

COLOR MONITOR SERVICE MANUAL

CHASSIS NO. : CL-32

FACTORY MODEL: LG508K

MODEL: FPD1530

KRSVM000063305

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



To apply the **LG Philips Module**.

CONTENTS

● To apply the LG Philips Module	● To apply the Toshiba Module
SPECIFICATIONSA-2	SPECIFICATIONSB-2
PRECAUTIONSA-3	PRECAUTIONSB-3
TIMING CHART A-4	TIMING CHART B-4
OPERATING INSTRUCTIONS A-5	OPERATING INSTRUCTIONS B-5
WIRING DIAGRAM A-6	WIRING DIAGRAM B-6
BLOCK DIAGRAM A-7	BLOCK DIAGRAM B-7
DESCRIPTION OF BLOCK DIAGRAM A-8	DESCRIPTION OF BLOCK DIAGRAM B-8
ADJUSTMENT A-9	ADJUSTMENT B-9
TROUBLESHOOTING GUIDE A-10	TROUBLESHOOTING GUIDE B-10
PRINTED CIRCUIT BOARD.....A-14	PRINTED CIRCUIT BOARD.....B-14
EXPLODED VIEW.....A-15	EXPLODED VIEW.....B-15
REPLACEMENT PARTS LISTA-17	REPLACEMENT PARTS LISTB-17
PIN CONFIGURATION.....A-20	PIN CONFIGURATION.....B-20
SCHEMATIC DIAGRAM A-22	SCHEMATIC DIAGRAM B-21

SPECIFICATIONS

1. LCD CHARACTERISTICS

Type : TFT XGA LCD Module
 Size : 352.0(H) x 263.5(V) x 14.0(T)
 Pixel Pitch : 0.297mm x 0.297mm
 Color Depth : 6bits(with FRC)/ 16M colors Active
 Video Area : 15.0inch
 (304.128 x 228.096)
 Surface Treatment : Anti-Glare, Hard Coating (3H)
 Backlight Unit : Top/Bottom edge side 2CCFL
 Electrical Interface : LVDS interface

2. OPTICAL CHARACTERISTICS

2-1. Viewing Angle by Contrast Ratio ≥ 10
 Left : 55° min. Right : 55° min.
 Top : 40° min. Bottom : 40° min.

2-2. Luminance
 : 200(min.), 250(typ.) at Center point
 2-3. Contrast Ratio :250(min.), 350(typ.)

3. SIGNAL (Refer to the Timing Chart)

3-1. Sync Signal
 1) Type : Separate Sync. (Horizontal & Vertical)
 2) Input Voltage Level: Low=0~0.8V, High=2.1~5.5V
 3) Sync Polarity : Positive or 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 : 31 ~ 63kHz
 Vertical : 56 ~ 75Hz

4. POWER SUPPLY

4-1. Power
 100~240V, 50/60Hz 0.6A

4-2. Power Consumption

MODE	H/V SYNC	VIDEO	POWER CONSUMPTION	LED COLOR
POWER ON (NORMAL)	ON/ON	ACTIVE	less than 30 W	GREEN
STAND-BY	OFF/ON	OFF	less than 2 W	AMBER
SUSPEND	ON/OFF	OFF	less than 2 W	AMBER
DPMS OFF	-	-	less than 2 W	AMBER

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.)
 Lamp Life : 40,000 Hours (Min.)

6. DIMENSIONS (with TILT/SWIVEL)


Width : 356mm (14.01")
 Depth : 151.7mm (5.97")
 Height : 359.8mm (14.16")

7. WEIGHT (with TILT/SWIVEL)

Net. Weight : 4.7kg (10.36 lbs)
 Gross Weight : 5.8kg (12.79 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.

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.)

WARNING

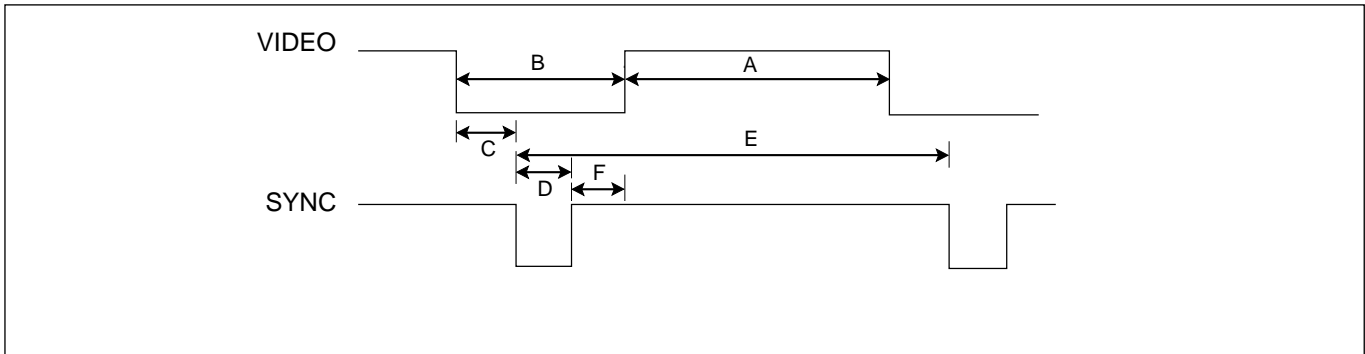
BE CAREFUL ELECTRIC SHOCK !

- 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.

CAUTION

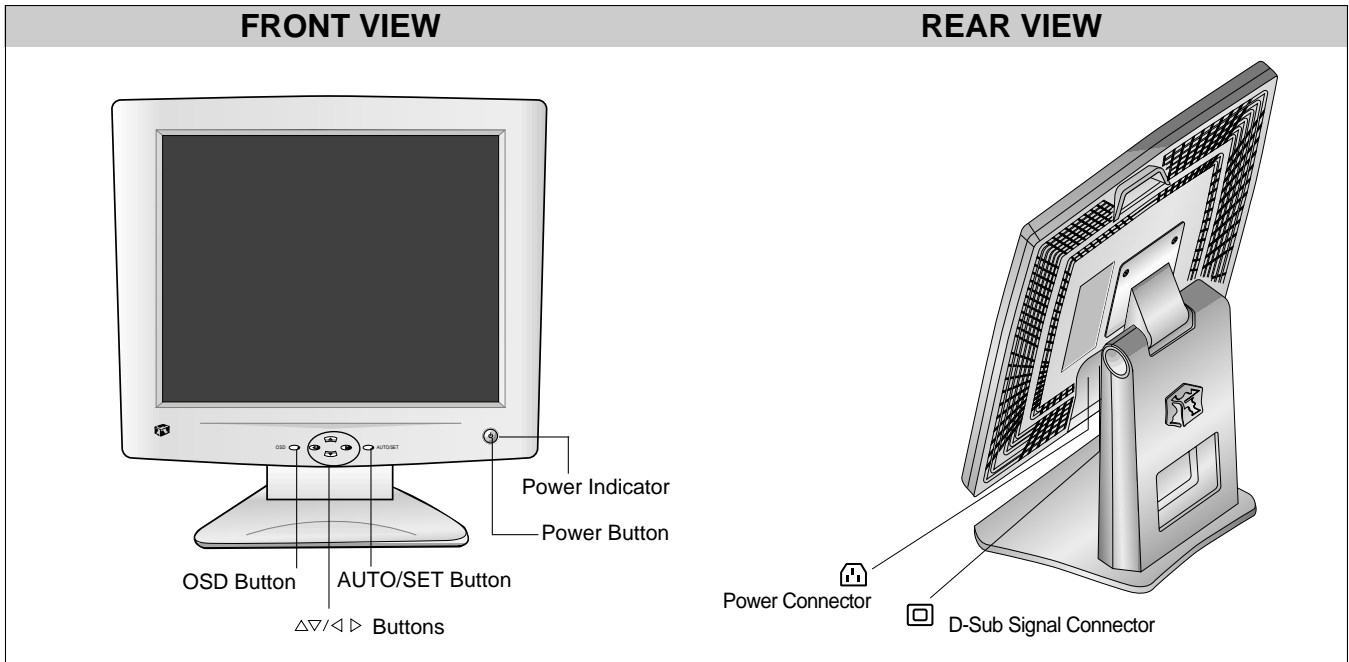
Please use only a plastic screwdriver to protect yourself from shock hazard during service operation.

TIMING CHART

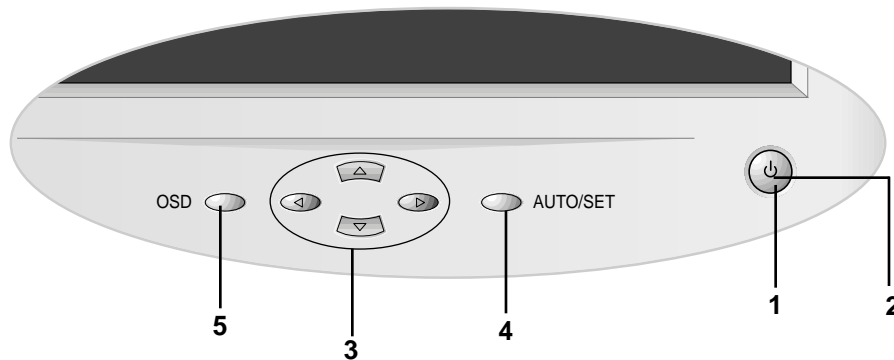


MODE	H / V	Sync Polarity	Dot Clock	Frequency	Total Period (E)	Video Active Time (A)	Blanking Time (B)	Sync Duration (D)	Back Porch (F)	Front Porch (C)	Resolution
1	H (Pixels)	+	25.175	31.468 KHz	800	640	160	96	48	16	640 x 350
	V (Lines)	-		70.0 Hz	449	350	99	2	60	37	
2	H (Pixels)	-	28.322	31.468 KHz	900	720	180	108	55	17	720 x 400 (TEXT)
	V (Lines)	+		70.0 Hz	449	400	49	2	34	13	
3	H (Pixels)	-	25.175	31.469 KHz	800	640	160	96	48	16	640 x 480
	V (Lines)	-		60.0 Hz	525	480	45	2	33	10	
4	H (Pixels)	-	30.24	35.00 KHz	864	640	224	64	96	64	640 x 480
	V (Lines)	-		66.67 Hz	525	480	45	3	39	3	
5	H (Pixels)	-	31.5	37.861 KHz	832	640	192	40	128	24	640 x 480
	V (Lines)	-		72.8 Hz	520	480	40	3	28	9	
6	H (Pixels)	-	31.5	37.50 KHz	840	640	200	64	120	16	640 x 480
	V (Lines)	-		75.0 Hz	500	480	20	3	16	1	
7	H (Pixels)	+	36.0	35.156KHz	1024	800	224	72	128	24	800 x 600
	V (Lines)	+		56.25 Hz	625	600	25	2	22	1	
8	H (Pixels)	+	40.0	37.879 KHz	1056	800	256	128	88	40	800 x 600
	V (Lines)	+		60.3 Hz	628	600	28	4	23	1	
9	H (Pixels)	+	50.0	48.077 KHz	1040	800	240	120	64	56	800 x 600
	V (Lines)	+		72.188 Hz	666	600	66	6	23	37	
10	H (Pixels)	+	49.5	46.875 KHz	1056	800	256	80	160	16	800 x 600
	V (Lines)	+		75.0 Hz	625	600	25	3	21	1	
11	H (Pixels)	-	57.2832	49.725 KHz	1152	832	320	64	224	32	832 x 624 (MAC)
	V (Lines)	-		74.55 Hz	667	624	43	3	39	1	
12	H (Pixels)	-	65	48.363 KHz	1344	1024	320	136	160	24	1024 x 768
	V (Lines)	-		60.0 Hz	806	768	38	6	29	3	
13	H (Pixels)	-	75	56.476 KHz	1328	1024	304	136	144	24	1024 x 768
	V (Lines)	-		70.0 Hz	806	768	38	6	29	3	
14	H (Pixels)	+	78.75	60.023 KHz	1312	1024	288	96	176	16	1024 x 768
	V (Lines)	+		75.0 Hz	800	768	32	3	28	1	

OPERATING INSTRUCTIONS



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; in DPMS (Energy Saving) mode, -stand-by, suspend, or power off mode - its color changes to amber.

