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COLOR MONITOR SERVICE MANUAL

CHASSIS NO. : CL-29

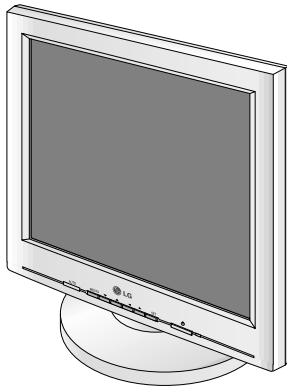
FACTORY MODEL: LB782G

MODEL: FLATRON LCD 782LS (LB782G-GD)

*() 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 Color LCD Module
Size	: 17.0 inch (43.2 cm diagonal)
Pixel Pitch	: 0.264(H) x 0.264(V)
Electrical Interface	: LVDS
Color Depth	: 6-bits+FRC, 16,194,277 colors
Size (mm)	: 383.5(H) x 306(V) x 21.0(D) Typ
Surface Treatment	: Anti-Glare, Hard Coating (3H)
Operating Mode	: Normally white
Backlight Unit	: Four-CCFL (Cold Cathode Fluorescent Lamp)

2. OPTICAL CHARACTERISTICS

2-1. Viewing Angle by Contrast Ratio ≥ 10	
Left : 70° Typ. ,	Right : -70° Typ.
Top : 45° Typ. ,	Bottom : -65° Typ.

2-2. Luminance : 200 (min.) 250 (typ.)

2-3. Contrast Ratio : 250 (min) 400 (typ.)

3. SIGNAL (Refer to the Timing Chart)

3-1. Sync Signal
 • Type : Separate TTL (Positive/Negative)

3-2. Video Input Signal

- 1) Type : R, G, B Analog
- 2) Voltage Level : 0~0.714 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 Ω

3-3. Operating Frequency

Horizontal	: 30 ~ 83 kHz
Vertical	: 56 ~ 75 Hz

4. POWER SUPPLY

4-1. Power
 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 45 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 : 5% ~ 95%
 (Non-condensing)

6. DIMENSIONS (with TILT/SWIVEL)

Width	: 419 mm (16.49")
Depth	: 205 mm (8.07")
Height	: 410 mm (16.14")

7. WEIGHT (with TILT/SWIVEL)

Net. Weight	: 6.8 kg (14.99 lbs)
Gross Weight	: 8.4 kg (18.52 lbs)

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  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.

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.

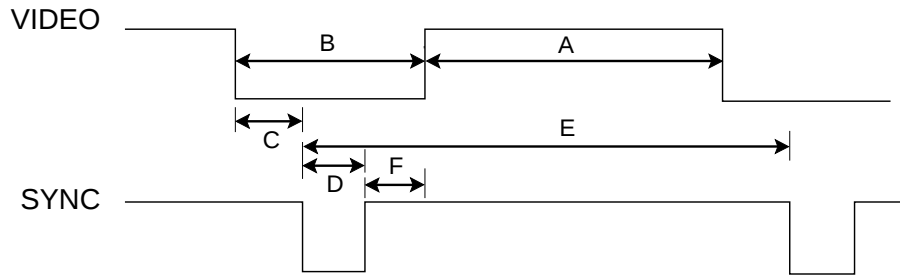
TAKE CARE DURING HANDLING THE LCD MODULE WITH BACKLIGHT UNIT.

- 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.)

CAUTION

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

TIMING CHART

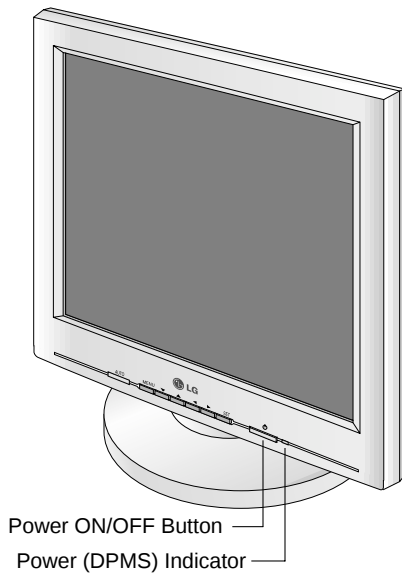


<< Dot Clock (MHz), Horizontal Frequency (kHz), Vertical Frequency (Hz), Horizontal etc... (μs), Vertical etc... (ms) >>

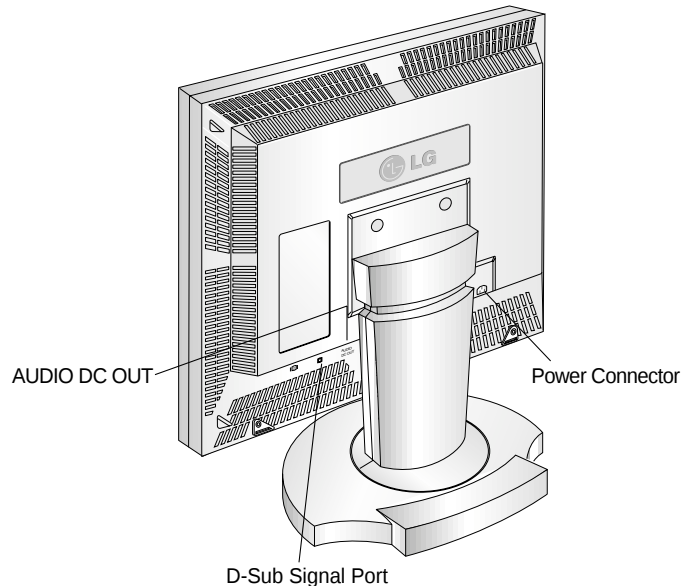
Mode	H/V Sort	Sync Polarity	DOT Clock	Frequency	Total Period (E)	Video Active Time (A)	Front Porch (C)	Sync Duration (D)	Back Porch (F)	Resolution
1	H	+	25.175	31.469	800	640	16	96	48	640x350 70Hz
	V	-		70.09	449	350	37	2	60	
2	H	-	28.321	31.468	900	720	18	108	54	720x400 70Hz
	V	+		70.08	449	400	12	2	35	
3	H	-	25.175	31.469	800	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	+	40.0	37.879	1056	800	40	128	88	800x600 60Hz
	V	+		60.317	628	600	1	4	23	
6	H	+	49.5	46.875	1056	800	16	80	160	800x600 75Hz
	V	+		75.0	625	600	1	3	21	
7	H	+/-	57.283	49.725	1152	832	32	64	224	832x624 75Hz
	V	+/-		74.55	667	624	1	3	39	
8	H	-	65.0	48.363	1344	1024	24	136	160	1024x768 60Hz
	V	-		60.0	806	768	3	6	29	
9	H	-	78.75	60.123	1312	1024	16	96	176	1024x768 75Hz
	V	-		75.029	800	768	1	3	28	
10	H	+/-	100.0	68.681	1456	1152	32	128	144	1152x870 75Hz
	V	+/-		75.062	915	870	3	3	39	
11	H	+/-	92.978	61.805	1504	1125	18	134	200	1152x900 65Hz
	V	+/-		65.96	937	900	2	4	31	
12	H	+	108.0	63.981	1688	1280	48	112	248	1280x1024 60Hz
	V	+		60.02	1066	1024	1	3	38	
13	H	+	135.0	79.976	1688	1280	16	144	248	1280x1024 75Hz
	V	+		75.035	1066	1024	1	3	38	

OPERATING INSTRUCTIONS

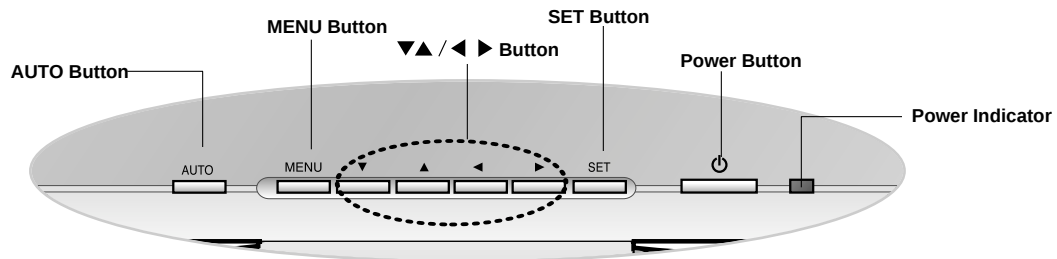
FRONT VIEW



REAR VIEW



Front Control Panel



1. MENU Button

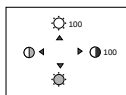
Use this button to enter or exit the on screen display.

2. ▼▲/◀▶ Button

Use these buttons to choose or adjust items in the on screen display

<Shortcut Keys>

- Brightness and Contrast can be adjusted directly without entering the On Screen Display (OSD) system. Touch the ▼▲/◀▶ buttons to adjust the settings and then the **OSD button** to save all changes. The Brightness and Contrast functions are also available in the On Screen Display (OSD) menu.



3. AUTO Button

Use this button to enter a selection in the on screen display.

* AUTO adjustment function

TO the **AUTO** button before using OSD menu. This button is for the automatic adjustment of the screen position, clock and phase.

Note: Some signal from some graphics boards may not function properly. **If the results are unsatisfactory**, adjust your monitor's Position, Clock and Phase manually.



4. MENU, ► Button

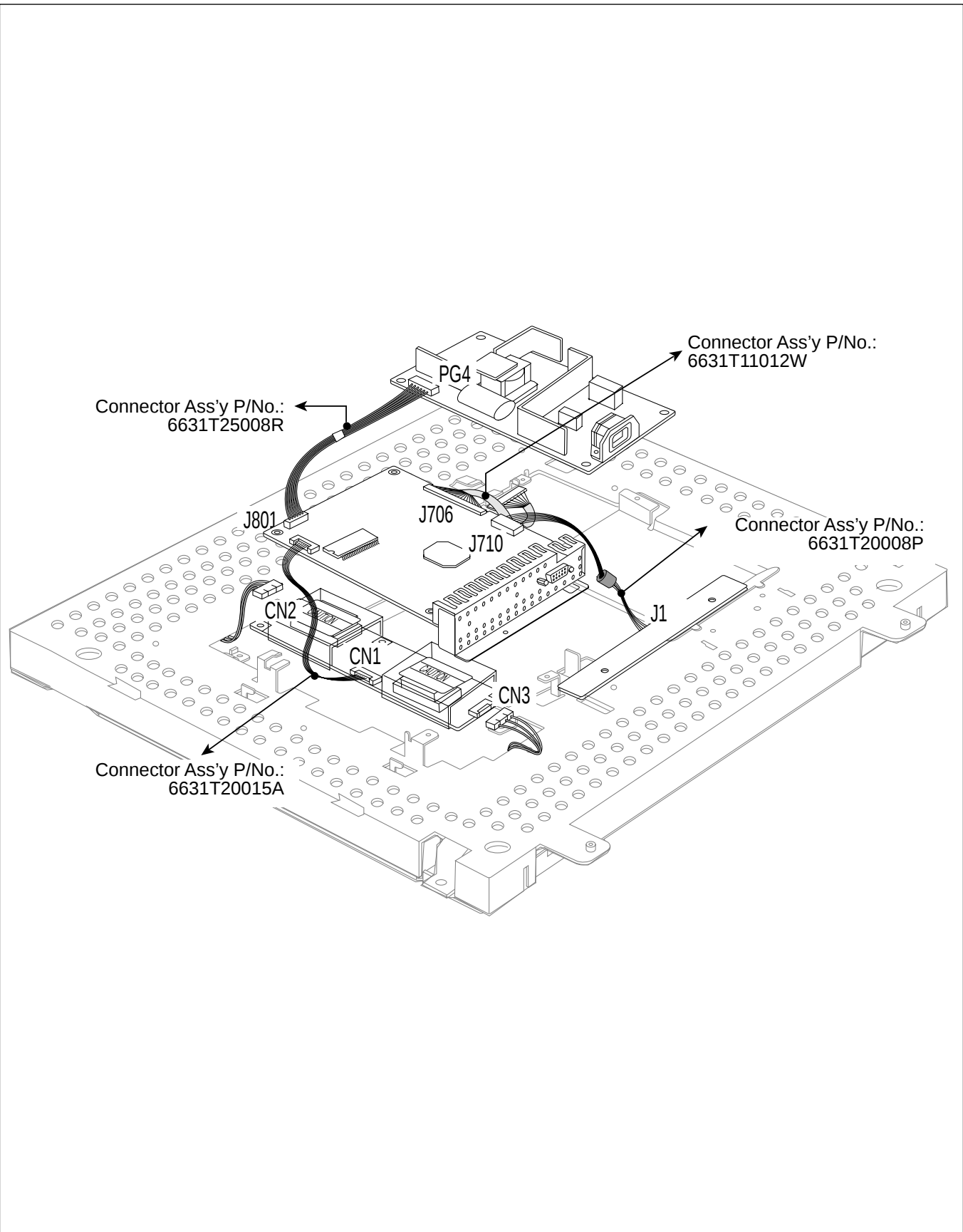
Press the hold the MENU button and ► button for 3 seconds: the message "CONTROLS LOCKED" appears.

CONTROLS LOCKED

You can unlock the OSD controls at any time by pushing the MENU, ► button for 3 seconds: the message "CONTROLS UNLOCKED" will appear.

