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# COLOR MONITOR SERVICE MANUAL

**CHASSIS NO. : CL-29**

**FACTORY MODEL: LB801H**

**MODEL: FLATRON L1811B(LB801H-GL)**

**\*( ) ID LABEL MODEL No.**

## **CAUTION**

**BEFORE SERVICING THE UNIT,  
READ THE SAFETY PRECAUTIONS IN THIS MANUAL.**



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## SPECIFICATIONS

### 1. LCD CHARACTERISTICS

Type : TFT SXGA LCD  
 Size : 18inch  
 Pixel Pitch : 0.2805(H) x 0.2805(V)  
 Color Depth : 8-bit, 16,777,216 colors  
 Electrical Interface : LVDS  
 Surface Treatment : Anti-Glare, Hard Coating(3H)  
 Operating Mode : Normally Black  
 Backlight Unit : Six-CCFL (Cold Cathode Fluorescent Lamp)

### 2. OPTICAL CHARACTERISTICS

2-1. Viewing Angle by Contrast Ratio  $\geq 10$

**Left** : -60° min., -80°(Typ)  
**Right** : +60° min., +80°(Typ)  
**Top** : +60° min., +80°(Typ)  
**Bottom** : -60° min., -80°(Typ)

2-2. Luminance : 200(min), 250(Typ)

2-3. Contrast Ratio : 200(min), 350(Typ)

### 3. SIGNAL (Refer to the Timing Chart)

3-1. Sync Signal

• Type : Separate, Positive/Negative  
 Composite, SOG (Sync On Green)  
 Digital

3-2. Video Input Signal

1) Type : R, G, B Analog  
 2) Voltage Level : 0~0.71 V  
 a) Color 0, 0 : 0 Vp-p  
 b) Color 7, 0 : 0.467 Vp-p  
 c) Color 15, 0 : 0.714 Vp-p  
 3) Input Impedance : 75  $\Omega$

3-3. Operating Frequency

Horizontal : 30 ~ 80kHz  
 Vertical : 56 ~ 85Hz

### 4. POWER SUPPLY

4-1. Power Adaptor(Built-in Power)

Input : AC 100~240V, 50/60Hz, 1.0A

4-2. Power Consumption

MODE	H/V SYNC	VIDEO	POWER CONSUMPTION	LED COLOR
POWER ON (NORMAL)	ON/ON	ACTIVE	less than 53 W	GREEN
STAND-BY	OFF/ON	OFF	less than 3 W	AMBER
SUSPEND	ON/OFF	OFF	less than 3 W	AMBER
OFF	OFF/OFF	OFF	less than 3 W	AMBER
POWER OFF	-	-	less than 3 W	OFF

### 5. ENVIRONMENT

5-1. Operating Temperature: 10°C~35°C (50°F~95°F)  
 (Ambient)

5-2. Relative Humidity : 10%~80%  
 (Non-condensing)

5-3. MTBF : 50,000 Hours(Min)

### 6. DIMENSIONS (with TILT/SWIVEL)

Width : 406 mm (15.98")  
 Depth : 223 mm (8.78")  
 Height : 431 mm (16.97")

### 7. WEIGHT (with TILT/SWIVEL)

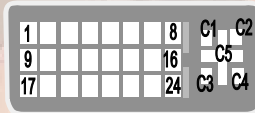
Net. Weight : 7.8kg (17.19 lbs)  
 Gross Weight : 10.0kg (22.04 lbs)

### 8. USB

Upstream : 1 port, Downstream : 2 port  
 Speed : Full-12Mbps, Low-1.5Mbps

## Signal Connector Pin Assignment

### • DVI-I Connector (Digital/Analog)



Pin	Signal (DVI-I)	Pin	Signal (DVI-I)
1	T. M. D. S. Data2-	16	Hot Plug Detect
2	T. M. D. S. Data2+	17	T. M. D. S. Data0-
3	T. M. D. S. Data2/4 Shield	18	T. M. D. S. Data0+
4	T. M. D. S. Data4-	19	T. M. D. S. Data0/5 Shield
5	T. M. D. S. Data4+	20	T. M. D. S. Data5-
6	DDC Clock	21	T. M. D. S. Data5+
7	DDC Data	22	T. M. D. S. Clock Shield
8	Analog Vertical Sync.	23	T. M. D. S. Clock+
9	T. M. D. S. Data1-	24	T. M. D. S. Clock-
10	T. M. D. S. Data1+	C1	Analog Red
11	T. M. D. S. Data1/3 Shield	C2	Analog Green
12	T. M. D. S. Data3-	C3	Analog Blue
13	T. M. D. S. Data3+	C4	Analog H. Sync.
14	+5V Power	C5	Analog Ground
15	Ground (return for +5V, H. Sync. and V. Sync.)		

T. M. D. S. (Transition Minimized Differential Signaling)

## PRECAUTION

### WARNING FOR THE SAFETY-RELATED COMPONENT.

- There are some special components used in LCD monitor that are important for safety. **These parts are marked  $\triangle$  on the schematic diagram and the replacement parts list.** It is essential that these critical parts should be replaced with the manufacturer's specified parts to prevent electric shock, fire or other hazard.
- Do not modify original design without obtaining written permission from manufacturer or you will void the original parts and labor guarantee.

### 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 are grounded through wrist band.
- Do not leave the module in high temperature and in areas of high humidity for a long time.
- The module not be exposed to the direct sunlight.
- Avoid contact with water as it may a short circuit within the module.
- If the surface of panel become dirty, please wipe it off with a softmaterial. (Cleaning with a dirty or rough cloth may damage the panel.)

### $\triangle$ CAUTION

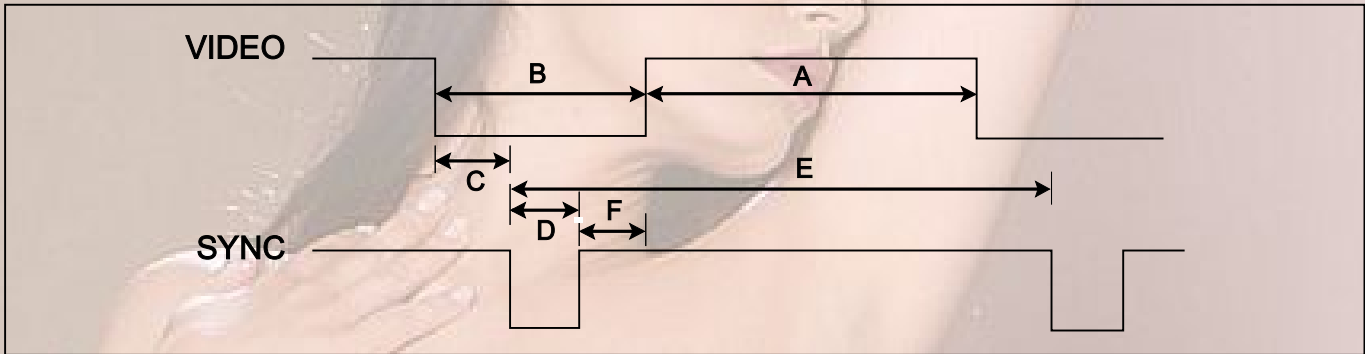
Please use only a plastic screwdriver to protect yourself from shock hazard during service operation.

### $\triangle$ WARNING

#### BE CAREFUL ELECTRIC SHOCK!

- If you want to replace with the new backlight (CCFL) or inverter circuit, must disconnect the AC adapter because high voltage appears at inverter circuit about 650Vrms.
- Handle with care wires or connectors of the inverter circuit. If the wires are pressed cause short and may burn or take fire.

## TIMING CHART



<< Dot Clock (MHz), Horizontal Frequency (kHz), Vertical Frequency (Hz), Horizontal etc... (μs), Vertical etc... (ms) >>

Mode	HV Sort	Sync Polarity	Dot Clock	Frequency	Total Period (E)	Video Active Time (A)	Front Porch (C)	Sync Duration (D)	Back Porch (F)	Resolution
1	H	+	25.175	31.469	800	640	16	96	48	640x350 70Hz
	V	-		70.8	449	350	38	2	59	
2	H	-	28.321	31.468	900	720	18	108	54	720x400 70Hz
	V	+		70.8	449	400	12	2	35	
3	H	-	25.175	31.469	840	640	16	96	48	640x480 60Hz
	V	-		59.94	525	480	10	2	33	
4	H	-	31.5	37.5	840	640	16	64	120	640x480 75Hz
	V	-		75	500	480	1	3	16	
5	H	-	36.0	43.269	832	640	56	56	80	640x480 85Hz
	V	-		85.0	509	480	1	3	25	
6	H	+	40.0	37.879	1056	800	40	128	88	800x600 60Hz
	V	+		60.317	628	600	1	4	23	
7	H	+	49.5	46.875	1056	800	16	80	160	800x600 75Hz
	V	+		75.0	625	600	1	3	21	
8	H	+	56.25	53.674	1048	800	32	64	152	800x600 85Hz
	V	+		85.061	631	600	1	3	27	
9	H	+/-	57.283	49.725	1152	832	32	64	224	832x624 75Hz
	V	+/-		74.55	667	624	1	3	39	
10	H	-	65.0	48.363	1344	1024	24	136	160	1024x768 60Hz
	V	-		60.0	806	768	3	6	29	
11	H	-	78.75	60.123	1312	1024	16	96	176	1024x768 75Hz
	V	-		75.029	800	768	1	3	28	
12	H	+	94.5	68.677	1376	1024	48	96	208	1024x768 85Hz
	V	+		84.997	808	768	1	3	36	
13	H	+/-	100.0	68.681	1456	1152	32	128	144	1152x870 75Hz
	V	+/-		75.062	915	870	3	3	39	
14	H	+/-	92.978	61.805	1504	1125	18	134	200	1152x900 65Hz
	V	+/-		65.96	937	900	2	4	31	
15	H	+	108.0	63.981	1688	1280	48	112	248	1280x1024 60Hz
	V	+		60.02	1066	1024	1	3	38	
16	H	+	135.0	79.976	1688	1280	16	144	248	1280x1024 75Hz
	V	+		75.035	1066	1024	1	3	38	

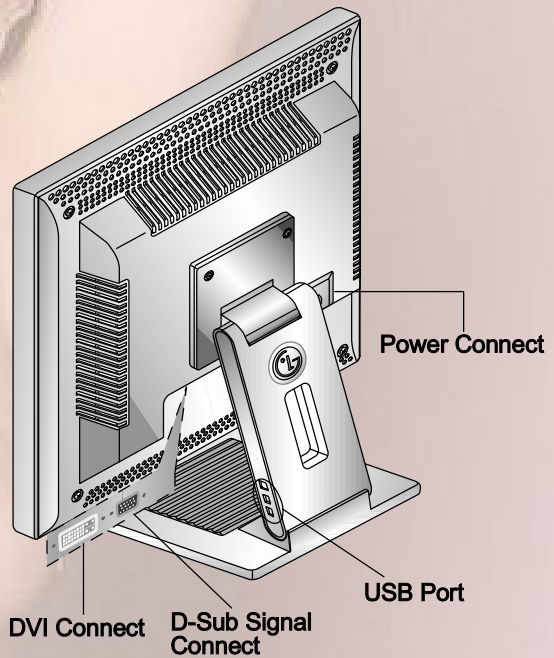
# OPERATING INSTRUCTIONS

## FRONT VIEW

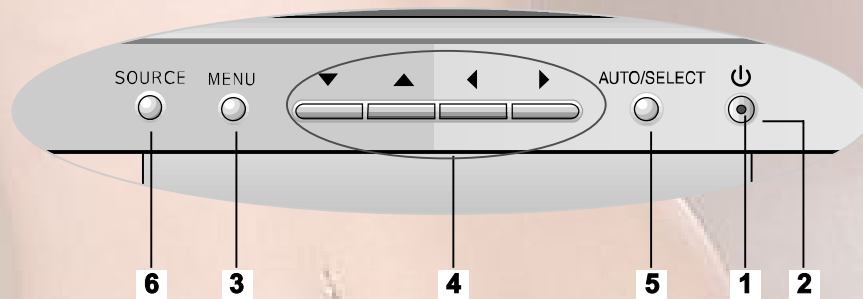


Front Control Panel

## REAR VIEW



## Front Control Panel



### 1. Power ON/OFF Button

Use this button to turn the monitor on or off.

### 2. Power Indicator

This indicator lights up green when the monitor operates normally. If the display is in DPM(Energy Saving)mode, this indicator color change to amber.

### 3. MENU Button

Use these buttons to enter or exit the On Screen Display.

### 4. . . . . Button

Use these buttons to choose or adjust items in the On Screen Display.

### 5. AUTO/SELECT Button

Use this button to enter a selection in the On Screen Display.

### 6. SOURCE Button

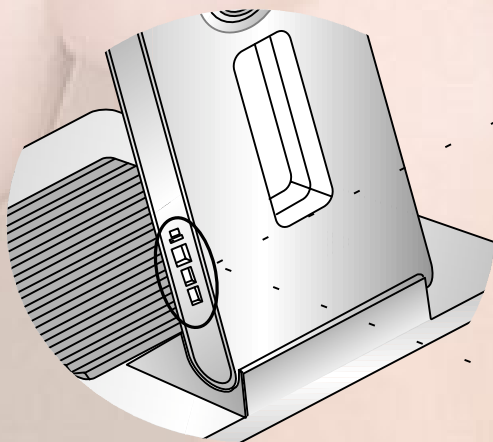
Use this button to make Dsub or DVI connector active. This feature is used when two computers are connected to the monitor. The default setting is Dsub.

## Making use of USB (Universal Serial Bus)\*

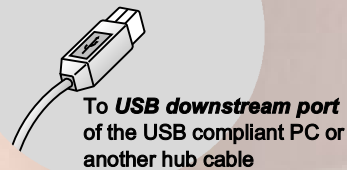
USB (Universal Serial Bus) is an innovation in connecting your different desktop peripherals conveniently to your computer. By using the USB, you will be able to connect your mouse, keyboard, and other to your monitor instead of having to connect them to your computer. This will give you greater flexibility in setting up your system. USB allows you to connect chain up to 120 devices on a single USB port, and you can “hot” plug (attach them while the computer is running) or unplug them while maintaining Plug and Plug auto detection and configuration. This monitor has an integrated BUS-powered USB hub, allowing up to 2 other USB devices to be attached it.

### USB connection

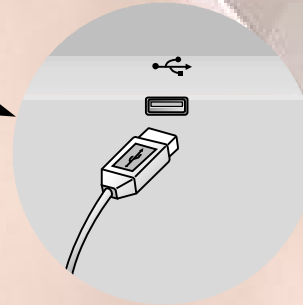
1. Connect the upstream port of the Display to the downstream port of the USB compliant PC or another hub using the USB cable. (Computer must have a USB port)
2. Connect the USB compliant peripherals to the downstream ports of the monitor.



- This is a simplified representation of rear view.