3. △▽/◀▶ Button

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

4. AUTO/SET Button

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

* AUTO adjustment function

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

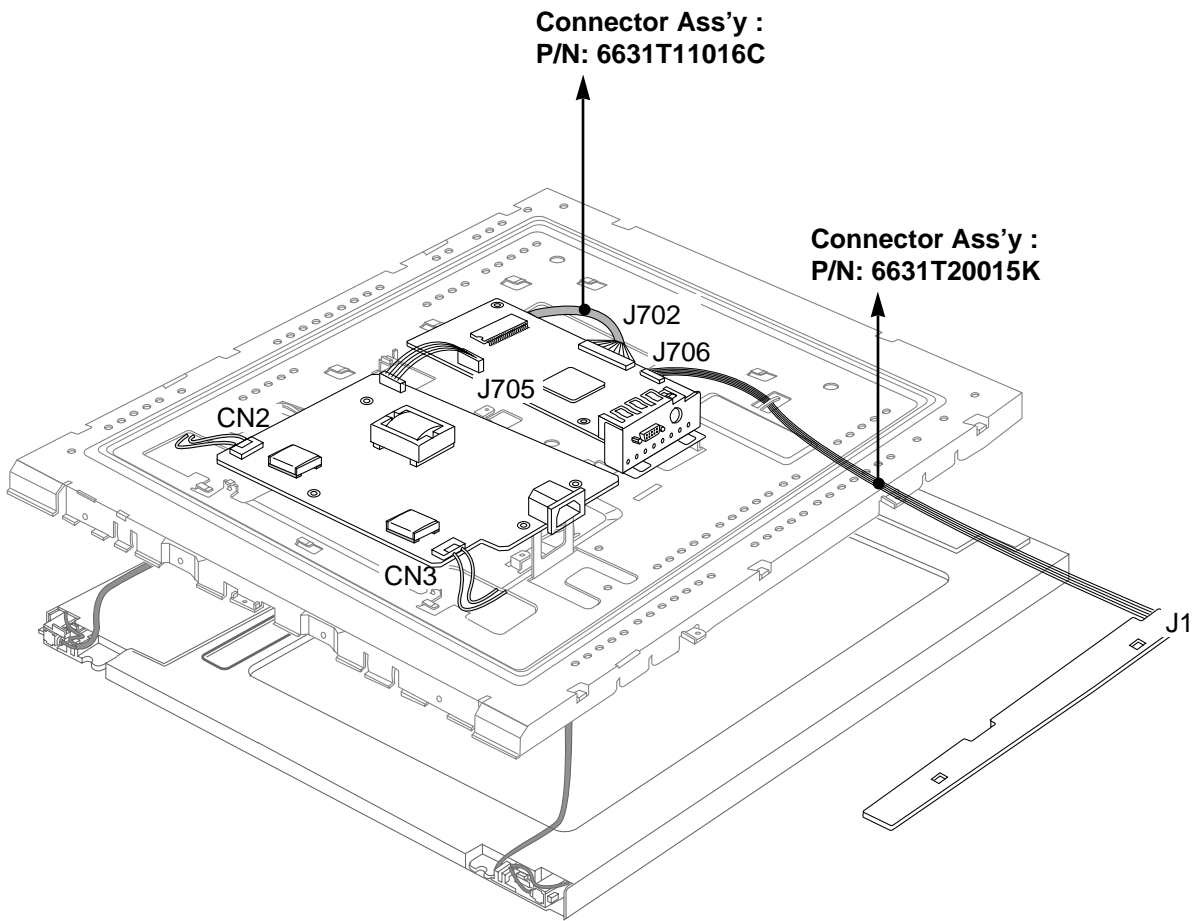
Note: Some signal from some graphics boards may not function properly. **If the results are unsatisfactory**, adjust your monitor's Position, Clock and Phase manually.

5. OSD Button

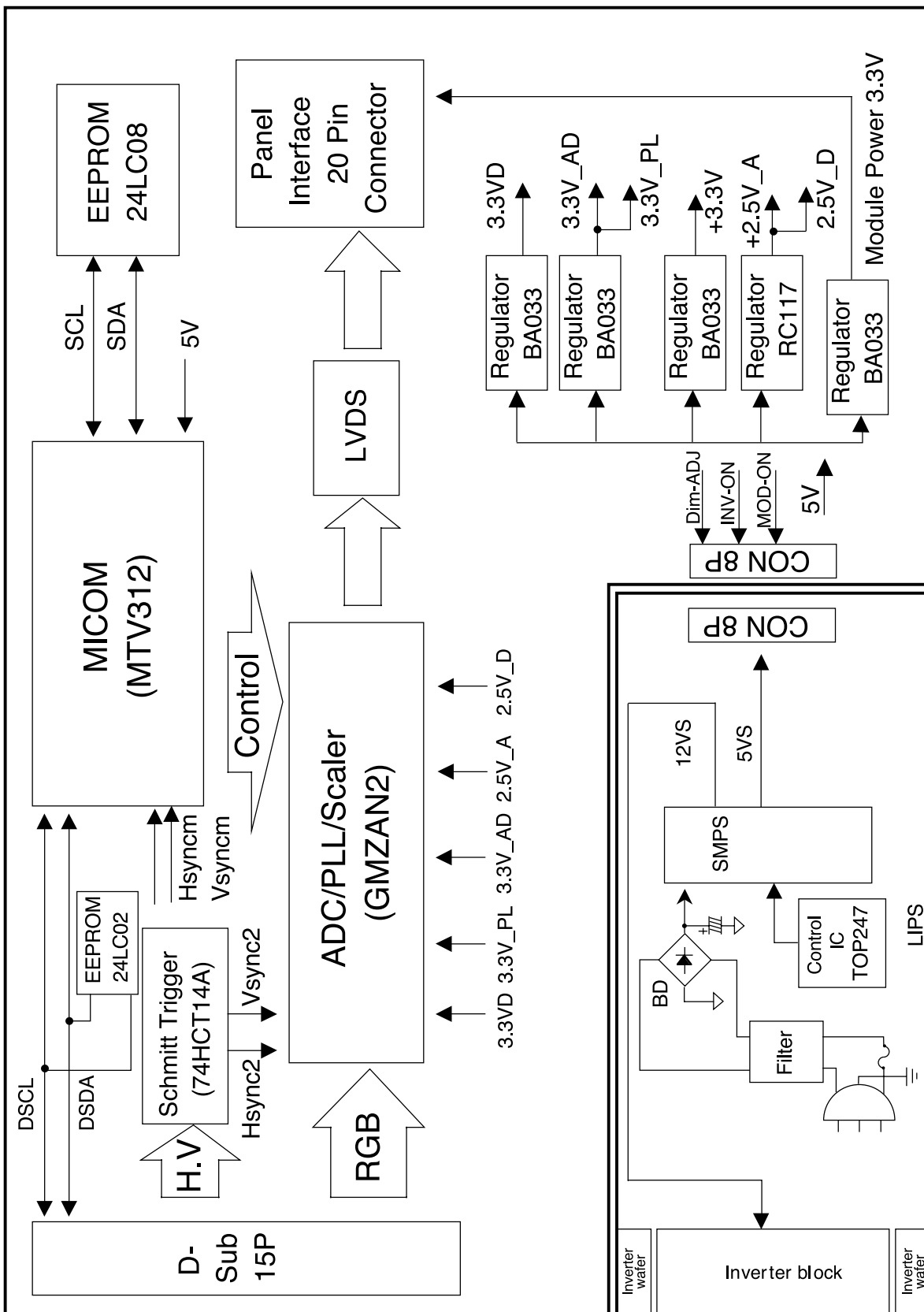
Use this button to enter or exit the on screen display.



WIRING DIAGRAM



BLOCK DIAGRAM



DESCRIPTION OF BLOCK DIAGRAM

1. Scaler One chip IC(GMZAN-2, U201)

GMZAN-2 (U201) is one chip IC which it supports four internal function blocks of Video Amp, PLL, A/D converter and Video processor.

Video signal (0.7Vp.p) clamped through C207, 208, 209 with matching IC's proper cut off voltage.

This signal is processed as a proper 8 bit digital signal by U201's amplifying, phase locking, A/D converting, and scaling operations.

U201 outputs 24bit RGB data and control signals(Clock, Horizontal and Vertical sync, and Data Enable) as LVDS IC's input signals.

2. System Controller (Microprocessor) Circuit

- 1) Microprocessor (U501) distinguishes polarity and frequency by calculating horizontal and vertical sync input from signal source.
- 2) Microprocessor (U501) carries out power control by sending power-down trigger signal to each IC.
- 3) Microprocessor (U501) communicates with EEPROM (U502), and GMZAN-2 (U201) through IIC(2 lines) or 4 bit bus line. It makes all devices operated properly.
- 4) Microprocessor (U501) let User adjust screen by OSD function.

3. LVDS(Low Voltage Differential Signal, U411)

LVDS transmitter (U411) delivers digital signal to the receiver inside LCD module by method of abstraction. The abstracted signals are pairs of RIN0+-, RIN1+-, RIN2+-, RIN3+-, and RCLKIN+- of which voltage swing is 0.5V each.

When SHUTON pin's input is High, transmitter goes to power down mode.

4. DC/DC block

This block is composed of regulators which supplies 2.5V and 3.3V.

Each regulator's source power is 5VR from LIPS(LCD Inverter and Power Supply) block.

U806 supplies 2.5VD and 2.5VA and U802 supplies 3.3VD, 3.3V_AD, and 3.3V_PL powers to GMZAN-2's internal PLL, ADC, Pre-amp, and scaler by dropping down 5VR.

U805 supplies MODPWR-3.3V for LCD module's operation by dropping down 5VR.

5. LIPS Block (LCD Inverter and Power Supply)

This block supplies DC voltages of 5VS to interface board and 12V to inverter by converting AC input voltage of 100~240Vac.

Converting method is SMPS(Switching Mode Power Supply).

Inverter on/off signal from microprocessor makes inverter turned on or off .

DIMADJ signal from microprocessor does inverter's current adjustment for Brightness control.

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.
- Alignment Adapter and Software.

1. Adjustment for Factory Preset Mode

- 1) Run alignment program for LG508K on the IBM compatible PC.
- 2) Select EEPROM All Init. command and Enter.
- 3) Display cross hatch pattern at Mode 1.
- 4) Select EDID WRITE[A0] [A6]command and Enter.

2. Adjustment for White Balance

- 1) Display color 0,0 pattern at Mode 13.
- 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 13.
- 6) Select DRIVE CAL command and Enter.
- 7) Color 1 (9300K) and Color 2 (6500K) are automatically adjusted and saved to the EEPROM.
- 8) Select PRESET EXIT command and Enter.