CONTROLS UNLOCKED

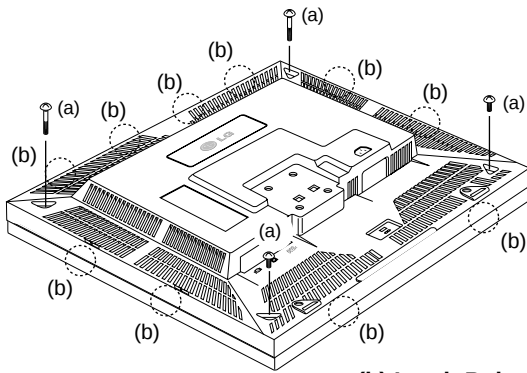
WIRING DIAGRAM



DISASSEMBLY

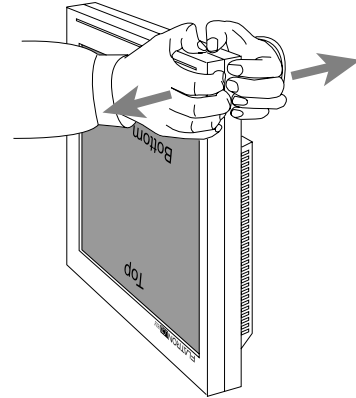
BACK COVER REMOVAL

Caution: When you open the Back cover, Be careful! Dont stress the Control Board Connector.

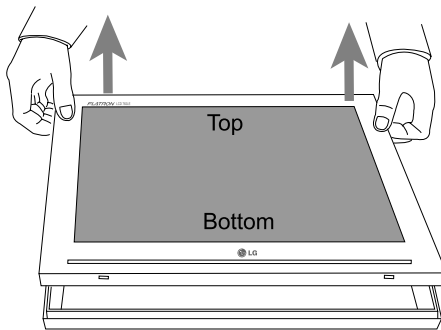


(b) Latch Point

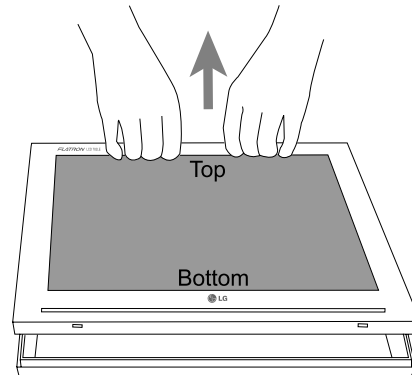
- 1) Set the Monitor face downward.
- 2) Remove four screws (a).



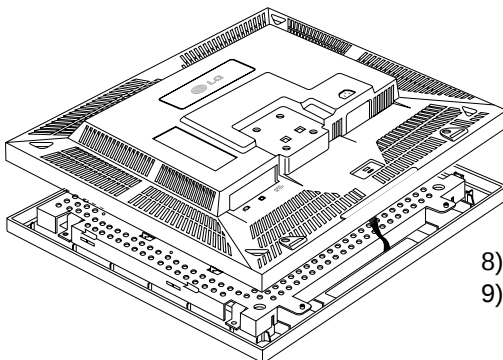
- 3) Set the Monitor as picture.
- 4) Release the bottom & side latch.



- 5) Set the Monitor face upward.
- 6) Release the up side latch.

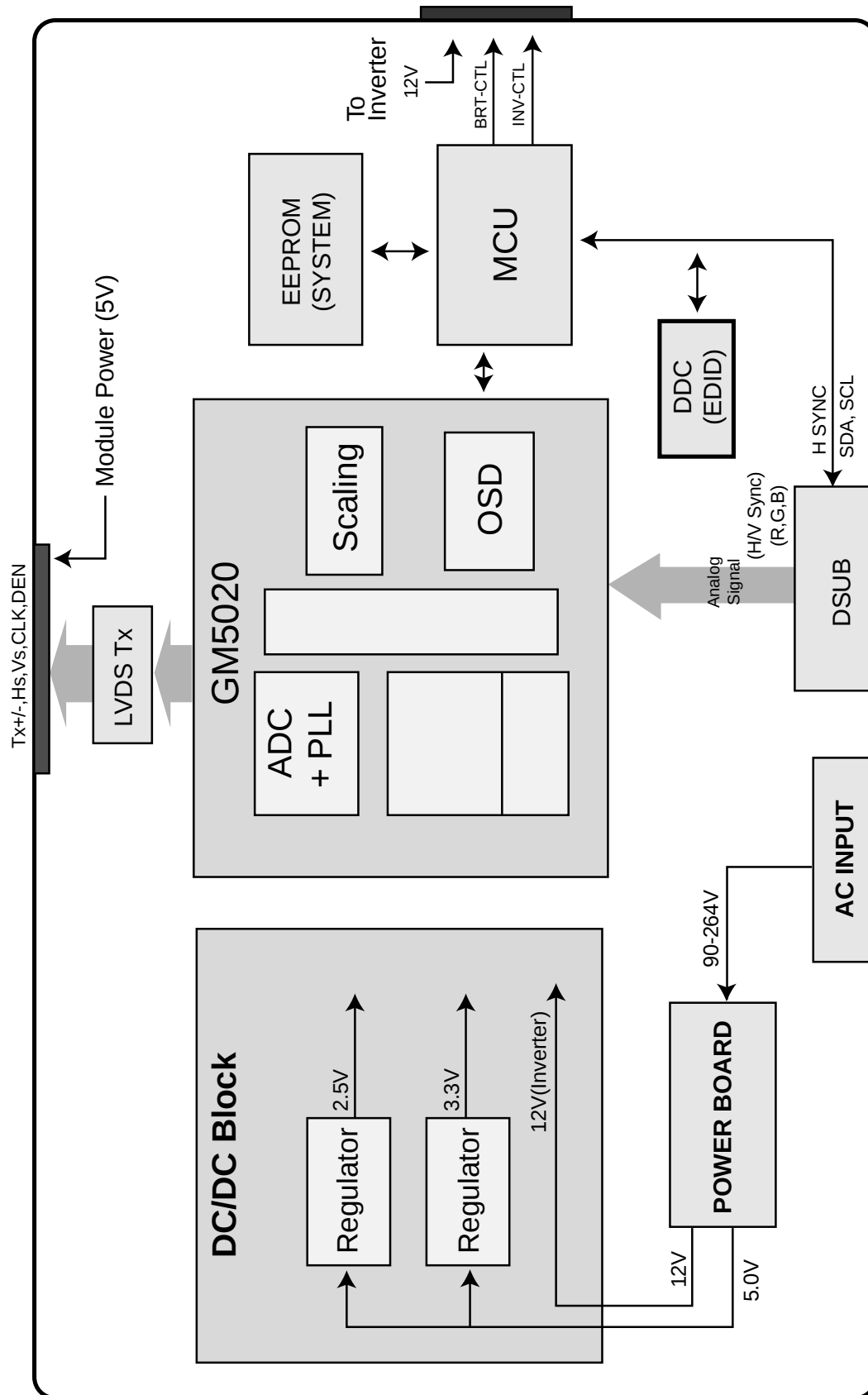


- 7) Release the center position latch.



- 8) Set the Monitor face downward.
- 9) Remove the Back cover.

BLOCK DIAGRAM



DESCRIPTION OF BLOCK DIAGRAM

1. Input signal part.

There is one input which is analog.
It comes from 15 pin D-Sub connector.

2. Pre-amp/ ADC / PLL / Video Controller.

This part amplifies the level of video signal from the analog video signal to the digital video signal using a pixel clock.

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

The range of the pixel clock is from 25MHz to 135.0MHz.

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 LCD module.

Especially pre-amp / ADC / Video controller are merged to one chip 'gm5020' by Genesis.

3. Power Part.

This circuit is working of 90~260VAC(50/60Hz). The operation procedure is as follows:

- 1) AC Input voltage is rectified and smoothed by the bridge diodes(BD901) and the capacitor(C905).
- 2) The Rectified voltage(DC) is applied to the primary coil of the transformer(T901).
- 3) The control IC(IC901) generates switching pulse to turn on and turn off the primary coil of the transformer(T901).
- 4) Depending on turn ratio of the transformer, the secondary voltages appear at the secondary coils of the transformer(T901).
- 5) These secondary voltages(12V,5V) are rectified by each diodes(D903,D906) and operates other circuit.(Inverter,Scaler...etc)

4. MICOM Part.

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

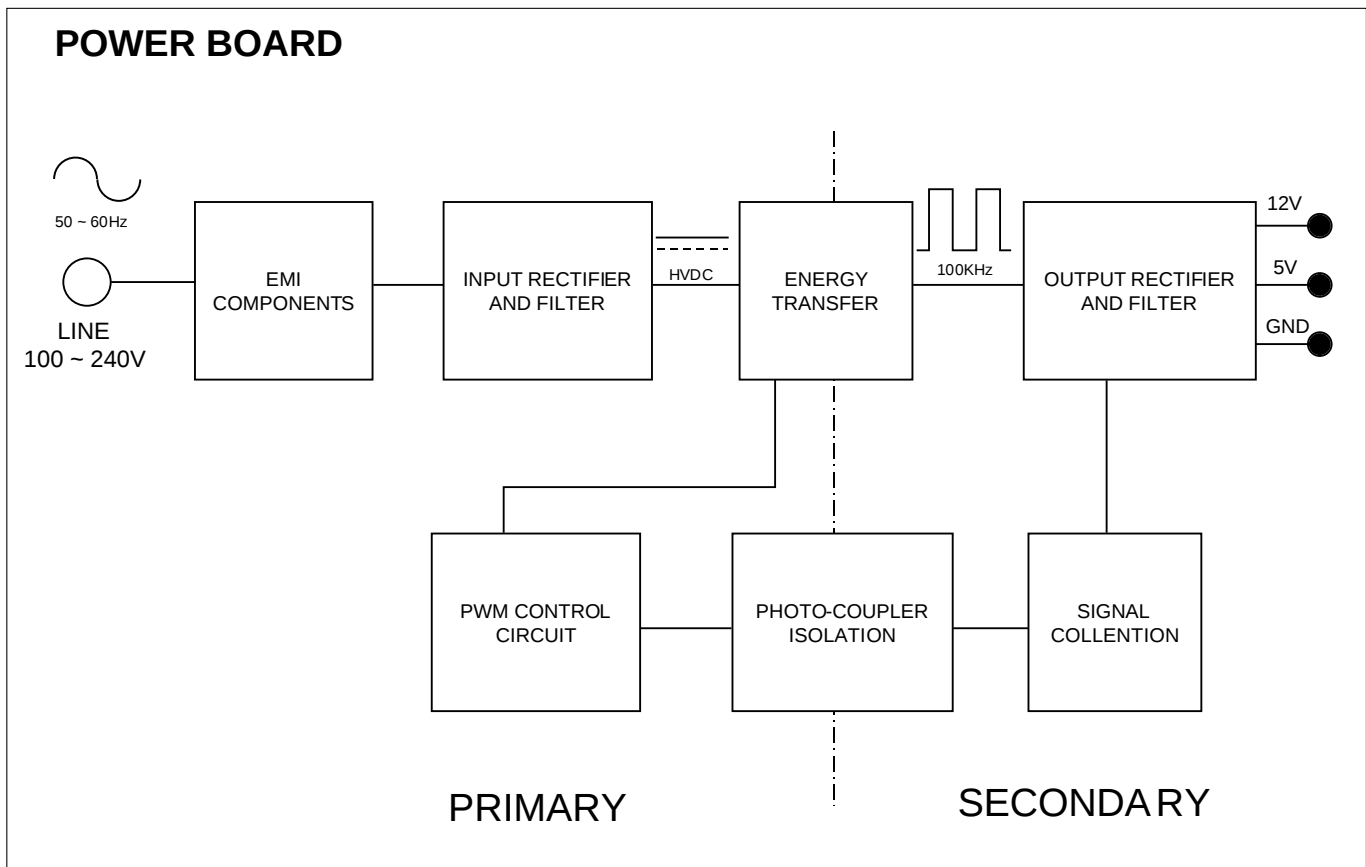
The Micom distinguishes polarity and frequency of the H/V sync are supplied from signal cable.

The controlled data of each modes is stored in EEPROM.

5. Inverter

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

BLOCK DIAGRAM



DESCRIPTION OF BLOCK DIAGRAM

1. EMI components.

This part contains of EMI components to comply with global marketing EMI standards like FCC 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 achieve the dc output stabilize, 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 achieve the stabilized 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 LB782G 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 White Balance

- 1) Display Black pattern at SXGA/60Hz.
- 2) Set External Bright to MAX position and Contrast to 80 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 Full White pattern at SXGA/60Hz.
- 6) Select DRIVE CAL command and Enter.
- 7) 9300K are automatically adjusted and saved to the EEPROM.
- 8) Select PRESET EXIT command and Enter.

3. 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(A) WR command and Enter.