To **USB downstream port** of the USB compliant PC or another hub cable

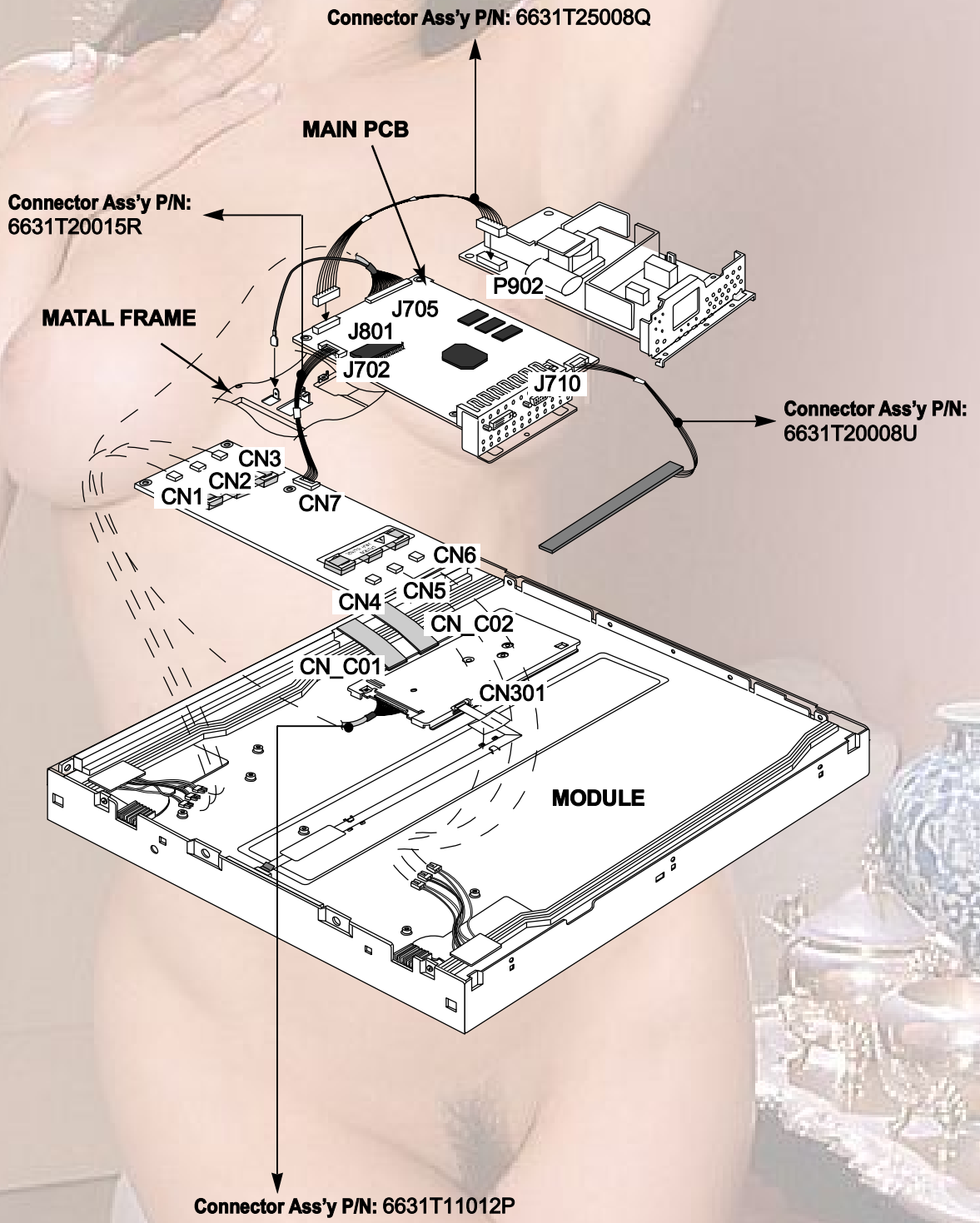


**USB downstream Port** connect the cables from USB compliant peripherals-such as keyboard, mouse, etc

#### NOTE

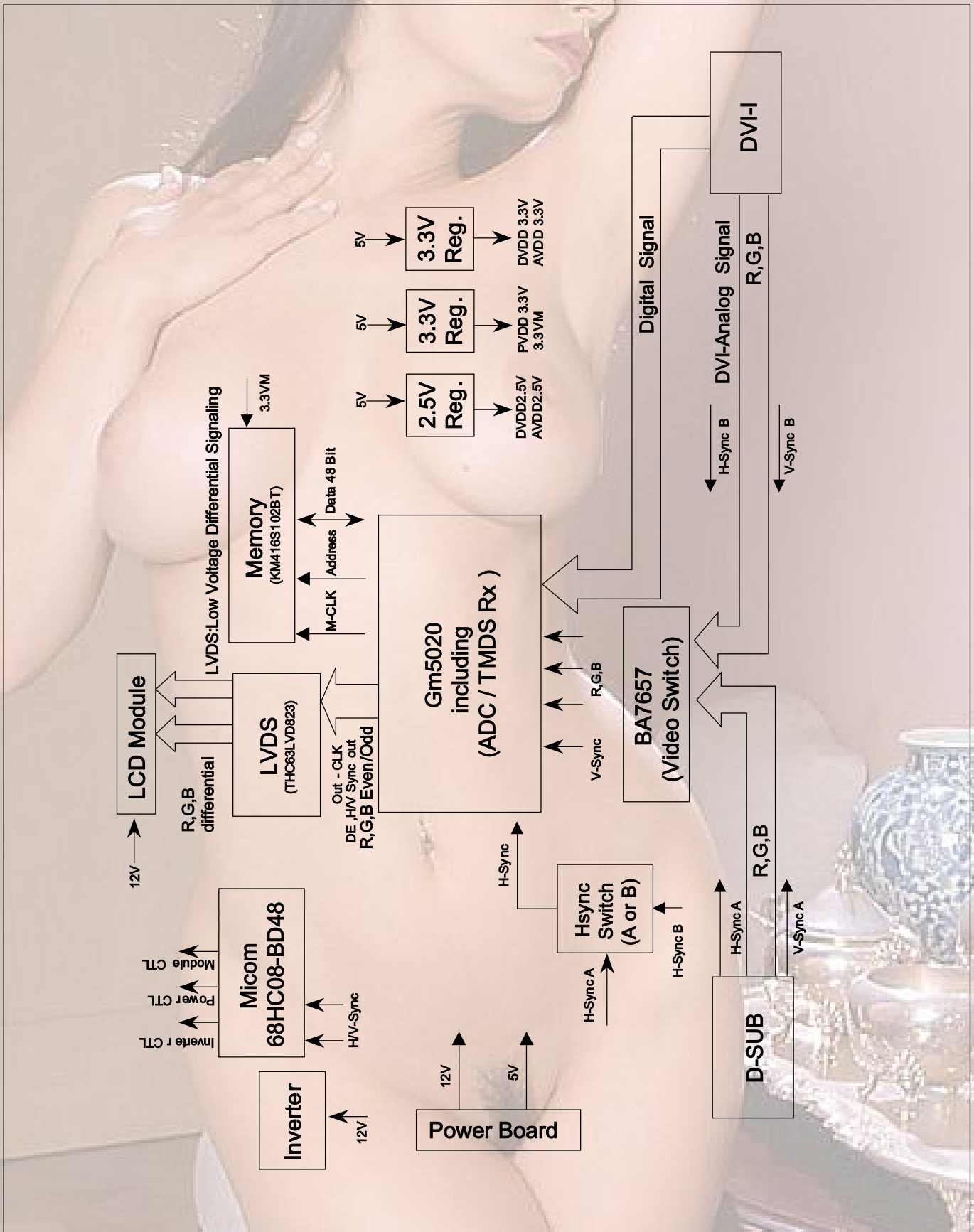
- To activate the USB hub function, the monitor must be connected to a USB compliant PC(OS) or another hub with the USB cable(enclosed).
- When connecting the USB cable, check that the shape of the connector at the cable side matches the shape at the connecting side.
- Even if the monitor is in a power saving mode, USB compliant devices will function when they are connected the USB ports(both the upstream and downstream) of the monitor.

# WIRING DIAGRAM





# BLOCK DIAGRAM



## DESCRIPTION OF BLOCK DIAGRAM

### 1. Input signal switching part(BA7657).

There are two analog inputs which are D-Sub analog and DVI-analog input. They come from each 15 pin D-Sub and 29 pin DVI-I connector.

### 2. Video Controller Part(GM5020).

This part amplifies the level of video signal for the analog to digital conversion and converts from the analog video signal to the digital video signal using a pixelclock.

The pixel clock for each mode is generated by the PLL.

The range of the pixel clock is from 25MHz to 135MHz.

This part consists of the Scaler and frame buffers which converts frame rate of input signal to 60Hz frame rate.

The Scaler gets the video signal converted analog to digital, interpolates input to 1280 X 1024 resolution signal and outputs 8-bit R, G, B signal to transmitter.

Especially pre-amp / ADC / Video controller are merged to one chip 'Gm5020' by Genesis.

Also FRC is separate.

### 3. Display Data Transmitter Part(LVDS).

This part transmit digital signal from the Scaler to the receiver of module.

### 4. Power Part.

This part consists of the one 5V, two 3.3V and one 2.5 regulators to convert power which is provided 12V, 5V in Power Board.

12V is provided for inverter and LCD Panel, 5V is provided for Micom.

Also, 5V is converted 3.3V and 2.5V by regulator. Converted power is provided for IC in the main board.

### 5. MICOM Part.

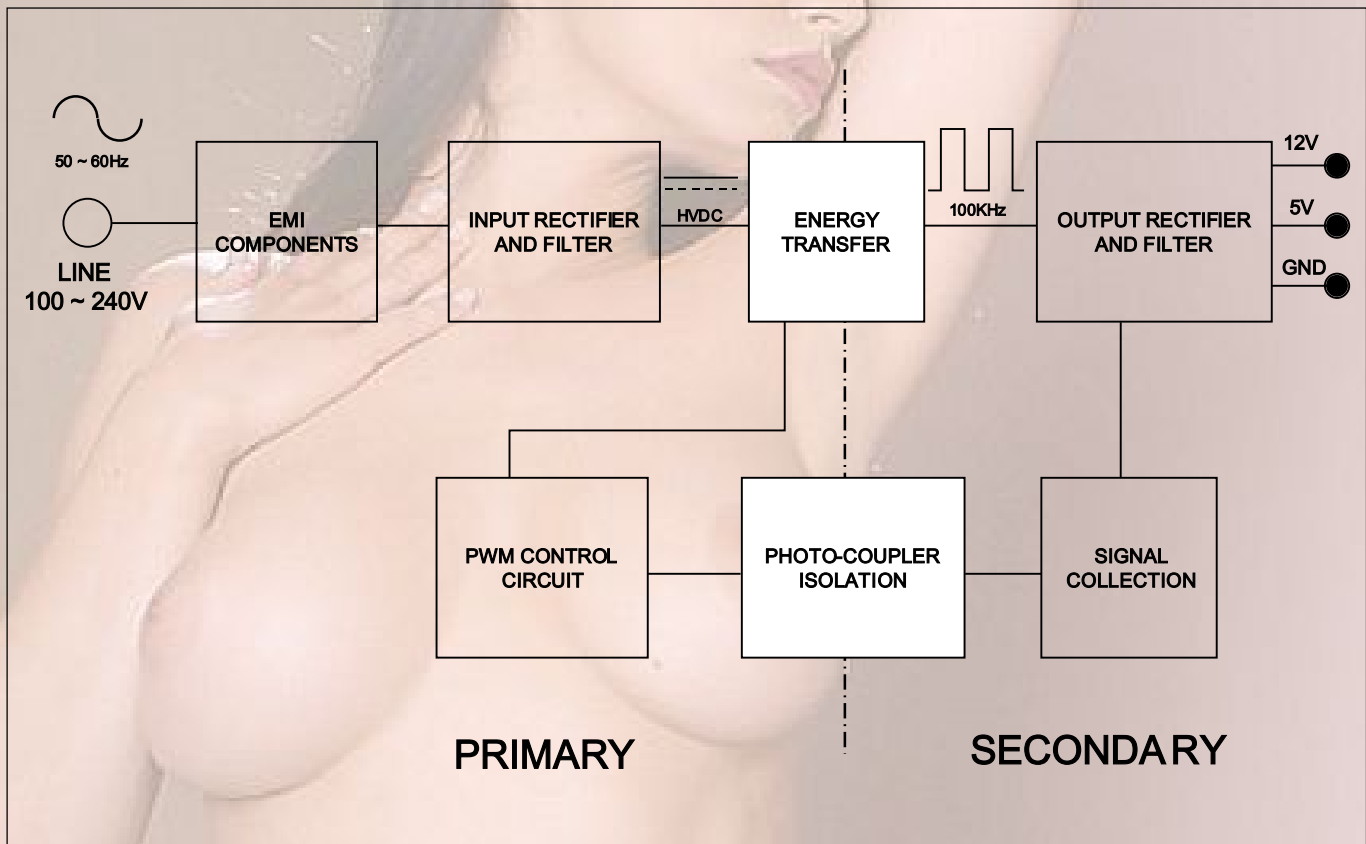
This part consists of EEPROM IC which stores control data, Reset IC and the Micom.

The Micom distinguishes polarity and frequency of the H/V sync are supplied from signal cable.

The controlled data of each modes is stored in EEPROM.

### 6. Inverter

The inverter converts from DC12V to AC 700Vrms and operate back-light lamp of module.



## Operation description\_Power

### 1. EMI components.

This part contains of EMI components to comply with global marketing EMI standards like FCC, VCCI CISPR, the circuit included a line-filter, across line capacitor and of course the primary protection fuse.

### 2. Input rectifier and filter.

This part function is for transfer the input AC voltage to a DC voltage through a bridge rectifier and a bulk capacitor.

### 3. Energy Transfer.

This part function is transfer the primary energy to secondary through a power transformer.

### 4. Output rectifier and filter.

This part function is to make a pulse width modulation control and to provide the driver signal to power switch, to adjust the duty cycle during different AC input and output loading condition to achive the dc output stablize, and also the over power protection is also monitor by this part.

### 5. Photo-Coupler isolation.

This part function is to feed back the dc output changing status through a photo transistor to primary controller to achive the stablized dc output voltage.

### 6. Signal collection.

This part function is to collect the any change from the dc output and feed back to the primary through photo transistor

# ADJUSTMENT

All adjustment are thoroughly checked and corrected when the monitor leaves the factory, but sometimes several minor adjustment may be required. Adjustment should be following procedure and after warming up for a minimum of 10 minutes.

- Alignment appliances and tools.
  - IBM compatible PC
  - Programmable Signal Generator. (eg. VG-819 made by Astrodesign Co.)
  - E(E)PROM with each mode data saved.

## 1. Adjustment Start

- 1) Display any pattern at any Mode.
- 2) Run alignment program for LB801H on the IBM compatible PC.
- 3) Select EEPROM → ALL INIT command and Enter
- 4) This will make all data to default state
- 5) Select COMMAND → PRESET START command and Enter

## 2. Adjustment for Factory Preset Mode

- 1) Select DIST. ADJ → FOS DEFAULT command and Enter
- 2) It will copy all factory default data to EEPROM automatically.

## 3. Adjustment for White Balance

- 1) Display color 0,0 pattern at Mode 15.
- 2) Set External Bright to MAX position and Contrast to MAX Position.
- 3) Select PRESET START → BIAS CAL command and Enter.
- 4) No attempt to manually adjust, BIAS data is automatically adjusted and saved to the EEPROM.
- 5) Display color 15,0 pattern at Mode 15.
- 6) Select DRIVE CAL command and Enter.
- 7) 5800K and 9300K are automatically adjusted and saved to the EEPROM.
- 8) Select PRESET EXIT command and Enter.

## 4. Adjustment for EDID

- 1) Use this procedure only when there is some problem on EDID data.
- 2) Connect the D-sub cable.
- 3) Select EEPROM → EDID Write command and Enter.
- 4) Select DDC(A) Write command and Enter.
- 5) Connect the DVI-I cable.
- 6) Select DDC(D) Write command and Enter.