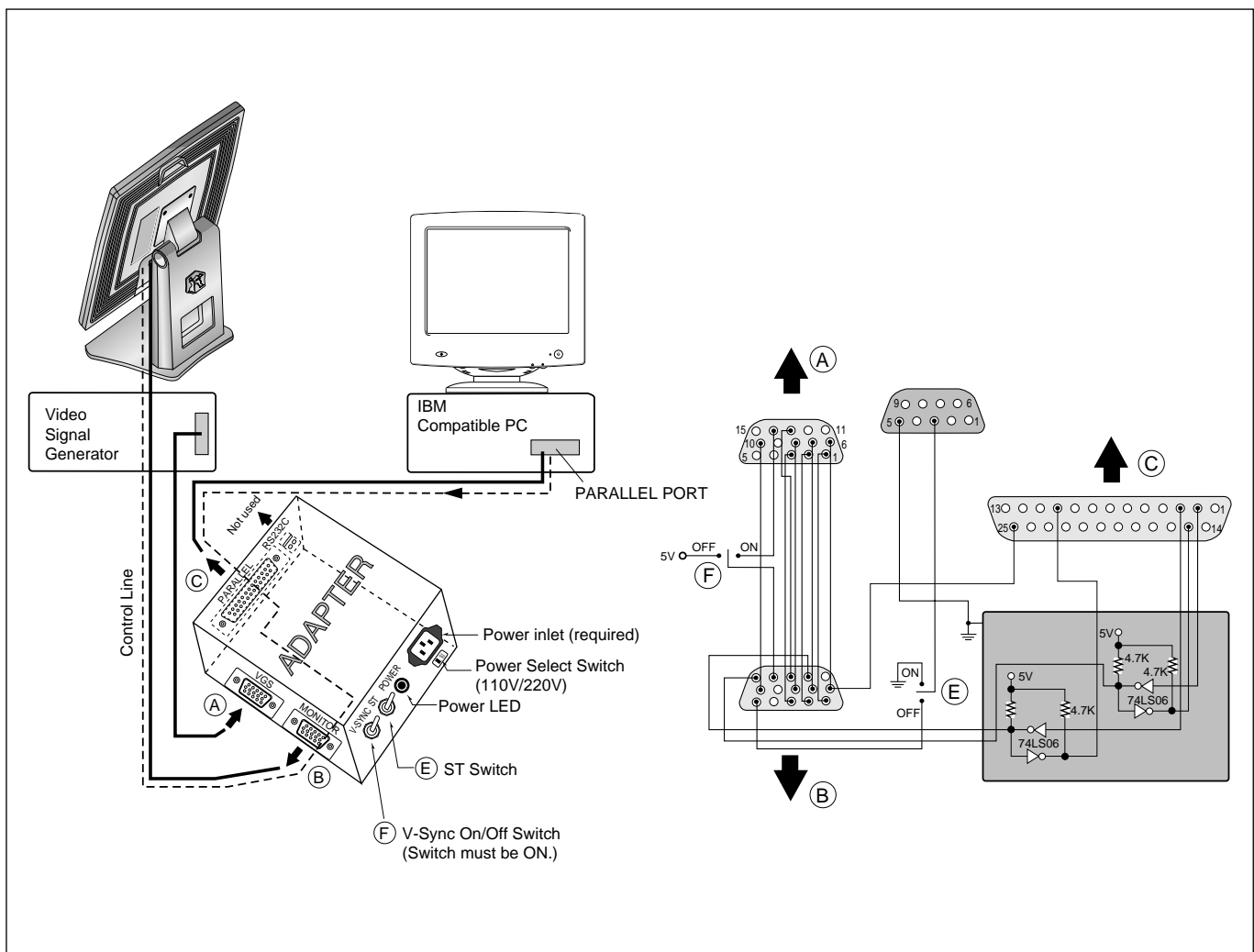
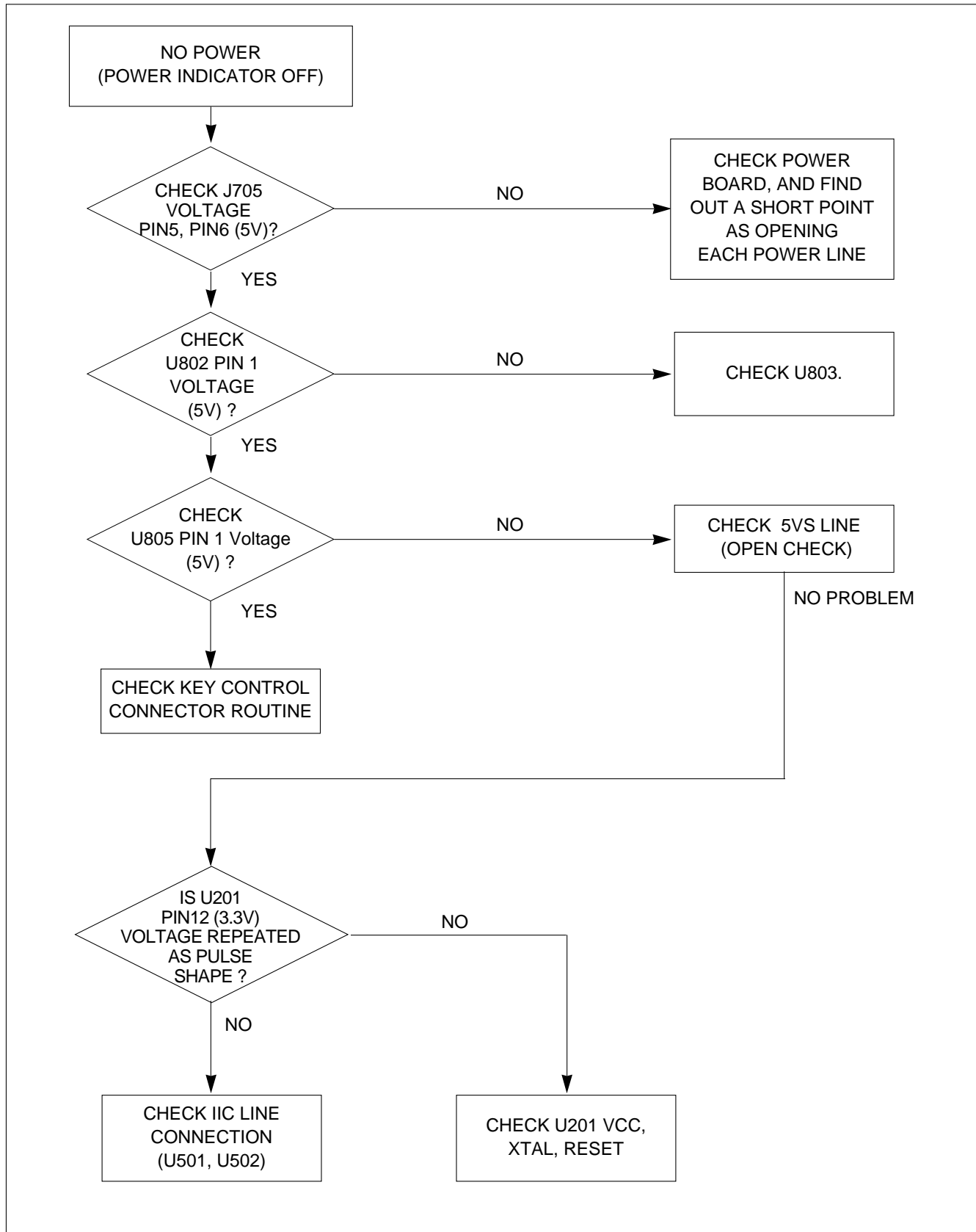