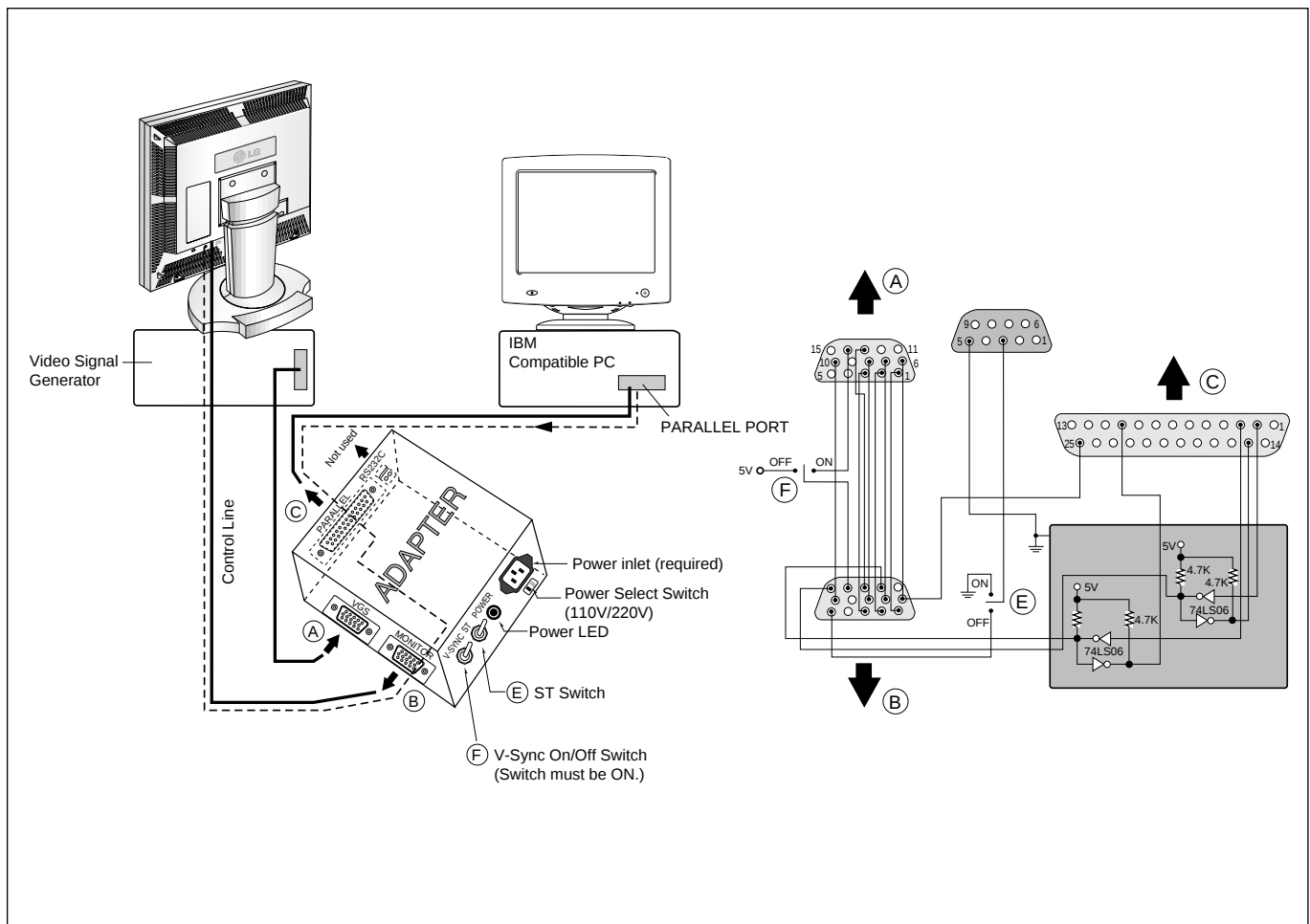
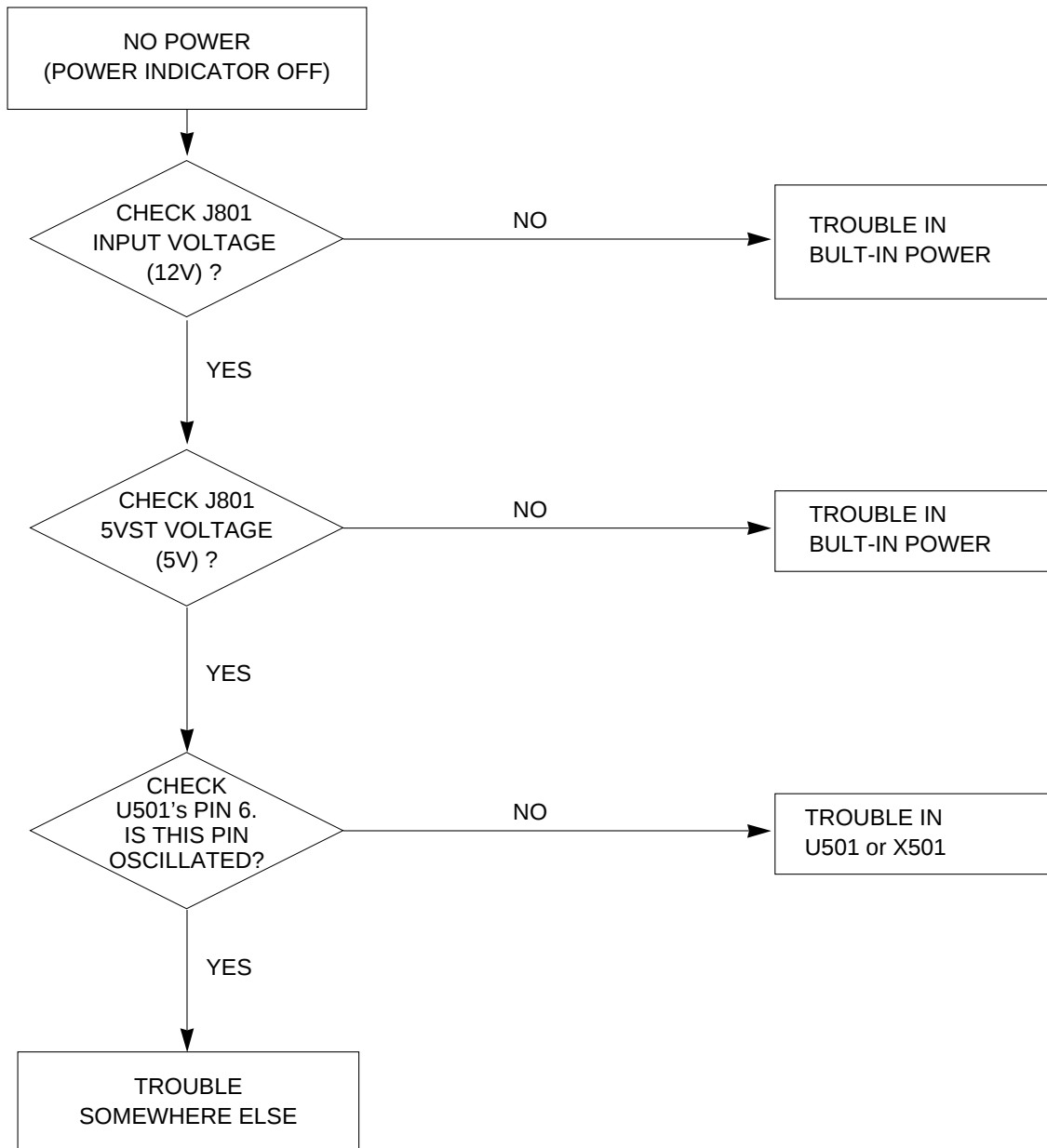