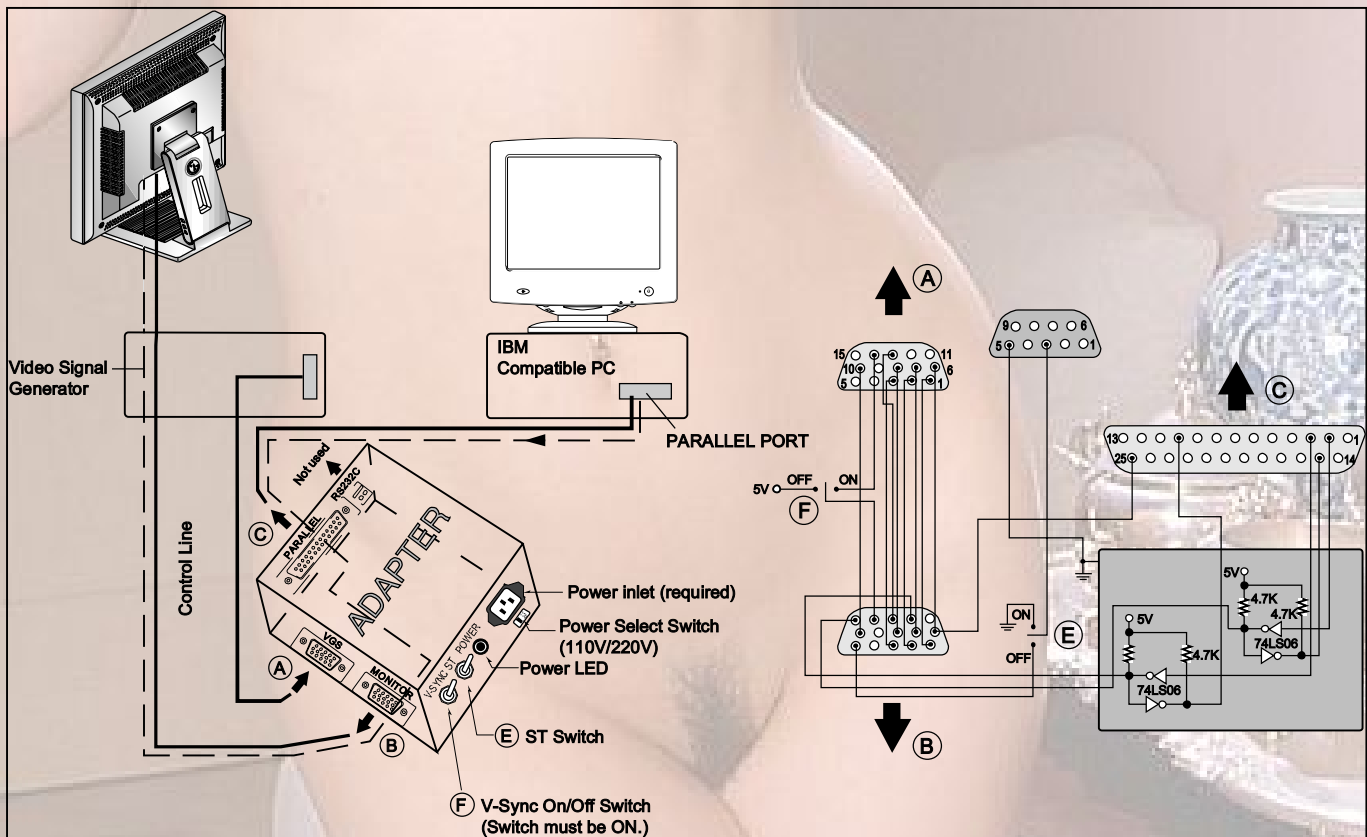
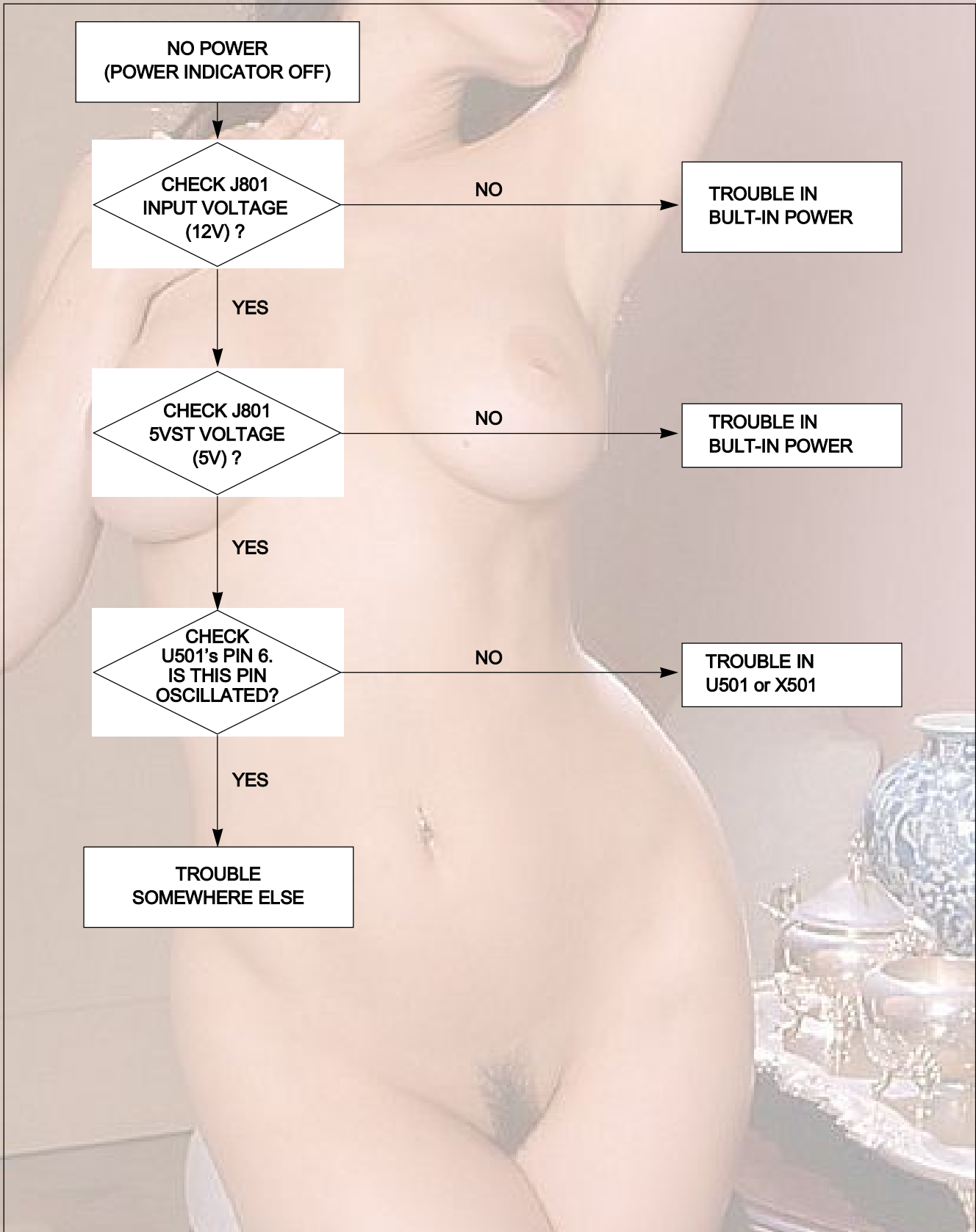