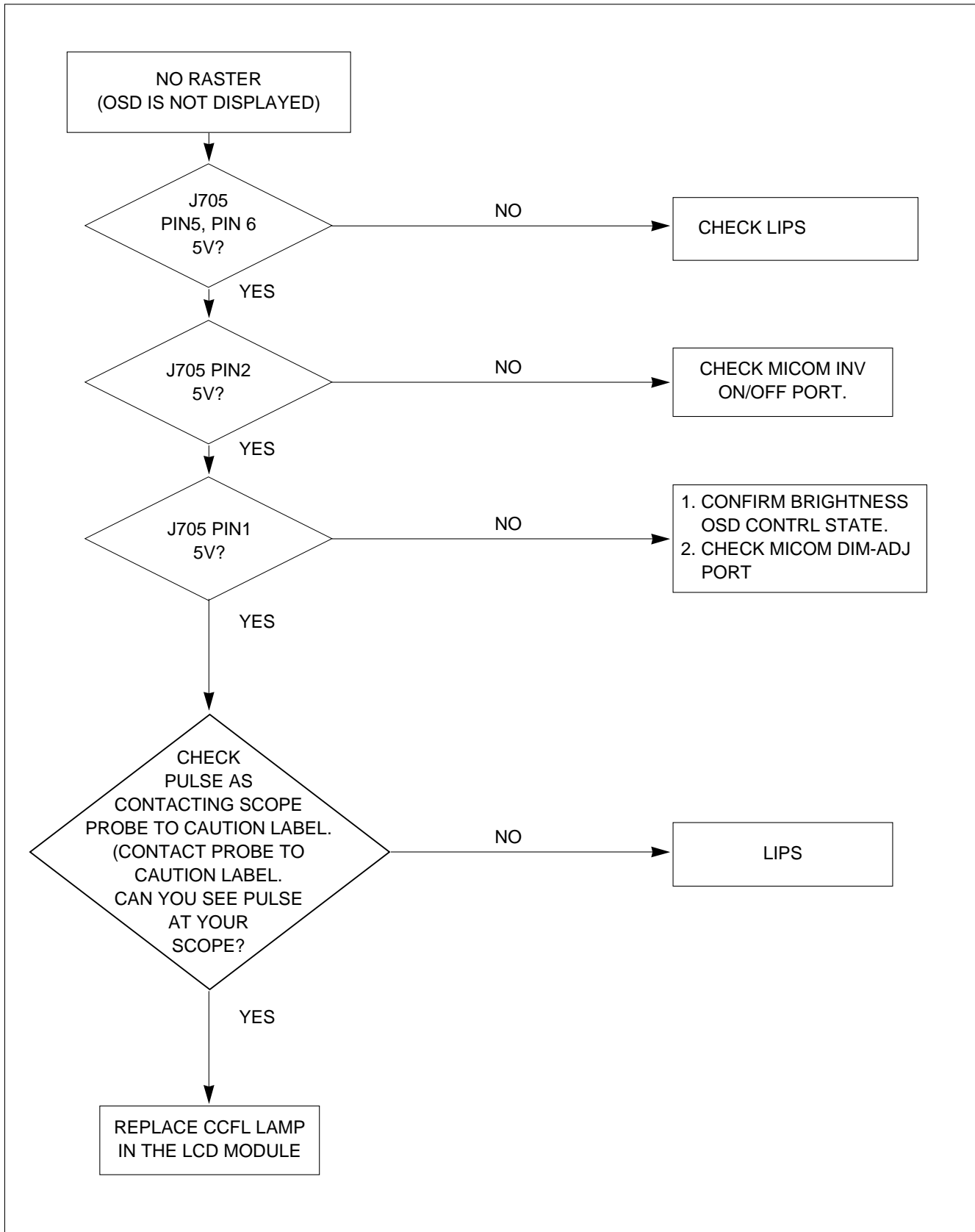
Figure 1. Cable Connection

TROUBLESHOOTING GUIDE

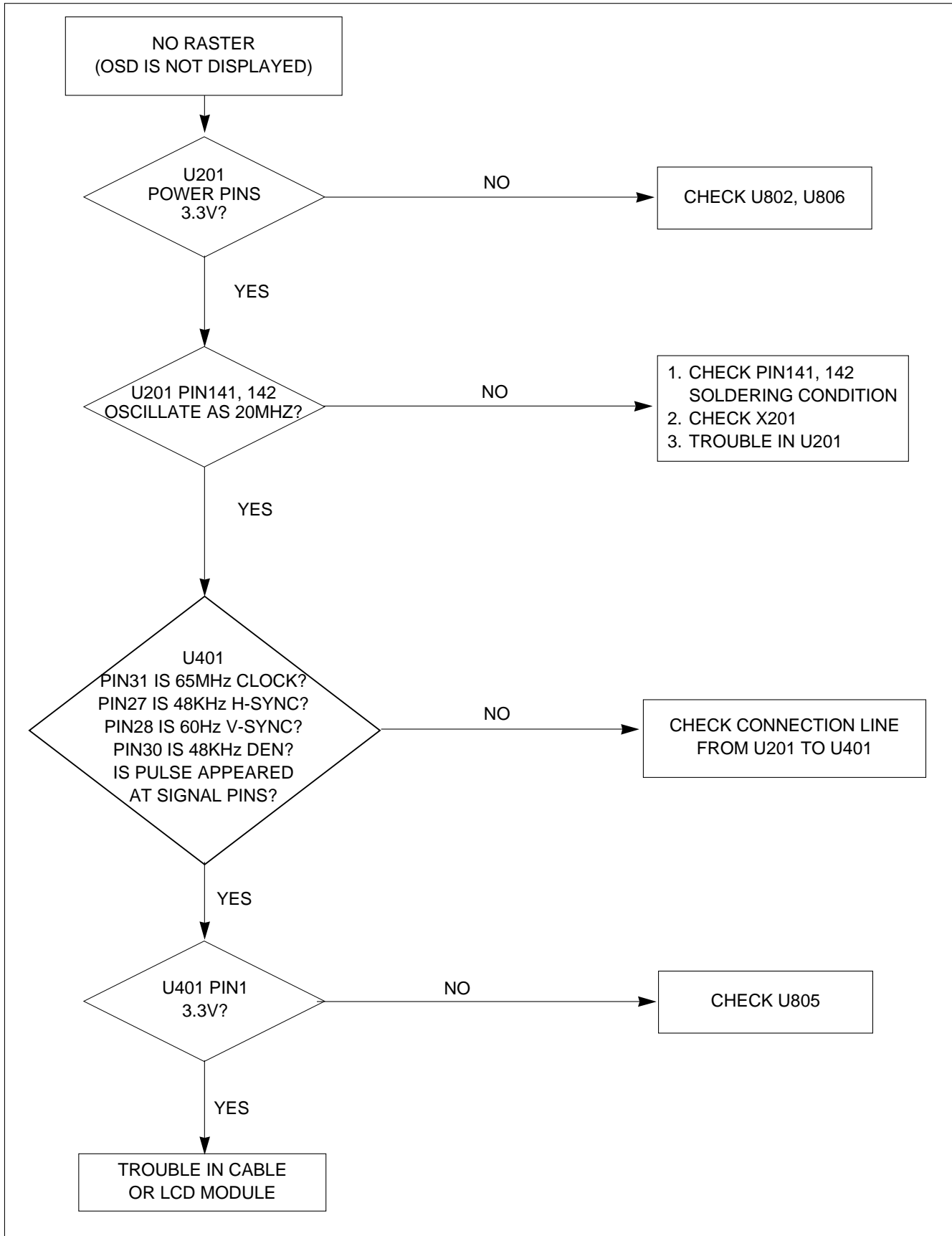
1. NO POWER



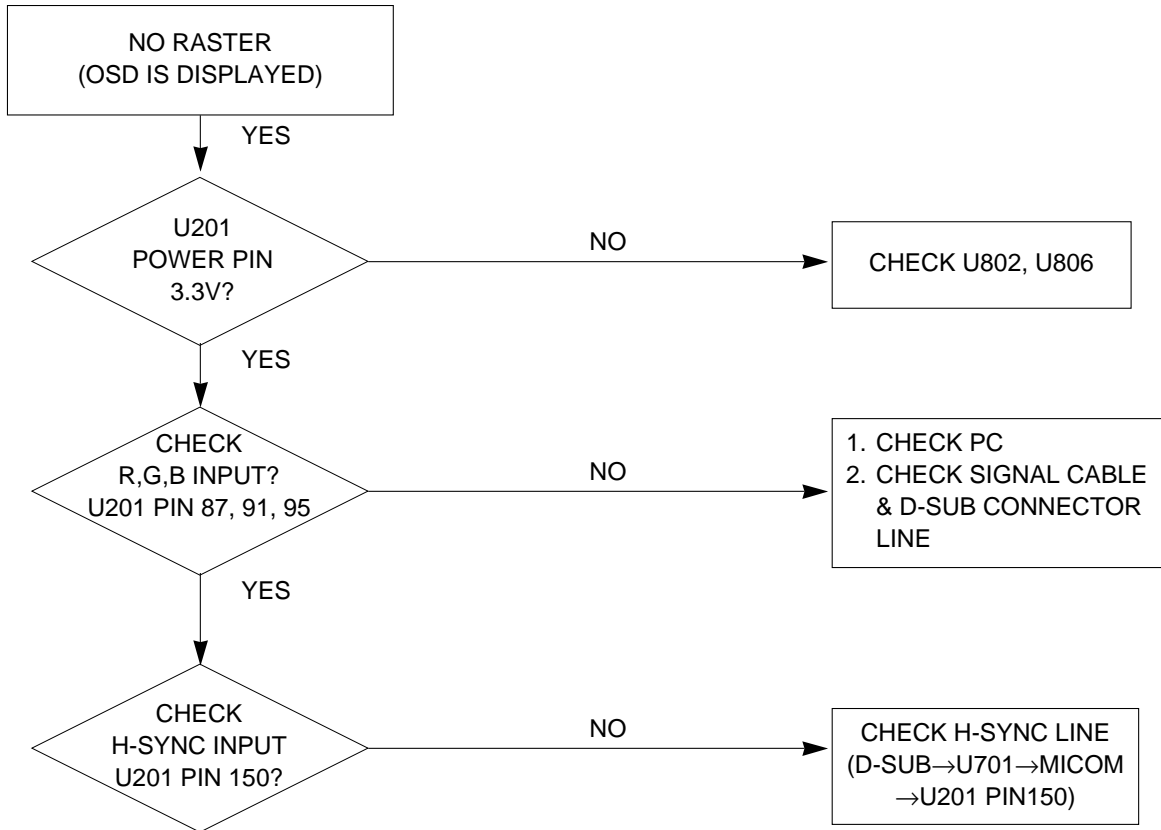
2. NO RASTER (OSD IS NOT DISPLAYED) – LIPS