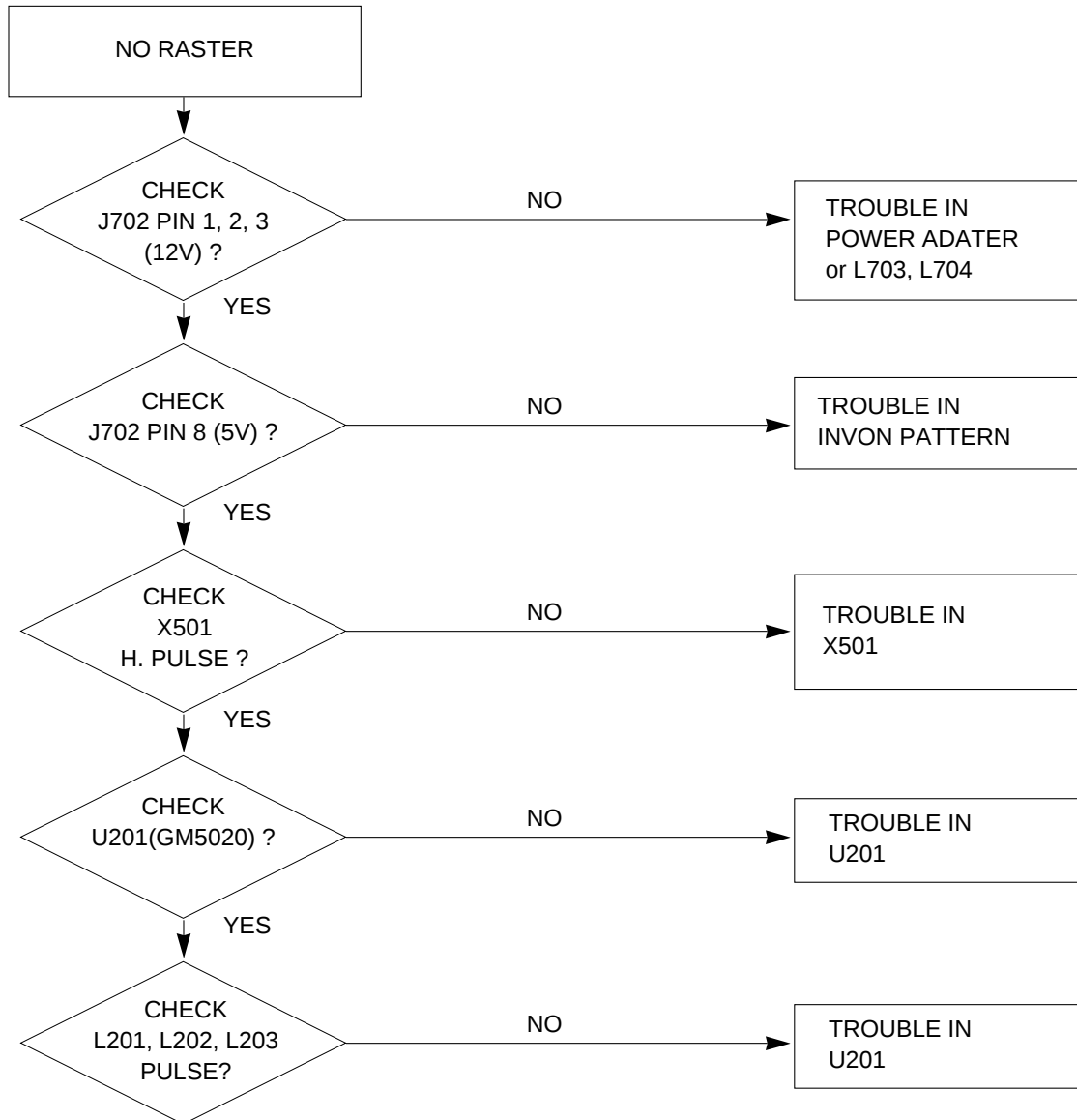
Figure 1. Cable Connection

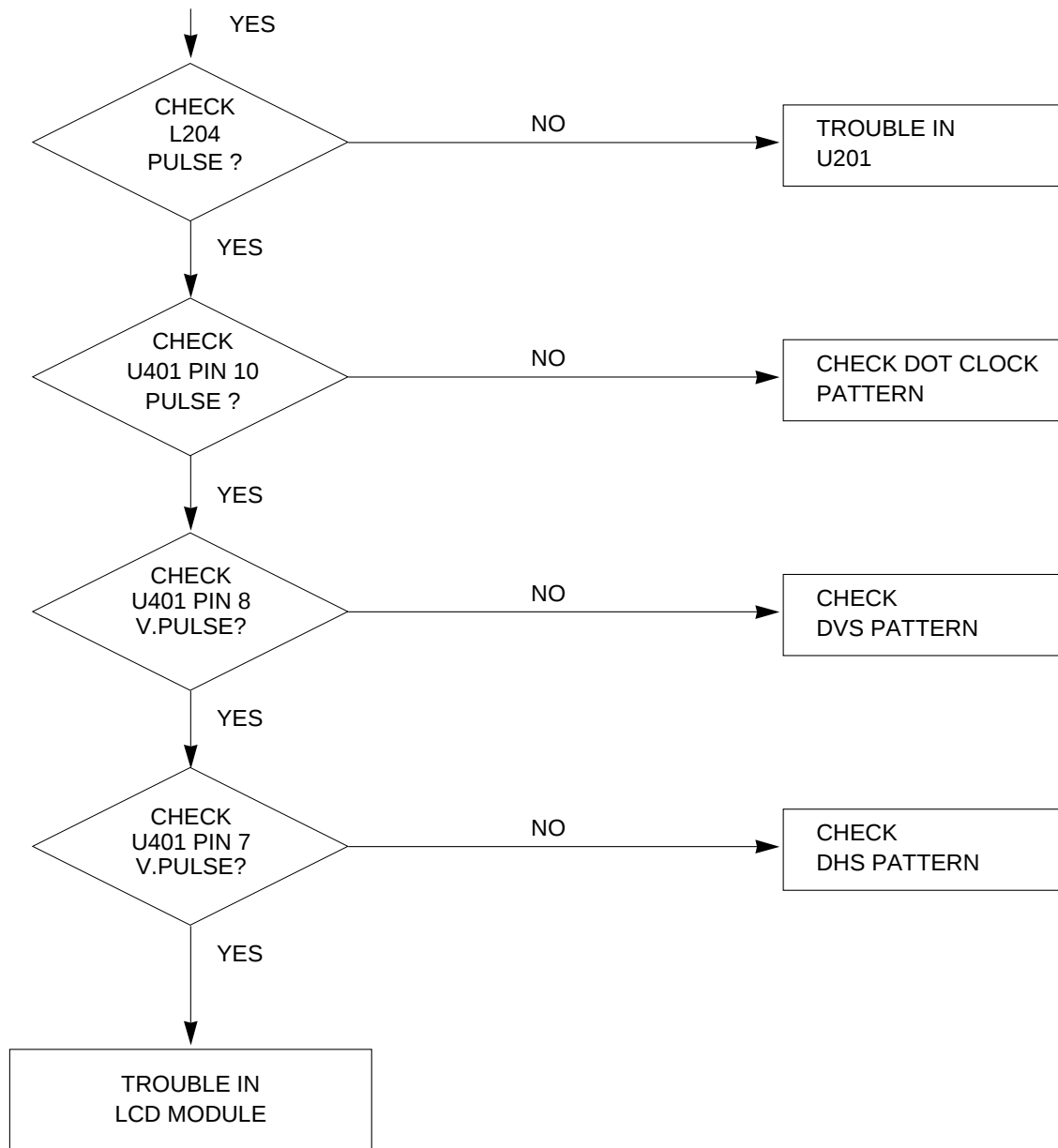
TROUBLESHOOTING GUIDE

1. NO POWER

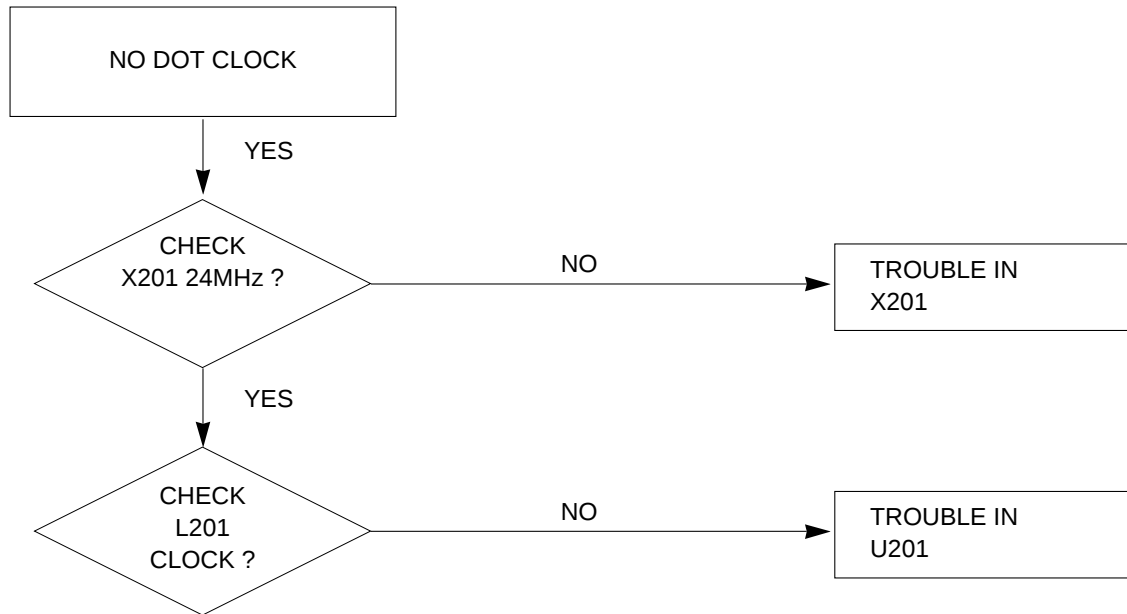


2. NO RASTER

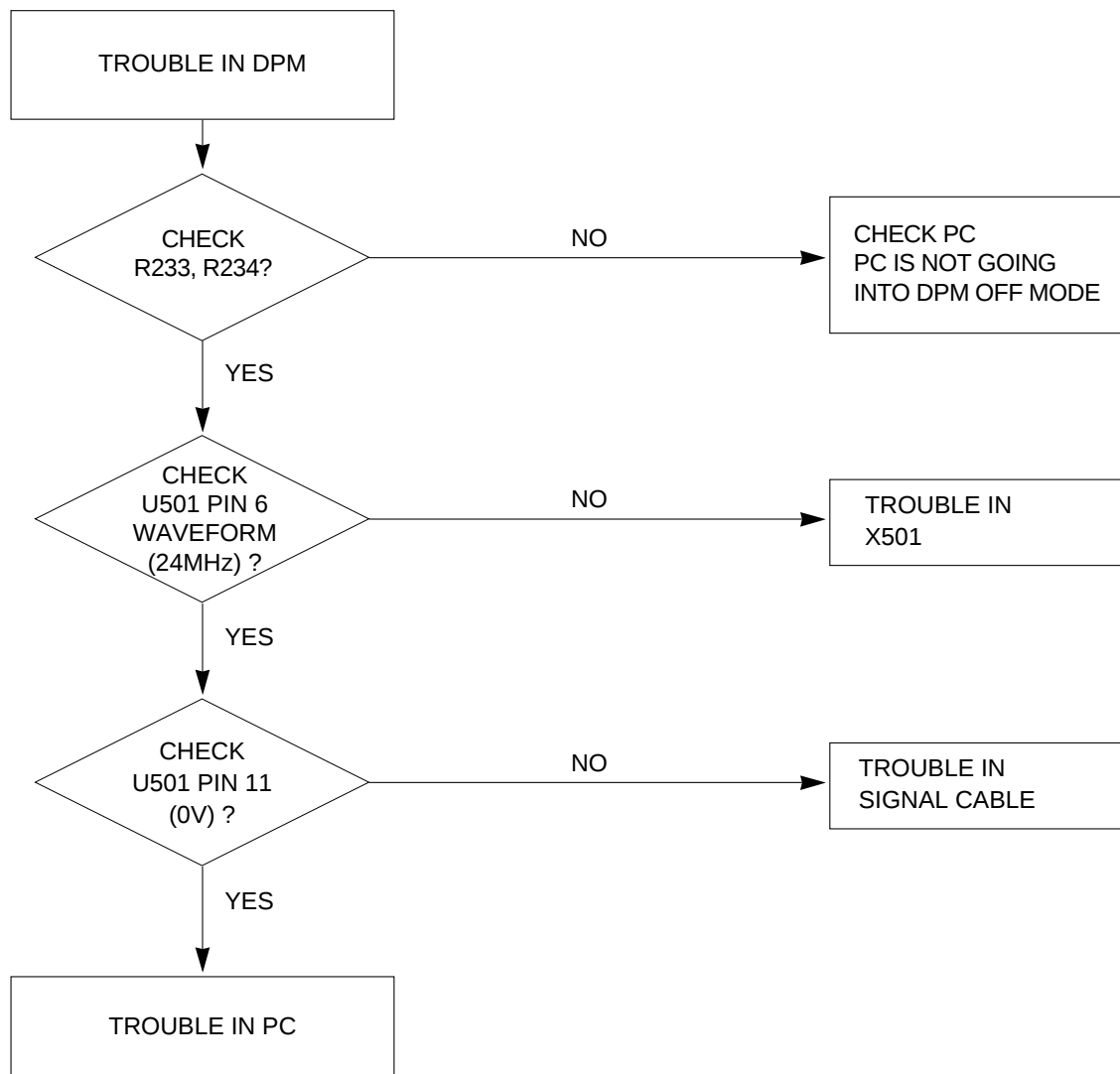




3. NO CLOCK (CLOCK GENERATOR)

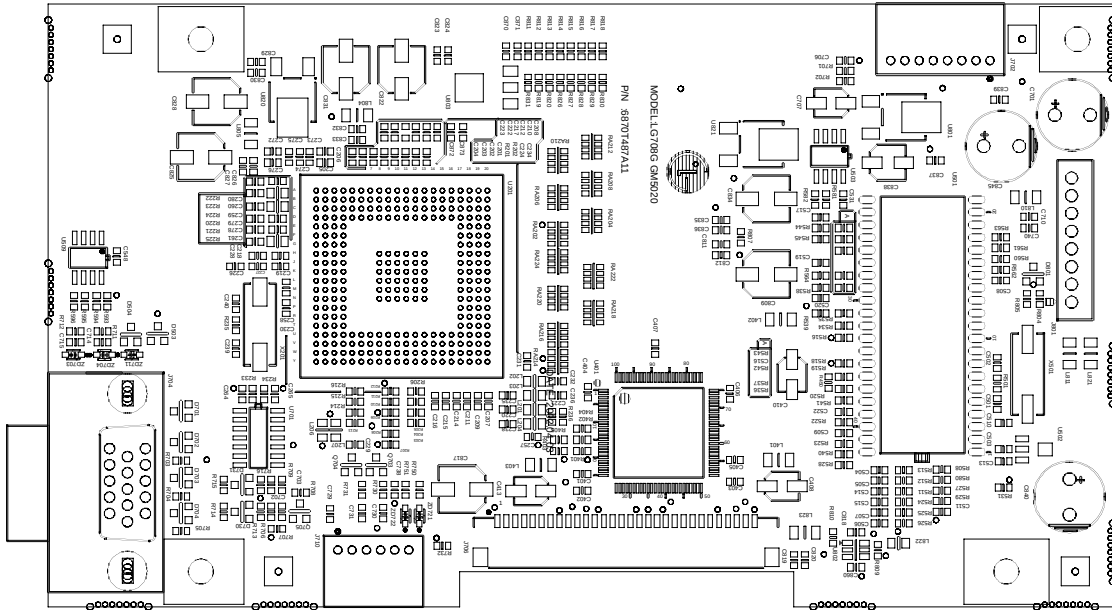


4. TROUBLE IN DPM

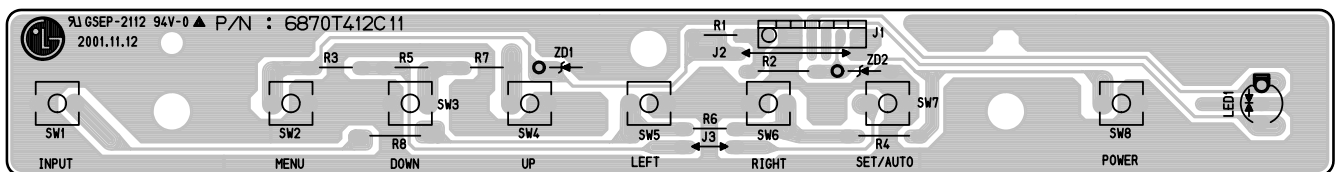


PRINTED CIRCUIT BOARD

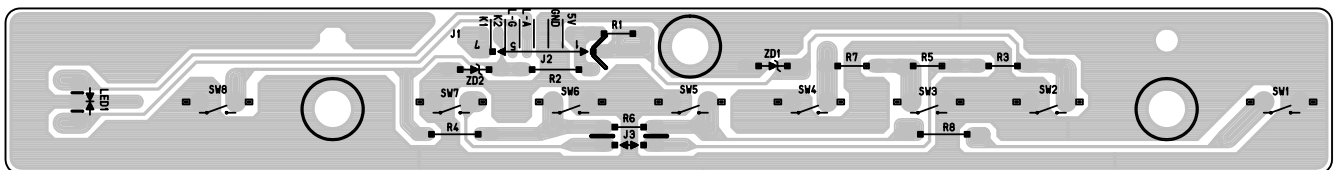
1. MAIN BOARD (Component Side)



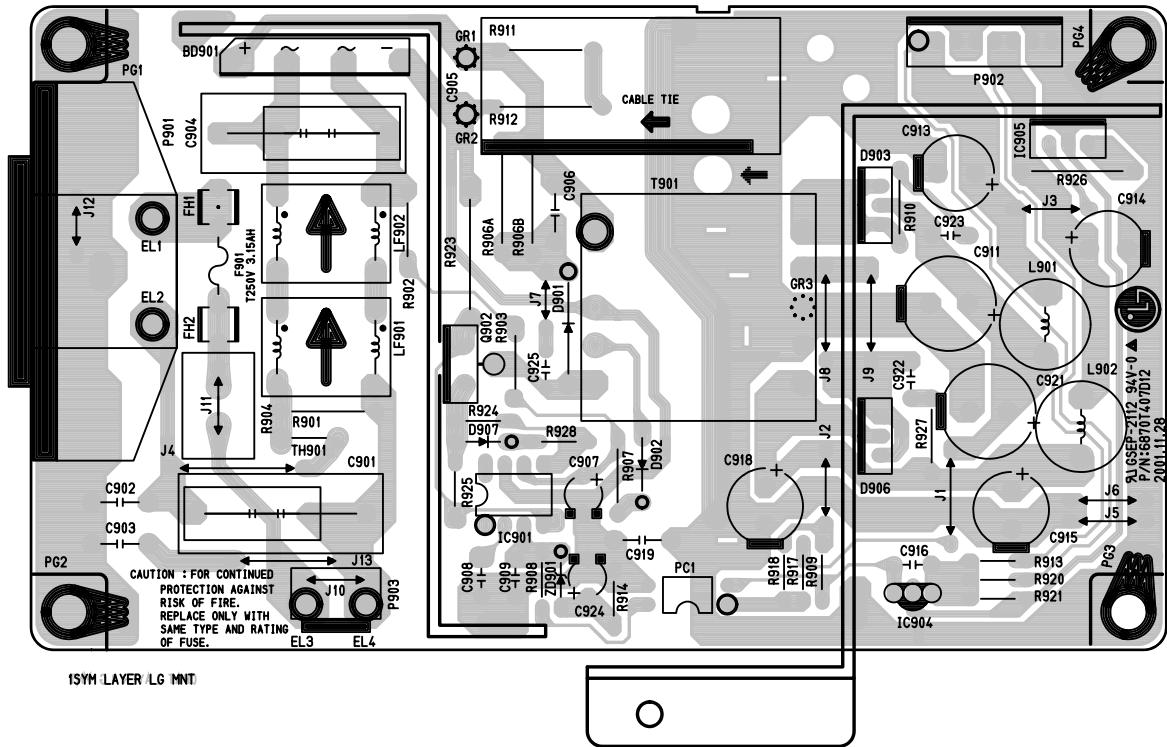
2. CONTROL BOARD (Component Side)