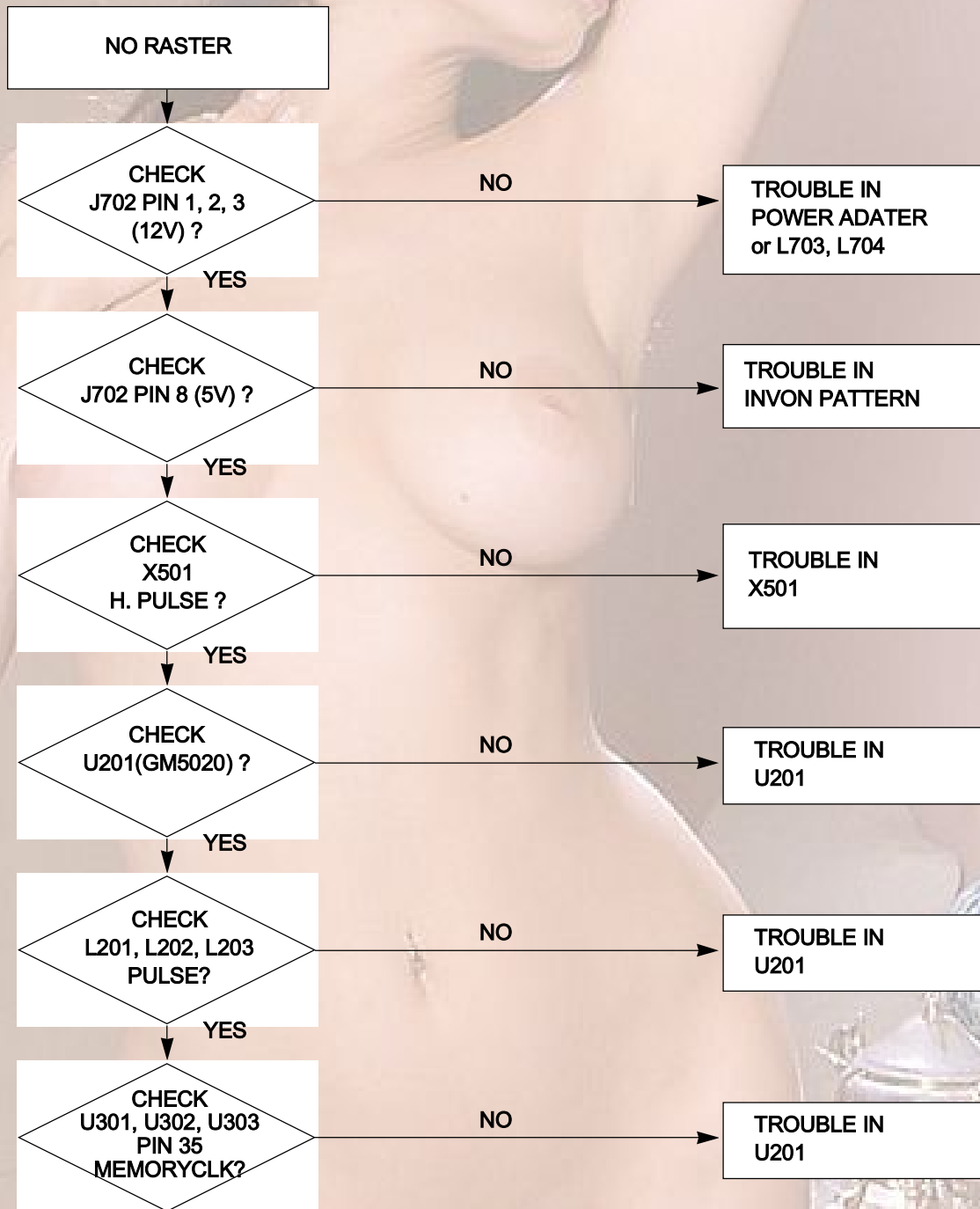
Figure 1. Cable Connection

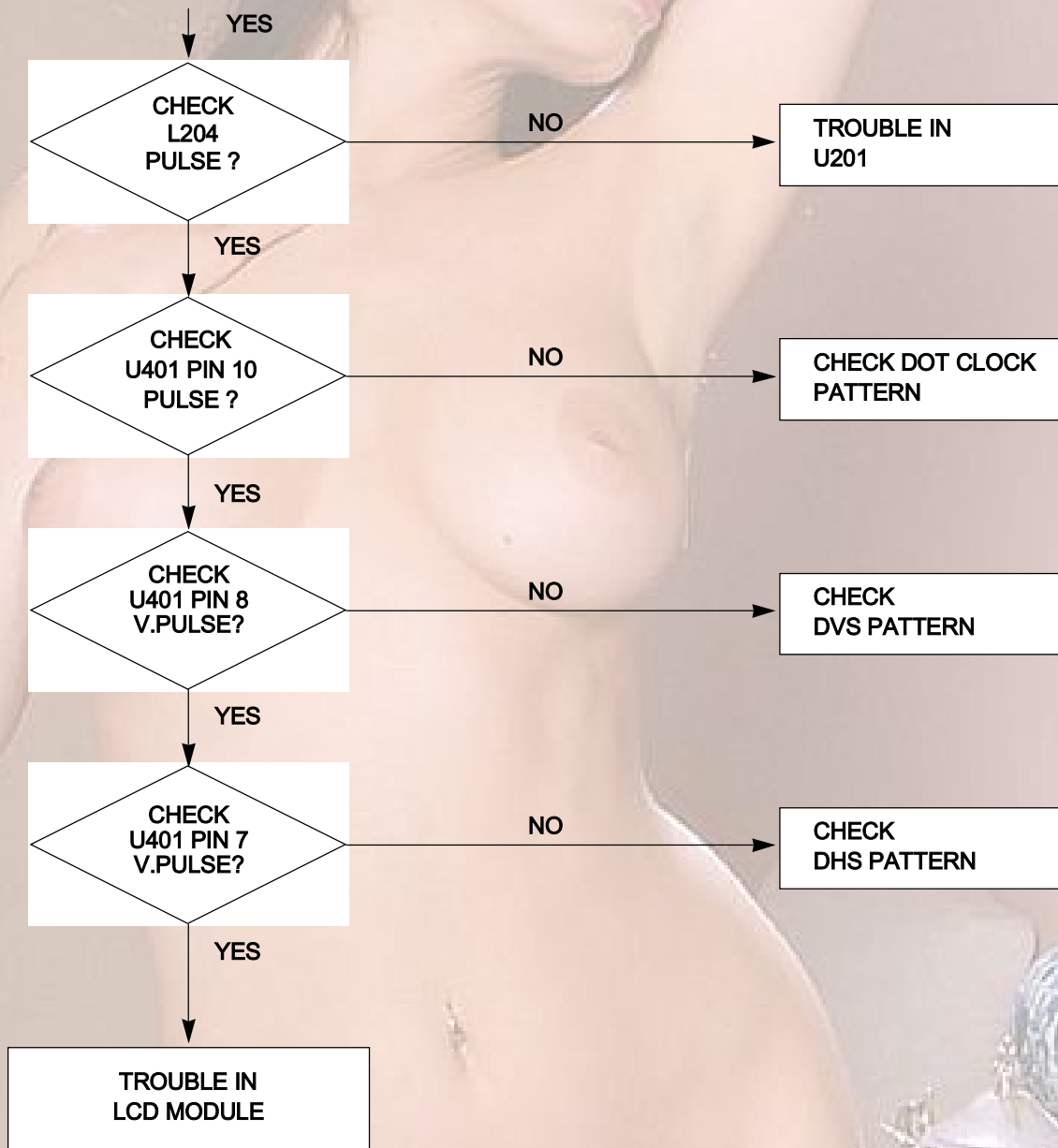
# TROUBLESHOOTING GUIDE

## 1. NO POWER

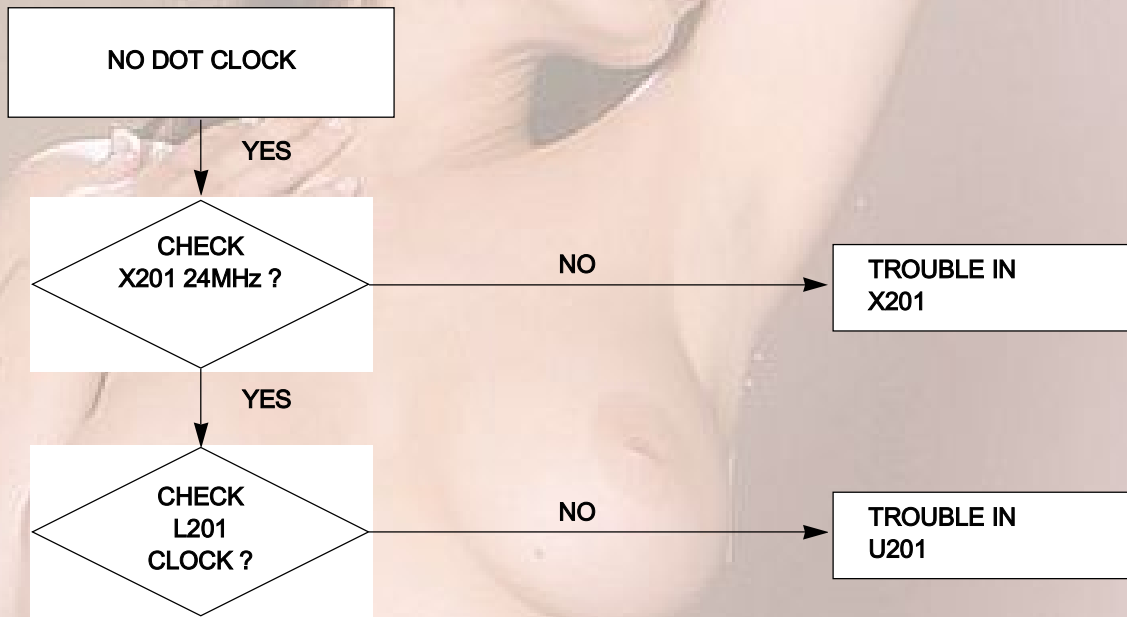


## 2. NO RASTER



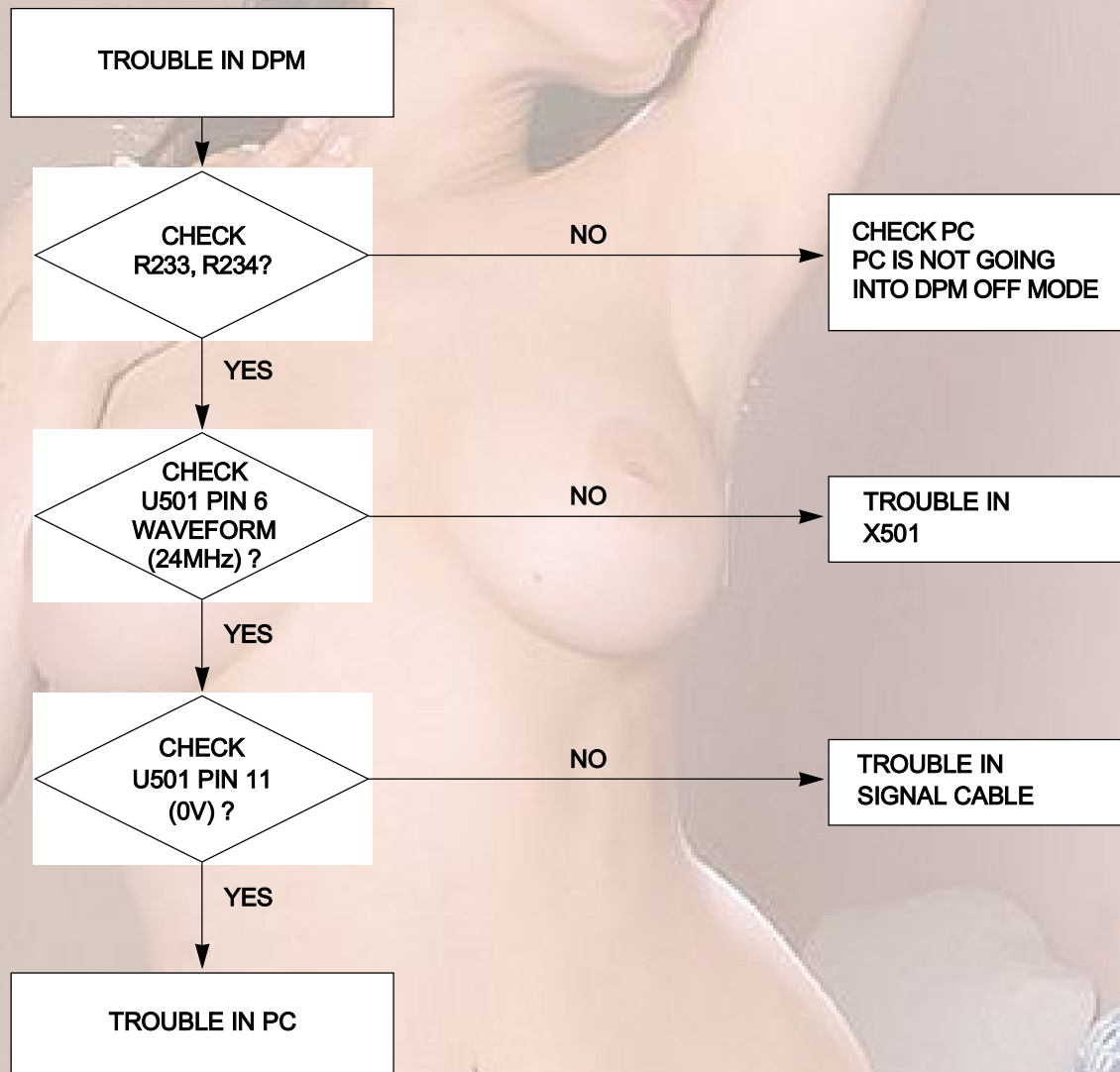


### 3. NO CLOCK (CLOCK GENERATOR)





#### 4. TROUBLE IN DPM

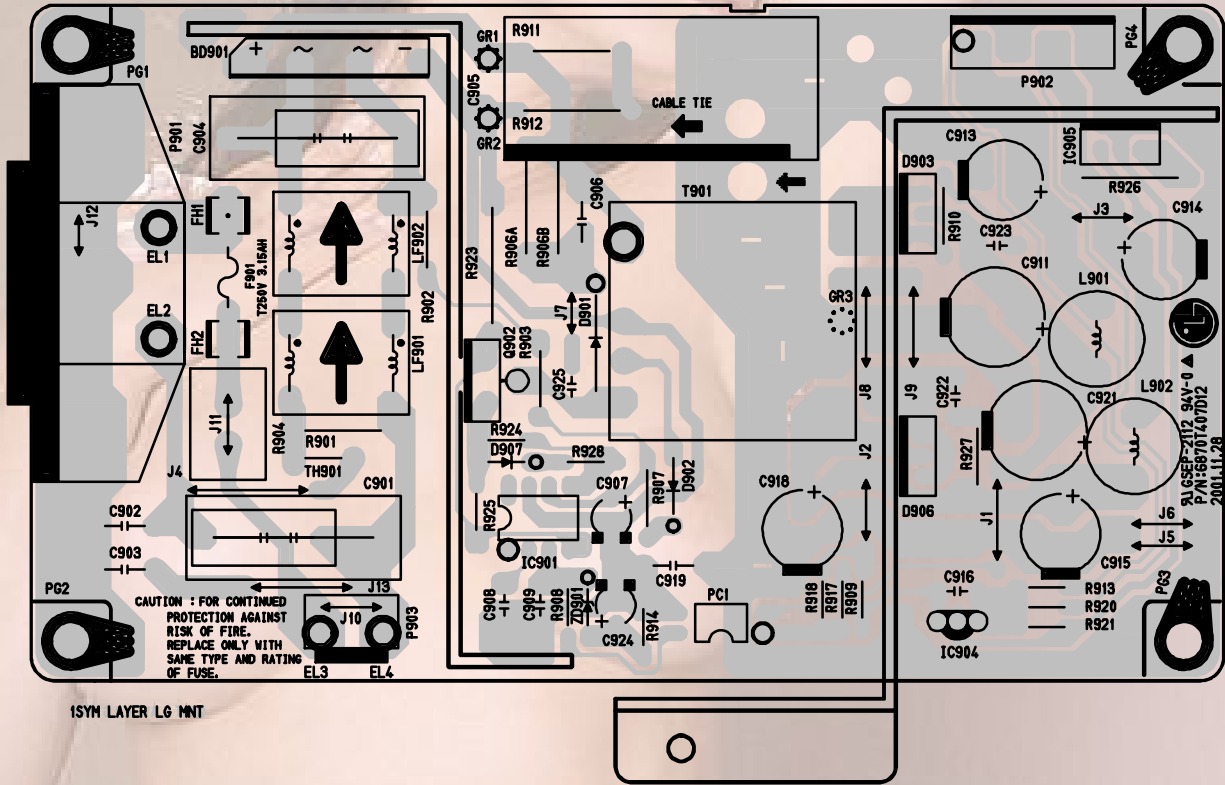




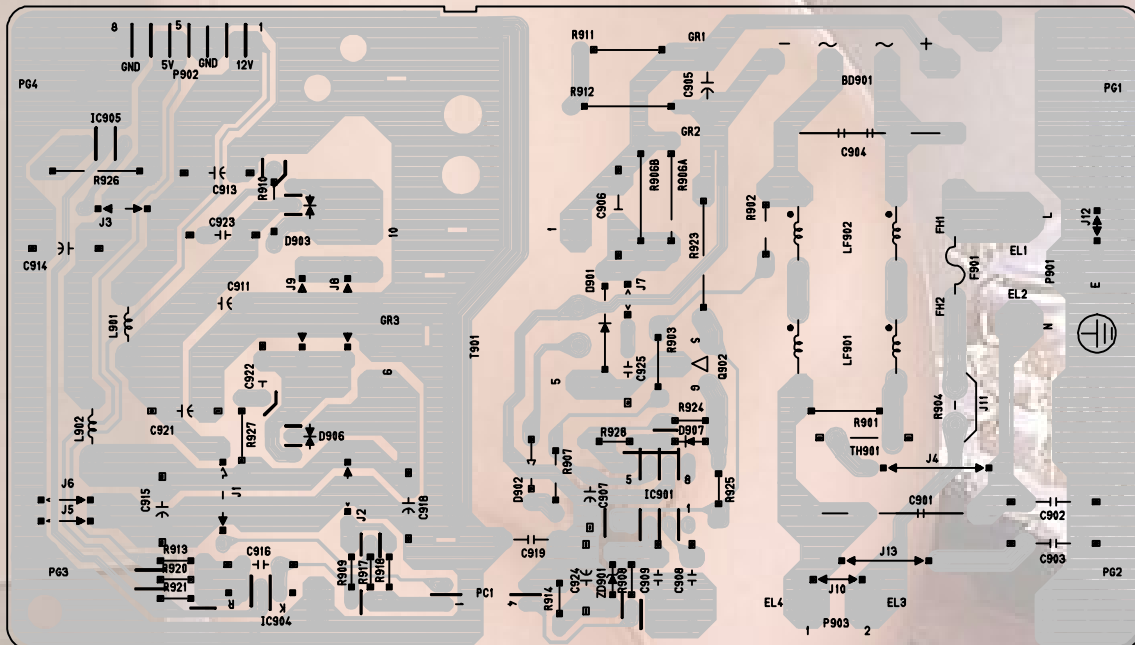
## 2. MAIN BOARD (Solder Side)



### 3. POWER BOARD (Component Side)

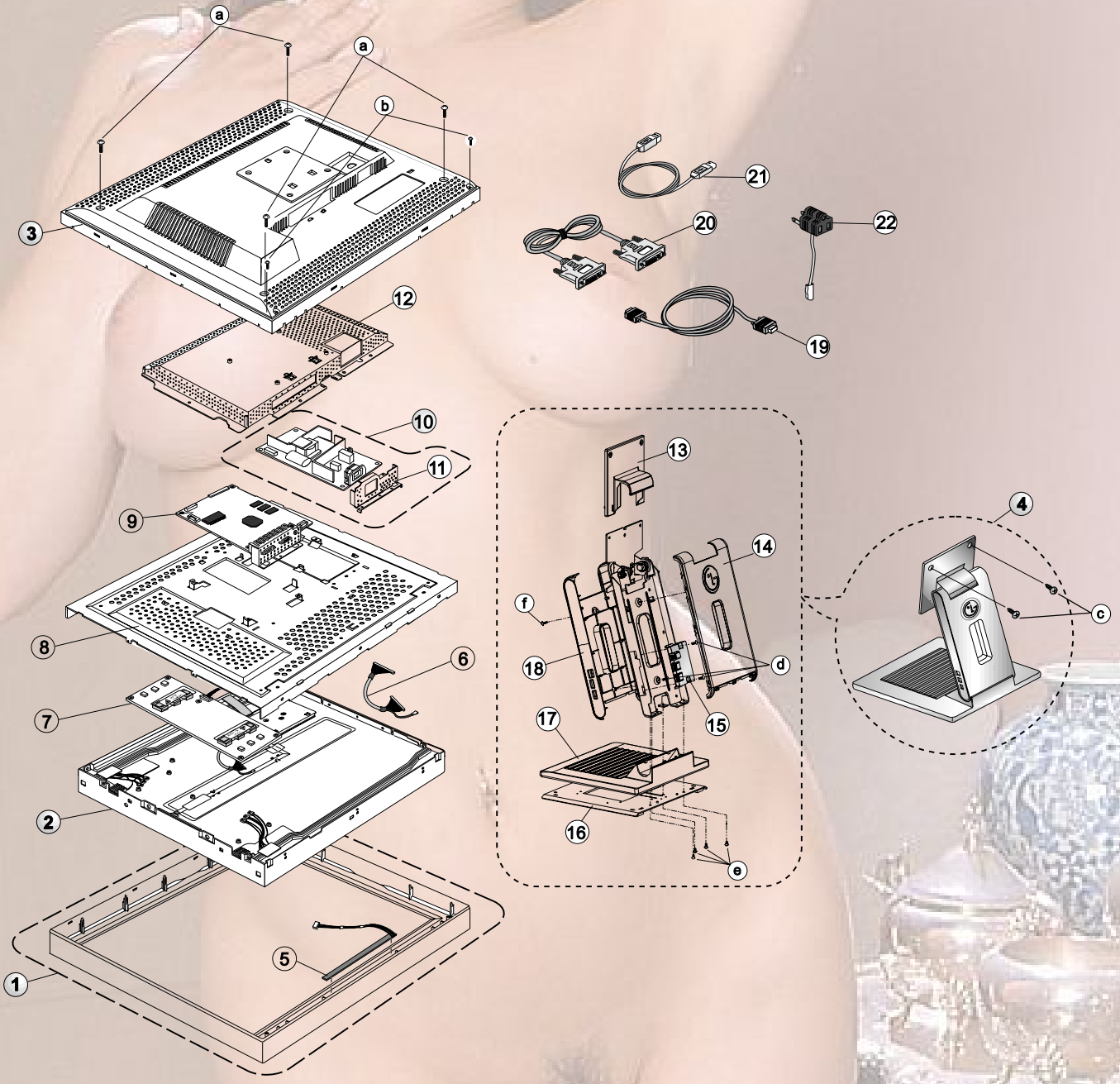


### 4. POWER BOARD (Solder Side)





# EXPLODED VIEW



## EXPLODED VIEW PARTS LIST

\* Note: Safety mark 

Ref. No.	Part No.		Description
1	3091TKL044A		CABINET ASSEMBLY, LB801H BRAND 3090TKL045 ..
2	6304FLP023A or 6304FLP004A		LCD(LIQUID CRYSTAL DISPLAY), LM181E05-C4M1 LG PHILIPS TFT COLOR 18.1" SXGA LCD(LIQUID CRYSTAL DISPLAY), LM181E05-C3M1 LG PHILIPS TFT COLOR 18.1" W/O
3	3809TKL025A		BACK COVER ASSEMBLY, LB800H L030A
4	3043TKK091A		TILT SWIVEL ASSEMBLY, LB800H . .
5	6871TST287A		PWB(PCB) ASSEMBLY, SUB, LB800H CONTROL TOTAL BRAND
6	6631T11012P		CONNECTOR ASSEMBLY, 30P H-H 100MM UL20276 PANEL LINK LB886F
7	6633TZA011C or 6633TZA008B	 	INVERTER ASSEMBLY, LG-PHILIPS NMC1805 6-LAMP,LM886F INVERTER ASSEMBLY, ALPS KUBNKM030A 6-LAMP LB886F/LI884E
8	4951TKS078B		METAL ASSEMBLY, FRAME, MAIN - LB886F
9	6871TMT275C		PWB(PCB) ASSEMBLY, MAIN, LB886F ALLVU BRAND CL-29 TOTAL
10	6871TPT225A		PWB(PCB) ASSEMBLY, POWER, LB800H POWER TOTAL BRAND
11	4814TKK187A		SHIELD, REAR LB886F
12	4950TKK429A		METAL, REAR LB800H
13	3550TKK257A		COVER, LB800H STAND TOP HINGE
14	3550TKK255A		COVER, LB800H STAND REAR
15	6871TUT017A		PWB(PCB) ASSEMBLY, USB, LB782F SUB TOTAL BRAND
16	4950TKK430A		METAL, BASE LB800H
17	3550TKK256A		COVER, LB800H STAND BOTTOM
18	3550TKK254A		COVER, LB800H STAND FRONT
19	6850TD9001A		CABLE, D-SUB, UL 2990-9C(7.5) DT 1870MM GRAY(85964) BRAND DM
20	6866TDV004C		CABLE, DVI, UL20276 DT 2000MM GRAY(85964) LB885C DM
21	6866TDU002D		SIGNAL CABLE, UL20276SB10P+2C AWG#30 DT 1870MM GRAY(85964) BRAND
22	381-240A		ADAPTER, AC, KPR-24 KAWASAKI 125V 15A BLACK <b>-Only Japan</b>
a	1SZZTER001H		SCREW, DRAWING, D3.0 L10.0 MSWR/BK .
b	332-113S		SCREW, DRAWING, D3.0 L12.0 MSWR/BK .
c	332-105G		SCREW, DRAWING, PVS+4*10(MSWR/BK)
d	332-068U		SCREW, PPB+3x8(MSWR/FZMW)
e	332-105A		SCREW, DRAWING, PVS+4x8(MSWR/FZMY)
f	332-113R		SCREW, DRAWING, D3.0 L16.0 MSWR/BK