3. NO RASTER (OSD IS NOT DISPLAYED) – gmZAN2

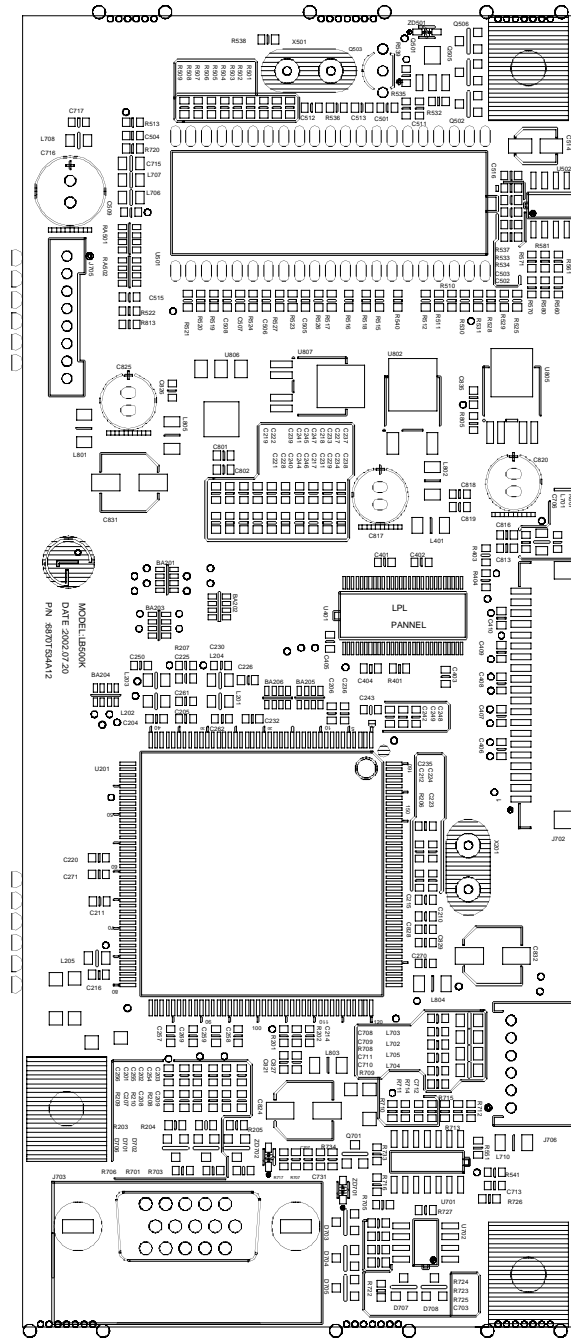


4. NO RASTER (OSD IS DISPLAYED) – gmZAN2

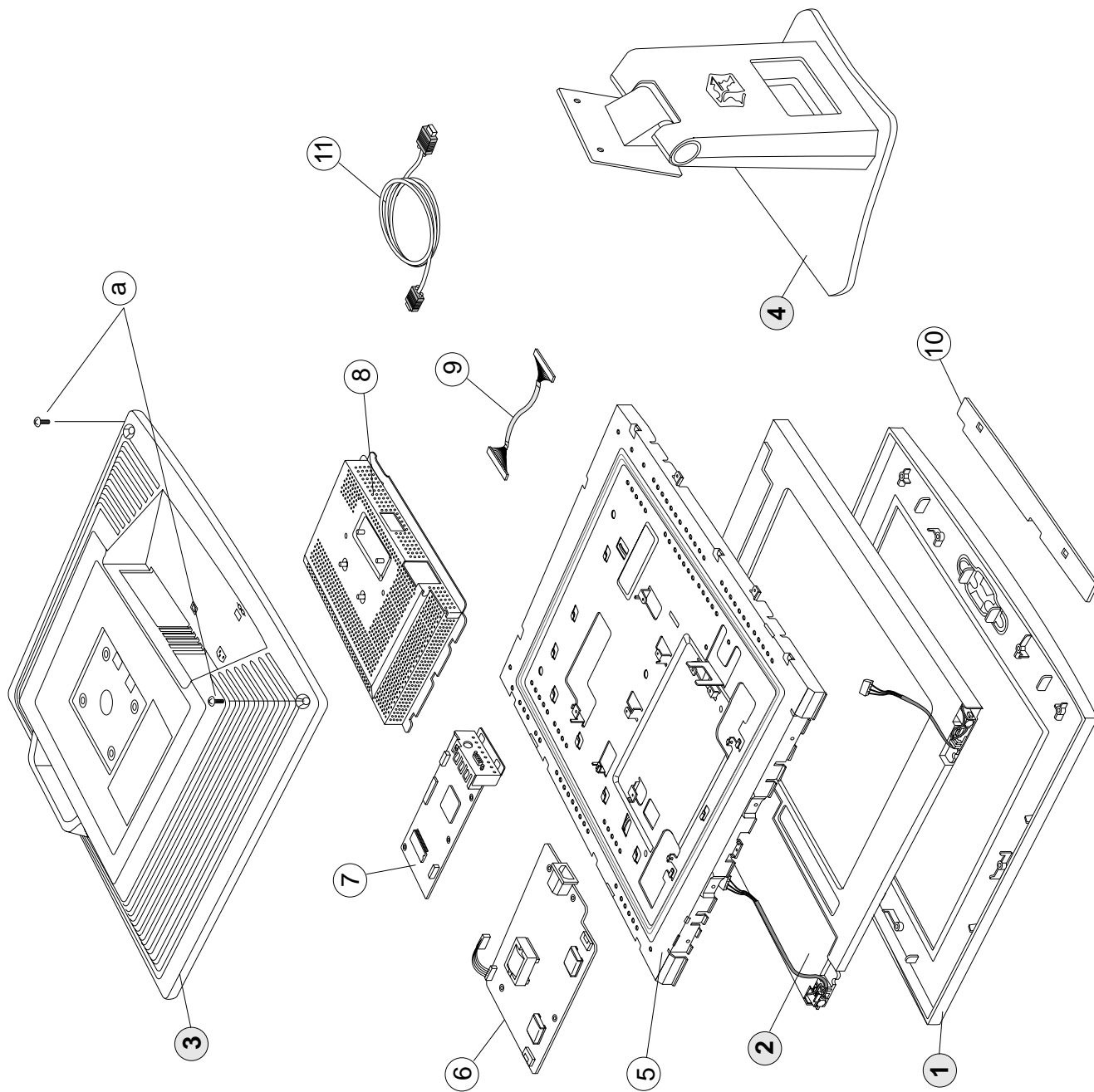


PRINTED CIRCUIT BOARD

1. MAIN BOARD (Component Side)



EXPLODED VIEW



EXPLODED VIEW PARTS LIST

Ref. No.	Part No.	Description
1	3091TKL041E	CABINET ASSEMBLY, LG508J G/WAY LOCAL SUB_MATERIAL C/SKD
2	6304FLP024A	LCD(LIQUID CRYSTAL DISPLAY) LM150X07-B4 LG PHILIPS TFT COLOR 15.0 INCH XGA
3	3809TKL027E	BACK COVER ASSEMBLY, LG508J 3808TKL032A MX LOCAL
4	3043TKK078M	TILT SWIVEL ASSEMBLY LG508J . MX, SEMI-CKD
5	4951TKS091F	METAL ASSEMBLY, FRAME MAIN, LG508K(LPL)
6	6634B00051A	ADAPTER, AC-DC, PWI1502LG 5V/12A 1A/1A LIPS FOR K-CHASSIS
	or 6634B00053A	ADAPTER, AC-DC, ADP-30EP 5V/12A 1A/1A LIPS FOR K-CHASSIS
7	3313TL5056A	MAIN TOTAL ASSEMBLY LG508K G/WAY CL-32
8	4950TKK424D	METAL REAR LB508J C/SKD
9	6631T11016C	CONNECTOR ASSEMBLY, 20P H-H 100MM UL20276 I/FACE CABLE LB500K
10	6871TST245E	PWB(PCB) ASSEMBLY, SUB, LG508J CONTROL TOTAL G/WAY
11	6850TD9001G	CABLE, D-SUB, UL 2990-9C(7.5) DT 1870MM BLACK(9930) , DM
a	332-113E	SCREW, DRAWING, D3.0 L10.0 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. 10. 07.				
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
MAIN BOARD				
CAPACITORS				
		C201	OCC100CK41A	10PF 1608 50V 5% R/TP NP0
		C202	OCC100CK41A	10PF 1608 50V 5% R/TP NP0
		C203	OCC100CK41A	10PF 1608 50V 5% R/TP NP0
		C204	OCK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C205	OCK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P
		C206	OCK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		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	OCK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C215	OCK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P
		C216	OCK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C217	OCC220CK41A	22PF 1608 50V 5% R/TP NP0
		C218	OCC220CK41A	22PF 1608 50V 5% R/TP NP0
		C219	OCC220CK41A	22PF 1608 50V 5% R/TP NP0
		C221	OCC220CK41A	22PF 1608 50V 5% R/TP NP0
		C222	OCC220CK41A	22PF 1608 50V 5% R/TP NP0
		C223	OCC180CK41A	18PF 1608 50V 5% R/TP NP0
		C224	OCC180CK41A	18PF 1608 50V 5% R/TP NP0
		C226	OCC680CK41A	68PF 1608 50V 5% R/TP NP0
		C227	OCC220CK41A	22PF 1608 50V 5% R/TP NP0
		C228	OCC220CK41A	22PF 1608 50V 5% R/TP NP0
		C229	OCC220CK41A	22PF 1608 50V 5% R/TP NP0
		C230	OCC080CK11A	8PF 1608 50V 0.5 PF R/TP NP0
		C231	OCC220CK41A	22PF 1608 50V 5% R/TP NP0
		C233	OCC220CK41A	22PF 1608 50V 5% R/TP NP0
		C234	OCC220CK41A	22PF 1608 50V 5% R/TP NP0
		C237	OCC220CK41A	22PF 1608 50V 5% R/TP NP0
		C238	OCC220CK41A	22PF 1608 50V 5% R/TP NP0
		C239	OCC220CK41A	22PF 1608 50V 5% R/TP NP0
		C240	OCC220CK41A	22PF 1608 50V 5% R/TP NP0
		C241	OCC220CK41A	22PF 1608 50V 5% R/TP NP0
		C242	OCC220CK41A	22PF 1608 50V 5% R/TP NP0
		C243	OCC220CK41A	22PF 1608 50V 5% R/TP NP0
		C244	OCC220CK41A	22PF 1608 50V 5% R/TP NP0
		C245	OCC220CK41A	22PF 1608 50V 5% R/TP NP0
		C246	OCC220CK41A	22PF 1608 50V 5% R/TP NP0
		C247	OCC220CK41A	22PF 1608 50V 5% R/TP NP0
		C248	OCC220CK41A	22PF 1608 50V 5% R/TP NP0
		C249	OCC220CK41A	22PF 1608 50V 5% R/TP NP0
		C254	OCK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P
		C255	OCK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P
		C256	OCK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P
		C257	OCK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P
		C258	OCK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P
		C259	OCK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P
		C261	OCC680CK41A	68PF 1608 50V 5% R/TP NP0
		C262	OCC680CK41A	68PF 1608 50V 5% R/TP NP0
		C269	OCK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P

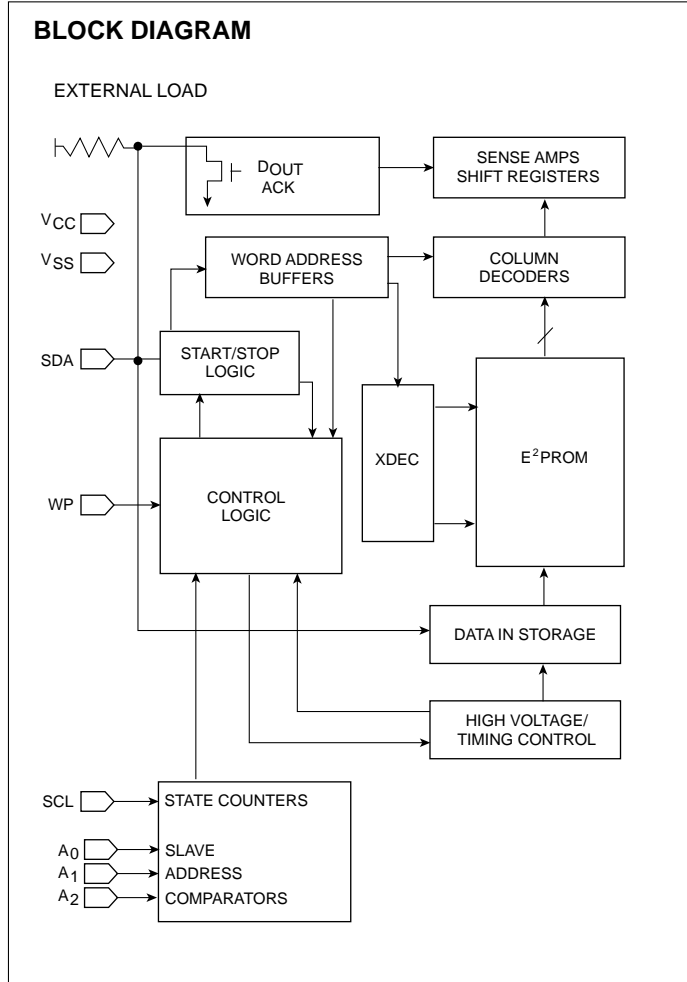
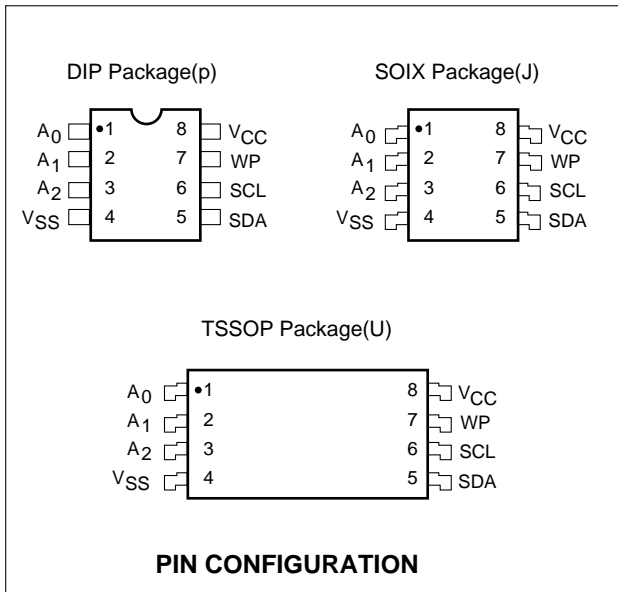
DATE: 2002. 10. 07.				
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		C270	OCK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P
		C271	OCK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P
		C401	OCK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C402	OCK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C403	OCK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C404	OCK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C405	OCK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C501	OCK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C502	OCC101CK41A	100PF 1608 50V 5% R/TP NP0
		C503	OCC101CK41A	100PF 1608 50V 5% R/TP NP0
		C504	OCK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C505	OCC101CK41A	100PF 1608 50V 5% R/TP NP0
		C506	OCC101CK41A	100PF 1608 50V 5% R/TP NP0
		C507	OCK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C508	OCK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C509	OCK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C512	OCC180CK41A	18PF 1608 50V 5% R/TP NP0
		C513	OCC180CK41A	18PF 1608 50V 5% R/TP NP0
		C514	OCH8106F611	10UF 16V M 85STD(CYL) R/TP
		C515	OCC680CK41A	68PF 1608 50V 5% R/TP NP0
		C516	OCK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C703	OCK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C706	OCK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C707	OCC680CK41A	68PF 1608 50V 5% R/TP NP0
		C712	OCC101CK41A	100PF 1608 50V 5% R/TP NP0
		C713	OCK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C715	OCH3105F946	1UF 16V Z F 2012 R/TP
		C731	OCC680CK41A	68PF 1608 50V 5% R/TP NP0
		C801	OCK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P
		C802	OCK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C813	OCK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P
		C816	OCK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C817	OCE107CF610	100UF SHL,SD 16V 20% BULK FL
		C818	OCK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C819	OCK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P
		C820	OCE107CF610	100UF SHL,SD 16V 20% BULK FL
		C821	OCK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C824	OCH8107F611	100UF 16V M 85STD(CYL) R/TP
		C825	OCE107CF610	100UF SHL,SD 16V 20% BULK FL
		C826	OCK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C827	OCK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P
		C828	OCK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C829	OCK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P
		C831	OCH8107F611	100UF 16V M 85STD(CYL) R/TP
		C832	OCH8107F611	100UF 16V M 85STD(CYL) R/TP
		C835	OCK104CK56A	0.1UF 1608 50V 10% R/TP X7R
DIODEs				
		D701	0DS226009AA	KDS226 TP KEC SOT-23 80V 300M
		D702	0DS226009AA	KDS226 TP KEC SOT-23 80V 300M
		D703	0DS226009AA	KDS226 TP KEC SOT-23 80V 300M
		D704	0DS226009AA	KDS226 TP KEC SOT-23 80V 300M
		D705	0DS226009AA	KDS226 TP KEC SOT-23 80V 300M

DATE: 2002. 10. 07.				
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		D706	0DS226009AA	KDS226 TP KEC SOT-23 80V 300M
		D707	0DS301109AA	MMBD301LT1 TP MOTOROLA SOT23 3
		D708	0DS301109AA	MMBD301LT1 TP MOTOROLA SOT23 3
			0DZ560009GB	BZT52C5V6S DIODES R/TP SOD323
ICs				
		U201	0IPRPGA002A	GMZAN2-160P GENESIS MICROCHIP
		U401	0ITH638300B	THC63LVDM83R THINE 56P,TSSOP R
		U501	0IZZTS2207A	MYSON 42PIN BK OTP LG508K
		U502	0ISG240860B	M24C08W6 SGS-THOMSON 8SOP R/TP
		U701	0IMO741420B	MC74HCT14ADR2 14P,SOIC TP LEVE
		U702	0ICS240213A	CAT24WC02J-TE13 8P SOP TP 2K I
		U802	0IPMGKE011A	KIA78D33F KEC DPAK R/TP 3.3V L
		U805	0IRH033000A	BA033SFP P/MOLD-5 TP REGULATOR
		U806	0IPMGON007A	NCP1117ST25T3 ON SEMI SOT223 R
COILs & COREs				
		L201	6210TCE001P	HB-1S2012-121JT CERATECH 2012M
		L202	6210TCE001P	HB-1S2012-121JT CERATECH 2012M
		L203	6210TCE001P	HB-1S2012-121JT CERATECH 2012M
		L204	6210TCE001P	HB-1S2012-121JT CERATECH 2012M
		L205	6210TCE001P	HB-1S2012-121JT CERATECH 2012M
		L401	6210TCE001G	HH-1M3216-501 CERATEC 3216MM R
		L701	6210TCE001S	HU-1M2012-121 CERATECH 2012MM
		L702	6210TCE001P	HB-1S2012-121JT CERATECH 2012M
		L703	6210TCE001P	HB-1S2012-121JT CERATECH 2012M
		L704	6210TCE001P	HB-1S2012-121JT CERATECH 2012M
		L705	6210TCE001P	HB-1S2012-121JT CERATECH 2012M
		L706	6210TCE001P	HB-1S2012-121JT CERATECH 2012M
		L707	6210TCE001P	HB-1S2012-121JT CERATECH 2012M
		L710	6210TCE001G	HH-1M3216-501 CERATEC 3216MM R
		L801	6210TCE001G	HH-1M3216-501 CERATEC 3216MM R
		L802	6210TCE001G	HH-1M3216-501 CERATEC 3216MM R
		L803	6210TCE001G	HH-1M3216-501 CERATEC 3216MM R
		L804	6210TCE001G	HH-1M3216-501 CERATEC 3216MM R
		L805	6210TCE001G	HH-1M3216-501 CERATEC 3216MM R
TRANSISTOR				
		Q502	0TR390409AE	FAIRCHILD KST3904(LGEMTF) TP S
		Q503	0IKE704200H	KIA7042AP TO-92 TP 4.2 VOLT.
		Q701	0TR390409AE	FAIRCHILD KST3904(LGEMTF) TP S
RESISTORs				
		R201	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R202	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R203	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R204	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R205	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R206	0RJ2701D677	2.7K OHM 1/10 W 5% 1608 R/TP
		R207	0RJ0472D677	47 OHM 1/10 W 5% 1608 R/TP
		R208	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R209	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R210	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R401	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R403	0RJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R404	0RJ5601D477	5.6K OHM 1/10 W 1% 1608 R/TP
		R501	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R502	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R503	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP