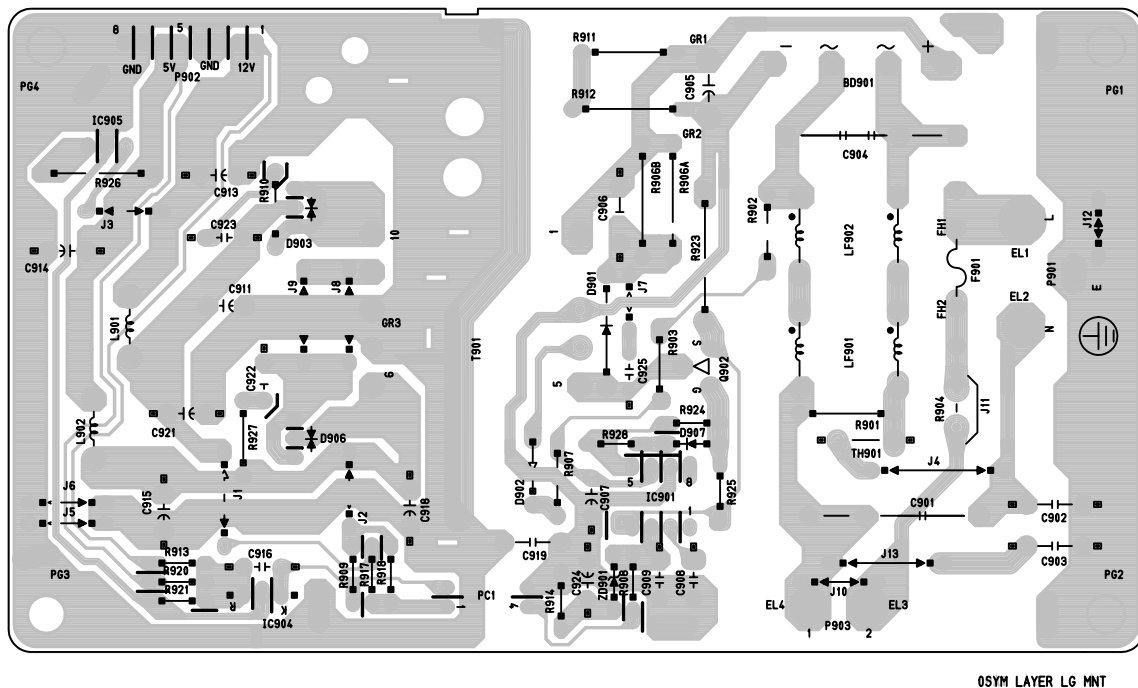
3. CONTROL BOARD (Solder Side)



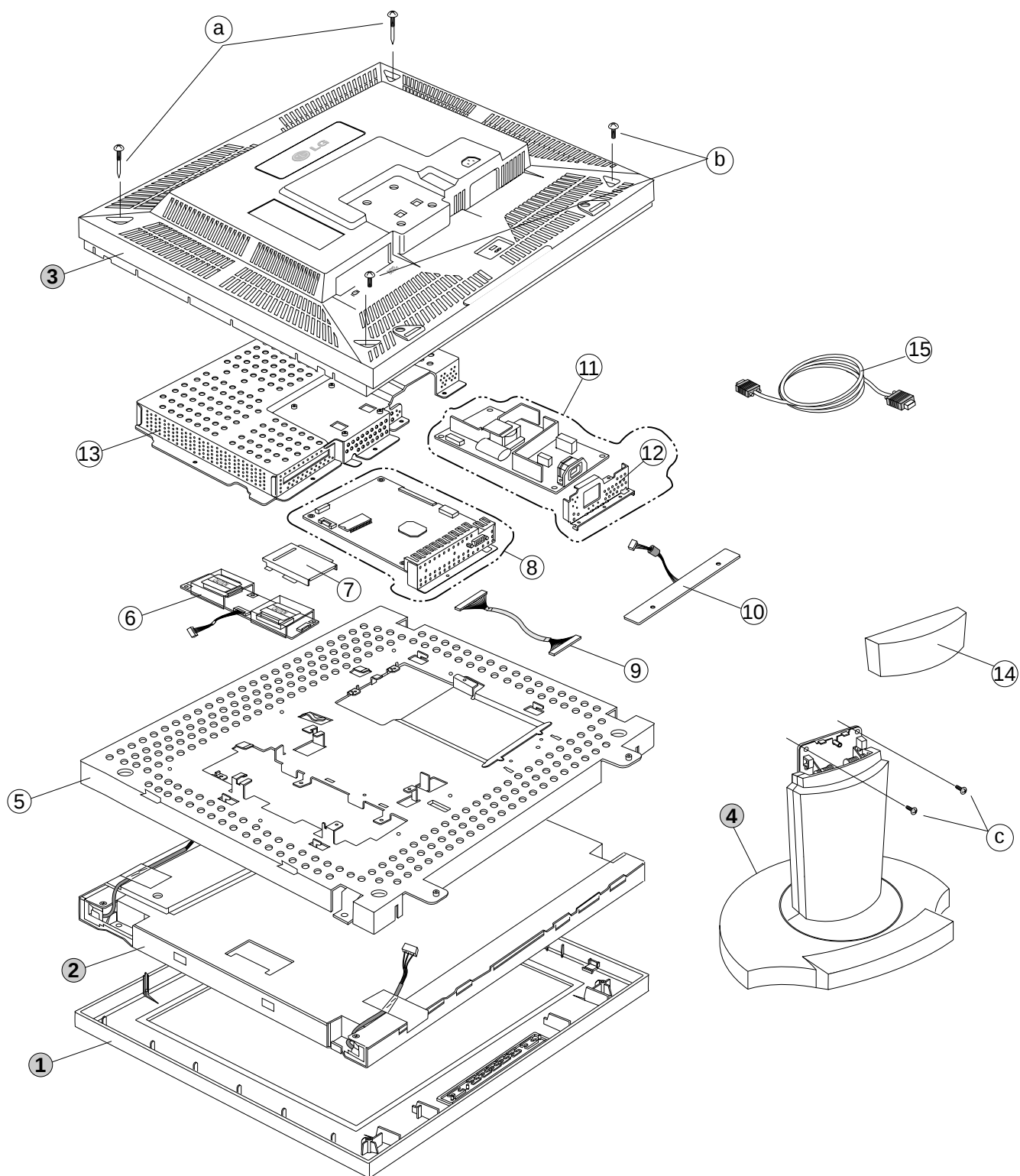
4. POWER BOARD (Component Side)



5. POWER BOARD (Solder Side)



EXPLODED VIEW



EXPLODED VIEW PARTS LIST

Ref. No.	Part No.	Description
1	3091TKL031H	CABINET ASSEMBLY, LB782G BRAND ANALOG ONLY EXPORT
2	6304FHD004A	LCD(LIQUID CRYSTAL DISPLAY) HT17E11-300 HYUNDAI TFT COLOR SXGA 17 INCH LVDS
3	3809TKL021A	BACK COVER ASSEMBLY, LB782F 3808TKL026 PC+ABS
4	3043TKK037M	TILT SWIVEL ASSEMBLY LB782F . NO USB
5	4951TKS082F	METAL ASSEMBLY, FRAME LB782G -HYDIS MODULE
6	6633TZA011A	INVERTER ASSEMBLY, LG-PHILIPS NMC1804,4-LAMP AU MODULE LB782
7	4814TKK200A	SHIELD INVERTER LB782F
8	3313TL7004B	MAIN TOTAL ASSEMBLY LB782G BRAND CL-36
9	6631T11012W	CONNECTOR ASSEMBLY, 30P H-H 200MM UL20276 LG708G
10	6871TST276A	PWB(PCB) ASSEMBLY,SUB, LB782F CONTROL TOTAL BRAND
11	6871TPT220A	PWB(PCB) ASSEMBLY,POWER, LB782F POWER TOTAL BRAND NO SWITCH
12	4814TKK187A	SHIELD REAR LB886F
13	4950TKS189A	METAL REAR LB782F
14	3550TKK053A	COVER LB880B HINGE BRAND 18.1" LCD
15	6850TD9001A	CABLE,D-SUB, UL 2990-9C(7.5) DT 1870MM GRAY(85964) BRAND DM
a	1SZZTAT001A	SCREW, DRAWING, D3.0 L28.0 MSWR/FZMY LB782F
b	332-095C	SCREW, PZP+3*12 (MSWR/FZMY)STD
c	332-105F	SCREW, DRAWING D4.0 L10.0 MSWR/FZMW

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. 6. 14.				
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
MAIN BOARD				
CAPACITORS				
		C201	OCK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C202	OCK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C203	OCK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C204	OCK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C205	OCK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C206	OCK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C207	OCK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C208	OCK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C209	OCK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C210	OCK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C211	OCK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C212	OCK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C214	OCK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C215	OCK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C216	OCK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C217	OCK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C218	OCK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C219	OCK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C220	OCC330CK41A	33PF 1608 50V 5% R/TP NP0
		C221	OCC330CK41A	33PF 1608 50V 5% R/TP NP0
		C222	OCK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C223	OCK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C224	OCK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C226	OCK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C227	OCK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C228	OCK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C229	OCC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C230	OCC150CK41A	15PF 1608 50V 5% R/TP NP0
		C231	OCC680CK41A	68PF 1608 50V 5% R/TP NP0
		C232	OCC680CK41A	68PF 1608 50V 5% R/TP NP0
		C234	OCK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C235	OCC680CK41A	68PF 1608 50V 5% R/TP NP0
		C236	OCC680CK41A	68PF 1608 50V 5% R/TP NP0
		C258	OCC150CK41A	15PF 1608 50V 5% R/TP NP0
		C259	0CH3682K516	6800PF 50V K B(Y5P) 2012 R/TP
		C260	0CH3682K516	6800PF 50V K B(Y5P) 2012 R/TP
		C261	0CH3682K516	6800PF 50V K B(Y5P) 2012 R/TP
		C264	OCC221CK41A	220PF 1608 50V 5% R/TP NP0
		C265	OCC470CK41A	47PF 1608 50V 5% R/TP NP0
		C272	OCK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C273	OCK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C274	OCK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C275	OCK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C276	OCK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C278	OCK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C279	OCK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C280	OCK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C401	OCK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C402	OCK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C403	OCK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C404	OCK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C405	OCK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)

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		C406	OCK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C407	OCK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C408	0CH8106F611	10UF 16V M 85STD(CYL) R/TP
		C410	0CH8106F611	10UF 16V M 85STD(CYL) R/TP
		C413	0CH8106F611	10UF 16V M 85STD(CYL) R/TP
		C501	OCC180CK41A	18PF 1608 50V 5% R/TP NP0
		C502	OCC180CK41A	18PF 1608 50V 5% R/TP NP0
		C503	OCK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C504	OCC470CK41A	47PF 1608 50V 5% R/TP NP0
		C505	OCC470CK41A	47PF 1608 50V 5% R/TP NP0
		C506	OCC470CK41A	47PF 1608 50V 5% R/TP NP0
		C507	OCC470CK41A	47PF 1608 50V 5% R/TP NP0
		C508	OCK222CK51A	2200PF 1608 50V 10% R/TP B(Y5P)
		C509	OCK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C510	OCK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C511	OCK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C513	OCK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C514	OCC470CK41A	47PF 1608 50V 5% R/TP NP0
		C515	OCC470CK41A	47PF 1608 50V 5% R/TP NP0
		C516	OCC101CK41A	100PF 1608 50V 5% R/TP NP0
		C517	OCC101CK41A	100PF 1608 50V 5% R/TP NP0
		C519	OCC101CK41A	100PF 1608 50V 5% R/TP NP0
		C520	OCC101CK41A	100PF 1608 50V 5% R/TP NP0
		C522	OCK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C531	OCK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C548	OCK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C701	0CE477EH618	470UF KMG 25V M FL TP 5
		C702	OCC101CK41A	100PF 1608 50V 5% R/TP NP0
		C706	OCC221CK41A	220PF 1608 50V 5% R/TP NP0
		C707	0CH8106F611	10UF 16V M 85STD(CYL) R/TP
		C710	OCK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C714	OCC101CK41A	100PF 1608 50V 5% R/TP NP0
		C715	OCC101CK41A	100PF 1608 50V 5% R/TP NP0
		C729	OCK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C730	OCK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C731	OCK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C738	OCK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C740	OCK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C809	0CH8107F611	100UF 16V M 85STD(CYL) R/TP
		C811	OCK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C812	OCC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C817	0CH8107F611	100UF 16V M 85STD(CYL) R/TP
		C818	OCC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C819	OCK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C820	OCC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C822	0CH8107F611	100UF 16V M 85STD(CYL) R/TP
		C823	OCK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C824	OCC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C825	0CH8107F611	100UF 16V M 85STD(CYL) R/TP
		C826	OCK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C827	OCC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C828	0CH8107F611	100UF 16V M 85STD(CYL) R/TP
		C829	OCC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C830	OCK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)