# REPLACEMENT PARTS LIST

**CAUTION:** BEFORE REPLACING ANY OF THESE COMPONENTS,  
 READ CAREFULLY THE **SAFETY PRECAUTIONS** IN THIS MANUAL.

\* NOTE : **S** SAFETY Mark   
**AL** ALTERNATIVE PARTS

DATE: 2002. 04. 26.				
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
<b>MAIN BOARD</b>				
<b>CAPACITORS</b>				
			C106	0CC101CK41A 100PF 1608 50V 5% R/TP NP0
			C107	0CC101CK41A 100PF 1608 50V 5% R/TP NP0
			C108	DCH7476C621 47UF 6.3V M 3528 TP(-)
			C109	0CK103CK51A 0.01UF 1608 50V 10% R/TP B(Y)
			C110	DCH7476C621 47UF 6.3V M 3528 TP(-)
			C111	0CK103CK51A 0.01UF 1608 50V 10% R/TP B(Y)
			C112	DCH7476C621 47UF 6.3V M 3528 TP(-)
			C113	0CK103CK51A 0.01UF 1608 50V 10% R/TP B(Y)
			C114	DCH7476C621 47UF 6.3V M 3528 TP(-)
			C115	0CK103CK51A 0.01UF 1608 50V 10% R/TP B(Y)
			C116	DCH7476C621 47UF 6.3V M 3528 TP(-)
			C117	0CK103CK51A 0.01UF 1608 50V 10% R/TP B(Y)
			C118	DCH7476C621 47UF 6.3V M 3528 TP(-)
			C119	0CK103CK51A 0.01UF 1608 50V 10% R/TP B(Y)
			C120	0CC102CK41A 1000PF 1608 50V 5% R/TP NP0
			C122	0CH8106F611 10UF 16V M 85STD(CYL) R/TP
			C123	0CK104CK56A 0.1UF 1608 50V 10% R/TP X7R
			C124	0CK104CK56A 0.1UF 1608 50V 10% R/TP X7R
			C125	OCE107WF6DC 100UF MVK 16V 20% R/TP(SMD)
			C128	0CK104CK56A 0.1UF 1608 50V 10% R/TP X7R
			C130	0CC102CK41A 1000PF 1608 50V 5% R/TP NP0
			C131	0CC102CK41A 1000PF 1608 50V 5% R/TP NP0
			C160	0CK103CK51A 0.01UF 1608 50V 10% R/TP B(Y)
			C161	0CK104CK56A 0.1UF 1608 50V 10% R/TP X7R
			C201	0CH3103K516 10000PF 50V K B 2012 R/TP
			C202	0CH3103K516 10000PF 50V K B 2012 R/TP
			C203	0CH3103K516 10000PF 50V K B 2012 R/TP
			C204	0CH3103K516 10000PF 50V K B 2012 R/TP
			C205	0CH3103K516 10000PF 50V K B 2012 R/TP
			C206	0CH3103K516 10000PF 50V K B 2012 R/TP
			C207	0CH3103K516 10000PF 50V K B 2012 R/TP
			C208	0CH3103K516 10000PF 50V K B 2012 R/TP
			C209	0CH3103K516 10000PF 50V K B 2012 R/TP
			C210	0CH3103K516 10000PF 50V K B 2012 R/TP
			C211	0CH3103K516 10000PF 50V K B 2012 R/TP
			C212	0CH3103K516 10000PF 50V K B 2012 R/TP
			C213	0CH3103K516 10000PF 50V K B 2012 R/TP
			C214	0CH3103K516 10000PF 50V K B 2012 R/TP
			C215	0CH3103K516 10000PF 50V K B 2012 R/TP
			C216	0CH3103K516 10000PF 50V K B 2012 R/TP
			C217	0CH3103K516 10000PF 50V K B 2012 R/TP
			C218	0CH3104K566 0.1UF 50V K X 2012 R/TP
			C219	0CH3103K516 10000PF 50V K B 2012 R/TP
			C220	0CH6330K416 33PF 50V J NP0 2012 R/TP
			C221	0CH6330K416 33PF 50V J NP0 2012 R/TP
			C222	0CH3103K516 10000PF 50V K B 2012 R/TP
			C223	0CH3103K516 10000PF 50V K B 2012 R/TP
			C224	0CH3103K516 10000PF 50V K B 2012 R/TP
			C225	0CH3103K516 10000PF 50V K B 2012 R/TP
			C226	0CH3103K516 10000PF 50V K B 2012 R/TP
			C227	0CH3104K566 0.1UF 50V K X 2012 R/TP
			C228	0CH3103K516 10000PF 50V K B 2012 R/TP

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			C229	0CC102CK41A 1000PF 1608 50V 5% R/TP NP0
			C230	0CH6150K416 15PF 50V J NP0 2012 R/TP
			C231	0CH6680K416 68PF 50V J NP0 2012 R/TP
			C232	0CH6680K416 68PF 50V J NP0 2012 R/TP
			C233	0CH3103K516 10000PF 50V K B 2012 R/TP
			C234	0CH3103K516 10000PF 50V K B 2012 R/TP
			C235	0CH6680K416 68PF 50V J NP0 2012 R/TP
			C236	0CH6680K416 68PF 50V J NP0 2012 R/TP
			C237	0CH3104K566 0.1UF 50V K X 2012 R/TP
			C258	0CH6150K416 15PF 50V J NP0 2012 R/TP
			C259	0CH3682K516 6800PF 50V K B(Y5P) 2012 R/T
			C260	0CH3682K516 6800PF 50V K B(Y5P) 2012 R/T
			C261	0CH3682K516 6800PF 50V K B(Y5P) 2012 R/T
			C262	0CH6330K416 33PF 50V J NP0 2012 R/TP
			C264	0CH6221K416 220PF 50V J NP0 2012 R/TP
			C265	0CH6470K416 47PF 50V J NP0 2012 R/TP
			C269	0CH3103K516 10000PF 50V K B 2012 R/TP
			C270	0CK104CK56A 0.1UF 1608 50V 10% R/TP X7R
			C271	0CK103CK51A 0.01UF 1608 50V 10% R/TP B(Y)
			C272	0CH3104K566 0.1UF 50V K X 2012 R/TP
			C273	0CH3103K516 10000PF 50V K B 2012 R/TP
			C274	0CH3103K516 10000PF 50V K B 2012 R/TP
			C275	0CH3104K566 0.1UF 50V K X 2012 R/TP
			C276	0CH3103K516 10000PF 50V K B 2012 R/TP
			C278	0CK104CK56A 0.1UF 1608 50V 10% R/TP X7R
			C279	0CK104CK56A 0.1UF 1608 50V 10% R/TP X7R
			C280	0CK104CK56A 0.1UF 1608 50V 10% R/TP X7R
			C301	0CK103CK51A 0.01UF 1608 50V 10% R/TP B(Y)
			C302	0CK103CK51A 0.01UF 1608 50V 10% R/TP B(Y)
			C303	0CK103CK51A 0.01UF 1608 50V 10% R/TP B(Y)
			C304	0CK103CK51A 0.01UF 1608 50V 10% R/TP B(Y)
			C305	0CK103CK51A 0.01UF 1608 50V 10% R/TP B(Y)
			C306	0CK103CK51A 0.01UF 1608 50V 10% R/TP B(Y)
			C307	0CK103CK51A 0.01UF 1608 50V 10% R/TP B(Y)
			C308	0CK103CK51A 0.01UF 1608 50V 10% R/TP B(Y)
			C309	0CK103CK51A 0.01UF 1608 50V 10% R/TP B(Y)
			C310	0CK103CK51A 0.01UF 1608 50V 10% R/TP B(Y)
			C311	0CK103CK51A 0.01UF 1608 50V 10% R/TP B(Y)
			C312	0CK103CK51A 0.01UF 1608 50V 10% R/TP B(Y)
			C313	0CK103CK51A 0.01UF 1608 50V 10% R/TP B(Y)
			C314	0CK103CK51A 0.01UF 1608 50V 10% R/TP B(Y)
			C315	0CK103CK51A 0.01UF 1608 50V 10% R/TP B(Y)
			C316	0CK103CK51A 0.01UF 1608 50V 10% R/TP B(Y)
			C317	0CK103CK51A 0.01UF 1608 50V 10% R/TP B(Y)
			C318	0CK103CK51A 0.01UF 1608 50V 10% R/TP B(Y)
			C401	0CK103CK51A 0.01UF 1608 50V 10% R/TP B(Y)
			C402	0CK103CK51A 0.01UF 1608 50V 10% R/TP B(Y)
			C403	0CK103CK51A 0.01UF 1608 50V 10% R/TP B(Y)
			C404	0CK103CK51A 0.01UF 1608 50V 10% R/TP B(Y)
			C405	0CK103CK51A 0.01UF 1608 50V 10% R/TP B(Y)
			C406	0CK103CK51A 0.01UF 1608 50V 10% R/TP B(Y)
			C407	0CK103CK51A 0.01UF 1608 50V 10% R/TP B(Y)
			C408	0CH8226F691 22UF 16V M 105STD (CYL) R/TP
			C409	OCE107WF6DC 100UF MVK 16V 20% R/TP(SMD)



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		C410	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C411	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y)
		C412	0CC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C413	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C501	0CC180CK41A	18PF 1608 50V 5% R/TP NP0
		C502	0CC180CK41A	18PF 1608 50V 5% R/TP NP0
		C503	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C504	0CC470CK41A	47PF 1608 50V 5% R/TP NP0
		C505	0CC470CK41A	47PF 1608 50V 5% R/TP NP0
		C506	0CC470CK41A	47PF 1608 50V 5% R/TP NP0
		C507	0CC470CK41A	47PF 1608 50V 5% R/TP NP0
		C508	0CK222CK51A	2200PF 1608 50V 10% R/TP B(Y)
		C510	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C511	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C513	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C514	0CC470CK41A	47PF 1608 50V 5% R/TP NP0
		C515	0CC470CK41A	47PF 1608 50V 5% R/TP NP0
		C516	0CC101CK41A	100PF 1608 50V 5% R/TP NP0
		C517	0CC101CK41A	100PF 1608 50V 5% R/TP NP0
		C519	0CC101CK41A	100PF 1608 50V 5% R/TP NP0
		C520	0CC101CK41A	100PF 1608 50V 5% R/TP NP0
		C521	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y)
		C522	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y)
		C526	0CH8106J691	10UF 35V M 105STD (CYL) R/TP
		C531	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y)
		C532	0CH8106J691	10UF 35V M 105STD (CYL) R/TP
		C533	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C548	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C701	0CE477EH618	470UF KMG 25V M FL TP 5
		C706	0CC221CK41A	2200PF 1608 50V 5% R/TP NP0
		C707	0CH8106J691	10UF 35V M 105STD (CYL) R/TP
		C710	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y)
		C714	0CC101CK41A	100PF 1608 50V 5% R/TP NP0
		C715	0CC101CK41A	100PF 1608 50V 5% R/TP NP0
		C727	0CC101CK41A	100PF 1608 50V 5% R/TP NP0
		C728	0CC101CK41A	100PF 1608 50V 5% R/TP NP0
		C729	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C730	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y)
		C731	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y)
		C738	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y)
		C740	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C817	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C818	0CC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C819	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y)
		C820	0CC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C822	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C823	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y)
		C824	0CC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C825	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C826	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y)
		C827	0CC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C828	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C829	0CC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C830	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y)
		C831	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C832	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y)
		C833	0CC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C834	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C835	0CC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C836	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y)
		C840	0CE477EH618	470UF KMG 25V M FL TP 5
		C841	0CC102CK41A	1000PF 1608 50V 5% R/TP NP0

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		C842	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y)
		C843	0CC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C844	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C845	0CE477EH618	470UF KMG 25V M FL TP 5
		C850	0CE477EH618	470UF KMG 25V M FL TP 5
		C860	0CC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C861	0CK105CD56A	1UF 1608 10V 10% R/TP X7R
		C870	0CC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C871	0CH6101K416	100PF 50V J NP0 2012 R/TP
		C872	0CC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C873	0CH6101K416	100PF 50V J NP0 2012 R/TP
<b>DIODEs</b>				
		D501	0DS301109AA	MMBD301LT1 TP MOTOROLA SOT23
		D502	0DS301109AA	MMBD301LT1 TP MOTOROLA SOT23
		D503	0DS301109AA	MMBD301LT1 TP MOTOROLA SOT23
		D504	0DS301109AA	MMBD301LT1 TP MOTOROLA SOT23
		D701	0DS226009AA	KDS226 TP KEC SOT-23 80V 30
		D702	0DS226009AA	KDS226 TP KEC SOT-23 80V 30
		D703	0DS226009AA	KDS226 TP KEC SOT-23 80V 30
		D704	0DS226009AA	KDS226 TP KEC SOT-23 80V 30
		D712	0DS226009AA	KDS226 TP KEC SOT-23 80V 30
		D713	0DS226009AA	KDS226 TP KEC SOT-23 80V 30
		D714	0DS226009AA	KDS226 TP KEC SOT-23 80V 30
		D715	0DS226009AA	KDS226 TP KEC SOT-23 80V 30
		D716	0DS226009AA	KDS226 TP KEC SOT-23 80V 30
		D730	0DS226009AA	KDS226 TP KEC SOT-23 80V 30
		D731	0DS226009AA	KDS226 TP KEC SOT-23 80V 30
		D732	0DS226009AA	KDS226 TP KEC SOT-23 80V 30
		D733	0DS226009AA	KDS226 TP KEC SOT-23 80V 30
		D734	0DS226009AA	KDS226 TP KEC SOT-23 80V 30
		D735	0DS226009AA	KDS226 TP KEC SOT-23 80V 30
		D736	0DS226009AA	KDS226 TP KEC SOT-23 80V 30
		D737	0DS226009AA	KDS226 TP KEC SOT-23 80V 30
		D738	0DS226009AA	KDS226 TP KEC SOT-23 80V 30
		D739	0DS226009AA	KDS226 TP KEC SOT-23 80V 30
		D740	0DS226009AA	KDS226 TP KEC SOT-23 80V 30
		D741	0DS226009AA	KDS226 TP KEC SOT-23 80V 30
		D742	0DS226009AA	KDS226 TP KEC SOT-23 80V 30
		D743	0DS226009AA	KDS226 TP KEC SOT-23 80V 30
		D744	0DS226009AA	KDS226 TP KEC SOT-23 80V 30
		D745	0DS226009AA	KDS226 TP KEC SOT-23 80V 30
		D746	0DS226009AA	KDS226 TP KEC SOT-23 80V 30
		D747	0DS226009AA	KDS226 TP KEC SOT-23 80V 30
		ZD701	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD702	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD703	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD704	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD705	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD711	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD721	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD722	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
<b>ICs</b>				
		U105	01MO741420B	MC74HCT14ADR2 14P,SOIC TP LE
		U106	01RH765700B	BA7657F 24P,SOP TP INPUT SIG
		U107	01IT748600N	SN74F86DR 14SOIC TP 2-INPUT
		U108	01PH740800H	74F08D 14P,SOIC TP QUAD 2-IN
		U109	01FFC80009A	FAIRCHILD FDC6326L R/TP SOT-
		U110	01SS780500H	KA78M05-R 3P,D-PAK TP 5V 0.5

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		U201	0IPRPGN001A	GM5020 GENESIS 292P,PBGA TRA
		U301	0IEB121616A	M12L16161A-7T 50P TSOP ST 16
		U302	0IEB121616A	M12L16161A-7T 50P TSOP ST 16
		U303	0IEB121616A	M12L16161A-7T 50P TSOP ST 16
		U401	0ILNRTH001A	THC63LVD823 THINE MICROSYSTE
		U501	0IZZTSZ160A	42P BK
		U502	0IKE704200J	KIA7042AF SOT-89 TP 4.2V VOL
		U503	0ICS240813B	CAT24WC08J-TE13 8P,SOIC R/TP
		U504	0ISS524202B	S524A40X21(SCT0) SAMSUNG ELE
		U509	0ISS524202B	S524A40X21(SCT0) SAMSUNG ELE
		U802	0TFFC80009A	FAIRCHILD FDC6326L R/TP SOT-
		U803	0IPMGFA003B	RC1117S-2.5 FAIRCHILD SOT-22
		U804	0TFFC80009A	FAIRCHILD FDC6326L R/TP SOT-
		U820	0IRH033200A	BA033FP-E2 MOLD-3 TP REGULAT
		U821	0IRH033200A	BA033FP-E2 MOLD-3 TP REGULAT
<b>COILs &amp; COREs</b>				
		L101	6210TCE001G	HH-1M3216-501 CERATEC 3216MM
		L201	0RH0562D622	56 1/10W 5 D.R/TP
		L202	6210TCE001P	HB-1S2012-121JT CERATECH 201
		L203	6210TCE001P	HB-1S2012-121JT CERATECH 201
		L204	6210TCE001P	HB-1S2012-121JT CERATECH 201
		L205	6210TCE001R	HB-1S2012-400JT CERATECH 201
		L206	6210TCE001P	HB-1S2012-121JT CERATECH 201
		L207	6210TCE001P	HB-1S2012-121JT CERATECH 201
		L401	6210TCE001G	HH-1M3216-501 CERATEC 3216MM
		L402	6210TCE001G	HH-1M3216-501 CERATEC 3216MM
		L403	6210TCE001G	HH-1M3216-501 CERATEC 3216MM
		L703	6210TCE001G	HH-1M3216-501 CERATEC 3216MM
		L704	6210TCE001G	HH-1M3216-501 CERATEC 3216MM
		L804	6210TCE001G	HH-1M3216-501 CERATEC 3216MM
		L805	6210TCE001G	HH-1M3216-501 CERATEC 3216MM
		L810	6210TCE001G	HH-1M3216-501 CERATEC 3216MM
		L811	6210TCE001G	HH-1M3216-501 CERATEC 3216MM
		L820	6210TCE001G	HH-1M3216-501 CERATEC 3216MM
		L821	6210TCE001G	HH-1M3216-501 CERATEC 3216MM
		L822	6210TCE001P	HB-1S2012-121JT CERATECH 201
		L823	6210TCE001G	HH-1M3216-501 CERATEC 3216MM
<b>TRANSISTOR</b>				
		Q102	0TR390409AE	FAIRCHILD KST3904(LGEMTF) TP
		Q103	0TR390409AE	FAIRCHILD KST3904(LGEMTF) TP
		Q104	0TR162309CA	KSC1623 TP SAMSUNG SOT23 NP
		Q703	0TR162309CA	KSC1623 TP SAMSUNG SOT23 NP
		Q704	0TR162309CA	KSC1623 TP SAMSUNG SOT23 NP
<b>RESISTORs</b>				
		R122	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R129	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R130	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R131	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R132	0RJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R133	0RJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R134	0RJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R135	0RJ4703D677	470K OHM 1/10 W 5% 1608 R/TP
		R139	0RJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R140	0RJ1003D677	100K OHM 1/10 W 5% 1608 R/TP
		R141	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R142	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP

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		R145	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R146	0RJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R147	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R149	0RJ2000D677	200 OHM 1/10 W 5% 1608 R/TP
		R150	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R151	0RJ1500D677	150 OHM 1/10 W 5% 1608 R/TP
		R153	0RJ2202D677	22K OHM 1/10 W 5% 1608 R/TP
		R154	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R155	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R201	0RH2001D622	2.0K 1/10W 5 D.R/TP
		R202	0RH2001D622	2.0K 1/10W 5 D.R/TP
		R203	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R204	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R205	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R206	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R207	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R208	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R209	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R210	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R211	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R212	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R213	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R214	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R215	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R216	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R218	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R219	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R220	0RJ0752D677	75 OHM 1/10 W 5% 1608 R/TP
		R221	0RJ0752D677	75 OHM 1/10 W 5% 1608 R/TP
		R222	0RJ0752D677	75 OHM 1/10 W 5% 1608 R/TP
		R223	0RJ1500D677	150 OHM 1/10 W 5% 1608 R/TP
		R224	0RJ1500D677	150 OHM 1/10 W 5% 1608 R/TP
		R225	0RJ1500D677	150 OHM 1/10 W 5% 1608 R/TP
		R233	0RH0222D622	22 1/10W 5 D.R/TP
		R234	0RH0222D622	22 1/10W 5 D.R/TP
		R235	0RJ2201D677	2200 OHM 1/10 W 5% 1608 R/TP
		R236	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R237	0RH0000D622	0 1/10W P-TYPE TAPPING
		R238	0RH0000D622	0 1/10W P-TYPE TAPPING
		R239	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R240	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R401	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R402	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R404	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R405	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R406	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R501	0RJ1004D677	1000000 OHM 1/10 W 5% 1608 R
		R502	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R505	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R508	0RJ4700D677	470 OHM 1/10 W 5% 1608 R/TP
		R511	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R512	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R513	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R514	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R515	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R516	0RH1001D622	1K OHM 1 / 10 W 2012 5.00% D
		R517	0RJ4700D677	470 OHM 1/10 W 5% 1608 R/TP
		R518	0RH1001D622	1K OHM 1 / 10 W 2012 5.00% D
		R519	0RJ4700D677	470 OHM 1/10 W 5% 1608 R/TP
		R522	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R523	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R524	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP

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*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
			R525	0RJ1000D677 100 OHM 1/10 W 5% 1608 R/TP
			R526	0RJ1000D677 100 OHM 1/10 W 5% 1608 R/TP
			R527	0RJ1003D677 100K OHM 1/10 W 5% 1608 R/TP
			R528	0RJ0222D677 22 OHM 1/10 W 5% 1608 R/TP
			R529	0RJ1002D677 10K OHM 1/10 W 5% 1608 R/TP
			R531	0RJ3302D677 33K OHM 1/10 W 5% 1608 R/TP
			R534	0RJ1001D677 1K OHM 1/10 W 5% 1608 R/TP
			R535	0RJ0000D677 0 OHM 1/10 W 5% 1608 R/TP
			R536	0RJ1000D677 100 OHM 1/10 W 5% 1608 R/TP
			R537	0RJ1000D677 100 OHM 1/10 W 5% 1608 R/TP
			R538	0RJ4701D677 4.7K OHM 1/10 W 5% 1608 R/TP
			R539	0RJ4701D677 4.7K OHM 1/10 W 5% 1608 R/TP
			R540	0RJ0222D677 22 OHM 1/10 W 5% 1608 R/TP
			R541	0RJ4700D677 470 OHM 1/10 W 5% 1608 R/TP
			R542	0RJ1000D677 100 OHM 1/10 W 5% 1608 R/TP
			R543	0RJ1000D677 100 OHM 1/10 W 5% 1608 R/TP
			R544	0RJ4701D677 4.7K OHM 1/10 W 5% 1608 R/TP
			R545	0RJ4701D677 4.7K OHM 1/10 W 5% 1608 R/TP
			R564	0RJ4701D677 4.7K OHM 1/10 W 5% 1608 R/TP
			R580	0RJ4701D677 4.7K OHM 1/10 W 5% 1608 R/TP
			R581	0RJ1000D677 100 OHM 1/10 W 5% 1608 R/TP
			R582	0RJ1000D677 100 OHM 1/10 W 5% 1608 R/TP
			R585	0RJ4701D677 4.7K OHM 1/10 W 5% 1608 R/TP
			R586	0RJ4701D677 4.7K OHM 1/10 W 5% 1608 R/TP
			R587	0RJ1000D677 100 OHM 1/10 W 5% 1608 R/TP
			R588	0RJ1000D677 100 OHM 1/10 W 5% 1608 R/TP
			R591	0RJ0000D677 0 OHM 1/10 W 5% 1608 R/TP
			R592	0RJ0000D677 0 OHM 1/10 W 5% 1608 R/TP
			R593	0RJ4701D677 4.7K OHM 1/10 W 5% 1608 R/TP
			R594	0RJ4701D677 4.7K OHM 1/10 W 5% 1608 R/TP
			R595	0RJ1000D677 100 OHM 1/10 W 5% 1608 R/TP
			R596	0RJ1000D677 100 OHM 1/10 W 5% 1608 R/TP
			R597	0RJ0000D677 0 OHM 1/10 W 5% 1608 R/TP
			R701	0RJ1002D677 10K OHM 1/10 W 5% 1608 R/TP
			R703	0RJ0752D677 75 OHM 1/10 W 5% 1608 R/TP
			R704	0RJ0752D677 75 OHM 1/10 W 5% 1608 R/TP
			R705	0RJ0752D677 75 OHM 1/10 W 5% 1608 R/TP
			R711	0RJ1000D677 100 OHM 1/10 W 5% 1608 R/TP
			R712	0RJ1000D677 100 OHM 1/10 W 5% 1608 R/TP
			R713	0RJ0472D677 47 OHM 1/10 W 5% 1608 R/TP
			R714	0RJ1801D677 1.8K OHM 1/10 W 5% 1608 R/TP
			R715	0RJ1002D677 10K OHM 1/10 W 5% 1608 R/TP
			R716	0RJ0472D677 47 OHM 1/10 W 5% 1608 R/TP
			R718	0RJ0222D677 22 OHM 1/10 W 5% 1608 R/TP
			R719	0RJ0222D677 22 OHM 1/10 W 5% 1608 R/TP
			R726	0RJ1000D677 100 OHM 1/10 W 5% 1608 R/TP
			R727	0RJ1000D677 100 OHM 1/10 W 5% 1608 R/TP
			R729	0RJ4700D677 470 OHM 1/10 W 5% 1608 R/TP
			R730	0RJ2700D677 270 OHM 1/10 W 5% 1608 R/TP
			R731	0RJ2700D677 270 OHM 1/10 W 5% 1608 R/TP
			R740	0RH0000D622 0 1/10W P-TYPE TAPPING
			R741	0RH0000D622 0 1/10W P-TYPE TAPPING
			R742	0RH0000D622 0 1/10W P-TYPE TAPPING
			R743	0RH0000D622 0 1/10W P-TYPE TAPPING
			R744	0RH0000D622 0 1/10W P-TYPE TAPPING
			R745	0RH0000D622 0 1/10W P-TYPE TAPPING
			R746	0RH0000D622 0 1/10W P-TYPE TAPPING
			R752	0RJ1003D677 100K OHM 1/10 W 5% 1608 R/TP
			R753	0RJ4701D677 4.7K OHM 1/10 W 5% 1608 R/TP
			R760	0RJ0472D677 47 OHM 1/10 W 5% 1608 R/TP
			R761	0RJ0472D677 47 OHM 1/10 W 5% 1608 R/TP
			R765	0RJ0752D677 75 OHM 1/10 W 5% 1608 R/TP

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*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
			R766	0RJ0752D677 75 OHM 1/10 W 5% 1608 R/TP
			R767	0RJ0752D677 75 OHM 1/10 W 5% 1608 R/TP
			R768	0RJ1801D677 1.8K OHM 1/10 W 5% 1608 R/TP
			R769	0RJ1002D677 10K OHM 1/10 W 5% 1608 R/TP
			R807	0RH0000D622 0 1/10W P-TYPE TAPPING
			R809	0RJ2202D677 22K OHM 1/10 W 5% 1608 R/TP
			R810	0RH5600D622 560 1/10W 5 D.R/TP
			R811	0RH0332D622 33 1/10W 5 D.R/TP
			R812	0RH0332D622 33 1/10W 5 D.R/TP
			R813	0RH0332D622 33 1/10W 5 D.R/TP
			R814	0RH0332D622 33 1/10W 5 D.R/TP
			R815	0RH0332D622 33 1/10W 5 D.R/TP
			R816	0RH0332D622 33 1/10W 5 D.R/TP
			R817	0RH0332D622 33 1/10W 5 D.R/TP
			R818	0RH0332D622 33 1/10W 5 D.R/TP
			R819	0RH0332D622 33 1/10W 5 D.R/TP
			R820	0RH0332D622 33 1/10W 5 D.R/TP
			R821	0RJ2202D677 22K OHM 1/10 W 5% 1608 R/TP
			R822	0RH5600D622 560 1/10W 5 D.R/TP
			R824	0RJ0000D677 0 OHM 1/10 W 5% 1608 R/TP
			R826	0RH0332D622 33 1/10W 5 D.R/TP
			R827	0RH0332D622 33 1/10W 5 D.R/TP
			R828	0RH0332D622 33 1/10W 5 D.R/TP
			R829	0RH0332D622 33 1/10W 5 D.R/TP
			R830	0RH0332D622 33 1/10W 5 D.R/TP
			RA202	0RHZTCZ001A 100 OHM 1/16 W 5% 3215 R/TP
			RA204	0RHZTCZ001A 100 OHM 1/16 W 5% 3215 R/TP
			RA206	0RHZTCZ001A 100 OHM 1/16 W 5% 3215 R/TP
			RA208	0RHZTCZ001A 100 OHM 1/16 W 5% 3215 R/TP
			RA210	0RHZTCZ001A 100 OHM 1/16 W 5% 3215 R/TP
			RA212	0RHZTCZ001A 100 OHM 1/16 W 5% 3215 R/TP
			RA214	0RHZTCZ001A 100 OHM 1/16 W 5% 3215 R/TP
			RA216	0RHZTCZ001A 100 OHM 1/16 W 5% 3215 R/TP
			RA218	0RHZTCZ001A 100 OHM 1/16 W 5% 3215 R/TP
			RA220	0RHZTCZ001A 100 OHM 1/16 W 5% 3215 R/TP
			RA222	0RHZTCZ001A 100 OHM 1/16 W 5% 3215 R/TP
			RA224	0RHZTCZ001A 100 OHM 1/16 W 5% 3215 R/TP
			RA225	0RHZTCZ001A 100 OHM 1/16 W 5% 3215 R/TP
			RA226	0RHZTCZ001A 100 OHM 1/16 W 5% 3215 R/TP
			RA227	0RHZTCZ001A 100 OHM 1/16 W 5% 3215 R/TP
			RA228	0RHZTCZ001A 100 OHM 1/16 W 5% 3215 R/TP
			RA229	0RHZTCZ001A 100 OHM 1/16 W 5% 3215 R/TP
			RA230	0RHZTCZ001A 100 OHM 1/16 W 5% 3215 R/TP
			RA231	0RHZTCZ001A 100 OHM 1/16 W 5% 3215 R/TP
			RA232	0RHZTCZ001A 100 OHM 1/16 W 5% 3215 R/TP
			RA233	0RHZTCZ001A 100 OHM 1/16 W 5% 3215 R/TP
			RA234	0RHZTCZ001A 100 OHM 1/16 W 5% 3215 R/TP
			RA235	0RHZTCZ001A 100 OHM 1/16 W 5% 3215 R/TP
			RA236	0RHZTCZ001A 100 OHM 1/16 W 5% 3215 R/TP
			RA237	0RHZTCZ001A 100 OHM 1/16 W 5% 3215 R/TP
			RA238	0RHZTCZ001A 100 OHM 1/16 W 5% 3215 R/TP
			RA239	0RHZTCZ001A 100 OHM 1/16 W 5% 3215 R/TP
			RA240	0RHZTCZ001A 100 OHM 1/16 W 5% 3215 R/TP
			RA241	0RHZTCZ001A 100 OHM 1/16 W 5% 3215 R/TP
			RA242	0RHZTCZ001A 100 OHM 1/16 W 5% 3215 R/TP
			<b>OTHERs</b>	
			X201	6202TST001E SX-1 SUNNY CHIP 24MHZ 30PPM
			X501	6202TST001E SX-1 SUNNY CHIP 24MHZ 30PPM

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*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
<b>POWER BOARD</b>				
△			C901	0CBZTBU002B BULK PCX2 335 474K
△			C902	0CKZTBU003B SC E 332M 12.5BW7 250V BK7.5
△			C903	0CKZTBU003B SC E 332M 12.5BW7 250V BK7.5
△			C904	0CBZTBU002A BULK PCX2 335 224K
			C905	0CZZTAB002C KMF 18*40 SYE / SWE 400V 120
			C906	0CK10302945 0.01UF 2KV Z F TR
			C907	0CE476EK638 47UF KMG 50V M FM5 TP 5
			C908	0CQ2721N419 2700PF 100V J PE NI TP
			C909	0CK1020K515 1000PF 50V K B TR
			C911	0CE228EF630 2200UF KMG 16V M FM5 BULK
			C913	0CE108BF630 1000UF KME 16V M FM5 BULK
			C914	0CE228ED630 2200UF KMG,RD 10V 20% BULK F
			C915	0CE228ED630 2200UF KMG,RD 10V 20% BULK F
			C916	181-288L MKT 100V 823JTR PHS26823
			C918	0CE228ED630 2200UF KMG,RD 10V 20% BULK F
			C919	0CKZTBU003B SC E 332M 12.5BW7 250V BK7.5
			C921	0CE228EF630 2200UF KMG 16V M FM5 BULK
			C922	0CKZTTA002E EKR3A102K09FK5 SAMWHA 1KV 10
			C923	0CKZTTA002E EKR3A102K09FK5 SAMWHA 1KV 10
			C924	0CE336BH638 33UF KME 25V M FM5 TP5
			D901	0DD400709CB UF4007 TP G.I DO204AL 1000V
			D902	0DR400409AB UF4004 TP G.I DO204AL 400V 1
			D903	0DRIR00011B 16CTQ100 I.R ST TO220 100V 1
			D906	0DRIR00021A 30CTQ060 I.R ST TO220 60V 30
			D907	0DS113309AA 1SS133 TP ROHM KOREA DO34 90
			ZD901	0DZ470009BC GDZ4.7B TP GRANDE DO34 0.5W
			BD901	0DD360000DA D3SBA60 BK SHINDENGEN 600V
△			F901	131-040C 3150MA 250V 5.2X20 CY/GL UL
			FH1	430-858C AFC-520 BAE EUN TA
			FH2	430-858C AFC-520 BAE EUN TA
			IC901	0IPMGIH001A ICE2AS01 INFINEON 8P,DIP ST
			IC904	0ISS431000A KA431AZ (LM431AZ)
			IC905	0ISS780500F KA7805
			L901	150-A85F LX31 GET BAR CHOKE,3.3UH,LB8
			L902	150-A85F LX31 GET BAR CHOKE,3.3UH,LB8
△			LF901	6200TZZ001A - GO BK L/FILTER,9MH,LB886F
△			LF902	6200TZZ001A - GO BK L/FILTER,9MH,LB886F
△			P901	6620TKB002A BAE EUN AC UNIVERSAL 3PIN BL
△			PC1	0IL1817000E LTV-817M B 4P BK PHOTO COUPL
			Q902	0TFFN10004A INFINEON SPP11N60C2 ST TO220
			R901	0RD6803A609 680K OHM 1/2 W (7.0) 5% TA52
			R902	0RD3902A609 39K OHM 1/2 W (7.0) 5% TA52
			R903	0RD3902A609 39K OHM 1/2 W (7.0) 5% TA52
			R906A	0RX5102J609 51KOHM 1 W 5% TA52
			R906B	0RX5102J609 51KOHM 1 W 5% TA52
			R907	0RD0102Q609 10 1/4W(3 5% TA52
			R908	0RD0222Q609 22 1/4W(3 5% TA52
			R909	0RD1001Q609 1K 1/4W(3 5% TA52
			R910	0RD0431A609 4.3 OHM 1/2 W (7.0) 5% TA52
			R911	0RD1004A609 1.0M OHM 1/2 W (7.0) 5% TA52
			R912	0RD1004A609 1.0M OHM 1/2 W (7.0) 5% TA52
			R913	0RN1102F409 11K 1/6W 1% TA52
			R914	0RD1002Q609 10K 1/4W(3 5% TA52
			R917	0RD1201Q609 1.20K 1/4W(3 5% TA52
			R918	0RD1000Q609 100 1/4W(3 5% TA52
			R920	0RN4702F409 47K 1/6W 1% TA52
			R921	0RN2701F409 2.70K 1/6W 1% TA52
			R923	0RB0330K607 0.33 OHM 2 W 5% TA62
			R924	0RD0752Q609 75 1/4W(3 5% TA52
			R925	0RD1002Q609 10K 1/4W(3 5% TA52
			R926	0RN0471H609 4.7 OHM 1/2 W 5% TA52