DATE: 2002. 10. 07.				
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		R504	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R505	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R506	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R507	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R508	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R509	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R510	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R511	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R512	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R513	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R515	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R516	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R517	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R518	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R519	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R520	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R521	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R522	0RJ1500D677	150 OHM 1/10 W 5% 1608 R/TP
		R523	0RJ0332D677	33 OHM 1/10 W 5% 1608 R/TP
		R524	0RJ0332D677	33 OHM 1/10 W 5% 1608 R/TP
		R525	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R526	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R527	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R528	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R529	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R530	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R531	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R532	0RJ3301D677	3.3K OHM 1/10 W 5% 1608 R/TP
		R533	0RJ0332D677	33 OHM 1/10 W 5% 1608 R/TP
		R534	0RJ0332D677	33 OHM 1/10 W 5% 1608 R/TP
		R535	0RJ3301D677	3.3K OHM 1/10 W 5% 1608 R/TP
		R536	0RJ1004D677	1000000 OHM 1/10 W 5% 1608 R/TP
		R537	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R540	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R541	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R551	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R561	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R571	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R581	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R701	0RJ0752D677	75 OHM 1/10 W 5% 1608 R/TP
		R703	0RJ0752D677	75 OHM 1/10 W 5% 1608 R/TP
		R705	0RJ4700D677	470 OHM 1/10 W 5% 1608 R/TP
		R706	0RJ0752D677	75 OHM 1/10 W 5% 1608 R/TP
		R707	0RJ0272D677	27 OHM 1/10 W 5% 1608 R/TP
		R708	0RJ1500D677	150 OHM 1/10 W 5% 1608 R/TP
		R709	0RJ1500D677	150 OHM 1/10 W 5% 1608 R/TP
		R711	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R712	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R713	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R714	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R715	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R716	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R717	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R722	0RJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R723	0RJ0332D677	33 OHM 1/10 W 5% 1608 R/TP
		R724	0RJ0332D677	33 OHM 1/10 W 5% 1608 R/TP
		R725	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R726	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R727	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R733	0RJ1501D677	1.5K OHM 1/10 W 5% 1608 R/TP
		R734	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R805	0RJ1001D677	1K OHM 1/10 W 5% 1608 R/TP

PIN CONFIGURATION

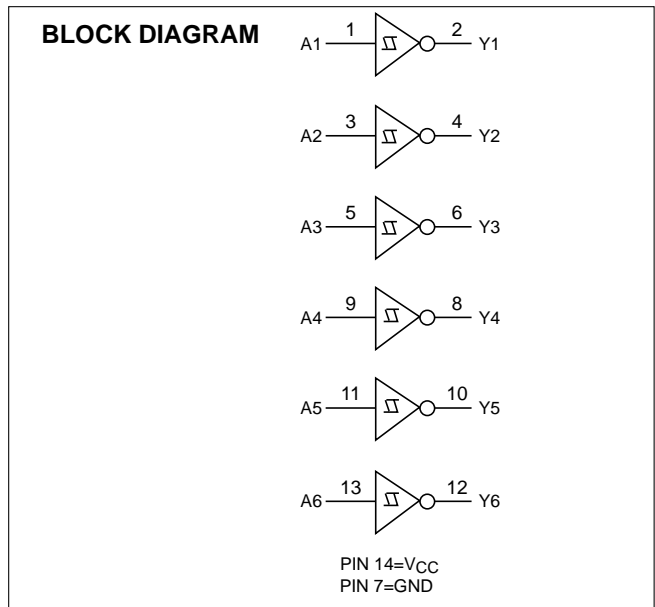
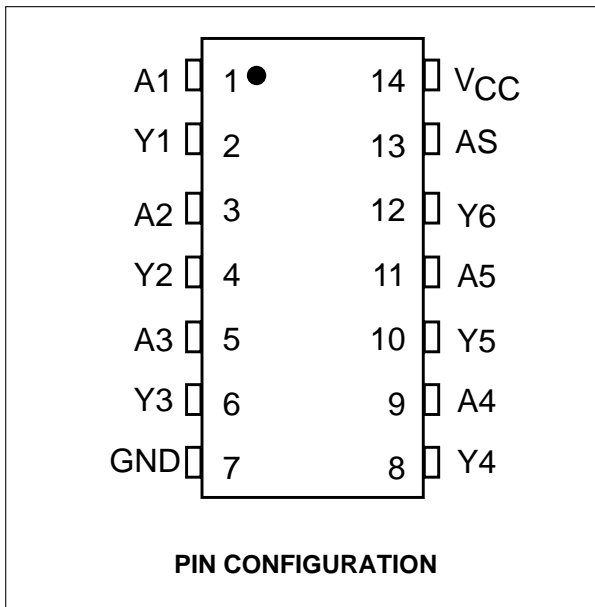
CAT24WC02J-TE13 8P



PIN FUNCTION

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

MC74HCT14ADR2 14P

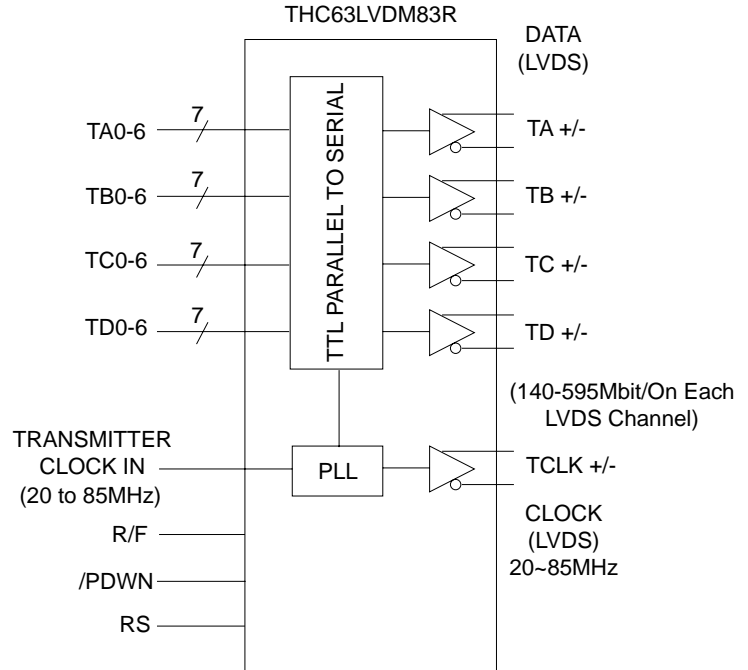


THC63LVDM83R

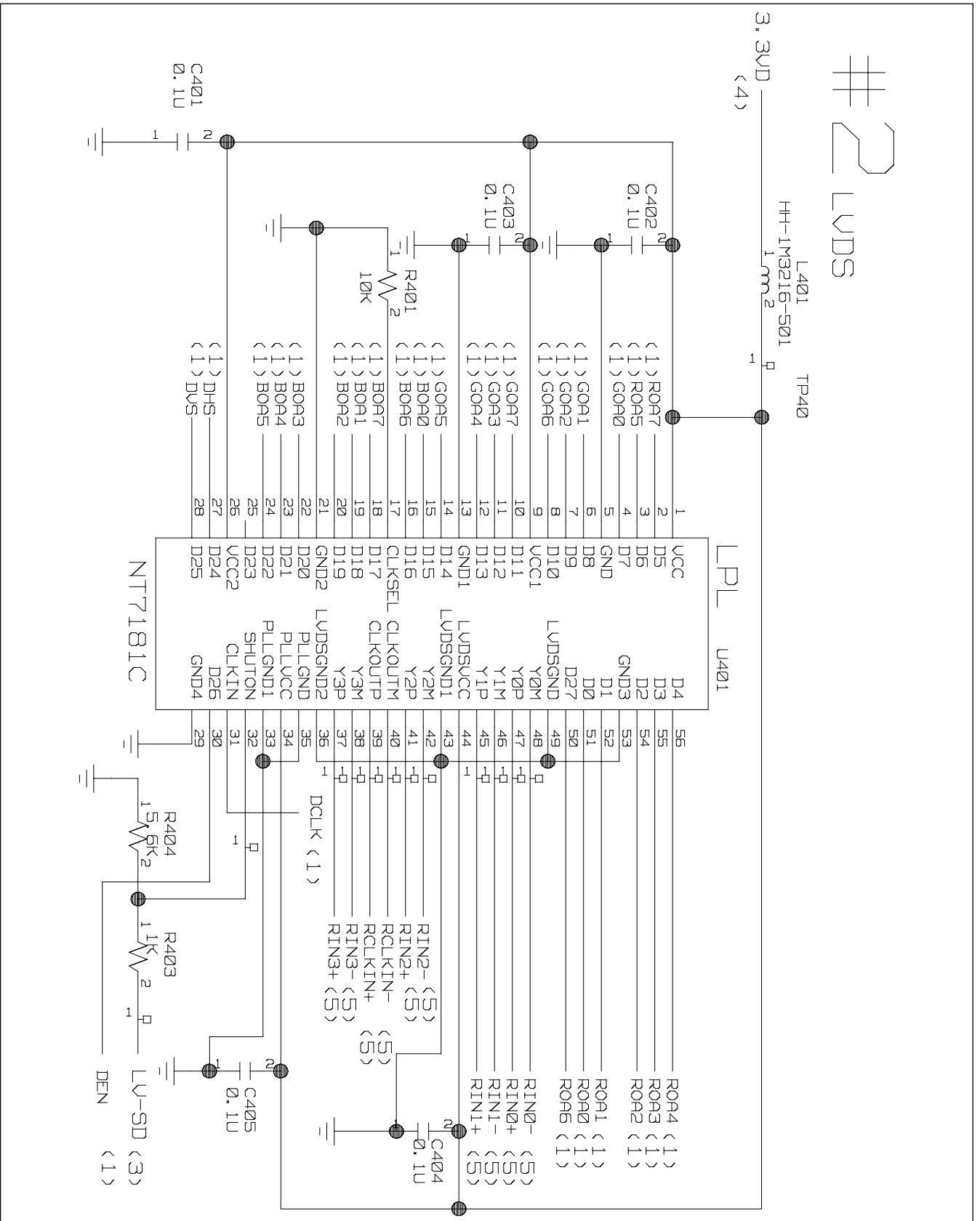
PIN CONFIGURATION

THC63LVDM83R	
RS	1
TD1	2
TA5	3
TA6	4
GND	5
TB0	6
TB1	7
TD2	8
VCC	9
TD3	10
TB2	11
TB3	12
GND	13
TB4	14
TB5	15
TD4	16
R/F	17
TD5	18
TB6	19
TC0	20
GND	21
TC1	22
TC2	23
TC3	24
TD6	25
VCC	26
TC4	27
TC5	28
56	TA4
55	TA3
54	TA2
53	GND
52	TA1
51	TA0
50	TD0
49	LVDS GND
48	TA-
47	TA+
46	TB-
45	TB+
44	LVDS VCC
43	LVDS GND
42	TC-
41	TC+
40	TCLK -
39	TCLK+
38	TD-
37	TD+
36	LVDS GND
35	PLL GND
34	PLL VCC
33	PLL GND
32	/PDWN
31	CLK IN
30	TC6
29	GND