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*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		C831	0CH8107F611	100UF 16V M 85STD(CYL) R/TP
		C832	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C833	0CC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C834	0CH8107F611	100UF 16V M 85STD(CYL) R/TP
		C835	0CC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C836	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C837	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C838	0CH8226F691	22UF 16V M 105STD (CYL) R/TP
		C839	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C840	0CE477EH618	470UF KMG 25V M FL TP 5
		C845	0CE477EH618	470UF KMG 25V M FL TP 5
		C860	0CK105CD56A	1UF 1608 10V 10% R/TP X7R
		C870	0CC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C871	0CC101CK41A	100PF 1608 50V 5% R/TP NP0
		C872	0CC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C873	0CC101CK41A	100PF 1608 50V 5% R/TP NP0
DIODEs				
		D503	0DS301109AA	MMBD301LT1 TP MOTOROLA SOT23 30
		D504	0DS301109AA	MMBD301LT1 TP MOTOROLA SOT23 30
		D701	0DS226009AA	KDS226 TP KEC SOT-23 80V 300MA
		D702	0DS226009AA	KDS226 TP KEC SOT-23 80V 300MA
		D703	0DS226009AA	KDS226 TP KEC SOT-23 80V 300MA
		D704	0DS226009AA	KDS226 TP KEC SOT-23 80V 300MA
		D730	0DS226009AA	KDS226 TP KEC SOT-23 80V 300MA
		D731	0DS226009AA	KDS226 TP KEC SOT-23 80V 300MA
		D801	0DS181009AA	KDS181 TP KEC SOT-23 80V 300M
		ZD703	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323 200
		ZD704	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323 200
		ZD711	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323 200
		ZD721	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323 200
		ZD722	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323 200
ICs				
		U201	0IPRPGN001A	GM5020 GENESIS 292P,PBGA TRAY S
		U401	0ILNRTH001A	THC63LVD823 THINE MICROSYSTEMS
		U501	0IZZTSZ190A	MOTOROLA 42P BK MICOM LB782G
		U502	0IKE704200J	KIA7042AF SOT-89 TP 4.2V VOLTAGE
		U503	0ICS240813B	CAT24WC08J-TE13 8P,SOIC R/TP 8K
		U509	0ISS524202B	S524A40X21(SCT0) SAMSUNG ELECTR
		U701	0ISTLFA058A	74F14SCX FAIRCHILD 14P,SOIC R/T
		U801	0ISS780500H	KA78M05-R 3P,D-PAK TP 5V 0.5A R
		U802	0TF632509AA	FDC6325L TP FAIRCHILD 8V 2.4A S
		U803	0IPMGFA003B	RC1117S-2.5 FAIRCHILD SOT-223 R
		U820	0IRH033200A	BA033FP-E2 MOLD-3 TP REGULATOR
		U821	0IRH033200A	BA033FP-E2 MOLD-3 TP REGULATOR
COILS & COREs				
		L201	6210TCE001P	HB-1S2012-121JT CERATECH 2012MM
		L202	6210TCE001P	HB-1S2012-121JT CERATECH 2012MM
		L203	6210TCE001P	HB-1S2012-121JT CERATECH 2012MM
		L204	6210TCE001P	HB-1S2012-121JT CERATECH 2012MM
		L206	6210TCE001P	HB-1S2012-121JT CERATECH 2012MM
		L207	6210TCE001P	HB-1S2012-121JT CERATECH 2012MM
		L401	6210TCE001G	HH-1M3216-501 CERATEC 3216MM R/
		L402	6210TCE001G	HH-1M3216-501 CERATEC 3216MM R/
		L403	6210TCE001G	HH-1M3216-501 CERATEC 3216MM R/
		L804	6210TCE001G	HH-1M3216-501 CERATEC 3216MM R/
		L805	6210TCE001G	HH-1M3216-501 CERATEC 3216MM R/

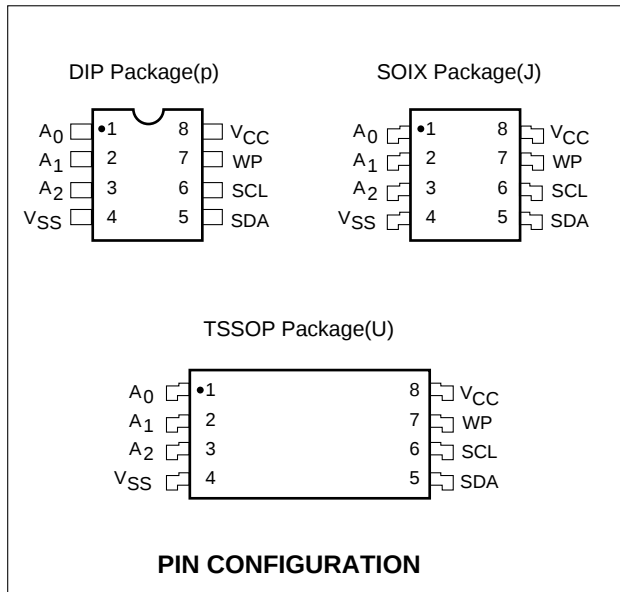
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*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		L810	6210TCE001G	HH-1M3216-501 CERATEC 3216MM R/
		L811	6210TCE001G	HH-1M3216-501 CERATEC 3216MM R/
		L821	6210TCE001G	HH-1M3216-501 CERATEC 3216MM R/
		L822	6210TCE001P	HB-1S2012-121JT CERATECH 2012MM
		L823	6210TCE001G	HH-1M3216-501 CERATEC 3216MM R/
TRANSISTOR				
		Q703	0TR390409AE	FAIRCHILD KST3904(LGEMTF) TP SO
		Q704	0TR390409AE	FAIRCHILD KST3904(LGEMTF) TP SO
		Q705	0TR390409AE	FAIRCHILD KST3904(LGEMTF) TP SO
RESISTORS				
		R201	0RJ2001D677	2K OHM 1/10 W 5% 1608 R/TP
		R202	0RJ2001D677	2K OHM 1/10 W 5% 1608 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
		R220	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R221	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R222	0RJ1000D677	100 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	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R234	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R235	0RJ2201D677	2200 OHM 1/10 W 5% 1608 R/TP
		R236	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
		R403	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R404	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R450	0RJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R501	0RJ1004D677	1000000 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
		R516	0RJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R518	0RJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		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
		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

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		R534	ORJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R535	ORJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R536	ORJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R537	ORJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R538	ORJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R539	ORJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R540	ORJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R541	ORJ4700D677	470 OHM 1/10 W 5% 1608 R/TP
		R542	ORJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R543	ORJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R544	ORJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R545	ORJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R562	ORJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R564	ORJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R580	ORJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R581	ORJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R582	ORJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R593	ORJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R594	ORJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R595	ORJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R596	ORJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R701	ORJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R703	ORJ0752D677	75 OHM 1/10 W 5% 1608 R/TP
		R704	ORJ0752D677	75 OHM 1/10 W 5% 1608 R/TP
		R705	ORJ0752D677	75 OHM 1/10 W 5% 1608 R/TP
		R706	ORJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R707	ORJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R708	ORJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R709	ORJ0472D677	47 OHM 1/10 W 5% 1608 R/TP
		R711	ORJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R712	ORJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R713	ORJ0472D677	47 OHM 1/10 W 5% 1608 R/TP
		R714	ORJ1801D677	1.8K OHM 1/10 W 5% 1608 R/TP
		R715	ORJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R716	ORJ0472D677	47 OHM 1/10 W 5% 1608 R/TP
		R730	ORJ2700D677	270 OHM 1/10 W 5% 1608 R/TP
		R731	ORJ2700D677	270 OHM 1/10 W 5% 1608 R/TP
		R804	ORJ0221D677	2.2 OHM 1/10 W 5% 1608 R/TP
		R805	ORJ0221D677	2.2 OHM 1/10 W 5% 1608 R/TP
		R807	ORJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R809	ORJ2202D677	22K OHM 1/10 W 5% 1608 R/TP
		R810	ORJ6800D677	680 OHM 1/10 W 5% 1608 R/TP
		R811	ORJ0332D677	33 OHM 1/10 W 5% 1608 R/TP
		R812	ORJ0332D677	33 OHM 1/10 W 5% 1608 R/TP
		R813	ORJ0332D677	33 OHM 1/10 W 5% 1608 R/TP
		R814	ORJ0332D677	33 OHM 1/10 W 5% 1608 R/TP
		R815	ORJ0332D677	33 OHM 1/10 W 5% 1608 R/TP
		R816	ORJ0332D677	33 OHM 1/10 W 5% 1608 R/TP
		R817	ORJ0332D677	33 OHM 1/10 W 5% 1608 R/TP
		R818	ORJ0332D677	33 OHM 1/10 W 5% 1608 R/TP
		R819	ORJ0332D677	33 OHM 1/10 W 5% 1608 R/TP
		R820	ORJ0332D677	33 OHM 1/10 W 5% 1608 R/TP
		R826	ORJ0332D677	33 OHM 1/10 W 5% 1608 R/TP
		R827	ORJ0332D677	33 OHM 1/10 W 5% 1608 R/TP
		R828	ORJ0332D677	33 OHM 1/10 W 5% 1608 R/TP
		R829	ORJ0332D677	33 OHM 1/10 W 5% 1608 R/TP
		R830	ORJ0332D677	33 OHM 1/10 W 5% 1608 R/TP
OTHERs				
		X201	6202TST001E	SX-1 SUNNY CHIP 24MHZ 30PPM 20P
		X501	6202TST001E	SX-1 SUNNY CHIP 24MHZ 30PPM 20P

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POWER BOARD				
		BD901	0DD360000DA	D3SBA60 BK SHINDENGEN 600V 2.
△		C901	0CBZTBU002B	BULK PCX2 335 474K
△		C902	0CKZTBU003C	SC E 472M 14.0BW7 250V BK7.5 SA
△		C903	0CKZTBU003C	SC E 472M 14.0BW7 250V BK7.5 SA
△		C904	0CBZTBU002C	BULK PCX2 335 104M
		C905	0CZZTAB002C	KMF 18*40 SYE / SWE 400V 120UF
		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 FM5
		C915	0CE228ED630	2200UF KMG,RD 10V 20% BULK FM5
		C916	181-288L	MKT 100V 823JTR PHS26823
		C918	0CE228ED630	2200UF KMG,RD 10V 20% BULK FM5
		C919	0CKZTBU003C	SC E 472M 14.0BW7 250V BK7.5 SA
		C921	0CE228EF630	2200UF KMG 16V M FM5 BULK
		C922	0CKZTTA002E	EKR3A102K09FK5 SAMWHA 1KV 1000P
		C923	0CKZTTA002E	EKR3A102K09FK5 SAMWHA 1KV 1000P
		C924	0CE336BH638	33UF KME 25V M FM5 TP5
		D901	0DD400709CB	UF4007 TP G.I DO204AL 1000V 1A
		D902	0DR400409AB	UF4004 TP G.I DO204AL 400V 1A 3
		D903	0DRIR00011B	16CTQ100 I.R ST TO220 100V 16A
		D906	0DRIR00021A	30CTQ060 I.R ST TO220 60V 30A 1
		D907	0DS113309AA	1SS133 TP ROHM KOREA DO34 90V 0
		F901	131-040C	3150MA 250V 5.2X20 CY/GL UL / C
		FH1	430-858C	AFC-520 BAE EUN TA
		FH2	430-858C	AFC-520 BAE EUN TA
		IC901	0IPMGIH001A	ICE2AS01 INFINEON 8P,DIP ST OFF
		IC904	0IKE431000B	KIA431 (TP)
		IC905	0ISS780500F	KA7805
		L901	150-A85F	LX31 GET BAR CHOKE,3.3UH,LB886F
		L902	150-A85F	LX31 GET BAR CHOKE,3.3UH,LB886F
△		LF901	6200TZZ001A	- GO BK L/FILTER,9MH,LB886F
△		LF902	6200TZZ001A	- GO BK L/FILTER,9MH,LB886F
△		P901	6620TKB002A	BAE EUN AC UNIVERSAL 3PIN BLACK
△		PC1	0IL1817000E	LTV-817M B 4P BK PHOTO COUPLER
		Q902	0TFFN10003A	INFINEON SPA07N60C2 ST TO220 65
		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
		R927	0RD0102A609	10 OHM 1/2 W (7.0) 5% TA52

PIN CONFIGURATION

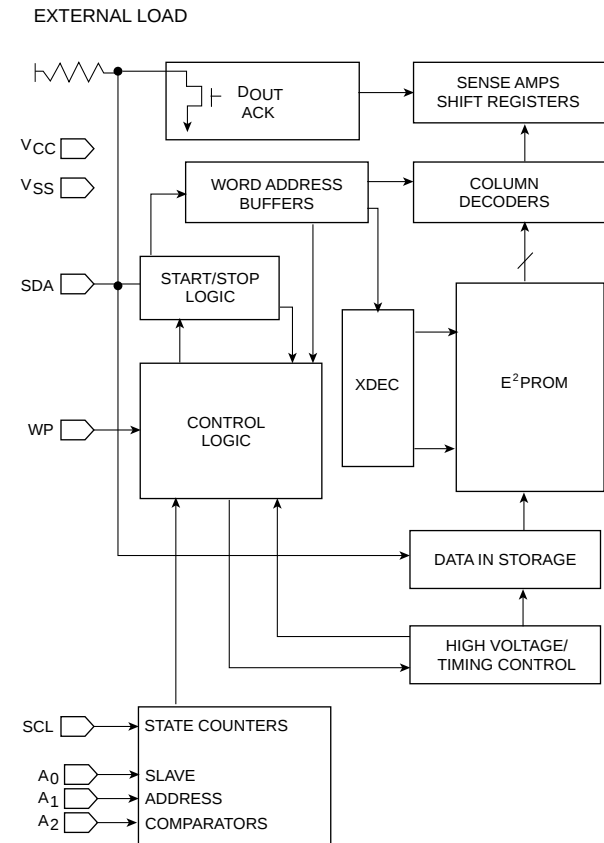
CAT24WC08J-TE13 8P



PIN FUNCTION

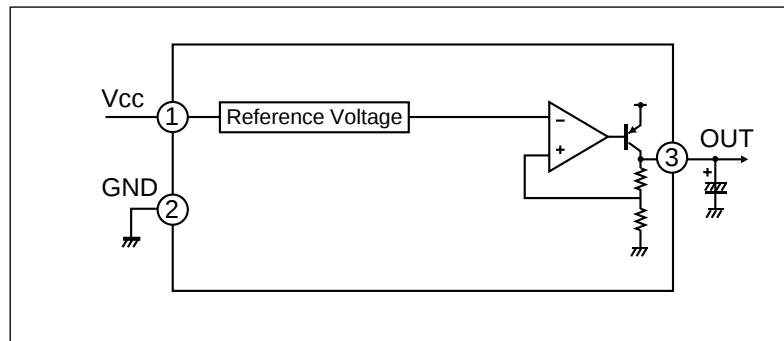
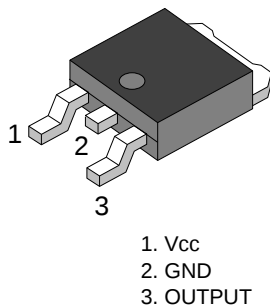
Pin Name	Function
A0, A1, A2	Device Address Inputs
SDA	Serial Data/Address
SCL	Serial Clock
WP	Write Protect
Vcc	+1.8V to + 6.0V power Supply
Vss	Ground