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*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
			R927	0RD0102A609 10 OHM 1/2 W (7.0) 5% TA52
			R928	0RD0202Q609 20 1/4W(3 5% TA52
△			T901	6170TMZ125B EER3016 340UH V-10PIN LB886F
			TH902	6322TA080AA TP8D13 DAEWOO +/- 15% 110/2
<b>CONTROL BOARD</b>				
			C1	0CK104CK56A 0.1UF 1608 50V 10% R/TP X7R
			C2	0CK104CK56A 0.1UF 1608 50V 10% R/TP X7R
			R1	0RJ4701D677 4.7K OHM 1/10 W 5% 1608 R/TP
			R2	0RJ4701D677 4.7K OHM 1/10 W 5% 1608 R/TP
			R3	0RJ8200D677 820 OHM 1/10 W 5% 1608 R/TP
			R4	0RJ8200D677 820 OHM 1/10 W 5% 1608 R/TP
			R5	0RJ1501D677 1.5K OHM 1/10 W 5% 1608 R/TP
			R6	0RJ1501D677 1.5K OHM 1/10 W 5% 1608 R/TP
			R7	0RJ2201D677 2200 OHM 1/10 W 5% 1608 R/TP
			R8	0RJ2201D677 2200 OHM 1/10 W 5% 1608 R/TP
			LED1	0DLLT0148AA LITEON LTST-C195KGSJKT R/TP
			SW1	140-058E SKHV10910B LGEC NON 12V 20A
			SW2	140-058E SKHV10910B LGEC NON 12V 20A
			SW3	140-058E SKHV10910B LGEC NON 12V 20A
			SW4	140-058E SKHV10910B LGEC NON 12V 20A
			SW5	140-058E SKHV10910B LGEC NON 12V 20A
			SW6	140-058E SKHV10910B LGEC NON 12V 20A
			SW7	140-058E SKHV10910B LGEC NON 12V 20A
			SW8	140-058E SKHV10910B LGEC NON 12V 20A
<b>USB BOARD</b>				
			C1	0CH8107F611 100UF 16V M 85STD(CYL) R/TP
			C2	0CK103CK51A 0.01UF 1608 50V 10% R/TP B(Y
			C6	0CH3105F946 1UF 16V Z F 2012 R/TP
			C8	0CC150CK41A 15PF 1608 50V 5% R/TP NP0
			C9	0CC150CK41A 15PF 1608 50V 5% R/TP NP0
			C18	0CK104CK56A 0.1UF 1608 50V 10% R/TP X7R
			C23	0CH8107F611 100UF 16V M 85STD(CYL) R/TP
			C24	0CC470CK41A 47PF 1608 50V 5% R/TP NP0
			C25	0CC470CK41A 47PF 1608 50V 5% R/TP NP0
			C27	0CH8107F611 100UF 16V M 85STD(CYL) R/TP
			C28	0CK103CK51A 0.01UF 1608 50V 10% R/TP B(Y
			C31	0CK104CK56A 0.1UF 1608 50V 10% R/TP X7R
			C32	0CK104CK56A 0.1UF 1608 50V 10% R/TP X7R
			C37	0CH8107F611 100UF 16V M 85STD(CYL) R/TP
			C38	0CC470CK41A 47PF 1608 50V 5% R/TP NP0
			C39	0CC470CK41A 47PF 1608 50V 5% R/TP NP0
			D1	0DS181009AA KDS181 TP KEC SOT-23 80V 3
			L4	6210TCE001P HB-1S2012-121JT CERATECH 201
			L5	6210TCE001P HB-1S2012-121JT CERATECH 201
			L13	6210TCE001B HH-1H3216-500JT CERATEC 3216
			L14	6210TCE001P HB-1S2012-121JT CERATECH 201
			L15	6210TCE001P HB-1S2012-121JT CERATECH 201
			L16	6210TCE001P HB-1S2012-121JT CERATECH 201
			L17	6210TCE001P HB-1S2012-121JT CERATECH 201
			L18	6210TCE001B HH-1H3216-500JT CERATEC 3216
			L19	6210TCE001P HB-1S2012-121JT CERATECH 201
			L20	6210TCE001P HB-1S2012-121JT CERATECH 201
			R1	0RJ0000D677 0 OHM 1/10 W 5% 1608 R/TP
			R2	0RJ1001D677 1K OHM 1/10 W 5% 1608 R/TP
			R8	0RJ1002D677 10K OHM 1/10 W 5% 1608 R/TP
			R9	0RJ1501D677 1.5K OHM 1/10 W 5% 1608 R/TP
			R19	0RJ1502D677 15K OHM 1/10 W 5% 1608 R/TP
			R21	0RJ0222D677 22 OHM 1/10 W 5% 1608 R/TP

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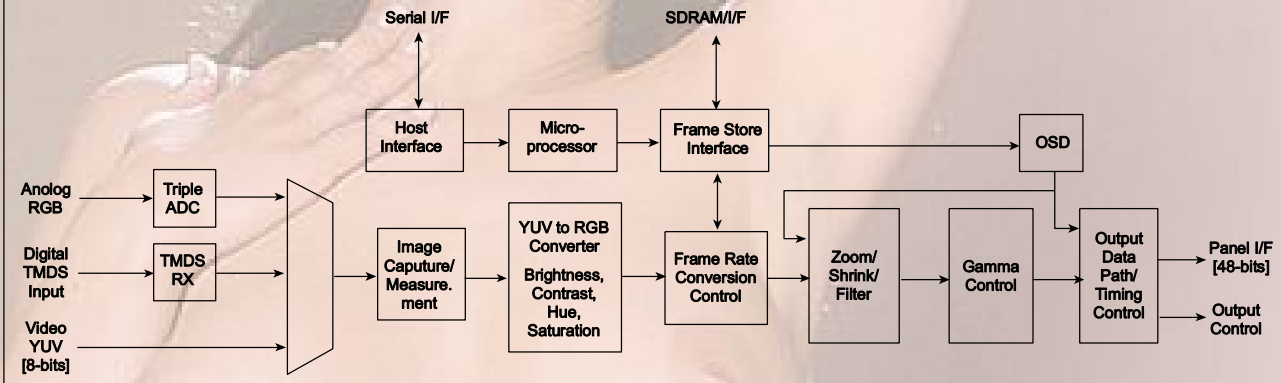
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		R22	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R23	0RJ1502D677	15K OHM 1/10 W 5% 1608 R/TP
		R24	0RJ1502D677	15K OHM 1/10 W 5% 1608 R/TP
		R25	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R26	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R28	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R30	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R31	0RJ1502D677	15K OHM 1/10 W 5% 1608 R/TP
		R32	0RJ1502D677	15K OHM 1/10 W 5% 1608 R/TP
		R34	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R35	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R37	0RJ1501D677	1.5K OHM 1/10 W 5% 1608 R/TP
		R40	0RJ1501D677	1.5K OHM 1/10 W 5% 1608 R/TP
		R41	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		U1	0IRH033200A	BA033FP-E2 MOLD-3 TP REGULAT
		U2	0IPRPT1007A	TUSB2036 TEXAS INSTRUMENT 32
		U3	0ITI204200B	TPS2042ADR TEXAS INSTRUMENT
		X1	6202TST001C	SX-1, SUNNY SMD, 6.0MHZ ,50P
		ZD1	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD4	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD7	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD8	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD11	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD12	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323

# PIN CONFIGURATION

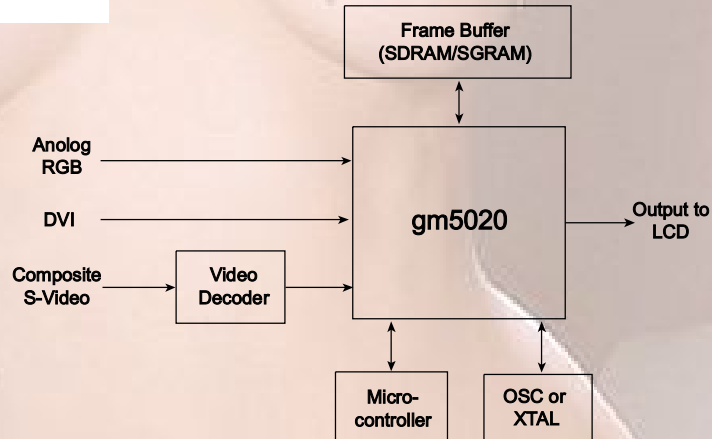
GM5020

GENESIS 292P

## FUNCTIONAL BLOCK DIAGRAM



## SYSTEM BLOCK DIAGRAM



74F08D 14P

SOP TP QUAD 2-INPUT

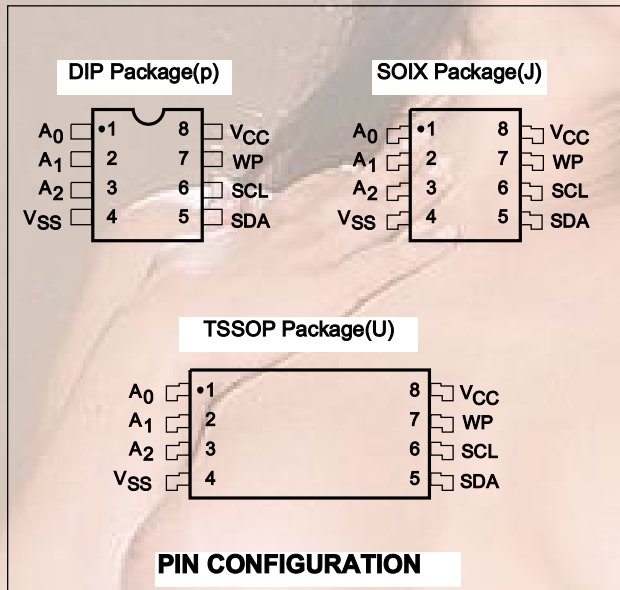
## PIN FUNCTION

INPUT		OUTPUT
Dna	Dnb	Qn
L	L	L
L	H	L
H	L	L
H	H	H



## PIN CONFIGURATION

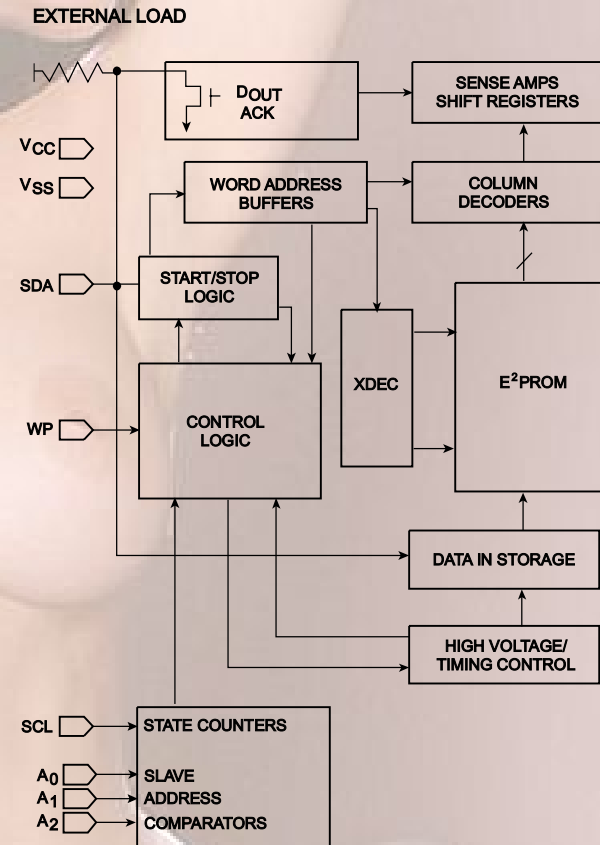
## CAT24WC08J-TE13 8P



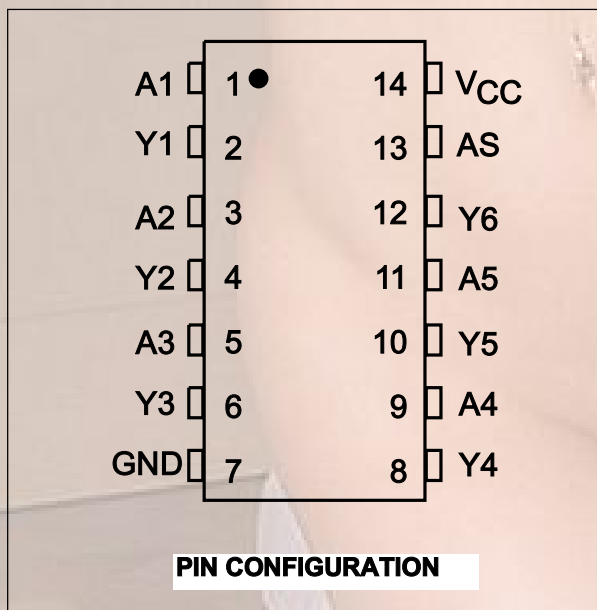
### PIN FUNCTION

Pin Name	Function
A <sub>0</sub> , A <sub>1</sub> , A <sub>2</sub>	Device Address Inputs
SDA	Serial Data/Address
SCL	Serial Clock
WP	Write Protect
V <sub>cc</sub>	+1.8V to + 6.0V power Supply
V <sub>ss</sub>	Ground

