risk of personal injury to service personnel. The possibility exists that improper service methods may damage the equipment. It is also important to understand that these CAUTIONS and NOTICES ARE NOT EXHAUSTIVE. AOC could not possibly know, evaluate and advise the service trade of all conceivable ways in which service might be done or of the possible hazardous consequences of each way. Consequently, AOC has not undertaken any such broad evaluation. Accordingly, a servicer who uses a service procedure or tool which is not recommended by AOC must first satisfy himself thoroughly that neither his safety nor the safe operation of the equipment will be jeopardized by the service method selected.
Hereafter throughout this manual, AOC Company will be referred to as AOC.

WARNING

Use of substitute replacement parts, which do not have the same, specified safety characteristics may create shock, fire, or other hazards.

Under no circumstances should the original design be modified or altered without written permission from AOC. AOC assumes no liability, express or implied, arising out of any unauthorized modification of design.
Servicer assumes all liability.

FOR PRODUCTS CONTAINING LASER:
DANGER-Invisible laser radiation when open AVOID DIRECT EXPOSURE TO BEAM.
CAUTION-Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.
CAUTION -The use of optical instruments with this product will increase eye hazard.

TO ENSURE THE CONTINUED RELIABILITY OF THIS PRODUCT, USE ONLY ORIGINAL MANUFACTURER'S REPLACEMENT PARTS, WHICH ARE LISTED WITH THEIR PART NUMBERS IN THE PARTS LIST SECTION OF THIS SERVICE MANUAL.
Take care during handling the LCD module with backlight unit
-Must mount the module using mounting holes arranged in four corners.
-Do not press on the panel, edge of the frame strongly or electric shock as this will result in damage to the screen.
-Do not scratch or press on the panel with any sharp objects, such as pencil or pen as this may result in damage to the panel.
-Protect the module from the ESD as it may damage the electronic circuit (C-MOS).
-Make certain that treatment person’s body is grounded through wristband.
-Do not leave the module in high temperature and in areas of high humidity for a long time.
-Avoid contact with water as it may a short circuit within the module.
-If the surface of panel becomes dirty, please wipe it off with a soft material. (Cleaning with a dirty or rough cloth may damage the panel.)

1. Monitor Specifications

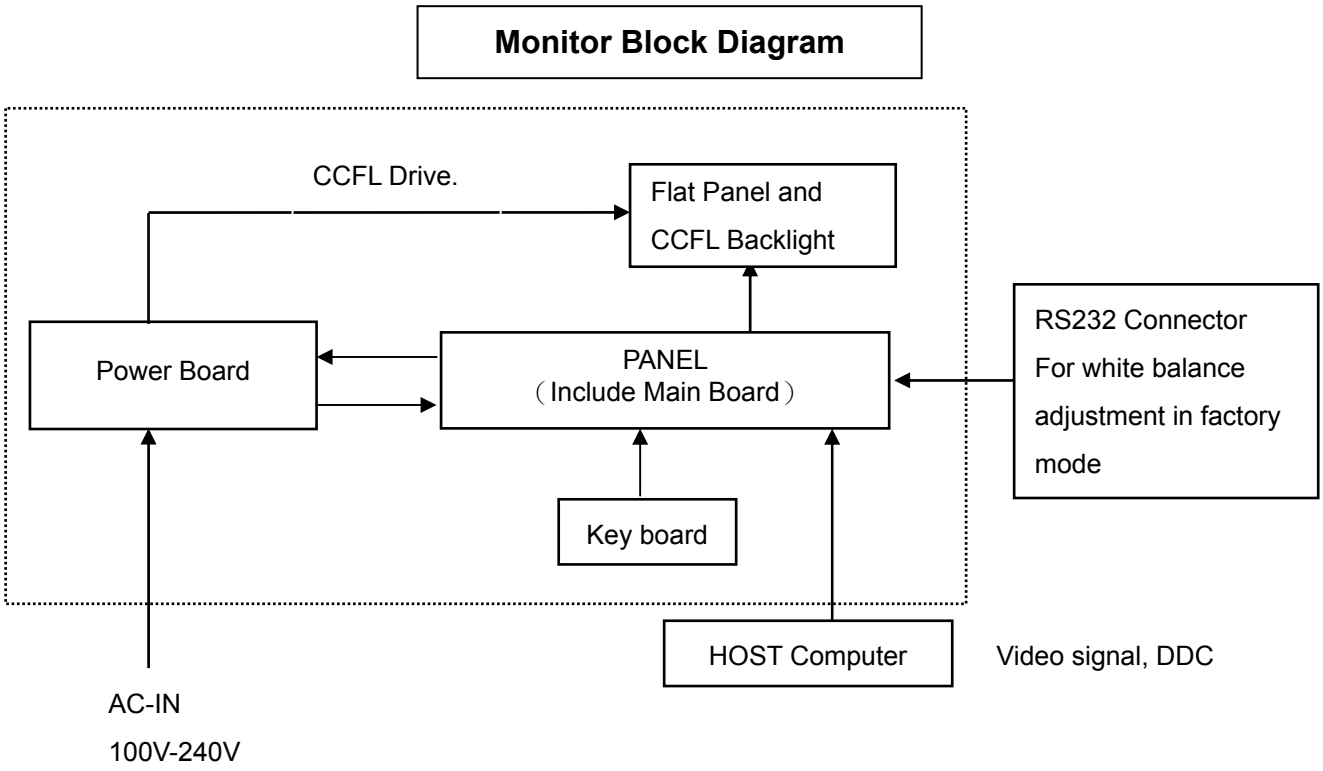
Driving system	TFT Color LCD	
LCD Panel	Size	48cm(19.0")
Pixel pitch	0.294mm(H) x 0.294mm(V)	
Video	R,G,B Analog Interface Digital(Dual-Input Model)H/VTTL	
Input	H-Frequency	31KHz – 80KHz
V-Frequency	55 – 75Hz	
Display Colors		16.2M Colors
Max. Resolution		1280 x 1024 @75Hz
Plug & Play		VESA DDC2B™
EPA ENERGY STAR®	ON Mode	≤36.7W
	OFF Mode	≤2W
Audio output		Rated Power 1.5W rms (Per channel)
Input Connector		D-Sub 15pin DVI-D 24pin (Dual-Input Model)
Maximum Screen Size		Hor. :376.32mm Ver. :301.056mm
Power Source		100~240VAC,50/60HZ
Environmental Considerations		Operating Temp: 0° to 40°C Storage Temp.: -20° to 60°C Operating Humidity: 20% to 80%
Dimensions		406(W)×408 (H)×210(D) mm 16.0”(W)×16.1”(H)×8.3”(D)
Weight (GW/NW)		6.5 kg / 5.0 kg 14.3lb/11.0lb

2. LCD Monitor Description

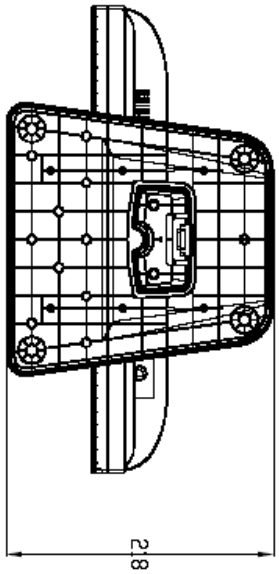
Assembly Description

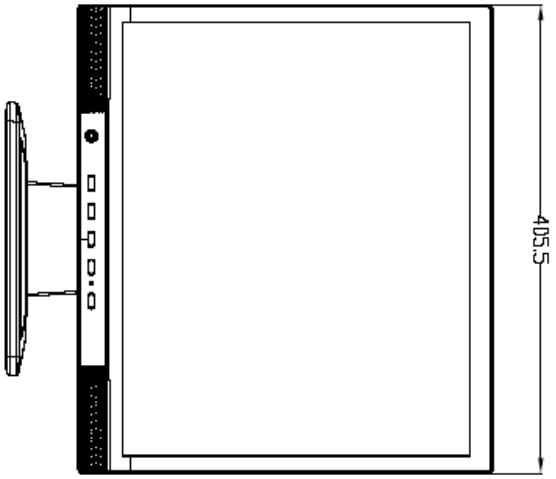
The LCD MONITOR will contain a power board and a key board which house the flat panel control logic, brightness control logic and DDC.

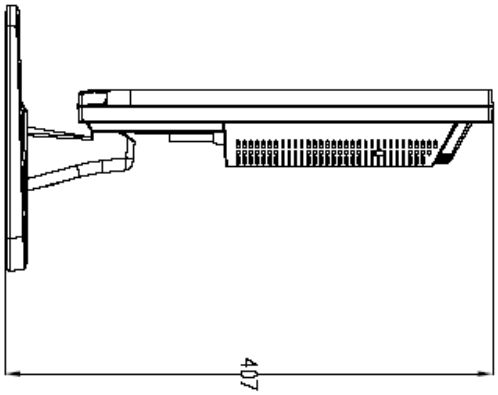
The power board will provide AC to DC Inverter voltage to drive the backlight of panel and the main board chips each voltage.



Dimensions







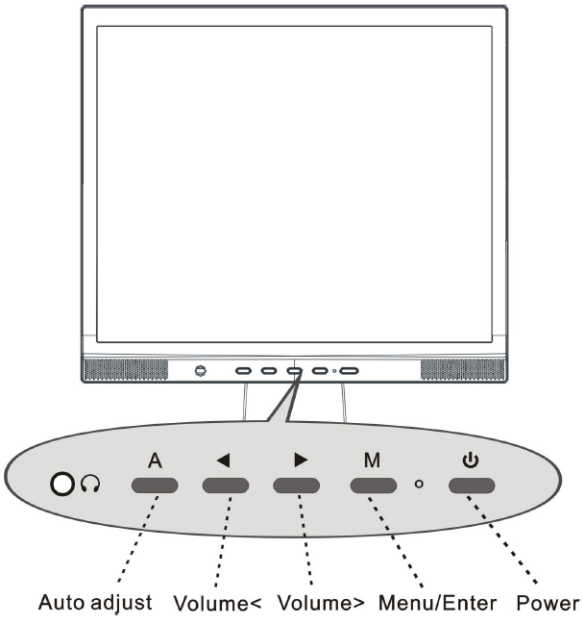
3. Operating Instructions

3.1 General Instructions

Press the power button to turn the monitor on or off. The control buttons are located in the front of the monitor. By changing these settings, the picture can be adjusted to your personal preferences.

- The power cord should be connected.
- Connect the video cable from the monitor to the video card.
- Press the power button to turn on the monitor, the power indicator will light up.

3.2 Control Buttons



• **Power Button:** Press this button to switch ON/OFF of monitor's power.

• **Power Indicator:** Green — Power On mode. Orange — Off mode.

• **MENU / ENTER:** 1. Activate the OSD menu or adjust the function settings and confirmation or 2. Exit OSD menu when in volume OSD status.

• **Volume < >:** 1. activates the volume control when the OSD is OFF.

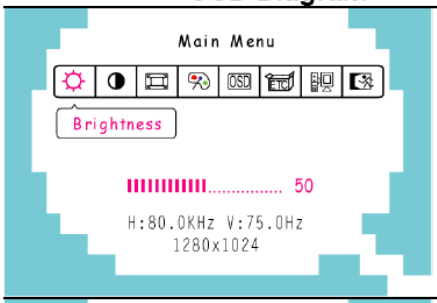
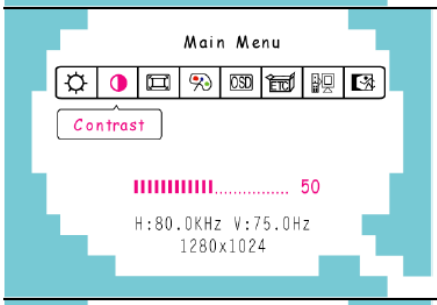
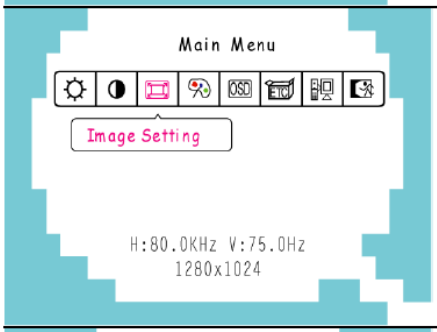
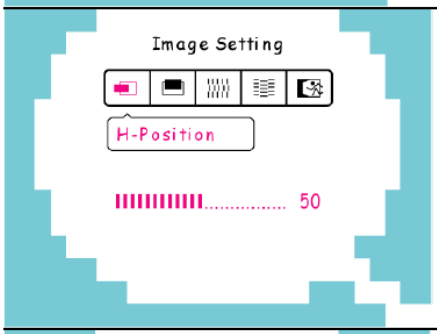
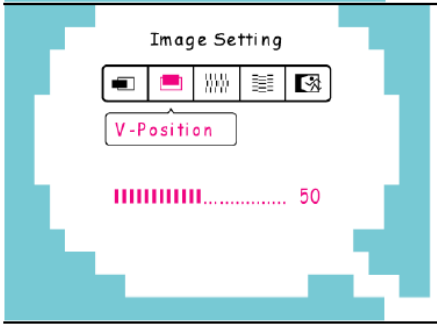
2. Navigate through adjustment icons when OSD is ON or adjust a function when function is activated.

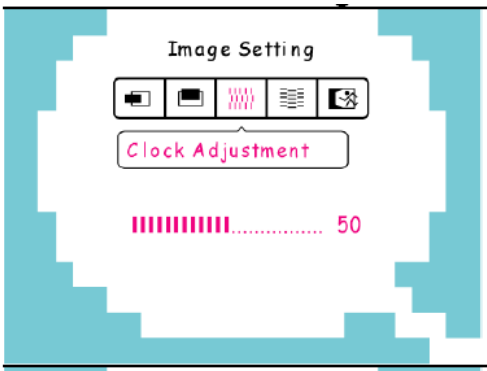
• **Auto Adjust button:** When OSD menu is in off status, press this button to activate the Auto Adjustment function. (The Auto Adjustment function is used to optimize the H-Position, V-Position, Clock and Focus.)

3.3 Adjusting the Picture

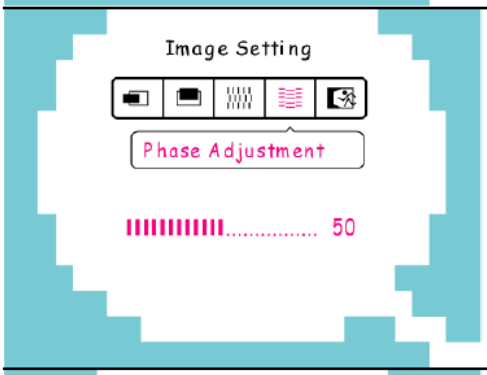
Adjustment steps:

1. Press the MENU-button to activate the OSD window.
2. Press < or > to select the desired function.
3. Press the MENU-button to select the function that you want to adjust.
4. Press < or > to change the settings of the current function.
5. To exit and save, select the exit function, or leave the monitor alone for 10 seconds. If you want to adjust any other function, repeat steps 2-4.

OSD Diagram	OSD Description
	**Brightness adjustment:** Select the 「Brightness」option on the 「Main Menu」. Enter the option and adjust the level.
	**Contrast adjustment:** Select the 「Contrast」option on the 「Main Menu」. Enter the option and adjust the level.
	**How to adjust screen position and quality:** Select 「Image Setting」on the 「Main Menu」, and then enter the option.
	**Horizontal position adjustment:** Select the 「H-position」option to shift the screen image to the left or right. Enter the option and adjust the level.
	**Vertical position adjustment:** Select the 「V-position」option to shift the screen image up or down. Enter the option and adjust the level.

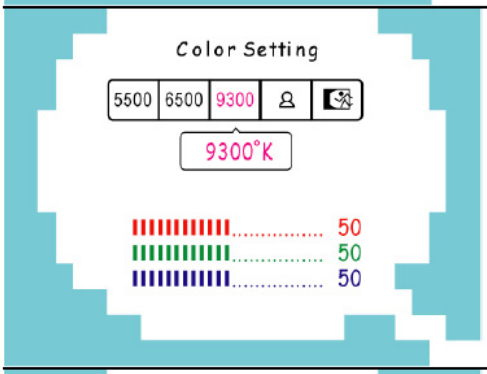


Clock adjustment:
Select the 「Clock Adjustment」 option to reduce the vertical flicker of characters on the screen. Enter the option and adjust the level.