BLOCK DIAGRAM



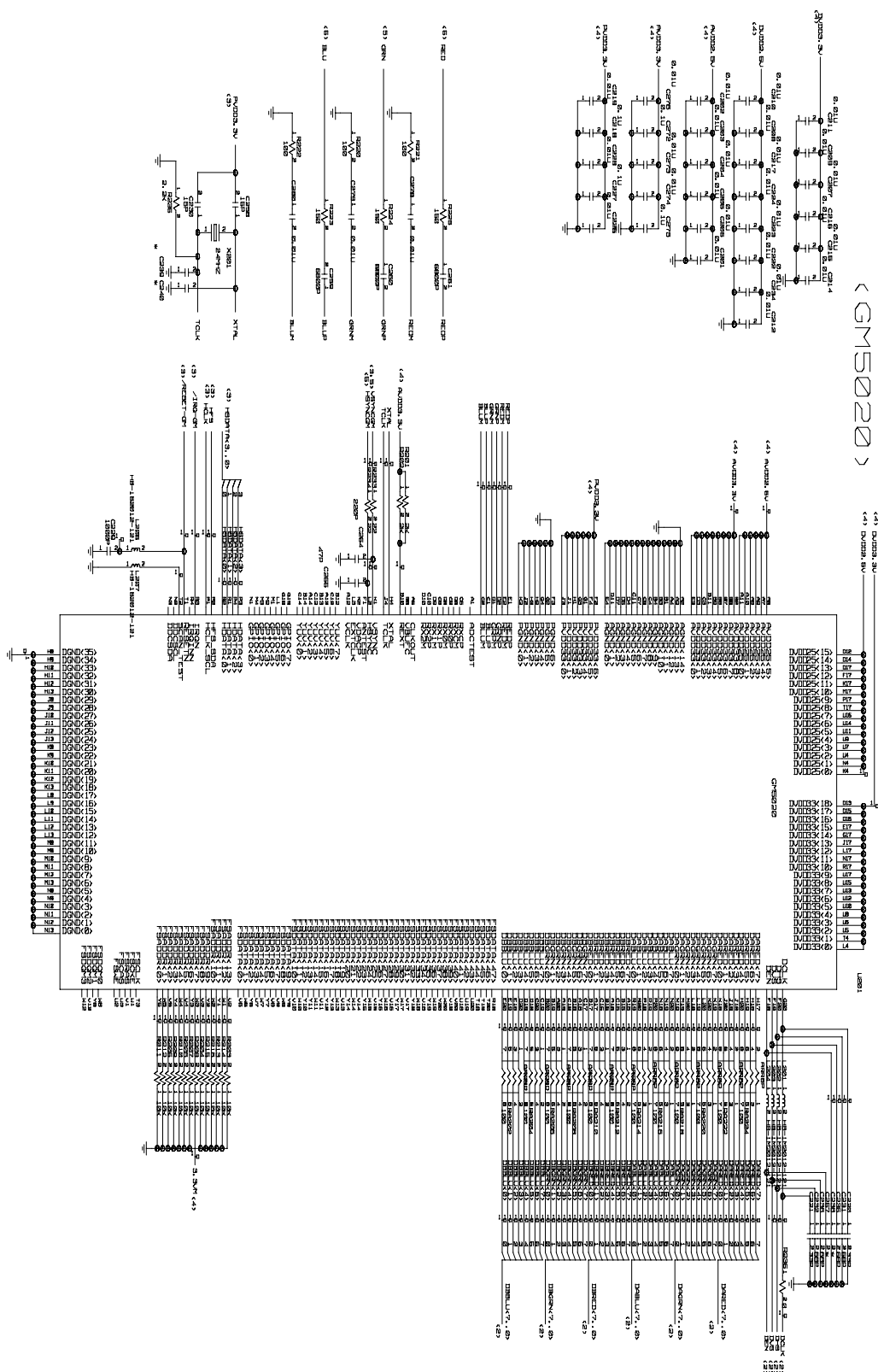
BA033

Low Saturation Voltage type 3-terminal Regulator

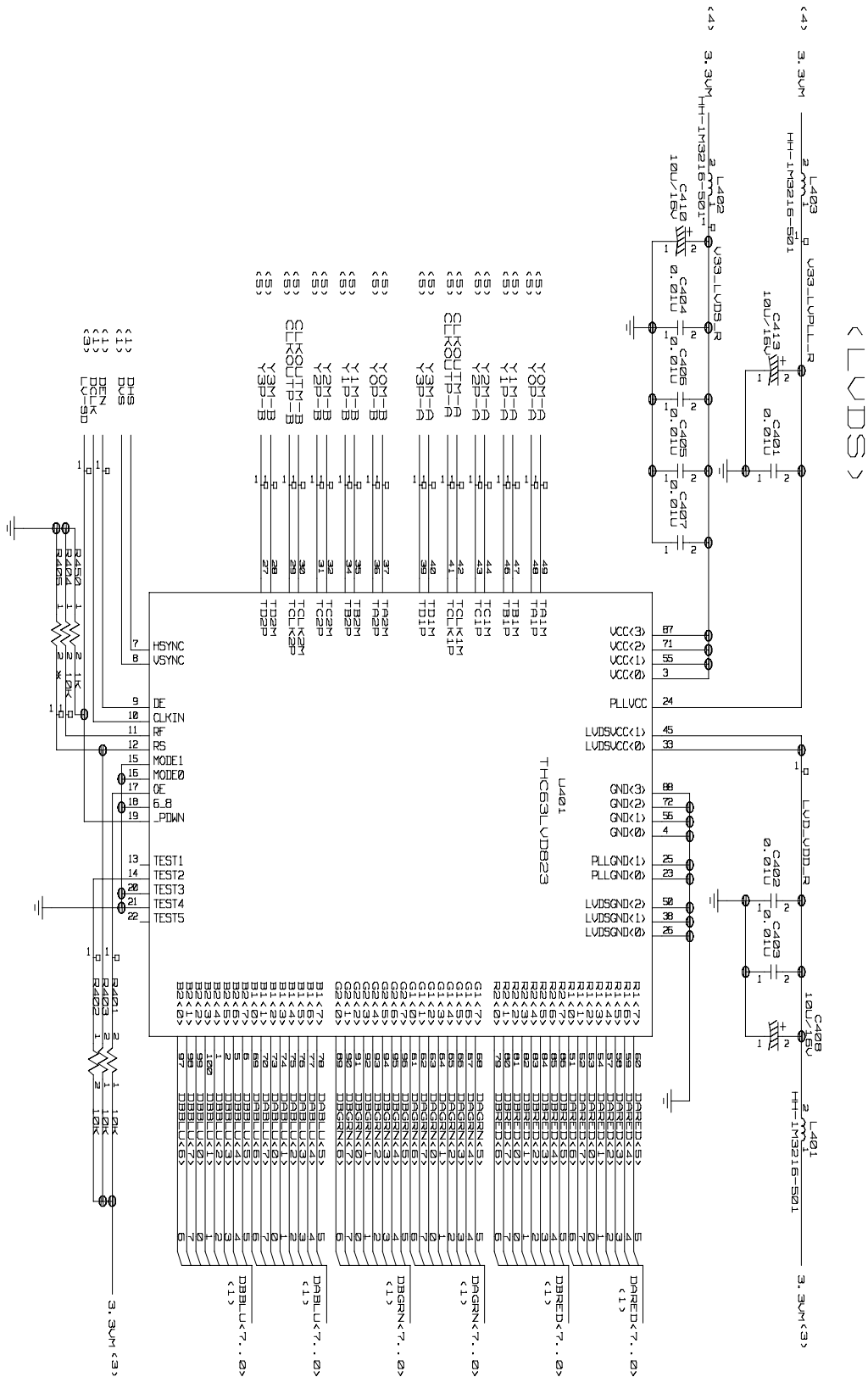


SCHEMATIC DIAGRAM

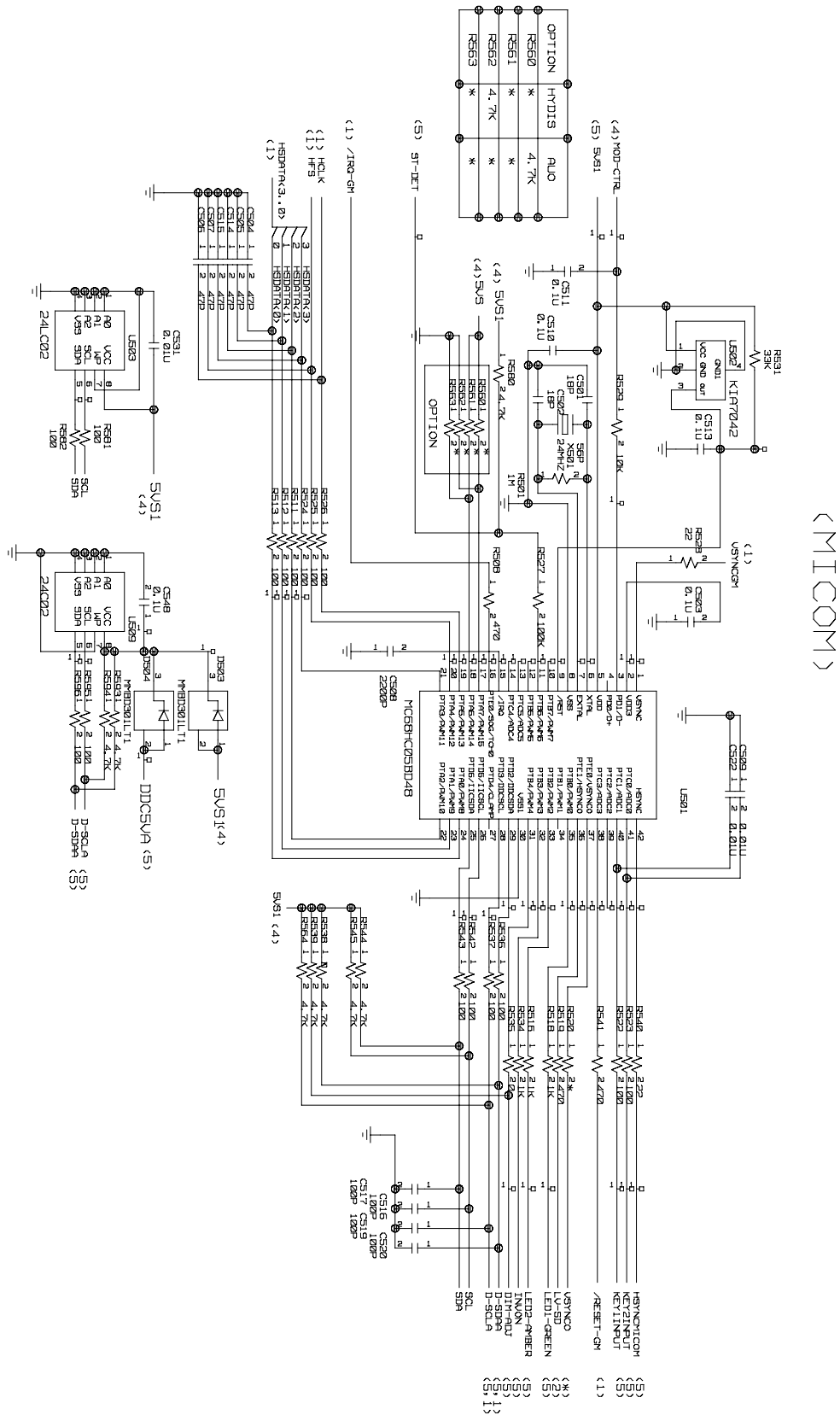
1. GM5020



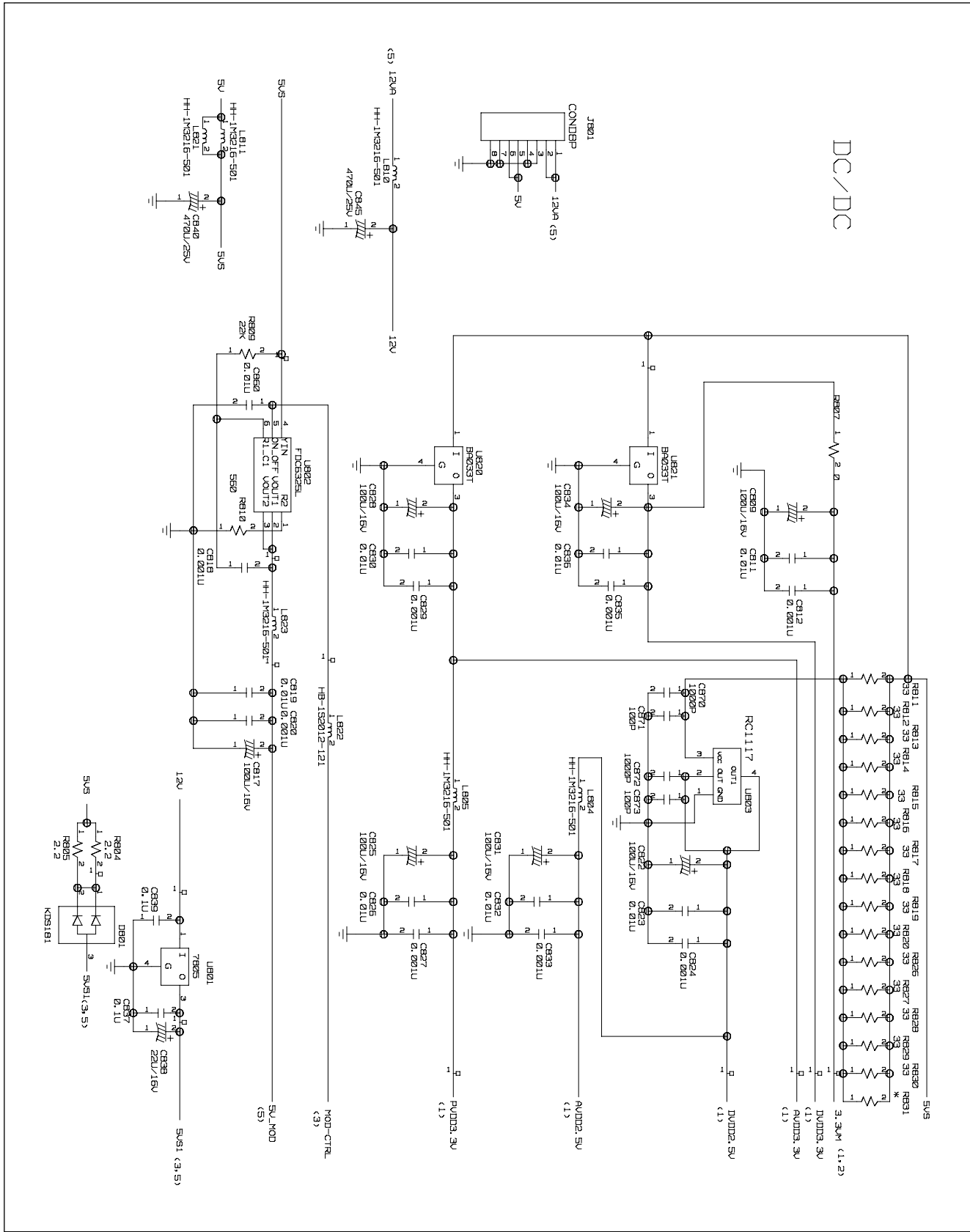
2. LVDS