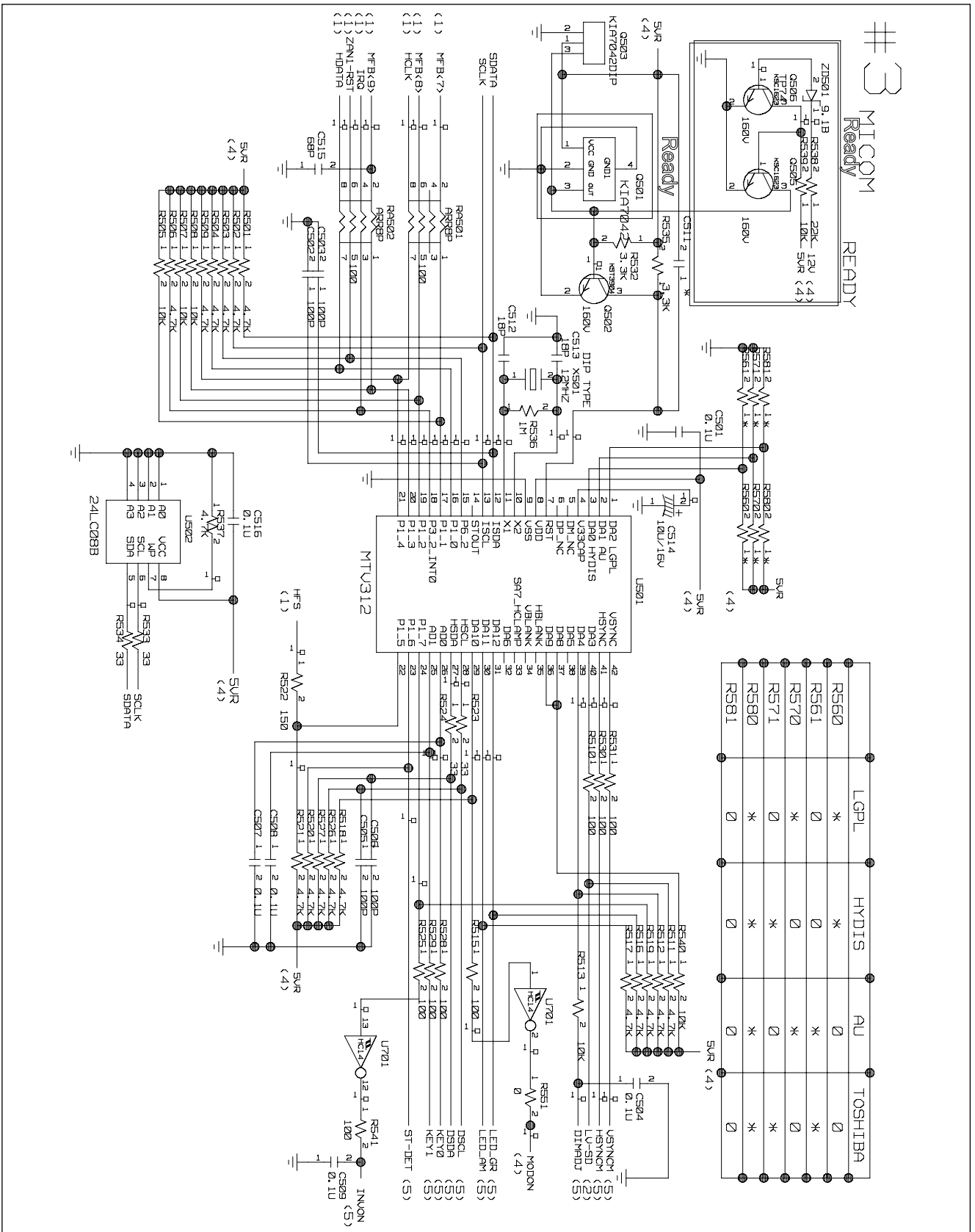
BLOCK DIAGRAM



2. LVDS

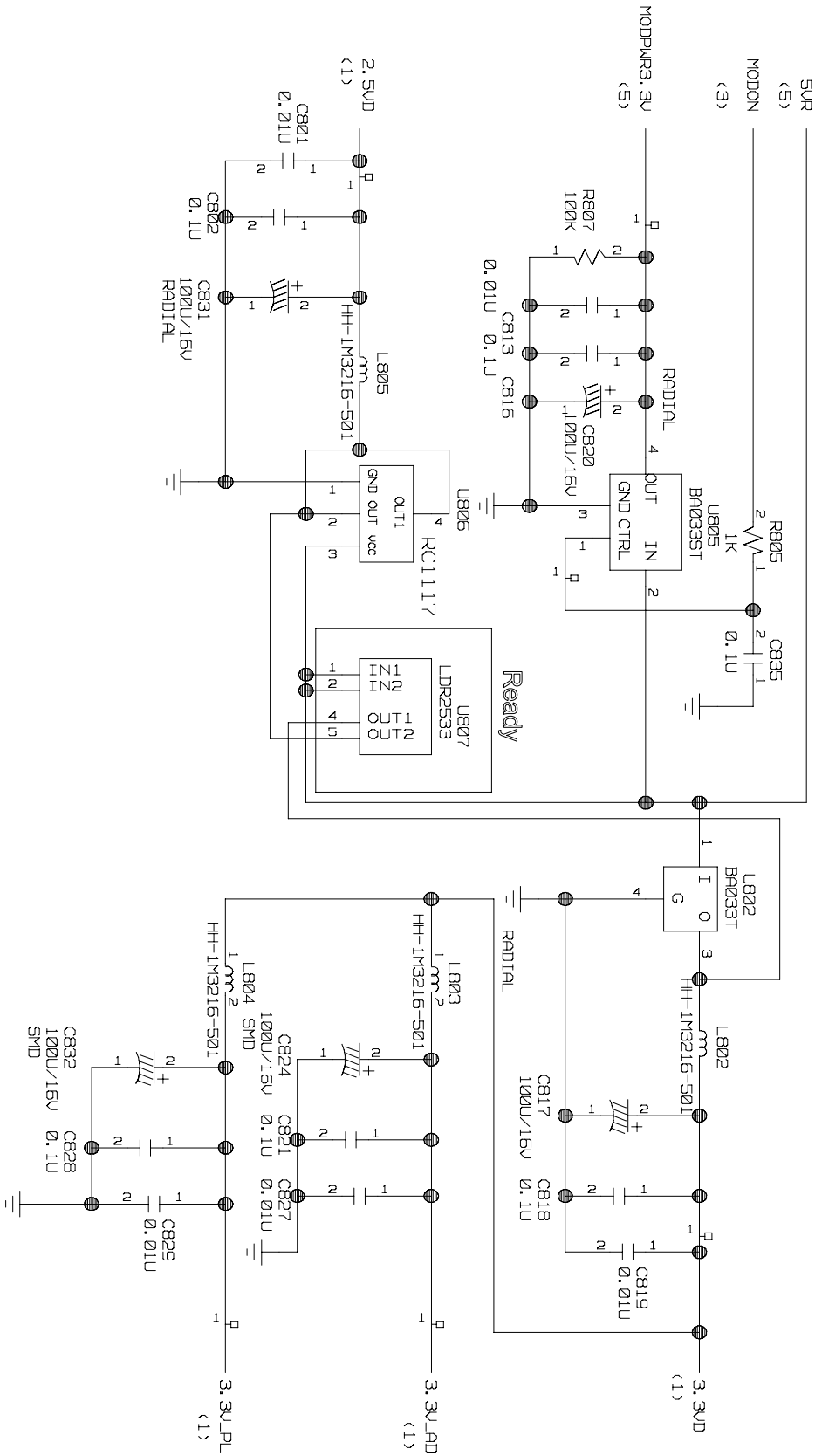


3. MICOM

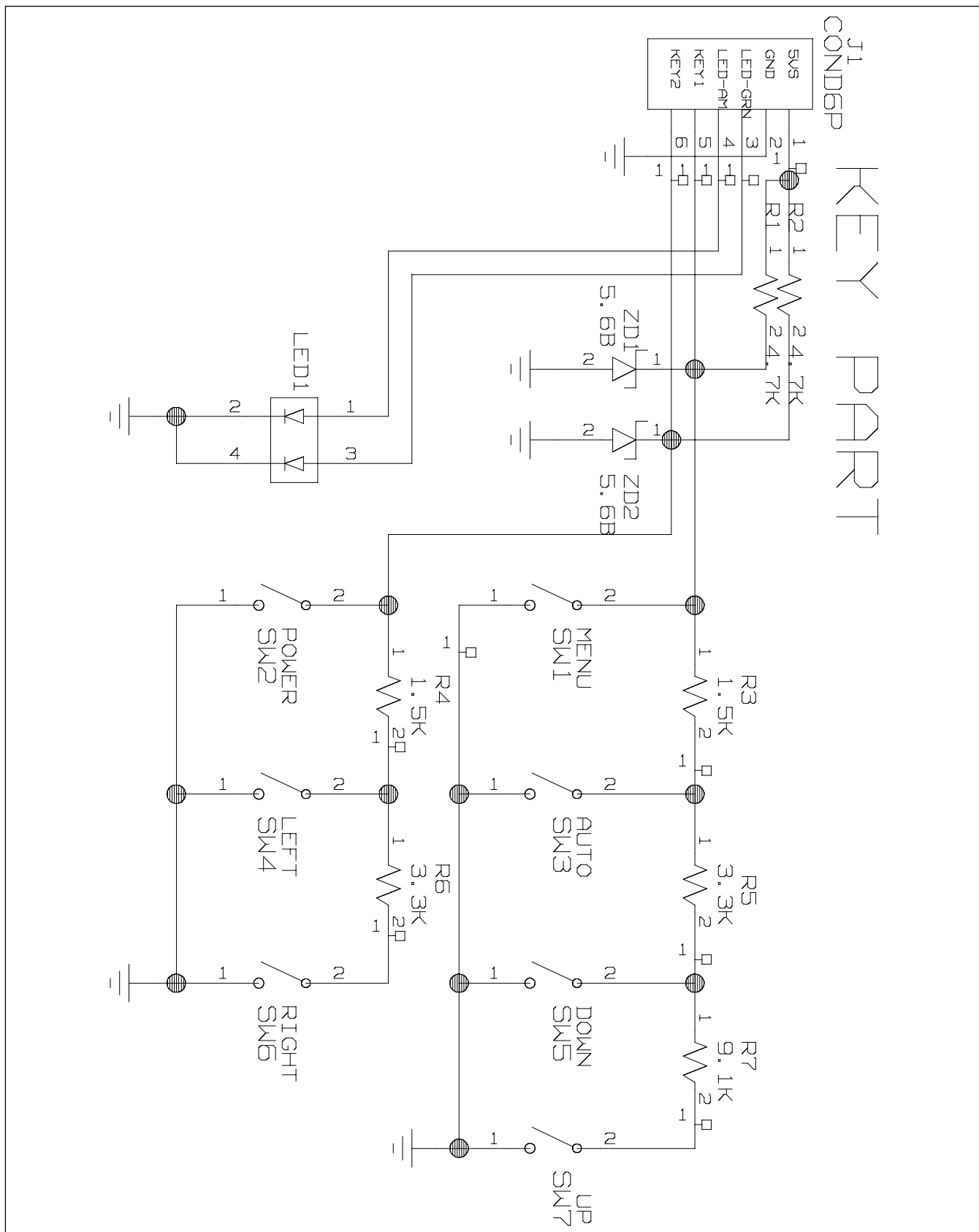


4. DC/DC BLOCK

#4 POWER



6. CONTROL



COLOR MONITOR SERVICE MANUAL

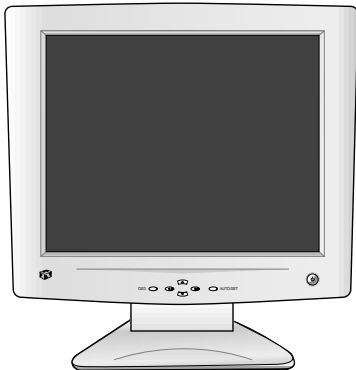
CHASSIS NO. : CL-32

FACTORY MODEL: LG508K

MODEL: FPD1530

CAUTION

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



To apply the **Toshiba Module**.