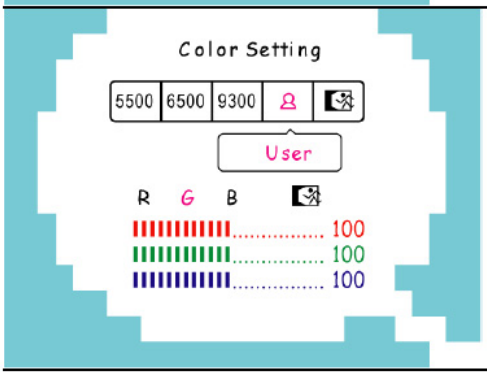


Phase adjustment:
Select the 「Phase Adjustment」 option to reduce the horizontal flicker of characters on the screen. Enter the option and adjust the level.

How to adjust color:
Press 'MENU/ENTER' button to select the 「Color Setting」 menu.

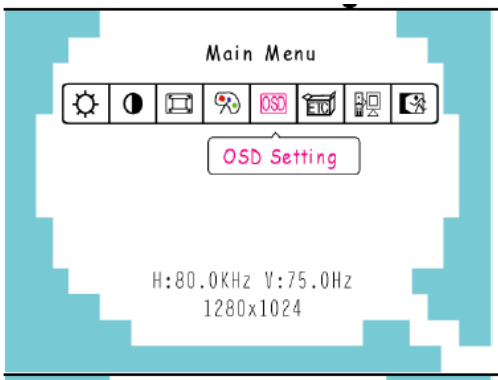


Move the cursor to one of the preset options and select it.

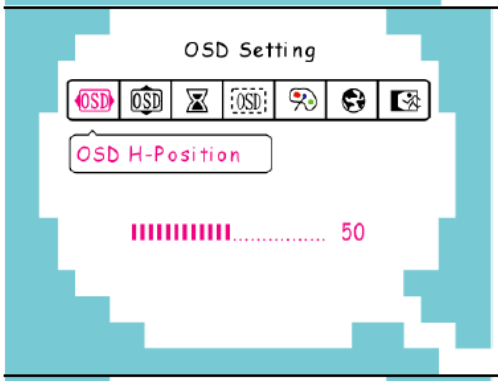


User defined option:
Move the cursor to the User option and select it

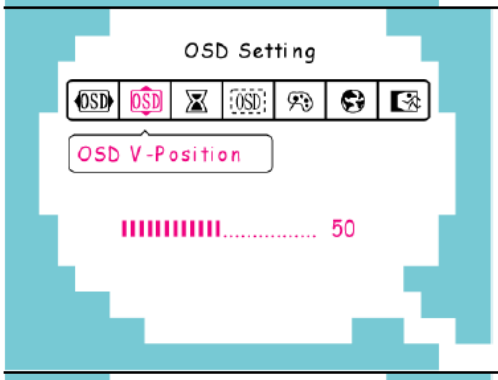
1. To adjust the red, enter the 「R」option and adjust the level.
2. To adjust the green, enter the 「G」 option and adjust the level.
3. To adjust the blue, enter the 「B」option and adjust the level.



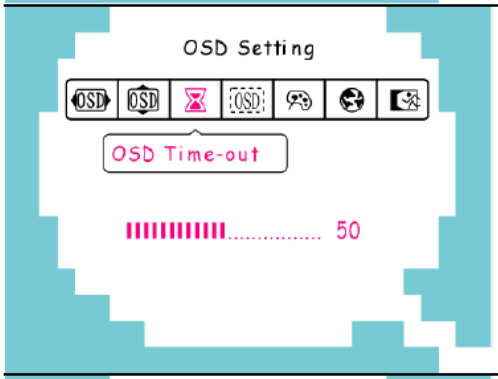
How to set the OSD:
Select 「OSD Setting」on the 「Main Menu」, and then enter the option.



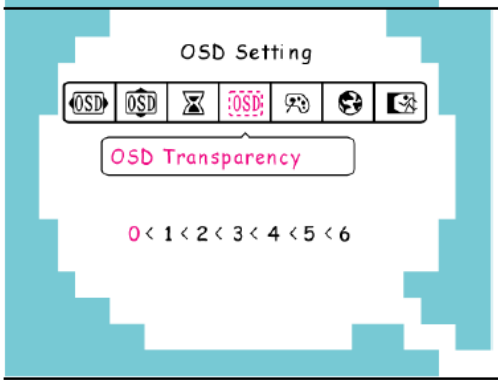
OSD horizontal adjustment:
Select the 「OSD H-Position」option to adjust the horizontal position of the OSD. Enter the option and adjust the level.



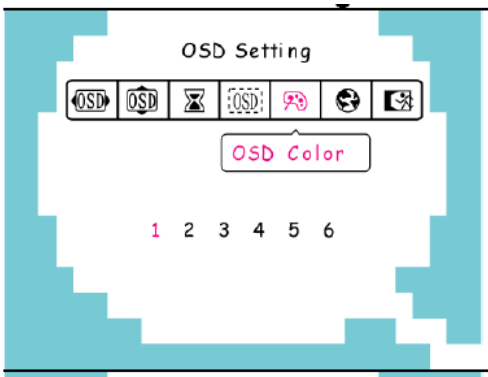
OSD vertical position adjustment:
Select the 「OSD V-Position」option to adjust the vertical position of the OSD. Enter the option and adjust the level.



OSD timer setting:
Select the 「OSD Time-out」option to set the OSD time out from 10 to 120 seconds. Enter the option and adjust the level.

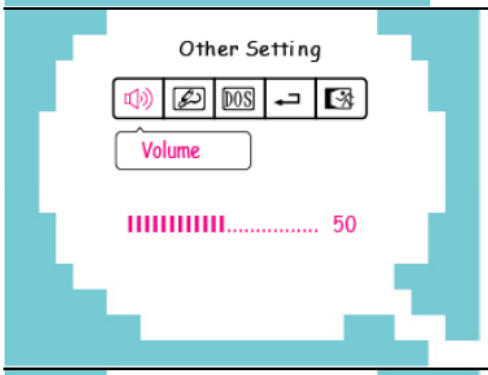


OSD Transparency setting:
Select the 「OSD Transparency」option to adjust the transparency of the OSD. Enter the option and adjust the level.

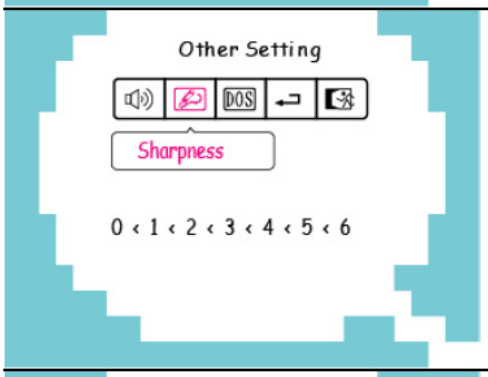


OSD color setting:
Select the 「OSD Color」setting option to adjust the color of the OSD. Enter the option and adjust the level.

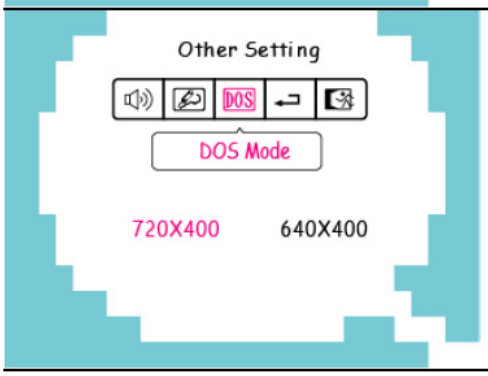
Language:
Select the 「Language」 option to change the language of the OSD. Enter the option and select a language.
(Reference only, the OSD Language is depended on selected model)



Volume adjustment:
Select the 「Volume」option to change the volume level. Enter the option and adjust the level.

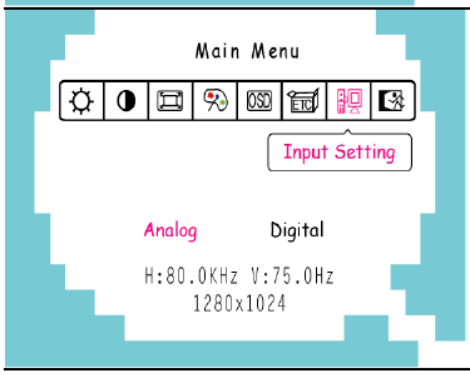


Sharpness:
Select the 「Sharpness」option to adjust the sharpness of the display. Set the value from 0 to 6.



DOS mode:
Select the 「DOS mode」option to set the monitor for use with PC. Enter the option and select 720 × 400 or 640 × 400.

Recall the factory settings:
Select the「Factory Preset」option to reset to the monitor's default setting. This will erase the current settings. Enter the option and select On or Off.

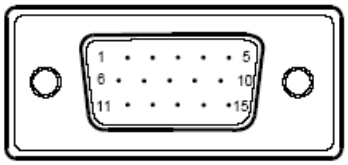


Input Setting:
Select the「Input Setting」option to change between the analog (D-Sub) or Digital (DVI) source. Enter the option and select Analog or Digital.

4. Input/Output Specification

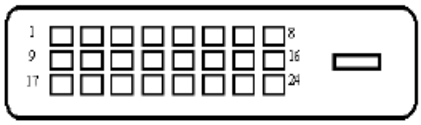
4.1 Input Signal Connector

- ***15 - Pin Color Display Signal Cable:***



PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1.	Red	9.	+5V
2.	Green	10.	Ground
3.	Blue	11.	Ground
4.	Ground	12.	DDC-Serial Data
5.	Ground	13.	H-Sync
6.	R-Ground	14.	V-Sync
7.	G-Ground	15.	DDC-Serial Clock
8.	B-Ground		

- ***24 - Pin Color Display Signal Cable: (Dual Input Mode)***



PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1.	TMDS Data 2-	13.	TMDS Data 3+
2.	TMDS Data 2+	14.	+5V Power
3.	TMDS Data 2/4 Shield	15.	Ground(for+5V)
4.	TMDS Data 4-	16.	Hot Plug Detect
5.	TMDS Data 4+	17.	TMDS Data 0-
6.	DDC Clock	18.	TMDS Data 0+
7.	DDC Data	19.	TMDS Data 0/5 Shield
8.	Analog Vertical sync	20.	TMDS Data 5-
9.	TMDS Data 1-	21.	TMDS Data 5+
10.	TMDS Data 1+	22.	TMDS Clock Shield
11.	TMDS Data 1/3 Shield	23.	TMDS Clock +
12.	TMDS Data 3-	24.	TMDS Clock -

4.2 Factory Preset Display Modes

MODE	RESOLUTION	HORIZONTAL FREQUENCY (KHz)	VERTICAL FREQUENCY (Hz)
1	640×350 @70Hz	31.469	70.087
2	640×400 @56Hz	24.827	56.424
3	640×400 @70Hz	31.469	70.090
4	640×480 @60Hz	31.469	59.940
5	640×480 @67Hz	35.000	66.667
6	640×480 @72Hz	37.861	72.809
7	640×480 @75Hz	37.500	75.000
8	720×400 @70Hz	31.469	70.087
9	800×600 @56Hz	35.156	56.250
10	800×600 @60Hz	37.879	60.317
11	800×600 @72Hz	48.077	72.188
12	800×600 @75Hz	46.875	75.000
13	832×624 @74.6Hz	49.725	74.500
14	1024×768 @60Hz	48.363	60.004
15	1024×768 @66Hz	53.964	66.132
16	1024×768 @70Hz	56.476	70.069
17	1024×768 @75Hz	60.023	75.029
18	1024×768 @75Hz	60.150	74.720
19	1152×864 @75Hz	67.500	75.000
20	1152×870 @75Hz	68.681	75.062
21	1152×900 @66Hz	61.846	66.004
22	1280×720 @60Hz	45.000	60.000
23	1280×768 @60Hz	47.776	59.870
24	1280×960 @60Hz	60.000	60.000
25	1280×1024 @60Hz	63.981	60.020
26	1280×1024 @75Hz	79.976	75.025

4.3 Panel Specification

HannStar Display model **HSD190SEN1-B** is a color active matrix thin film transistor (TFT) liquid crystal display (LCD) that uses amorphous silicon TFT as a switching device. This model is composed of a TFT LCD panel, the voltage reference, common voltage, DC-DC converter, column, and row driver circuit. This TFT LCD has a 19-inch diagonally measured active display area with SXGA resolution (1024 vertical by 1280 horizontal pixel array).

4.3.1 Display Characteristics

Item	Specification	
Outline dimension	396*324 *23(Typ)	
Display area	376.32 (H) x301.056 (V) (19.0" diagonal)	
Number of Pixel	1280(H) x 1024(V)	
Pixel pitch	0.294(H) x 0.294(V)	
Pixel arrangement	RGB Vertical Stripe	
Display mode	Normally white	
Surface treatment	Antiglare, Hard-Coating(3H)	
Weight	2840(Typ.)	
Back-light	4-CCFLs, Top & bottom edge side	
Input signal	Analog RGB	
Power Conwumption	B/L	20
Optimum viewing direction	6 o'clock	

4.3.2 Optical Characteristics

Item		Symbol	Condition	Min.	Typ.	Max.	Unit
Contrast		CR	Θ=0° ϕ=0° Normal viewing angle	450	700	--	
Response time	Rising	TR +TF		--	2	4	msec
	Falling			--	6	8	
White luminance (center of screen)		Y_L		240	300	--	cd/m^2
Color chromaticity (CIE1931)	Red	Rx		0.614	0.644	0.674	
		Ry		0.298	0.328	0.358	
	Green	Gx		0.260	0.290	0.320	
		Gy		0.584	0.614	0.644	
	Blue	Bx		0.112	0.142	0.172	
		By		0.049	0.079	0.109	
	White	Wx		0.280	0.310	0.340	
		Wy		0.300	0.330	0.360	
Viewing angle	Hor.	Θ_L	CR>10	65	75	--	
		Θ_R		65	75	--	
	Ver.	Θ_H		60	70	--	
		Θ_L		55	65	--	
Viewing angle	Hor.	Θ_L	CR>5	--	80	--	
		Θ_R		--	80	--	
	Ver.	Θ_H		--	80	--	
		Θ_L		--	80	--	
Brightness uniformity		B_{UNI}	Θ=0° ϕ=0°	75	--	--	%

4.3.3 Parameter guide line for CCFL Inverter

TFT LCD Module:

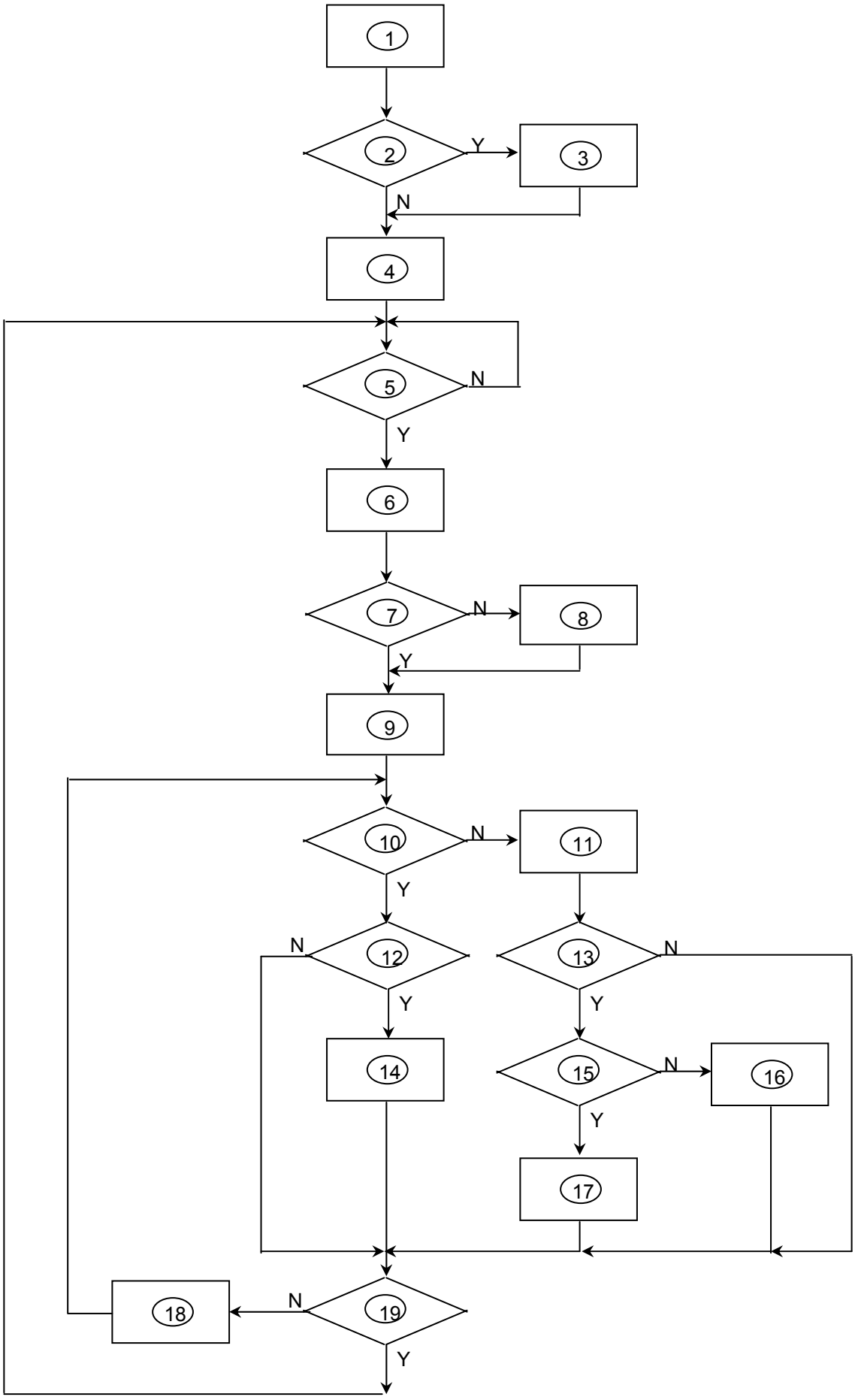
Item	Symbol	Min.	Max.	Unit.
Power supply Voltage	VDD	-0.3	5.5	V(DC)

Back Light Unit:

Item	Symbol	Min.	Max.	Unit
Lamp current	I_L	3.0	9.0	mA
Lamp frequency	f_L	40	80	KHz

5. Block Diagram

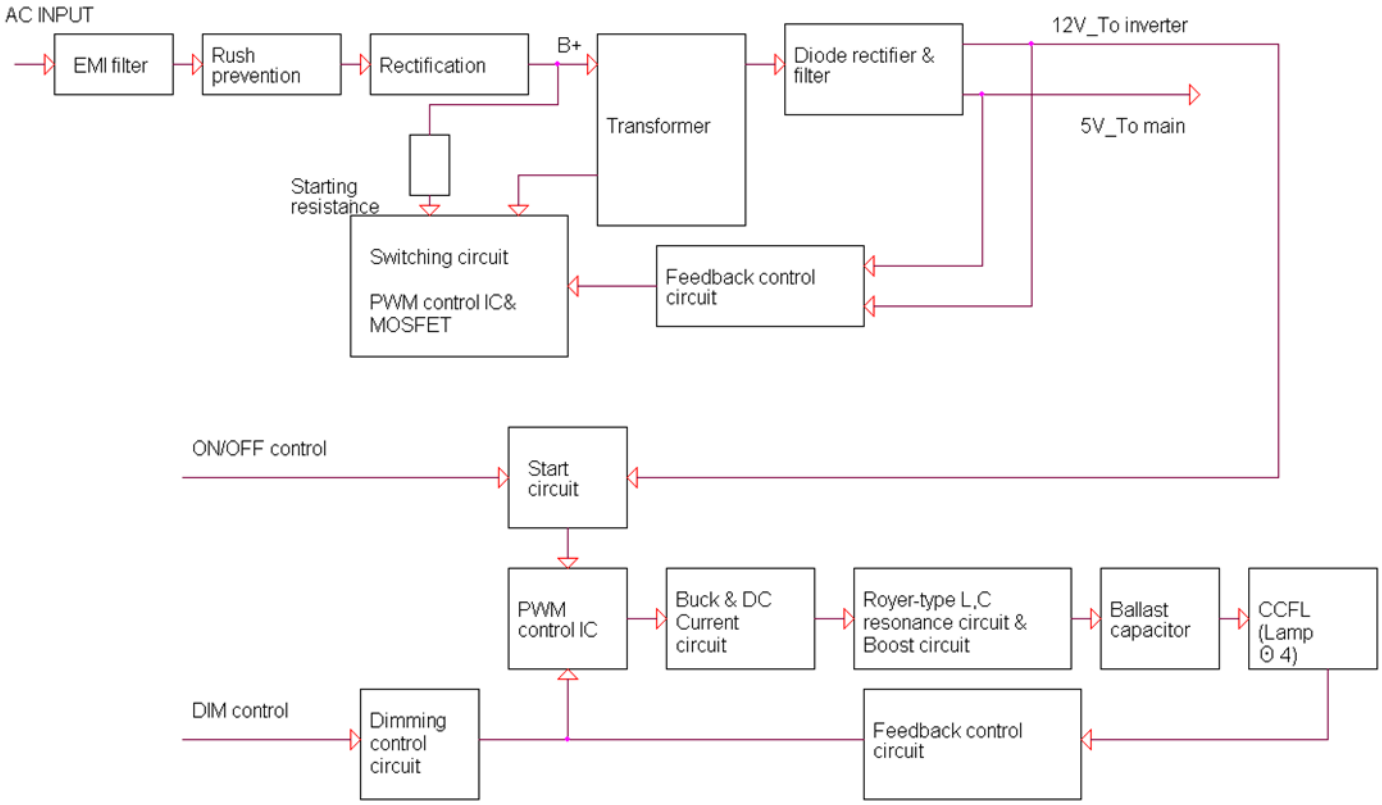
5.1 Software Flow Chat



1) MCU initialize.
2) Is the EPROM blank?
3) Program the EPROM by default values.
4) Get the PWM value of brightness from EPROM.
5) Is the power key pressed?
6) Clear all global flags.
7) Are the AUTO and SELECT keys pressed?
8) Enter factory mode.
9) Save the power key status into EPROM.
   Turn on the LED and set it to green color.
   Scalar initializes.
10) In standby mode?
11) Update the lifetime of back light.
12) Check the analog port, are there any signals coming?
13) Does the scalar send out an interrupt request?
14) Wake up the scalar.
15) Are there any signals coming from analog port?
16) Display "No connection Check Signal Cable" message. And go into standby mode after the message disappear.
17) Program the scalar to be able to show the coming mode.
18) Process the OSD display.
19) Read the keyboard. Is the power key pressed?