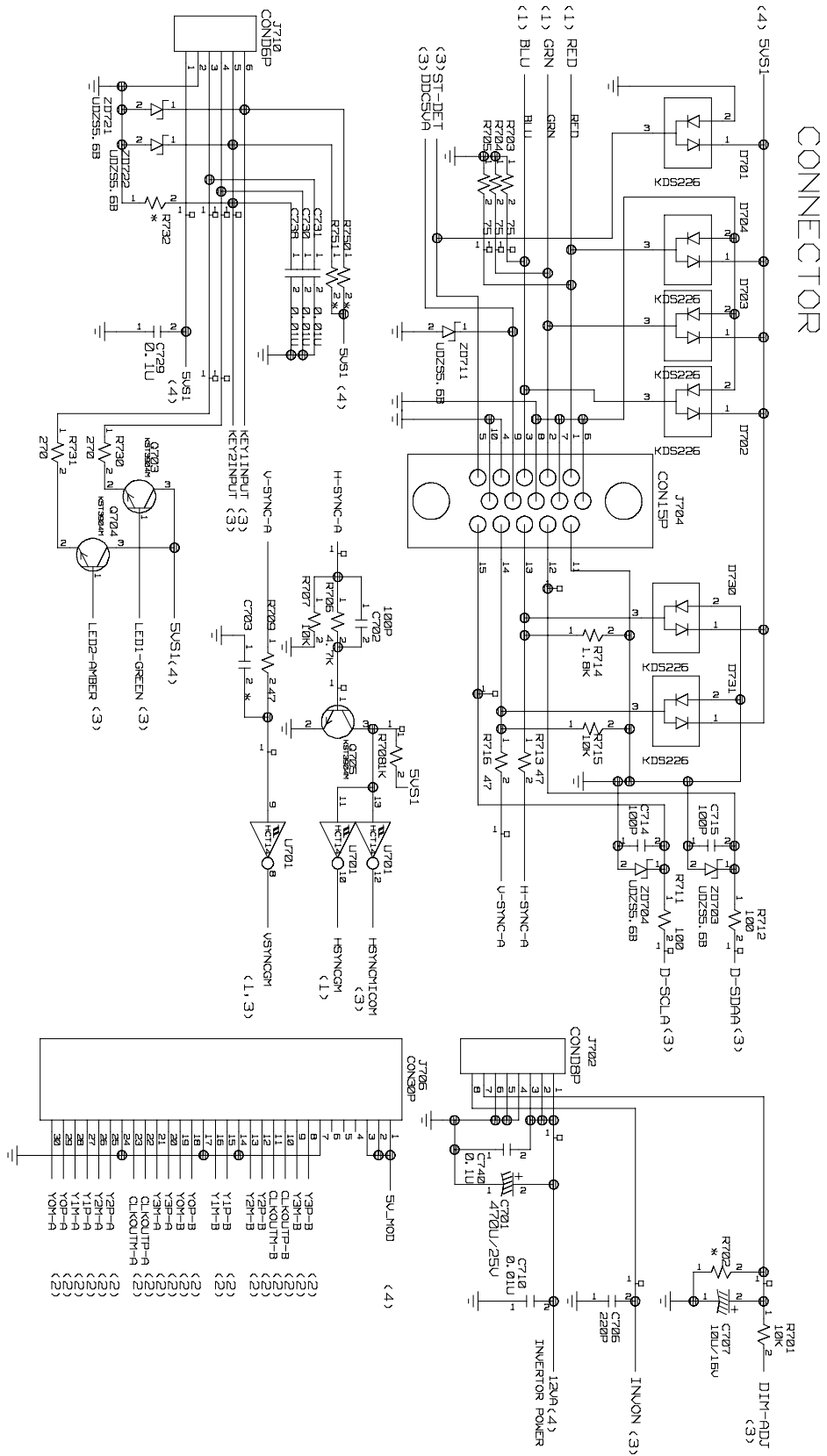
- 28 -



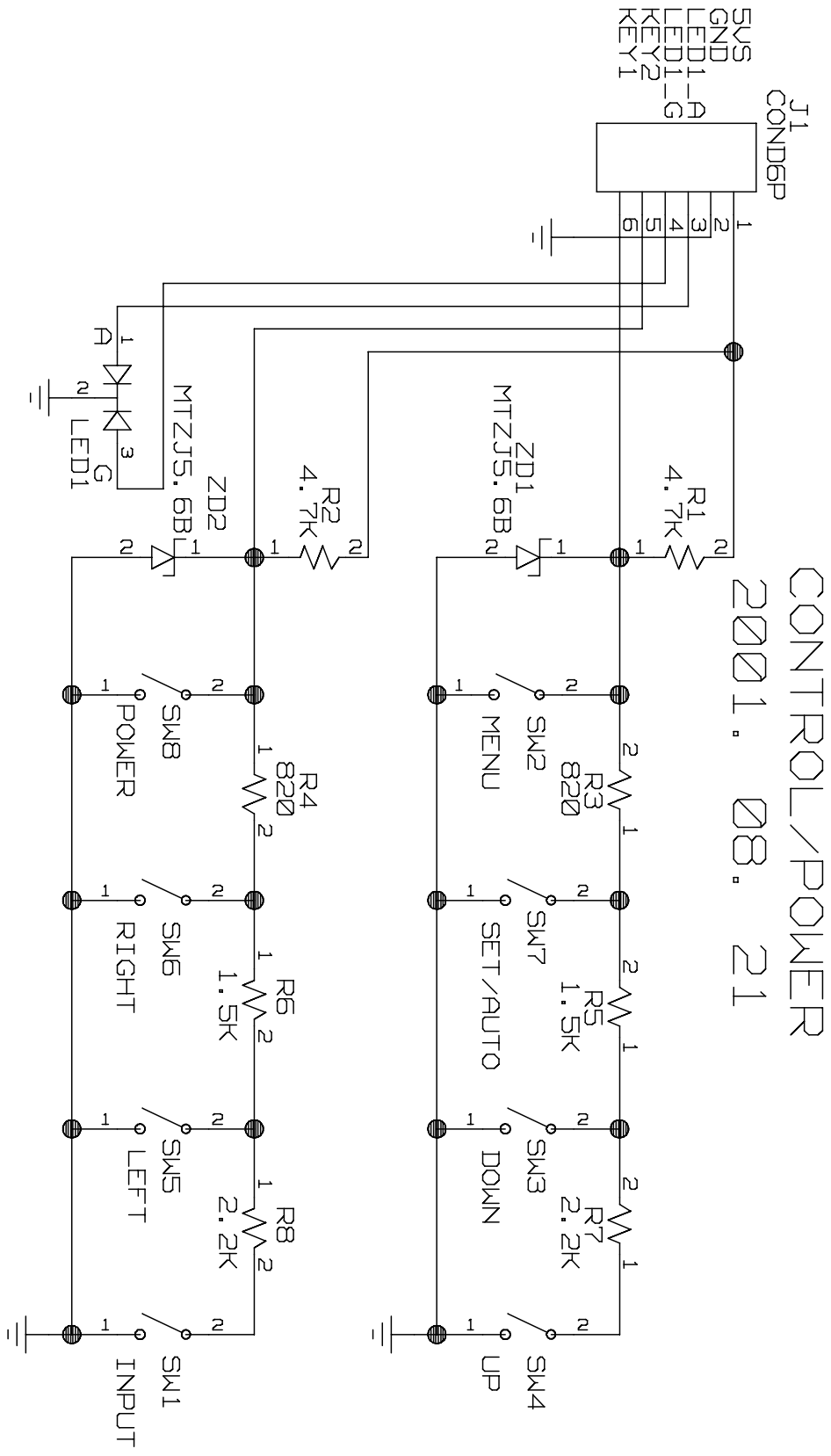
4. DC/DC



5. CONNECTOR



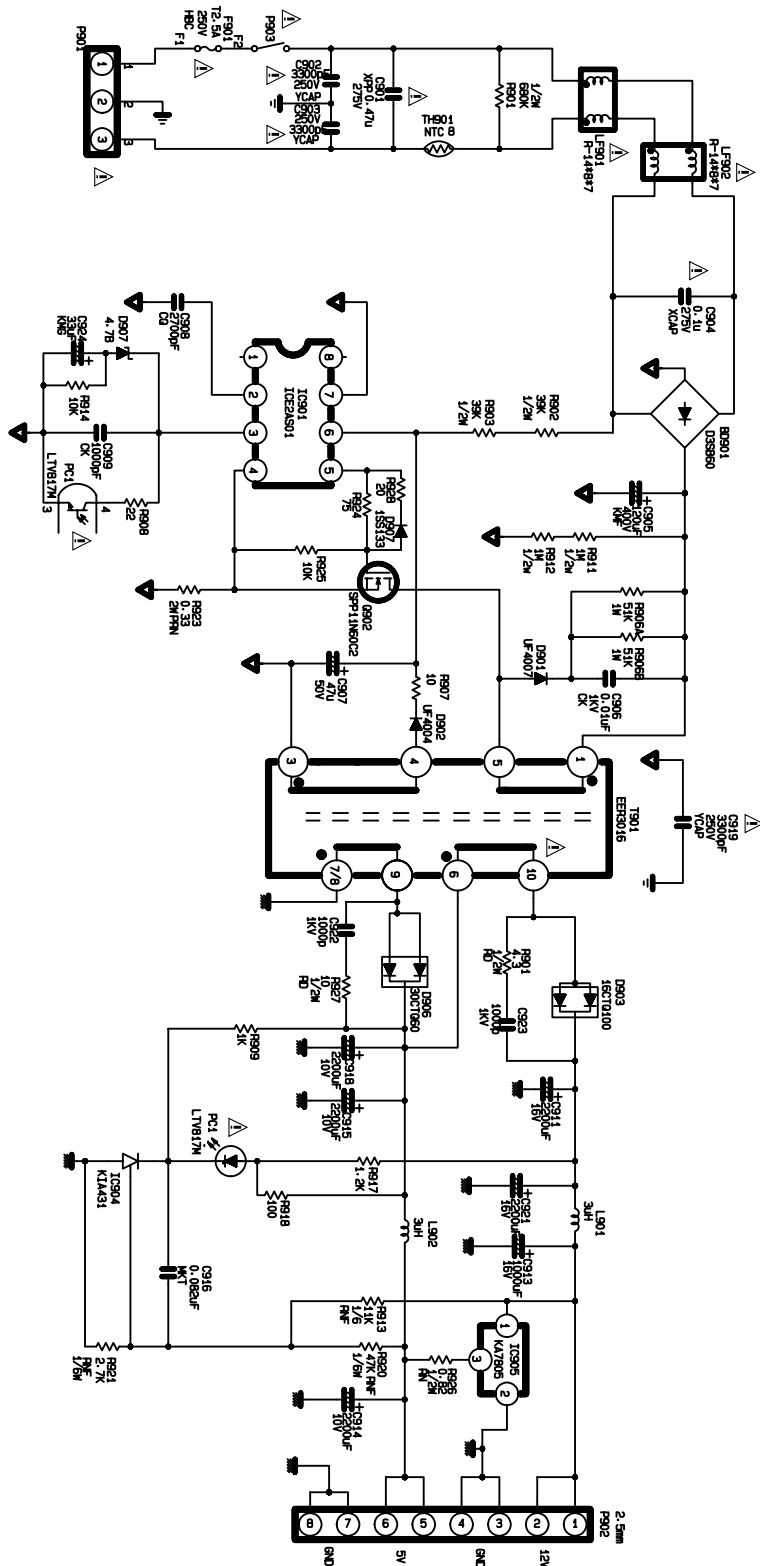
6. CONTROL



7. POWER

Internal Power Circuit

2001.11.21





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