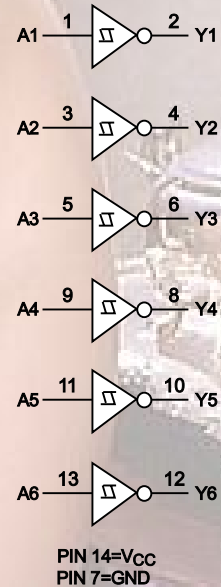
### BLOCK DIAGRAM



## MC74HCT14ADR2 14P



### BLOCK DIAGRAM





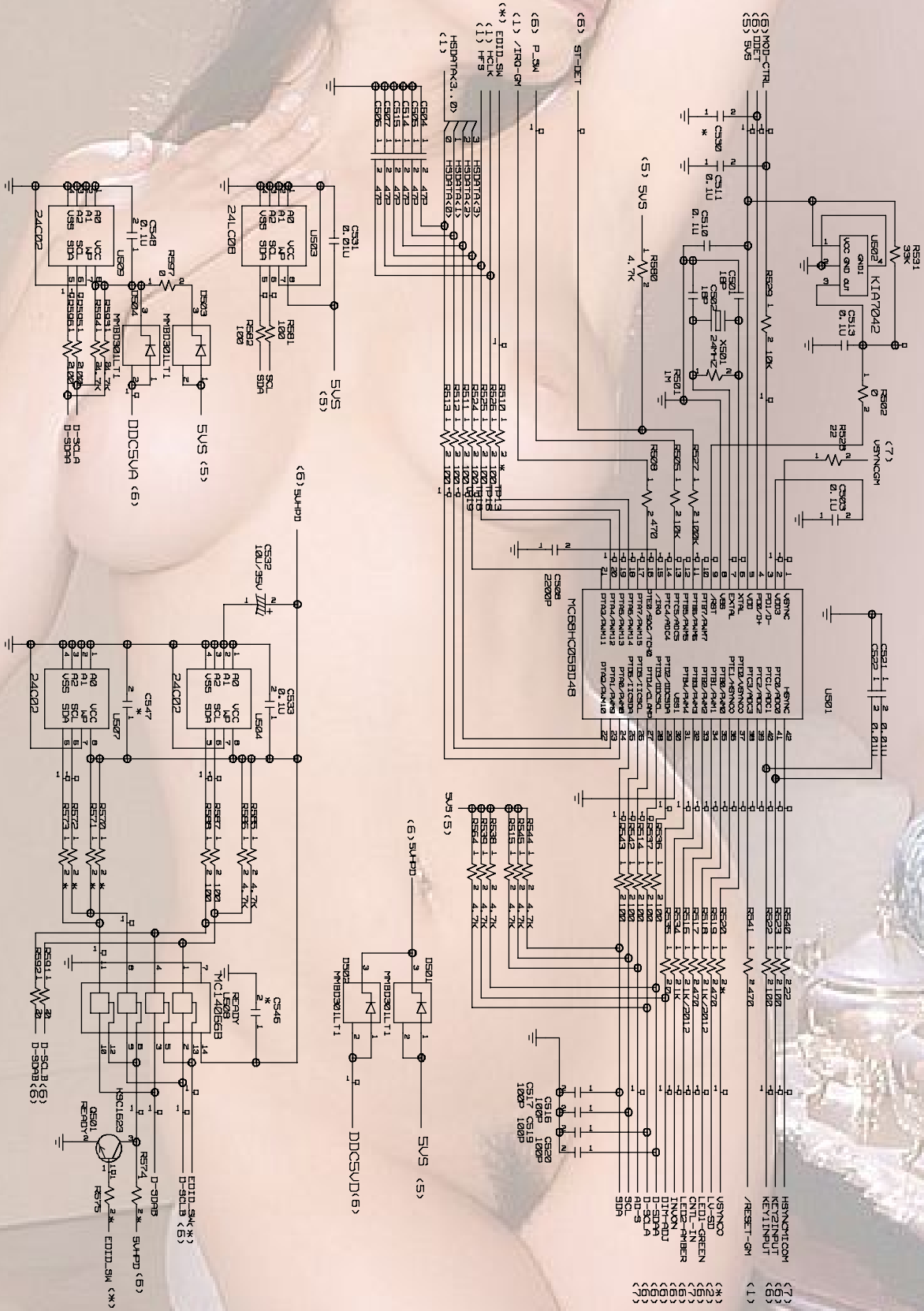






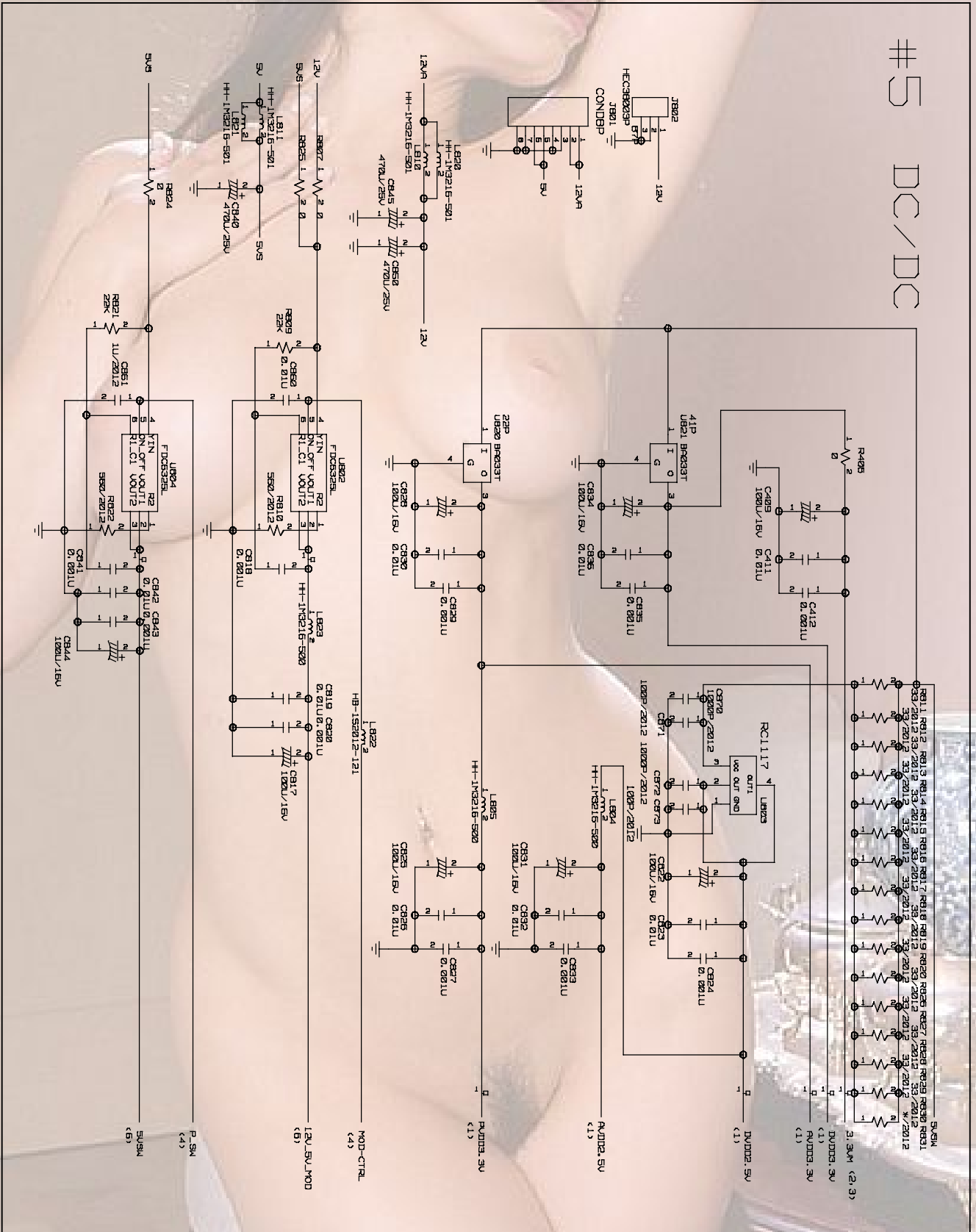
# 4. MICOM

#4 MICOM



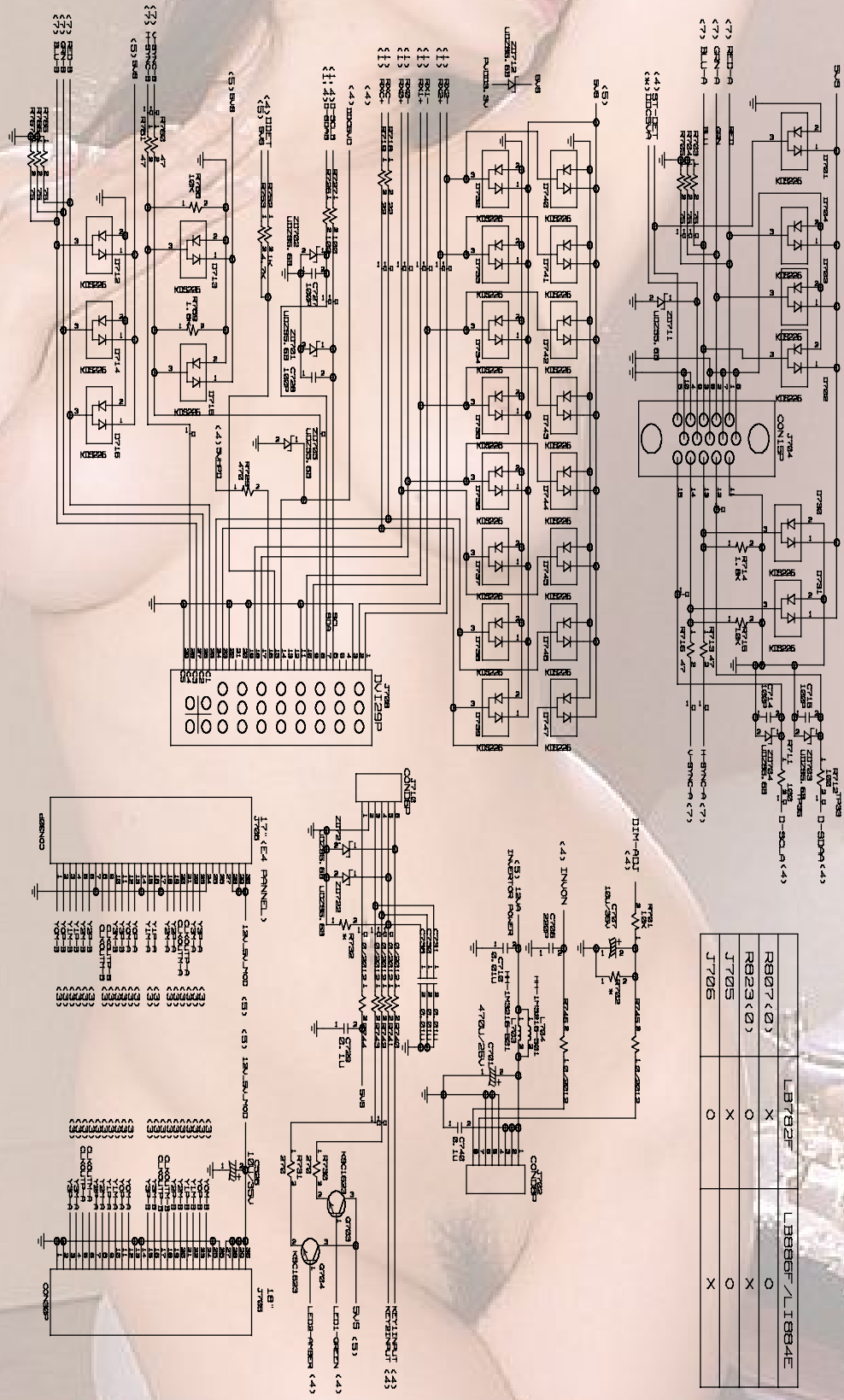
# 5. DC/DC

## #5 DC/DC



# 6. CONNECTOR

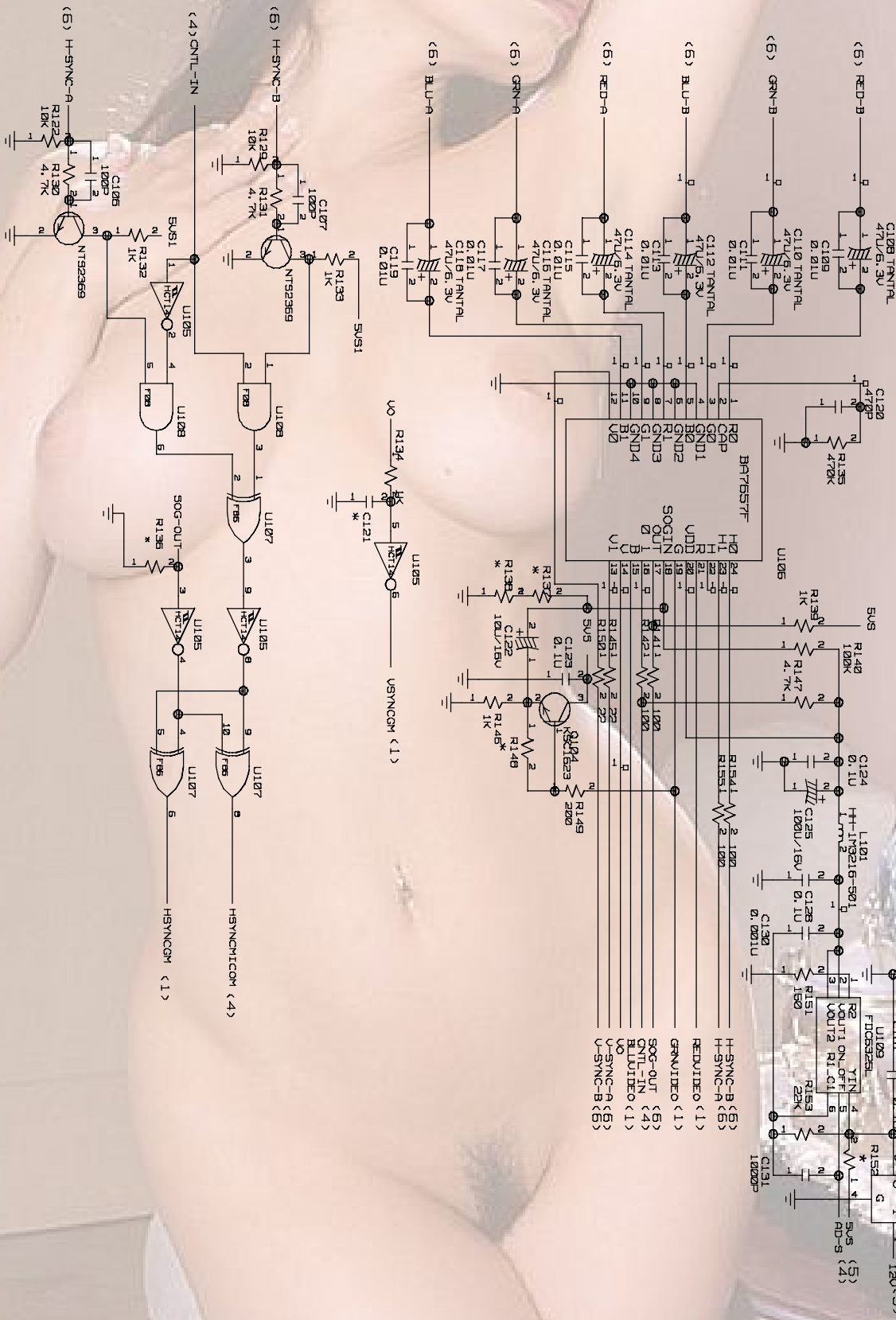
## #6 CONNECTOR



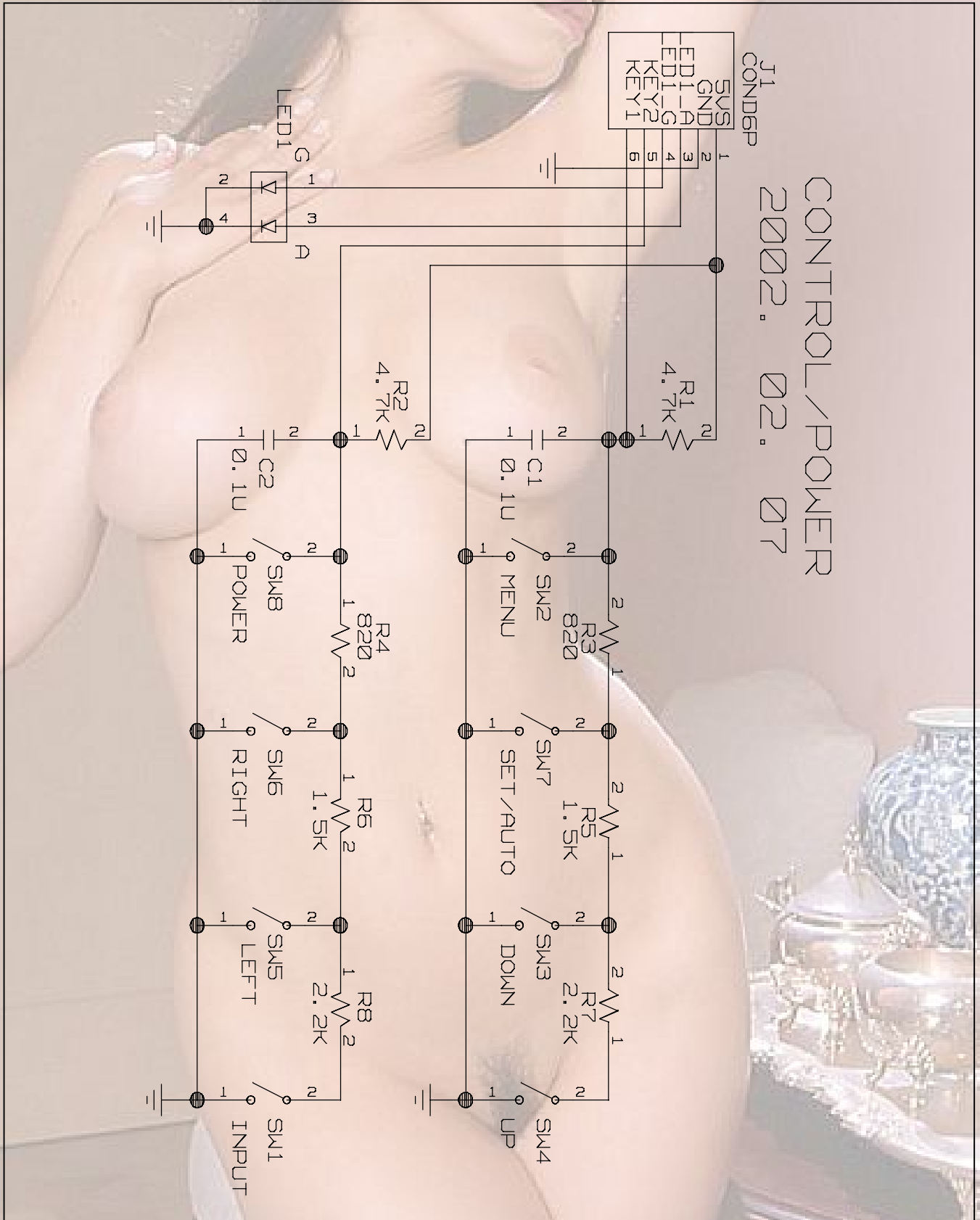
R807(0)	X	L8782F	L888BF/1T84E
R823(0)	O		
J705	X		
J706	O		

# 7. INPUT SWITCHING

## #7 INPUT SWITCHING



## 8. CONTROL KEY











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