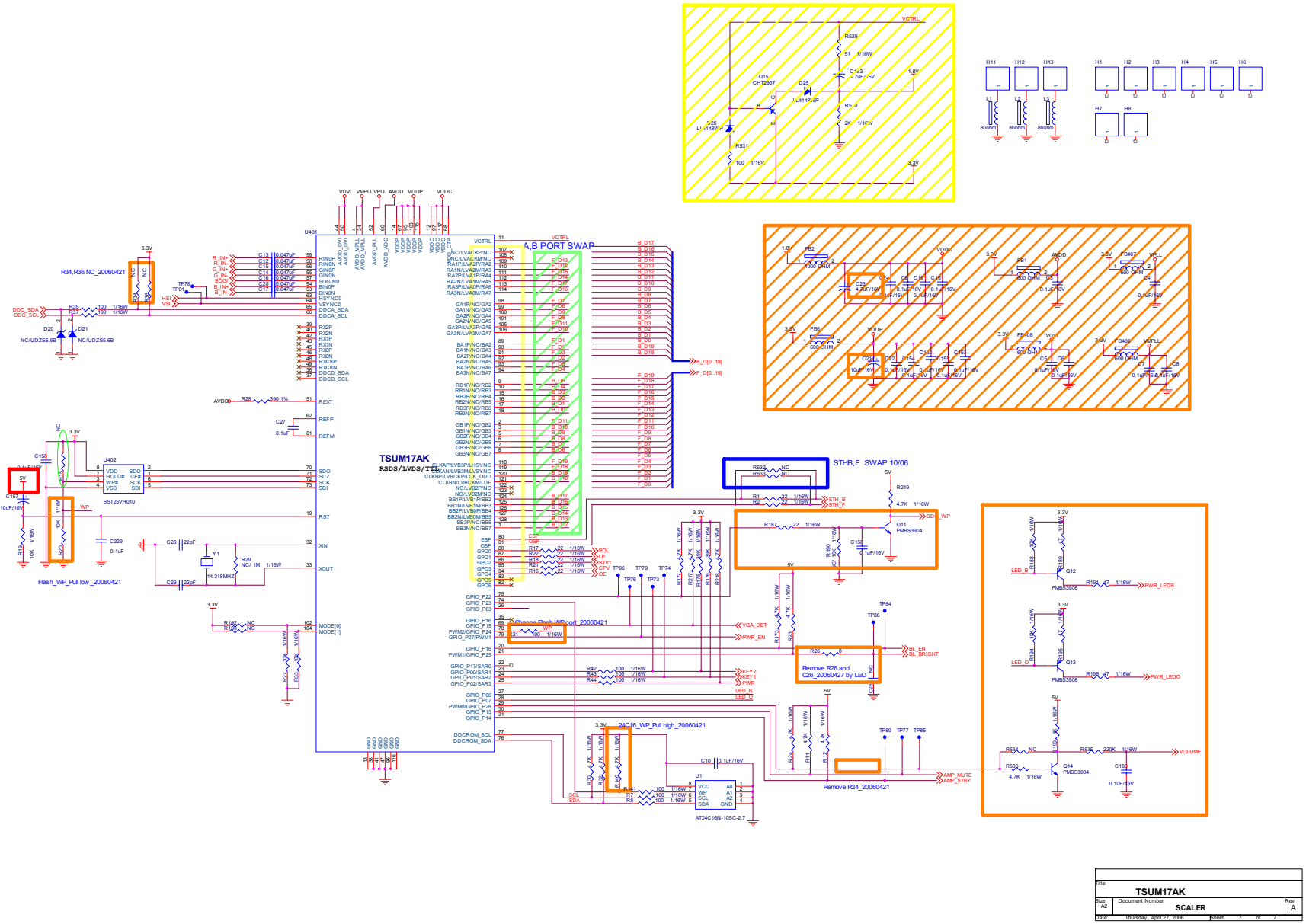
5.2 Electric Block Diagram

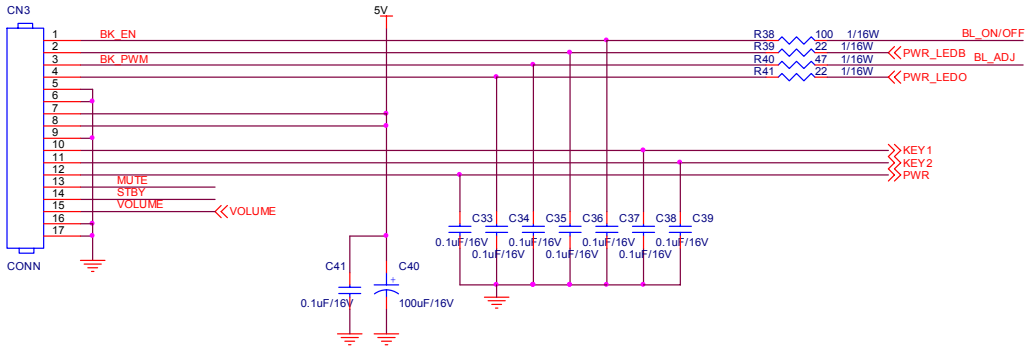
Power Board

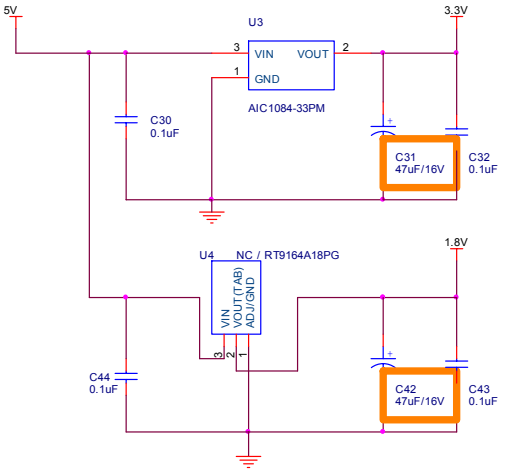


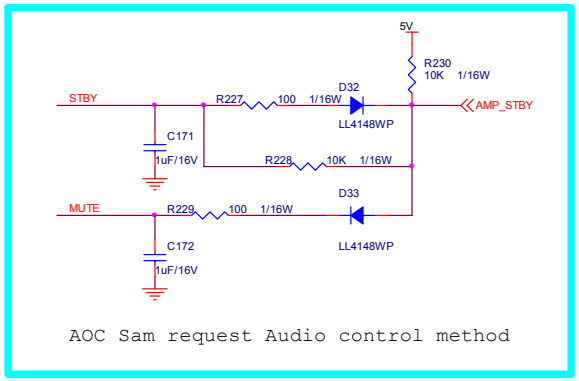
6. Schematic

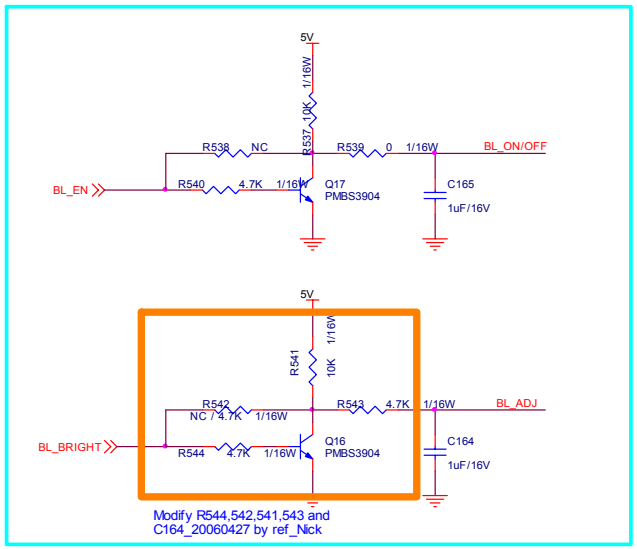
6.1 Main Board

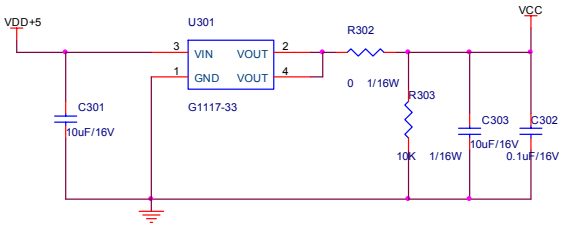


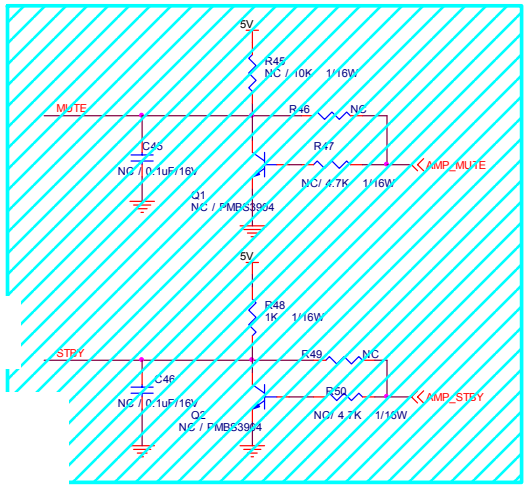


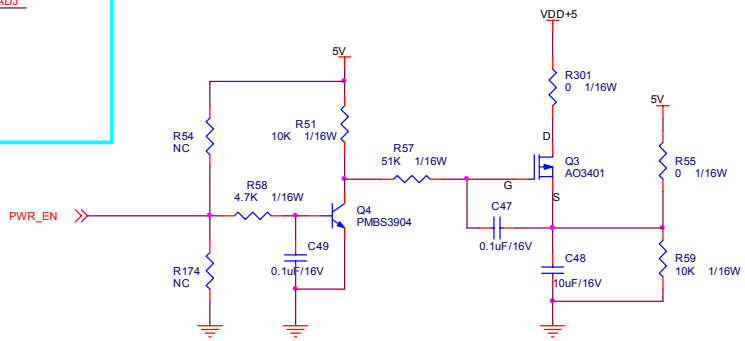




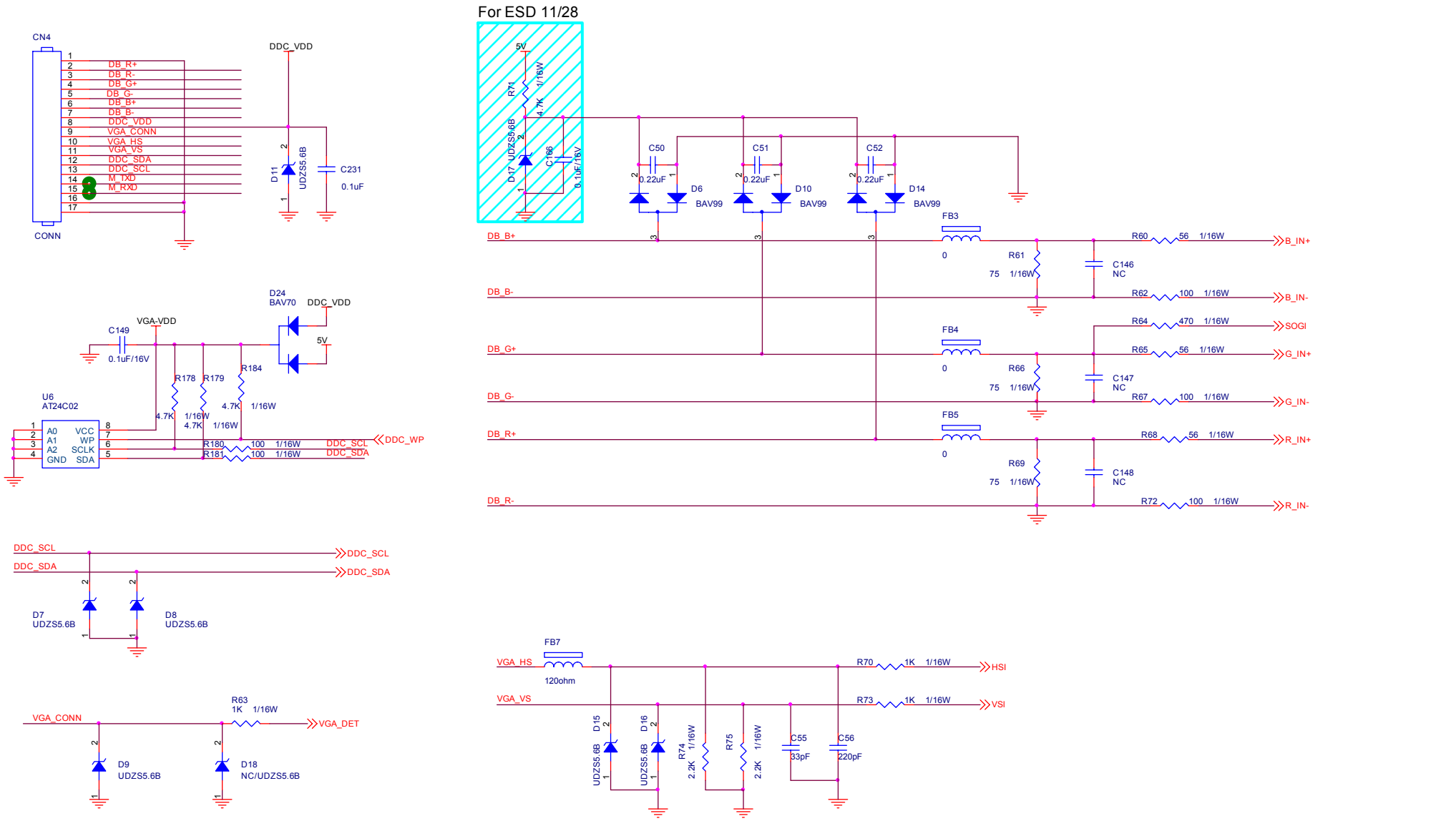




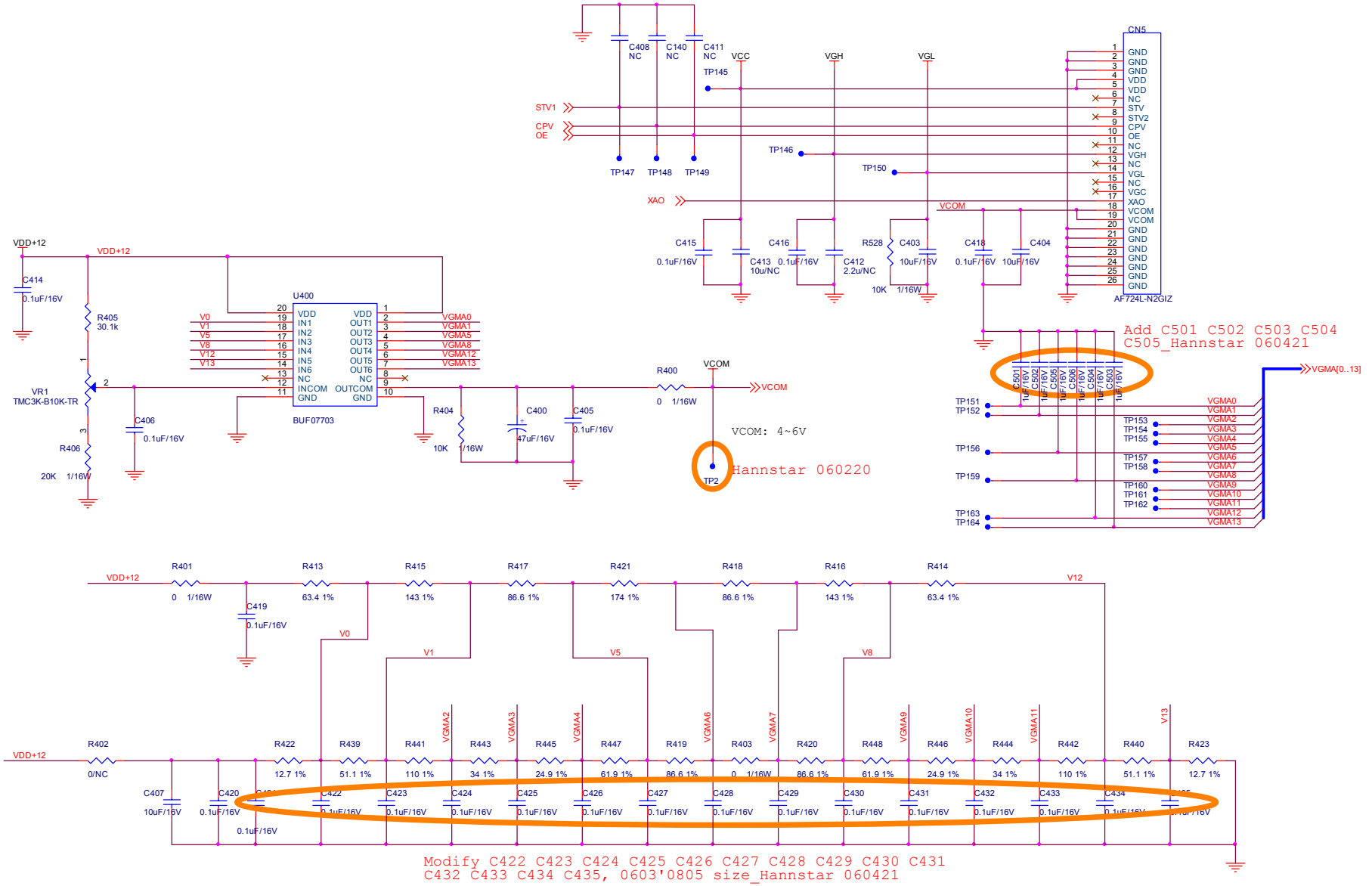




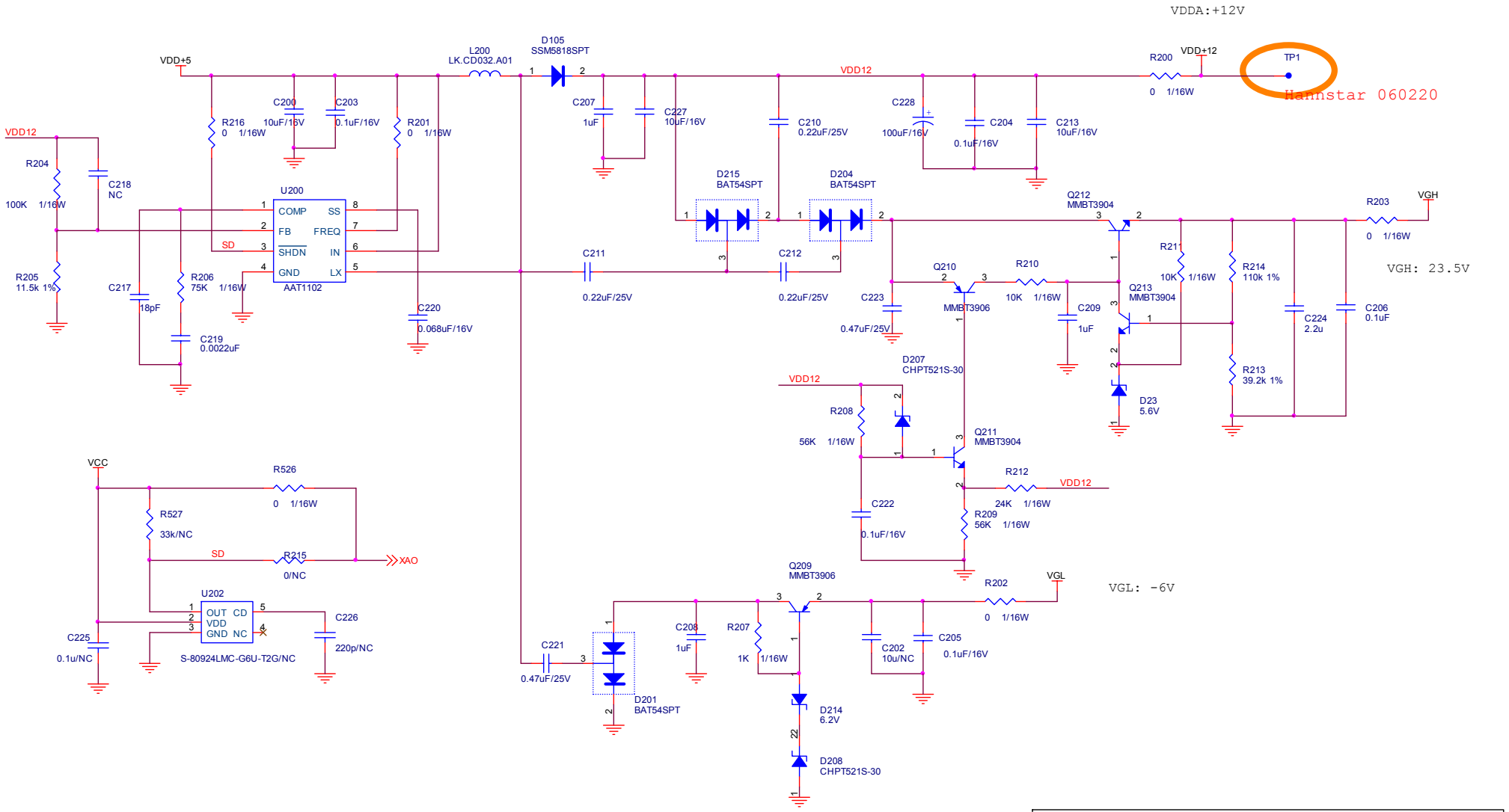
Title	I-MODEL-HSD	
Size	Document Number: POWER	Rev 0.1
Date: Thursday, April 27, 2006	Sheet 6 of 7	



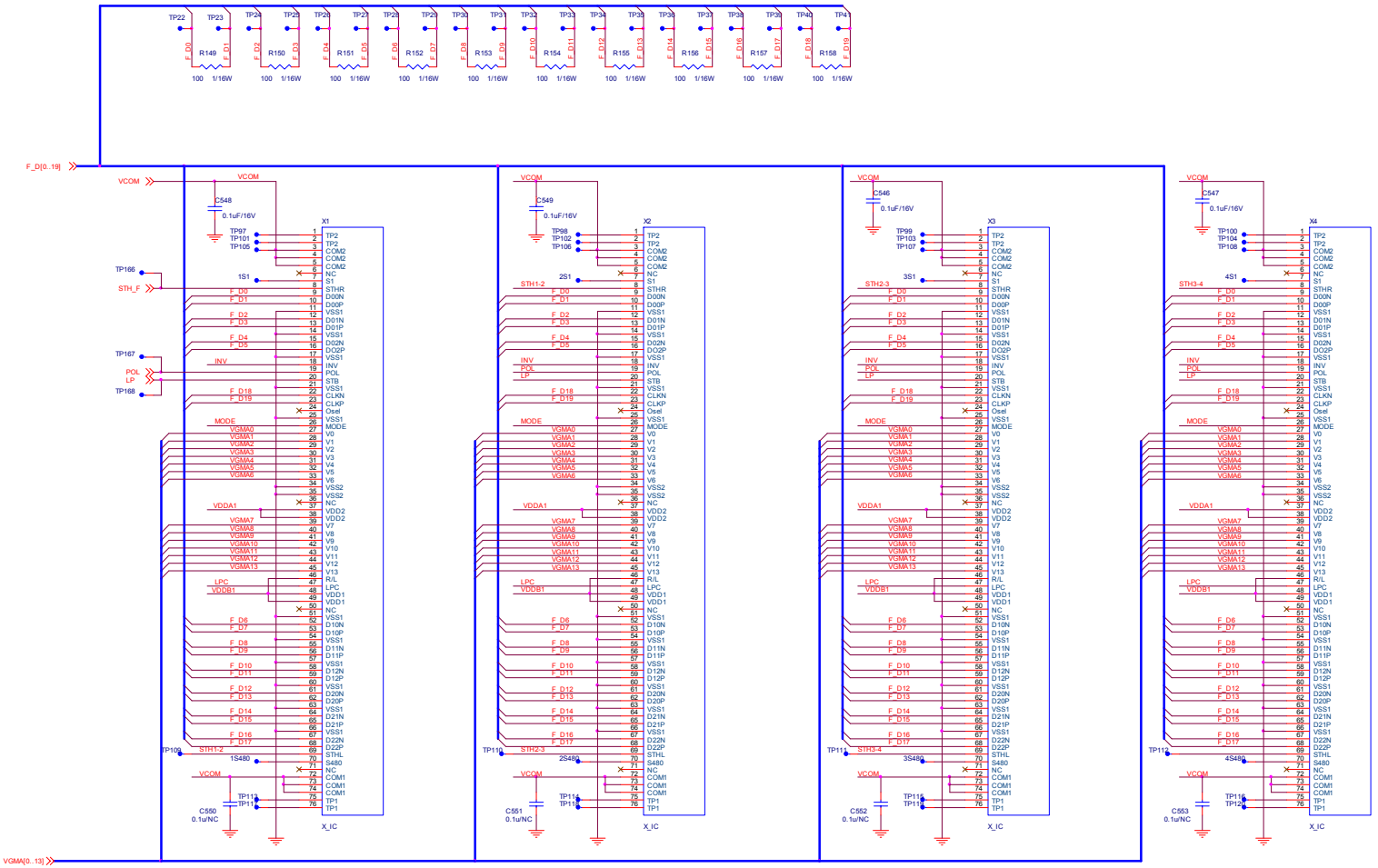
Title	I-MODEL-HSD	
Size	Document Number: VGA INPUT	Rev 0.1
Date: Thursday , April 27, 2006	Sheet 5 of 7	



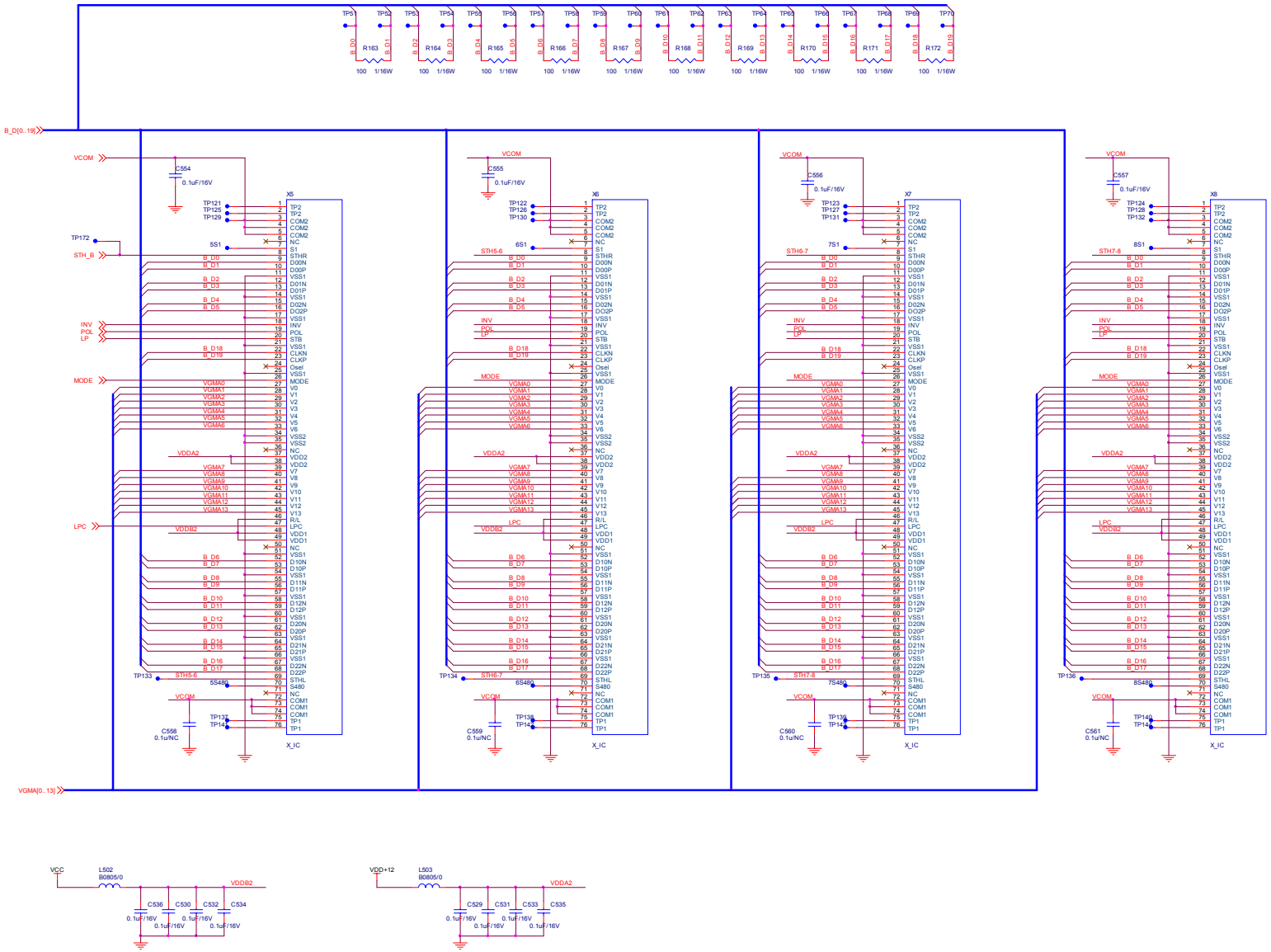
Title	I-MODEL-HSD	
Size	Document Number: VGMA	Rev: C
Date: Thursday, April 27, 2006	Sheet 3 of 8	



Title	I-MODEL-HSD	
Size	Document Number: DC-DC	Rev: 0.1
Date: Thursday, April 27, 2006	Sheet 4 of 7	

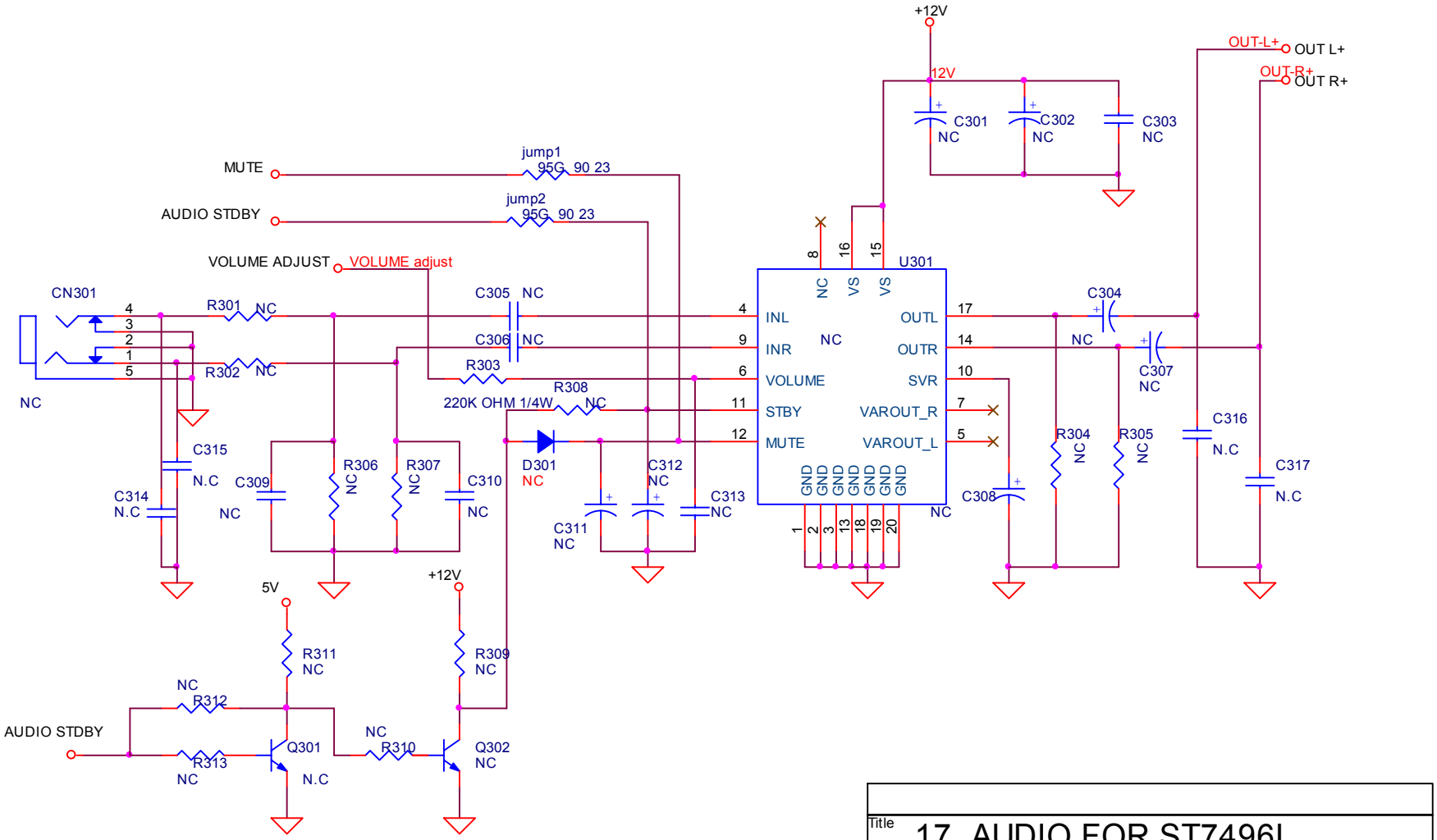


Title	I-MODEL-HSD	
Size	Document Number X1-X4	Rev 0.1
Date: Thursday, April 27, 2006	Sheet 2 of 7	



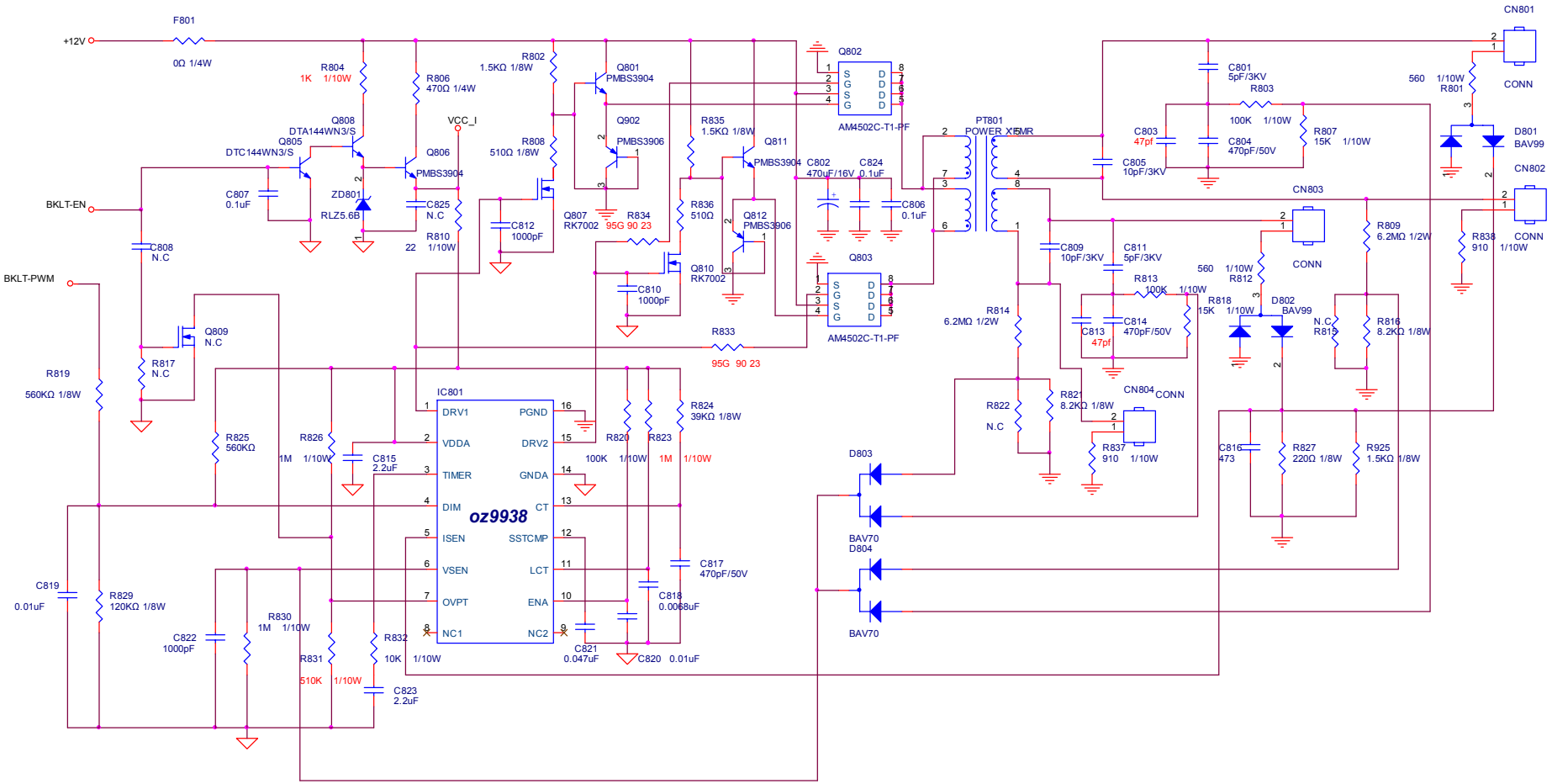
Title	I-MODEL-HSD	
Size	Document Number X5-X8	Rev 0.1
Date: Thursday, April 27, 2006	Sheet 1 of 7	

6.2 Power Board

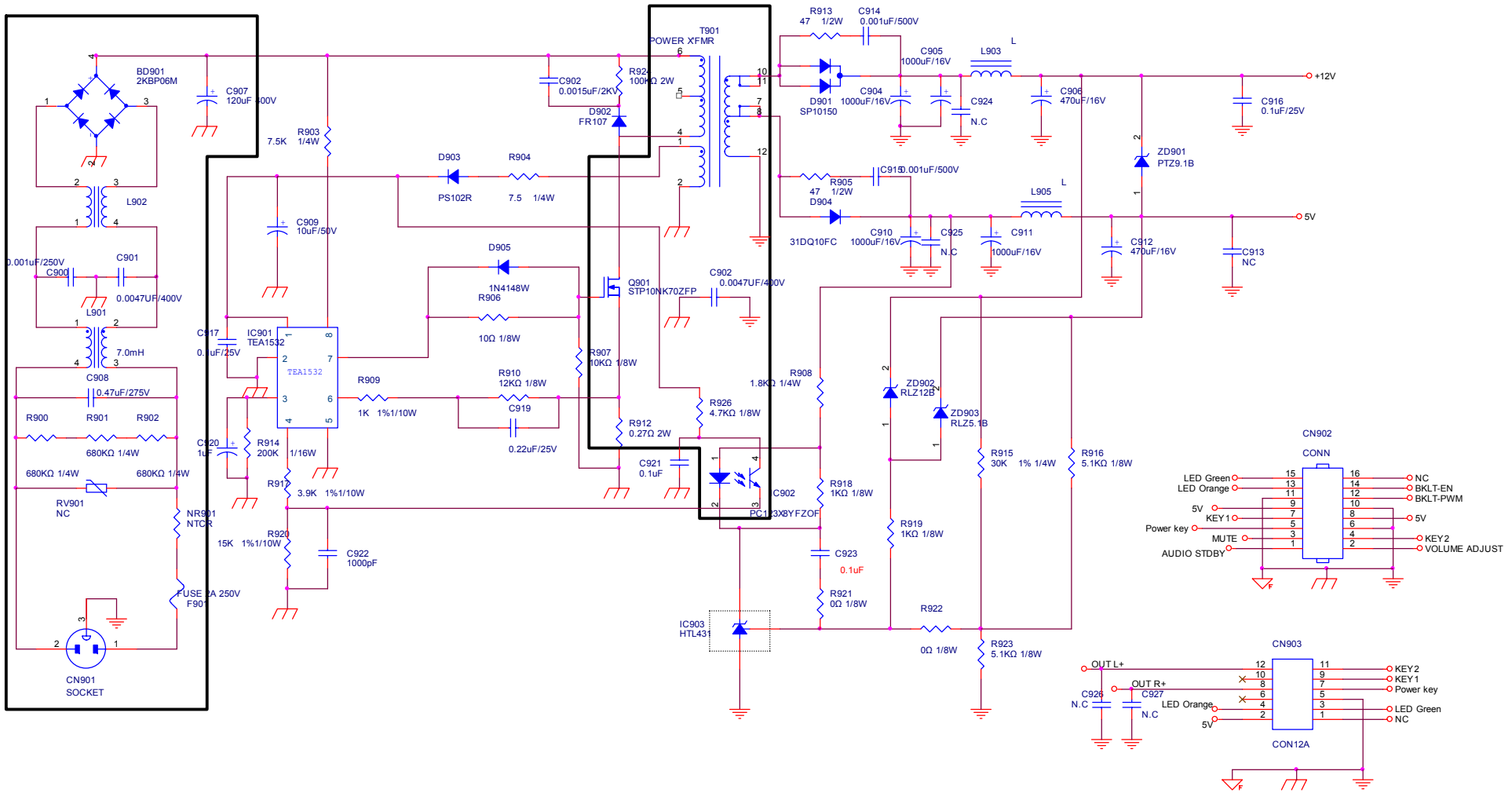


Title	17 AUDIO FOR ST7496L	
Size A	Document Number <Doc> G1696-1-X-X-1-060713	Rev A
Date: Thursday, July 13, 2006	Sheet 1 of 3	

715L1144-1-NMV



Title: OZ9938 Half Bridge for 4 CCFLs Application		
Size: B	Document Number: 1.0 G1696-1-X-X-1-060713	Rev: TPV01
Date: Thursday, July 13, 2006	Sheet 1 of 3	



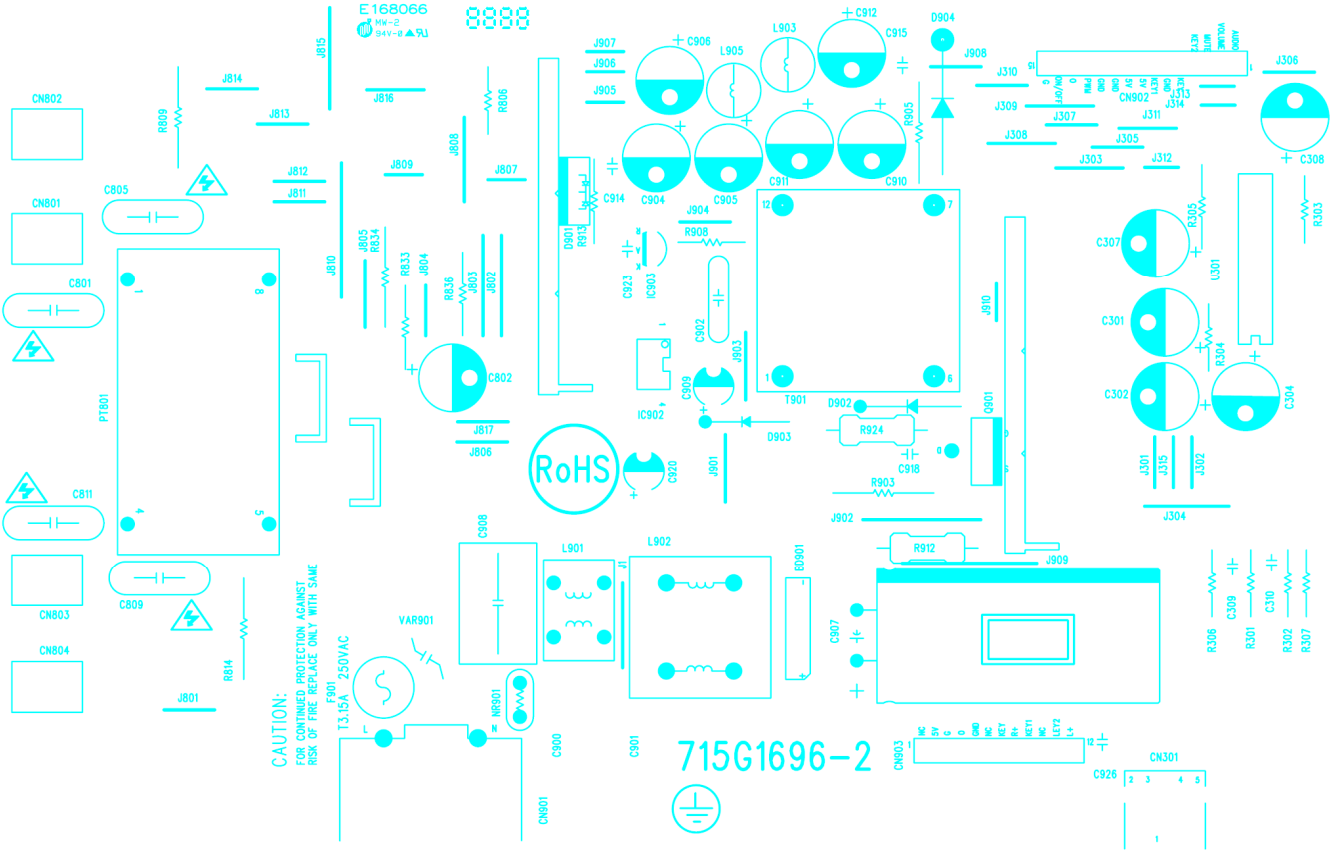
<Title>

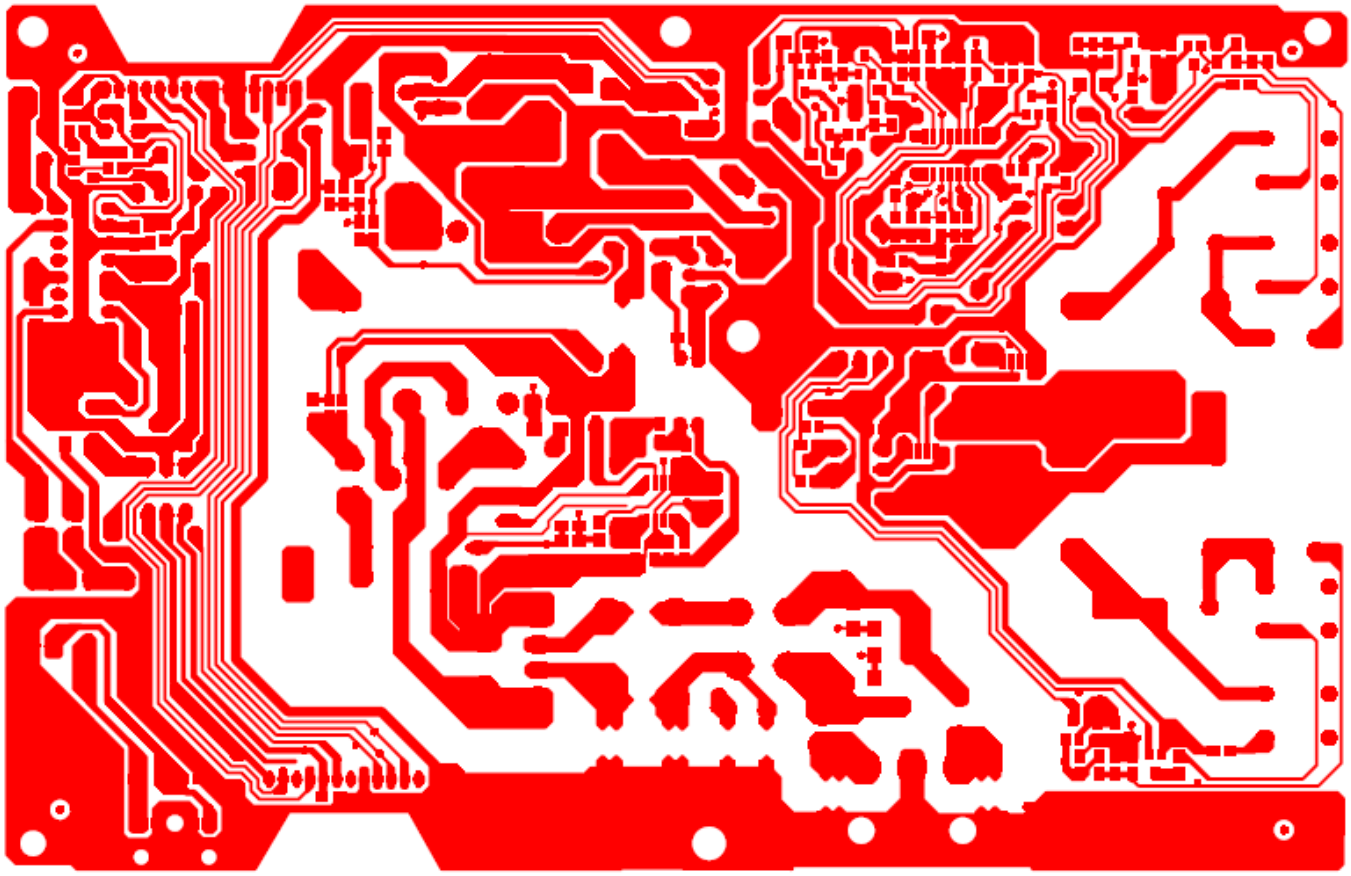
INTERNAL POWER FOR PWPC17

Size	Document Number	Rev
B	G1606 1 X X 1 060713	2
Date: Thursday, July 13, 2006	Sheet 1 of 3	

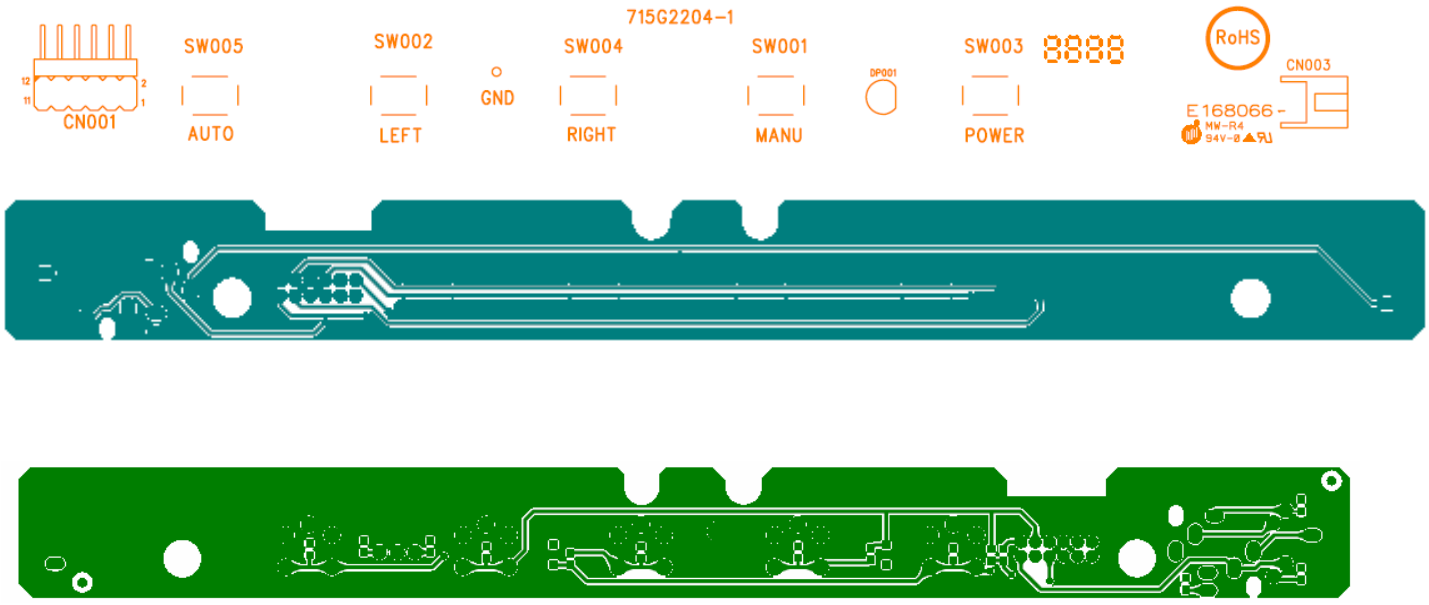
7. PCB Layout

7.1 Power Board





7.2 Key board


715G2204-1
CN001
SW005
AUTO
SW002
LEFT
GND
SW004
RIGHT
SW001
MANU
DP001
SW003
POWER
8888
RoHS
CN003
E168066

8. Maintainability

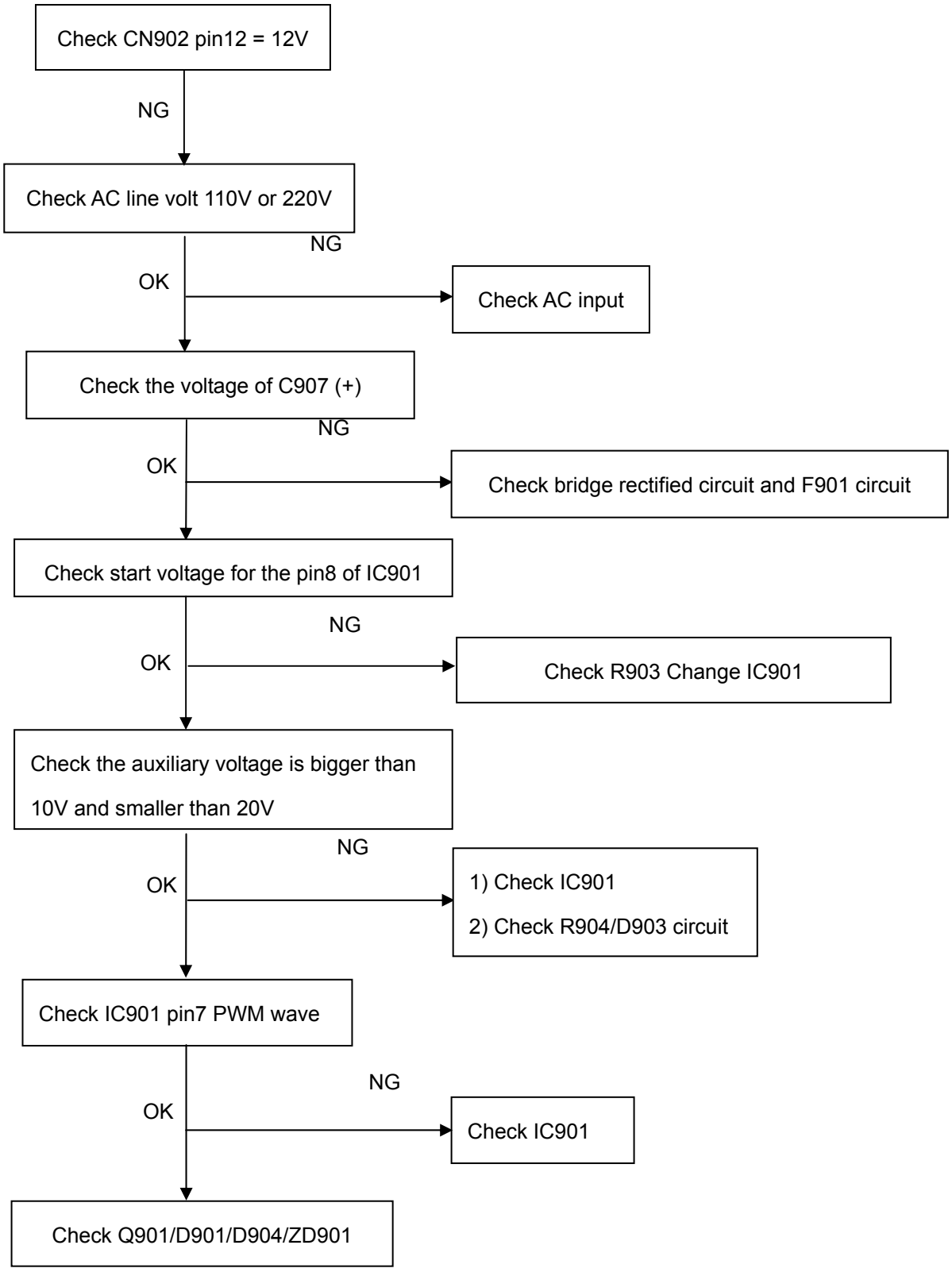
8.1 Equipments and Tools Requirement

1. Voltmeter.
2. Oscilloscope.
3. Pattern Generator.
4. DDC Tool with an IBM Compatible Computer.
5. Alignment Tool.
6. LCD Color Analyzer.
7. Service Manual.
8. User Manual.

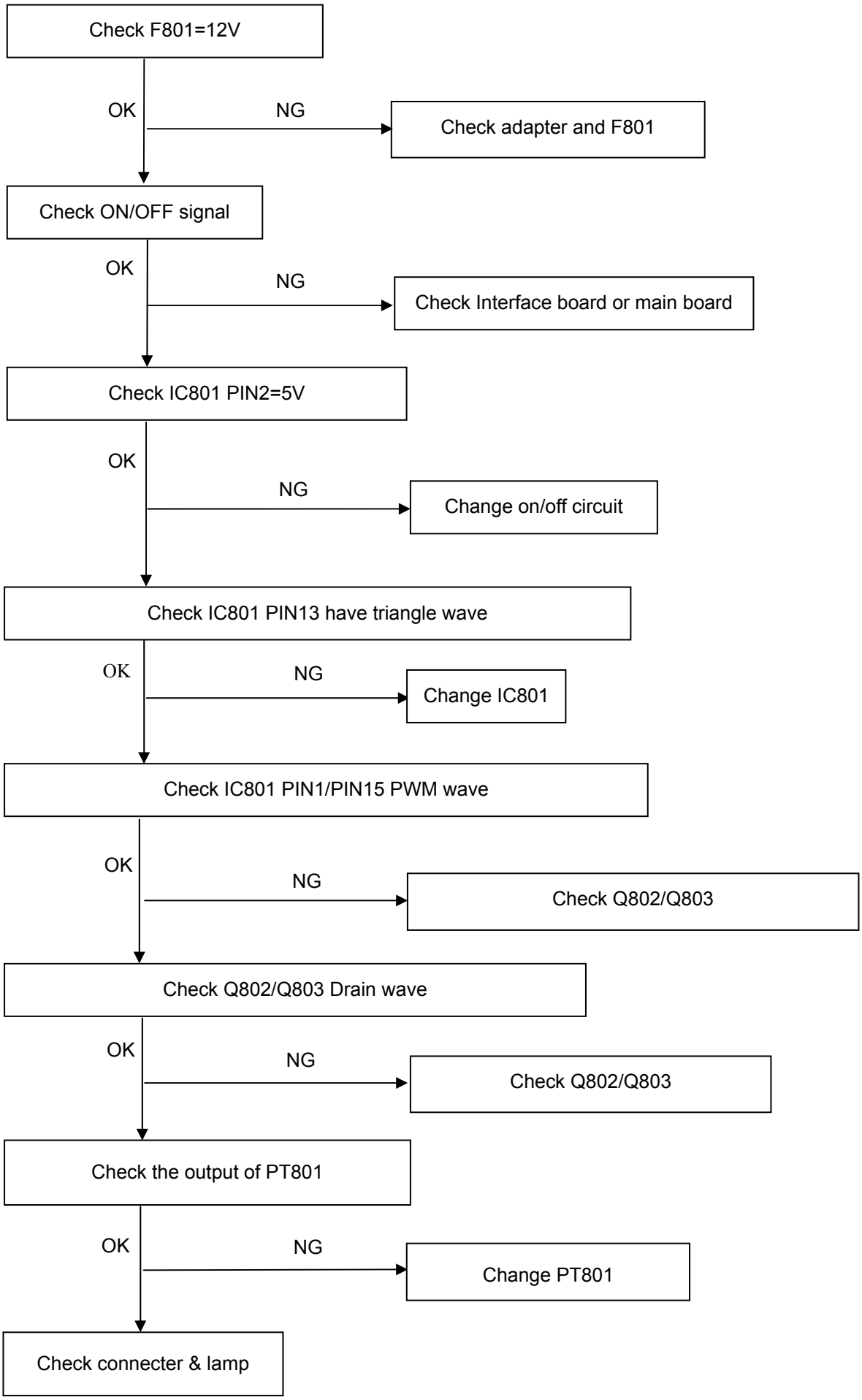
8.2 Trouble Shooting

8.2.1 Power Board

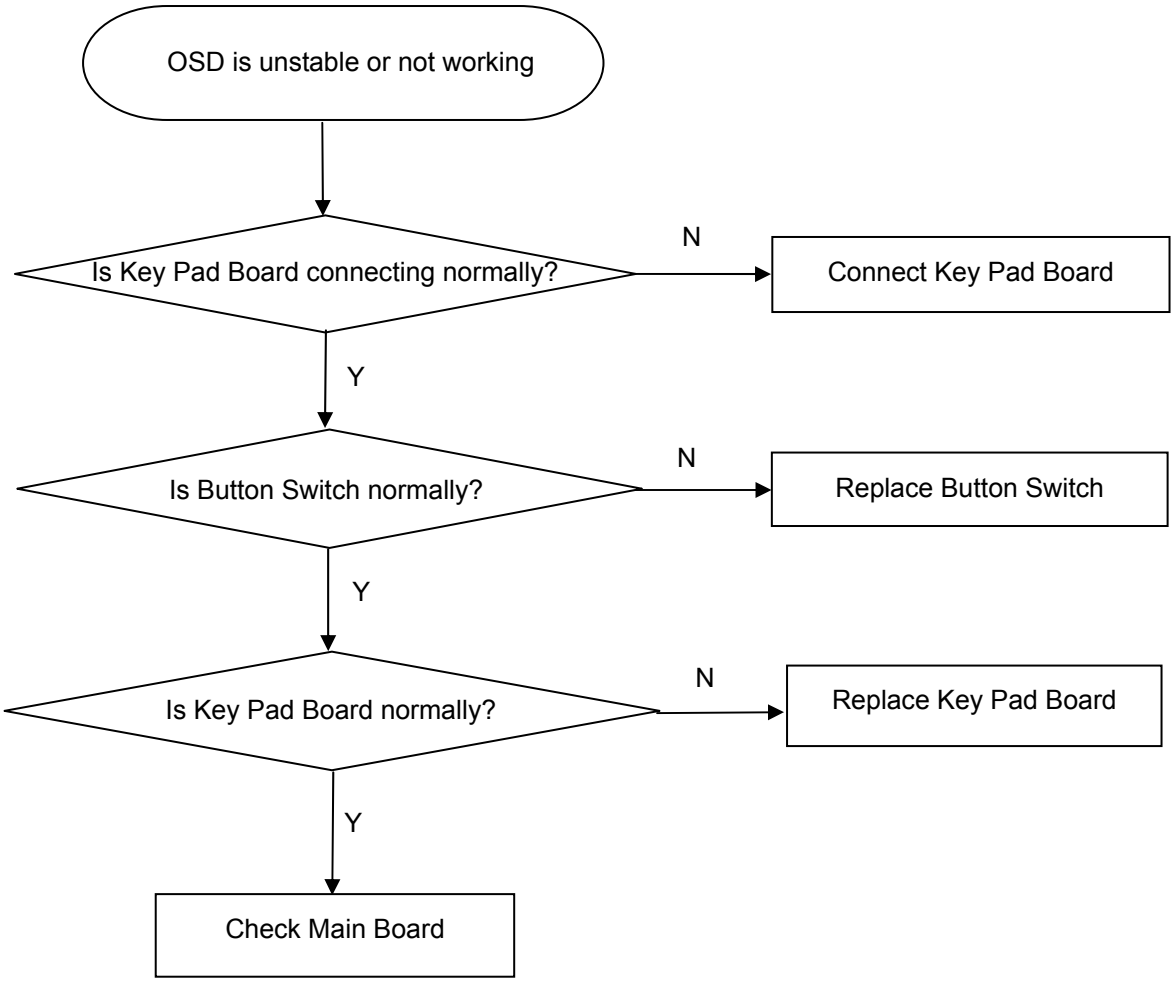
1) No power



2.) No Backlight



8.2.2Key Board



9. White- Balance, Luminance Adjustment

Approximately 30 minutes should be allowed for warm up before proceeding White-Balance adjustment.

1. How to do the Chroma-7120 MEM. Channel setting

   A. Reference to chroma 7120 user guide

   B. Use “SC” key and “NEXT” key to modify x,y,Y value and use “**ID**” key to modify the TEXT description Following is the procedure to do white-balance adjust

2. Setting the color temp. you want

   A. MEM.CHANNEL 3 (9300 color):

   9300 color temp. parameter is x = 283 ±28, y = 297 ±28,Y=220cd/㎡

   B. MEM.CHANNEL 4 (6500 color):

   6500 color temp. parameter is x = 313±28, y = 329 ±28, Y=220cd/㎡

   C. MEM.CHANNEL 9 (5500 color):

   5500 color temp. parameter is x = 333±28, y = 348 ±28, Y=220cd/㎡

3. Enter into factory mode of AG191A

   Turn on the power, press simultaneously the MENU and AUTO buttons, then the factory OSD will be at the left top of the panel.

4. Bias adjustment:

   Set the **Contrast** to 50; Adjust the **Brightness** to 80.

5. Gain adjustment:

Move cursor to “-F-” and press MENU key

   A. Adjust 9300 color-temperature

      1. Switch the Chroma-7120 to **RGB-Mode** (with press “MODE” button)
      2. Switch the MEM. Channel to Channel 3 (with up or down arrow on chroma 7120)
      3. The LCD-indicator on chroma 7120 will show x = 283 ±28, y = 297 ±28, Y=220cd/㎡
      4. Adjust the RED of color 1 on factory window until chroma 7120 indicator reached the value R=100
      5. Adjust the GREEN of color 1 on factory window until chroma 7120 indicator reached the value G=100
      6. Adjust the BLUE of color 1 on factory window until chroma 7120 indicator reached the value B=100
      7. Repeat above procedure (item 4,5,6) until chroma 7120 RGB value meet the tolerance =100±2

   B. Adjust 6500 color-temperature

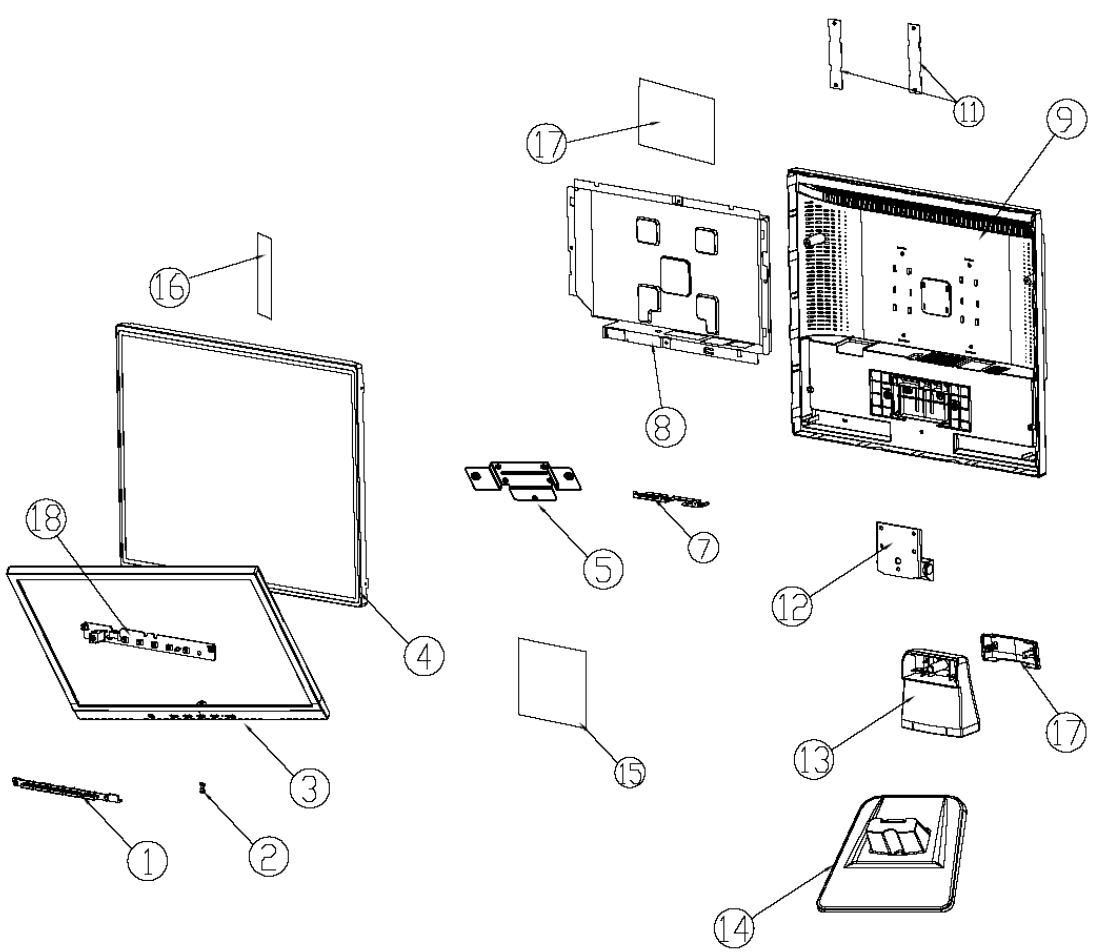
      1. Switch the chroma-7120 to **RGB-Mode** (with press “MODE” button)
      2. Switch the MEM.channel to Channel 4(with up or down arrow on chroma 7120)
      3. The LCD-indicator on chroma 7120 will show x = 313 ±28, y = 329 ±28, Y=220cd/㎡
      4. Adjust the RED of color 2 on factory window until chroma 7120 indicator reached the value R=100
      5. Adjust the GREEN of color 2 on factory window until chroma 7120 indicator reachedthe value G=100
      6. Adjust the BLUE of color 2 on factory window until chroma 7120 indicator reached the value B=100
      7. Repeat above procedure (item 4,5,6) until chroma 7120 RGB value meet the tolerance =100±2

C. Adjust 5500 color-temperature

1. Switch the chroma-7120 to **RGB-Mode** (with press “MODE” button)
2. Switch the MEM.channel to Channel 9 (with up or down arrow on chroma 7120)
3. The LCD-indicator on chroma 7120 will show x = 333±28, y = 348 ±28, Y=220cd/㎡
4. Adjust the RED of color 3 on factory window until chroma 7120 indicator reached the value R=100
5. Adjust the GREEN of color 3 on factory window until chroma 7120 indicator reachedthe value G=100
6. Adjust the BLUE of color 3 on factory window until chroma 7120 indicator reached the value B=100
7. Repeat above procedure (item 4,5,6) until chroma 7120 RGB value meet the tolerance =100±2

D. Turn the Power-button off to quit from factory mode.

9. Monitor Exploded View



18	Key Board	KEPC6QH3P
17	MYLAR_TOP	Q52G6025 11999
16	MYLAR_BOTTOM	Q52G6025 13 32
15	PWPC	PWPC1941HE1P
14	BASE	A34G0117ZT1L20
13	STAND	A34G0046 ZT 3L
12	HINGE	A37G0005 1
11	VESA BRACKET	A15G0028 1
10	GATE COVER	Q33G4945 ZT 1L
9	REAR COVER	A34G0050 TW 1T
8	MAIN SHIELD	Q85G740 2 1
7	AC BRACKET	Q15G8313 1
5	HINGE BKT	A15G0027 2
4	PANEL	750GLH90M1B11N
3	BEZEL	A34G0041ZTB5L30
2	LED	A33G0027 1 1C
1	BUTTON	A33G0043 ZU 1L
ITEM	TYPE	P/N

10. BOM List

T96HM5DTG6HZAIP

Location	Part No.	Description
	015G8266 1	AC BKT
	045G 88606	PE BAG FOR BASE
	045G 88626 1	PE BAG FOR MONITOR
	052G 1186	SMALL TAPE
	052G 1211 B	AL TAPE
	052G 1211516	ALUMINUM TAPE
	089G 173 56546	AUDIO CABLE
E089A	089G 745HAA 2	SIGNAL CBALE
	0M1G 330 5 47 CR3	SCREW
	0M1G 340 10225 CR3	SCREW
	0M1G1140 6120	SCREW
	0M1G1730 6120	SCREW
	0Q1G 330 6120	SCREW
	0Q1G 330 12 47 CR3	SCREW
	750GLH90M1B11N	PANEL LCD HSD190SEN1 B01 HSD
	A33G0030 ZT 1L 32	CABLE COVER
	AM1G1740 10225 CR3	SCREW
	KEPC6QH3P	KEY BOARD
CN004	033G3802 2H	WAFER 2P RIGHT ANGLE
CN003	033G3802 2H	WAFER 2P RIGHT ANGLE
CN001	033G8027 12 H	PIN HEADER 2*6 R/A
SW003	077G 600 1GCJ	TACT SWITCH TSPB-2 -NP
SW002	077G 600 1GCJ	TACT SWITCH TSPB-2 -NP
SW001	077G 600 1GCJ	TACT SWITCH TSPB-2 -NP
SW005	077G 600 1GCJ	TACT SWITCH TSPB-2 -NP
SW004	077G 600 1GCJ	TACT SWITCH TSPB-2 -NP
DP001	081G 12 1 GP	LED GP32032M/R003-ZY-33
CN002	088G 30221T CL	PHONE JACK (DARK GRAY)
	095G 900649 D	WIRE HARNESS
	SMTKEPC6QH3P	KEY BOARD FOR SMT
R011	061G0603103	RST CHIPR 10 KOHM +-5% 1/10W
R009	061G0603103	RST CHIPR 10 KOHM +-5% 1/10W
C005	065G0603104 12	CER2 0603 X7R 16V 100N P
C004	065G0603104 12	CER2 0603 X7R 16V 100N P
C003	065G0603104 12	CER2 0603 X7R 16V 100N P
C002	065G0603104 12	CER2 0603 X7R 16V 100N P
C001	065G0603105 12	CHIP 1UF 16VX7R 0603

FB001	071G 59G301	CHIP BEAD 300OHM
D002	093G 39S 34 T	UDZS5.6B
D001	093G 39S 34 T	UDZS5.6B
	AIKEPC6QH3P	KEY BOARD FOR AI
R002	061G 60239152T	390 OHM 5% 1/6W
R001	061G 60239152T	390 OHM 5% 1/6W
	715G2204 1A	KEY BOARD PCB
	PWPC1941HE1P	POWER G1696-2-X-X-1-060927
CN801	033G8021 2E U	WAFER
CN802	033G8021 2E U	WAFER
CN803	033G8021 2E U	WAFER
CN804	033G8021 2E U	WAFER
	040G 45762420A	LABEL 25X6MM
IC902	056G 139 3B	PC123 Y82FZ0F
U301	056G 616 1	IC E-TDA7496L ST
NR901	061G 58080 WT	8 OHM NCT
R924	061G152M104 64	100KOHM 5% 2W
R912	061G152M278 64	0.27 OHM 5% 2W
C809	065G 3J1006ET	10PF,J,3KV,SL
C805	065G 3J1006ET	10PF,J,3KV,SL
C811	065G 3J5096ET	5PF 5% SL 3KV
C801	065G 3J5096ET	5PF 5% SL 3KV
C901	065G305M1022BP	Y2 1000PF M 250VAC Y5P
C900	065G305M1022BP	Y2 1000PF M 250VAC Y5P
C902	065G306M4722BP	4700PF +-20% 400VAC
C904	067G215S1023KV	105℃ 1000UF M 16V
C905	067G215S1023KV	105℃ 1000UF M 16V
C910	067G215S1023KV	105℃ 1000UF M 16V
C911	067G215S1023KV	105℃ 1000UF M 16V
C802	067G215S471 3K	EC 470UF 16V
C301	067G215S471 3K	EC 470UF 16V
C302	067G215S471 3K	EC 470UF 16V
C304	067G215S471 3K	EC 470UF 16V
C307	067G215S471 3K	EC 470UF 16V
C308	067G215S471 3K	EC 470UF 16V
C906	067G215S471 3K	EC 470UF 16V
C912	067G215S471 3K	EC 470UF 16V
L902	073G 174 65 LS	LINE FILTER BY LISHIN
L905	073G 253 91 H	CHOKE COIL
L903	073G 253 91 LS	CHOKE BY LI SHIN

PT801	080GL17T 34 DN	XFMR BY DARFON
T901	080GL17T 35 L	XFMR FOR POWER LITAI
CN901	087G 501 32 S	AC SOCKET
CN301	088G 30214K	PHONE JACK 5PIN
	090G6059 1	HEAT SINK
DB901	093G 50460 28	BRIDGE DIODE KBP208G LITEON
D904	093G3010 1	31DQ10FC
CN903	095G8014 12544	WIRE HARNESS
CN902	095G8014 15506	WIRE HARNESS
	705G 780 57 54	Q901 ASS'Y
Q901	057G 667 21	STP10NK70ZFP
	090G6263 1	HEAT SINK
	0M1G1730 8128 CR3	SCREW
	705G 780 93 16	D901 ASS'Y
	090G6263 1	HEAT SINK
D901	093G 60245	SP10150
	0M1G1730 8128 CR3	SCREW
	PW1941HE1SMTP	POWER BOARD FOR SMT
IC901	056G 564911	IC TEA1532AT S08
IC801	056G 608 10	0Z9938
Q801	057G 417 4	PMBS3904/PHILIPS-SMT(04)
Q806	057G 417 4	PMBS3904/PHILIPS-SMT(04)
Q811	057G 417 4	PMBS3904/PHILIPS-SMT(04)
Q804	057G 417 6	PMBS3906/PHILIPS-SMT(06)
Q812	057G 417 6	PMBS3906/PHILIPS-SMT(06)
Q803	057G 600 61	AM4502C-TI-PF S0-8
Q802	057G 600 61	AM4502C-TI-PF S0-8
Q807	057G 759 2	RK7002
Q810	057G 759 2	RK7002
Q808	057G 760 4A	DTA144WN3/S SOT-23
Q805	057G 760 5A	DTC 144WN3/S SOT-23
R921	061G0805000	0 OHM 1/10W
R922	061G0805000	0 OHM 1/10W
R906	061G0805100	10 OHM 1/10W
R909	061G0805100 1F	RST CHIPR 1KOHM +-1% 1/8W
R804	061G0805102	CHIP 1KOHM 1/10W
R918	061G0805102	CHIP 1KOHM 1/10W
R919	061G0805102	CHIP 1KOHM 1/10W
R832	061G0805103	10 KOHM 1/10W
R907	061G0805103	10 KOHM 1/10W

R820	061G0805104	RST CHIP 100K 1/8W 5%
R813	061G0805104	RST CHIP 100K 1/8W 5%
R803	061G0805104	RST CHIP 100K 1/8W 5%
R823	061G0805105	1MOHM 1/10W
R826	061G0805105	1MOHM 1/10W
R830	061G0805105	1MOHM 1/10W
R910	061G0805123	RST CHIPR 12 KOHM +-5% 1/8W
R829	061G0805124	RST CHIPR 120 KOHM +-5% 1/8W
R828	061G0805150 1F	RST CHIPR 1.5 KOHM +-1% 1/8W
R920	061G0805150 2F	RST CHIPR 15 KOHM +-1% 1/8W
R802	061G0805152	RST CHIPR 1.5 KOHM +-5% 1/8W
R835	061G0805152	RST CHIPR 1.5 KOHM +-5% 1/8W
R807	061G0805153	RST CHIPR 15KOHM +-5% 1/8W
R818	061G0805153	RST CHIPR 15KOHM +-5% 1/8W
R810	061G0805220	22&8 1/10W
R827	061G0805221	RST CHIPR 220 OHM +-5% 1/8W
R915	061G0805300 2F	RST CHIPR 30 KOHM +-1% 1/8W
R917	061G0805390 1F	RST CHIPR 3.9 KOHM +-1% 1/8W
R824	061G0805390 2F	RST CHIPR 39 KOHM +-1% 1/8W
R911	061G0805472	RST CHIPR 4.7 KOHM +-5% 1/8W
R916	061G0805510 1F	RST CHIPR 5.1 KOHM +-1% 1/8W
R923	061G0805510 1F	RST CHIPR 5.1 KOHM +-1% 1/8W
R808	061G0805511	RST CHIPR 510 OHM +-5% 1/8W
R831	061G0805514	RST CHIPR 510 KOHM +-5% 1/8W
R801	061G0805561	560 0805
R812	061G0805561	560 0805
R819	061G0805564	RST CHIPR 560 KOHM +-5% 1/8W
R821	061G0805822	RST CHIPR 8.2 KOHM +-5% 1/8W
R816	061G0805822	RST CHIPR 8.2 KOHM +-5% 1/8W
R838	061G0805911	RST CHIPR 910 OHM +-5% 1/8W
R837	061G0805911	RST CHIPR 910 OHM +-5% 1/8W
RJ803	061G1206000	0 OHM 1/8W
RJ802	061G1206000	0 OHM 1/8W
RJ801	061G1206000	0 OHM 1/8W
F801	061G1206000 4	RST CHIPR 0 OHM +-5% 1/4W
R914	061G1206204	RST CHIPR 200 KOHM +-5% 1/4W
R825	061G1206564	RST CHIPR 560 KOHM +-5% 1/4W
R902	061G1206684	RST CHIPR 680 KOHM +-5% 1/4W
R901	061G1206684	RST CHIPR 680 KOHM +-5% 1/4W
R900	061G1206684	RST CHIPR 680 KOHM +-5% 1/4W

R904	061G1206759	7R5 OHM 1/8W
C922	065G0805102 31	1000PF 50V NPO
C822	065G0805102 31	1000PF 50V NPO
C812	065G0805102 31	1000PF 50V NPO
C810	065G0805102 31	1000PF 50V NPO
C820	065G0805103 32	10NF/50V/0805/X7R
C819	065G0805103 32	10NF/50V/0805/X7R
C916	065G0805104 22	0.1UF +-10% 25V X7R 080
C303	065G0805104 22	0.1UF +-10% 25V X7R 080
C921	065G0805104 32	CHIP 0.1U 50V X7R
C917	065G0805104 32	CHIP 0.1U 50V X7R
C913	065G0805104 32	CHIP 0.1U 50V X7R
C824	065G0805104 32	CHIP 0.1U 50V X7R
C807	065G0805104 32	CHIP 0.1U 50V X7R
C806	065G0805104 32	CHIP 0.1U 50V X7R
C312	065G0805105 22	CHIP 1UF 25V X7R 0805
C311	065G0805105 22	CHIP 1UF 25V X7R 0805
C919	065G0805224 22	CAIP CAP 0.22 UF 25V X7R
C815	065G0805225 27	2.2UF
C823	065G0805225 27	2.2UF
C814	065G0805471 31	CHIP 470PF 50V NPO
C804	065G0805471 31	CHIP 470PF 50V NPO
C817	065G080547121G	470PF, G, 25V,NPO
C821	065G0805473 32	CHIP 0.047UF 50V X7R
C305	065G0805474 22	CHIP 0.47UF 25V X7R 0805
C306	065G0805474 22	CHIP 0.47UF 25V X7R 0805
C818	065G0805682 32	MLCC 0805 CAP 6800PF K 50V X7R
C816	065G0805683 22	68NK X7R 25V
C313	065G1206104 32	CHIP 0.1UF 25V X7R 1206
D804	093G 64 42 P	BAV70 SOT-23
D803	093G 64 42 P	BAV70 SOT-23
D905	093G 6432S	IN4148W
D802	093G 6433P	BAV99
D801	093G 6433P	BAV99
ZD902	093G 39S 17 T	RLZ12B LLDS
ZD801	093G 39S 24 T	RLZ 5.6B LLDS
ZD903	093G 39S 25 T	RLZ5.1B LLDS
ZD901	093G 39S 38 T	PTZ 9.1B
	PW1941HE1AIP	POWER BOARD FOR AI
CN901	006G 31500	EYELET

T901	006G 31502	1.5MM RIVET
C907	006G 31502	1.5MM RIVET
L901	006G 31502	1.5MM RIVET
L902	006G 31502	1.5MM RIVET
Q901	006G 31502	1.5MM RIVET
PT801	006G 31502	1.5MM RIVET
IC903	056G 158 4 T	H431BA
R908	061G 17218252T	1.8KOHM 5% 1/4W
R303	061G 17222452T	RST CFR 220KOHM +-5% 1/4W
R806	061G 17247152T	470OHM 5% 1/4W
R905	061G 20747052T	47 OHM 1/2W
R913	061G 20747052T	47 OHM 1/2W
R304	061G 60210252T	CFR 1K OHM +-5% 1/6W
R305	061G 60210252T	CFR 1K OHM +-5% 1/6W
R301	061G 60210352T	CFR 10KOHM +-5% 1/6W
R302	061G 60210352T	CFR 10KOHM +-5% 1/6W
R836	061G 60251152T	510 OHM 5% 1/6W
R307	061G 60256252T	5.6KOHM 5% 1/6W
R306	061G 60256252T	5.6KOHM 5% 1/6W
R903	061G212Y15352T	RST MGFR 15 KOHM +-5% 1/2W
R814	061G212Y625 KT	MGFR 6.2MOHM +-5% 1/2W
R809	061G212Y625 KT	MGFR 6.2MOHM +-5% 1/2W
C923	064G700J1040AT	0.1UF 50V PEN
C918	065G 2K152 1T6052	1.5NF/2KV Y5P +-10%
C310	065G 444101 5T	100 PF 10% 50V Y5P
C309	065G 444101 5T	100 PF 10% 50V Y5P
C915	065G517K102 5T6213	1000PF,K,500V,Y5P
C914	065G517K102 5T6213	1000PF,K,500V,Y5P
C920	067G 2151097NT	KMY50VB1M-TP5 5*11.5
F901	084G 55 7	FUSE 3.15A 250V MET3.15
D902	093G 6026T52T	RECTIFIER DIODE FR107
D903	093G 6038P52T	PS102R
	715G1696 2	POWER BOARD PCB
	Q15G0028 2	VESA BKT
	Q33G4945 ZT 1L	GETE COVER
	Q85G 721 1	SHIELD
	Q40G0001850 1A	CARTON LABEL
	040G 459625 5A	PALLET LABEL
	Q40G 58170931A	HT POT LABEL
	Q40G0002850 2A	EPA LABEL

	040G 58162435A	LABEL
	Q40G 19N850 1A	RATING LABEL
E089B	089G420A18N IS	POWER CORD
	007G 5 L 36	COMPOUND PALLET
	007G 5 L 37	COMPOUND PALLET
	044G9003210	CORNER PAPER
	052G 1185	MIDDLE TAPE
	050G 600 2	HANDLE1
	050G 600 3	HANDLE2
	Q44G3944850 1A	CARTON
	Q44G600262213A	PAPER CAP
	Q44G6002842 6A	PAPER BOARD
	045G 76 28 RN	PE BAG FO MANUAL/BASE
	Q41G7800850 9A	QSG FOR INC
	Q40G0002850 6A	WARRANTY LABEL
	Q41G780085014A	RECYCLE INFORMATION
	Q70G9000850 1A	CD MANUAL
	705GQ9K0F34045	19" LCD BEZEL ASS'Y
	0Q1G1030 8120	SCREW
	A33G0027 1 1C	LENS
	A33G0043 ZU 1L	KEY PAD
	A34G0041 ZTB5B 30	BEZEL
	Q12G6300 33	RUBBER PAD
	Q12G6300 12	RUBBER PAD
E078L	078G 322501 LV	SPEAKER
E078R	078G 322501 RV	SPEAKER
	705GQ9K0P34047	STAND/BASE ASS'Y
	0Q1G 130 6120	SCREW (T3X6)
	0Q1G 340 10120	SCREW
	0Q1G1040 10120	SCREW
	A34G0042 ZT 6B 30	REAR COVER(19")
	A34G0046 ZT 3B	STAND
	A34G0117 ZT 1B 20	BASE
	A37G0005 1	HINGE
	AM1G1740 6225 CR3	SCREW
	Q15G0020 2	BASE BRACKET
	Q15G0071 1	HINGE BKT
	0M1G 330 6120	SCREW
	0M1G1130 6120	SCREW
	Q52G6025 13 69	MYLAR

	Q44G9032 1	EPS(L)
	Q44G9032 2	EPS(R)

12. Different Parts List

Diversity of T96HM5DTG6ZHAIP compared with T96HM5DTG6HZAIP		
Location	**Part No.**	**Description**
	705GQ9K0F34046	19" LCD BEZEL ASS'Y
	A33G0043 ZT 1L	KEY PAD
	A34G0041 ASB5B 30	BEZEL
	045G 88609 C	EPE COVER

Diversity of T96HM5NTG6HZAIP compared with T96HM5DTG6HZAIP		
Location	**Part No.**	**Description**
E089	089G 17356G553	AUDIO CABLE 1800MM
	705GQ9K0F34060	19" LCD BEZEL ASS'Y
	A34G0041 ZTB5L 30	BEZEL(19")
	705GQ9K0P34053	19" LCD STAND COVER-BASE ASS'Y
	A34G0042 ZT 6L 30	REAR COVER(19")
	A34G0046 ZT 3L	STAND
	A34G0117 ZT 1L 20	BASE
	Q40G 19N850 3A	RATING LABEL
	Q44G3944850 3A	CARTON
	Q70G9000850 2A	CD MANUAL

Diversity of T96HM5NTG6ZHAIP compared with T96HM5DTG6HZAIP		
Location	**Part No.**	**Description**
	045G 88609 C	EPE COVER
E089	089G 17356G553	AUDIO CABLE 1800MM
	705GQ9K0F34059	19" LCD BEZEL ASS'Y
	A33G0043 ZT 1L	KEY PAD
	A34G0041 ASB5L 30	BEZEL(19")
	705GQ9K0P34053	19" LCD STAND COVER-BASE ASS'Y
	A34G0042 ZT 6L 30	REAR COVER(19")
	A34G0046 ZT 3L	STAND
	A34G0117 ZT 1L 20	BASE
	Q40G 19N850 3A	RATING LABEL
	Q44G3944850 3A	CARTON
	Q70G9000850 2A	CD MANUAL