SPECIFICATIONS

1. LCD CHARACTERISTICS

Type : TFT XGA LCD Module
 Size : 352.0(H) x 263.5(V) x 14.0(T)
 Pixel Pitch : 0.297mm x 0.297mm
 Color Depth : 6 Bits+FRC/ 16,194,277 colors
 Active Video Area : 15.0 inch (304.128 x 228.096)
 Surface Treatment : Anti-Glare, Hard Coating (3H)
 Backlight Unit : Top/Bottom edge side 4CCFL
 Electrical Interface : LVDS

2. OPTICAL CHARACTERISTICS

2-1. Viewing Angle by Contrast Ratio ≥ 10
 Left : 50° min. Right : 50° min.
 Top : 40° min. Bottom : 40° min.

2-2. Luminance :
 200(min.), 250(typ.) at Center point

2-3. Contrast Ratio
 250(min.), 350(typ.)

3. SIGNAL (Refer to the Timing Chart)

3-1. Sync Signal
 1) Type : Separate Sync. (Horizontal & Vertical)
 2) Input Voltage Level : Low=0~0.8V, High=2.1~5.5V
 3) Sync Polarity : Positive or 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 : 31 ~ 63kHz
 Vertical : 56 ~ 75Hz

4. POWER SUPPLY

4-1. Power
 100~240V, 50/60Hz 0.6A

4-2. Power Consumption

MODE	H/V SYNC	VIDEO	POWER CONSUMPTION	LED COLOR
POWER ON (NORMAL)	ON/ON	ACTIVE	less than 30 W	GREEN
STAND-BY	ON/OFF	OFF	less than 2 W	AMBER
SUSPEND	OFF/ON	OFF	less than 2 W	AMBER

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.)
 Lamp Life : 50,000 Hours (min.)

6. DIMENSIONS (with TILT/SWIVEL)


Width : 380mm (14.96")
 Depth : 205mm (8.07")
 Height : 367mm (14.45")

7. WEIGHT (with TILT/SWIVEL)

Net. Weight : 4.9kg (10.80 lbs)
 Gross Weight : 5.8kg (12.79 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.

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.)

WARNING

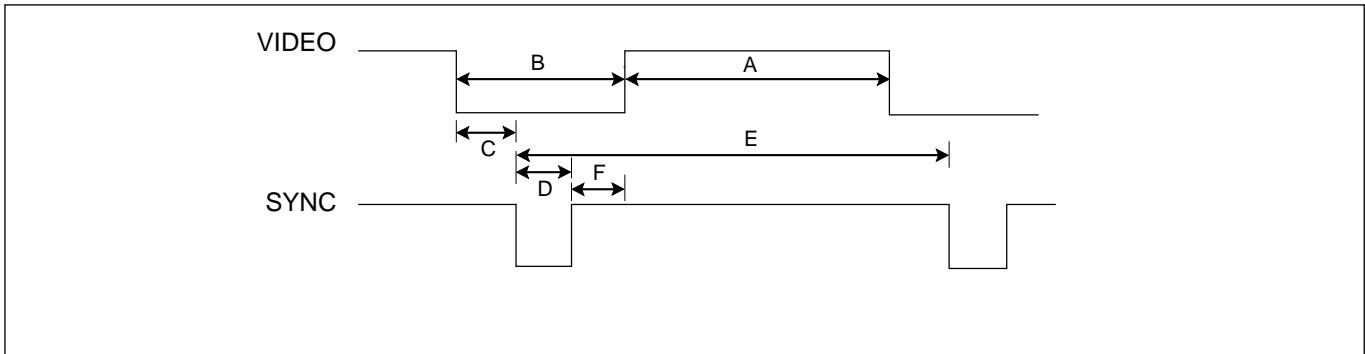
BE CAREFUL ELECTRIC SHOCK !

- 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.

CAUTION

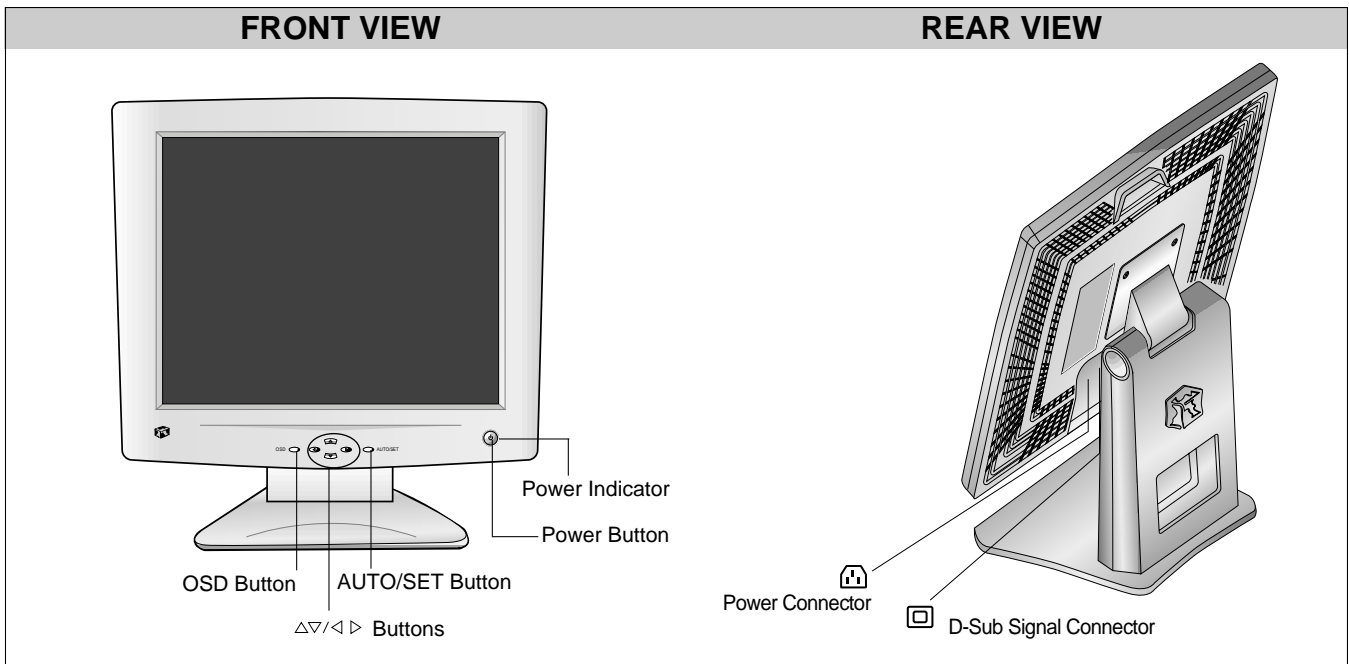
Please use only a plastic screwdriver to protect yourself from shock hazard during service operation.

TIMING CHART

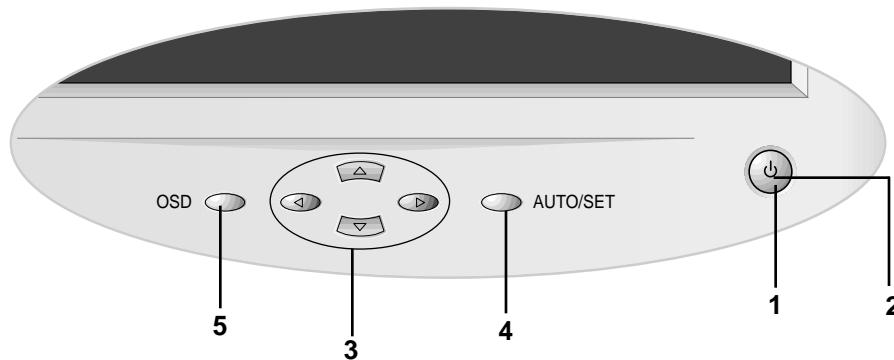


MODE	H / V	Sync Polarity	Dot Clock	Frequency	Total Period (E)	Video Active Time (A)	Blanking Time (B)	Sync Duration (D)	Back Porch (F)	Front Porch (C)	Resolution
1	H (Pixels)	+	25.175	31.468 KHz	800	640	160	96	48	16	640 x 350
	V (Lines)	-		70.0 Hz	449	350	99	2	60	37	
2	H (Pixels)	-	28.322	31.468 KHz	900	720	180	108	55	17	720 x 400 (TEXT)
	V (Lines)	+		70.0 Hz	449	400	49	2	34	13	
3	H (Pixels)	-	25.175	31.469 KHz	800	640	160	96	48	16	640 x 480
	V (Lines)	-		60.0 Hz	525	480	45	2	33	10	
4	H (Pixels)	-	30.24	35.0 KHz	864	640	224	64	96	64	640 x 480
	V (Lines)	-		66.67 Hz	525	480	45	3	39	3	
5	H (Pixels)	-	31.5	37.861 KHz	832	640	192	40	128	24	640 x 480
	V (Lines)	-		72.8 Hz	520	480	40	3	28	9	
6	H (Pixels)	-	31.5	37.50 KHz	840	640	200	64	120	16	640 x 480
	V (Lines)	-		75 Hz	500	480	20	3	16	1	
7	H (Pixels)	+	36.0	35.156KHz	1024	800	224	72	128	24	800 x 600
	V (Lines)	+		56.25 Hz	625	600	25	2	22	1	
8	H (Pixels)	+	40.0	37.879 KHz	1056	800	256	128	88	40	800 x 600
	V (Lines)	+		60.3 Hz	628	600	28	4	23	1	
9	H (Pixels)	+	50.0	48.077 KHz	1040	800	240	120	64	56	800 x 600
	V (Lines)	+		72.188 Hz	666	600	66	6	23	37	
10	H (Pixels)	+	49.5	46.875 KHz	1056	800	256	80	160	16	800 x 600
	V (Lines)	+		75.0 Hz	625	600	25	3	21	1	
11	H (Pixels)	-	57.2832	49.725 KHz	1152	832	320	64	224	32	832 x 624 (MAC)
	V (Lines)	-		74.55 Hz	667	624	43	3	39	1	
12	H (Pixels)	-	65	48.363 KHz	1344	1024	320	136	160	24	1024 x 768
	V (Lines)	-		60.0 Hz	806	768	38	6	29	3	
13	H (Pixels)	-	75	56.476 KHz	1328	1024	304	136	144	24	1024 x 768
	V (Lines)	-		70.0 Hz	806	768	38	6	29	3	
14	H (Pixels)	+	78.75	60.023 KHz	1312	1024	288	96	176	16	1024 x 768
	V (Lines)	+		75.0 Hz	800	768	32	3	28	1	

OPERATING INSTRUCTIONS



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; in DPMS (Energy Saving) mode, -stand-by, suspend, or power off mode - its color changes to amber.

3. △▽/◀▶ Button

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

4. AUTO/SET Button

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

* AUTO adjustment function

Touch the **AUTO/SET** 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.

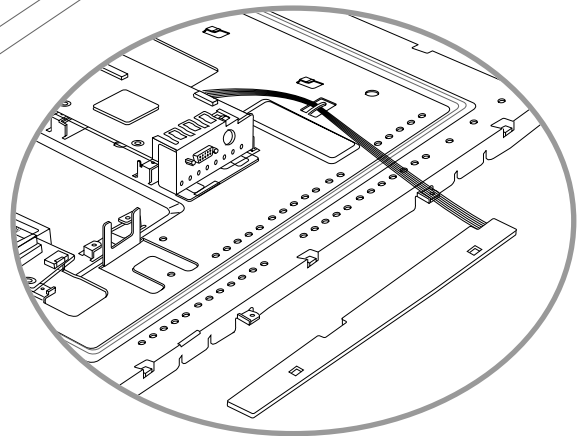
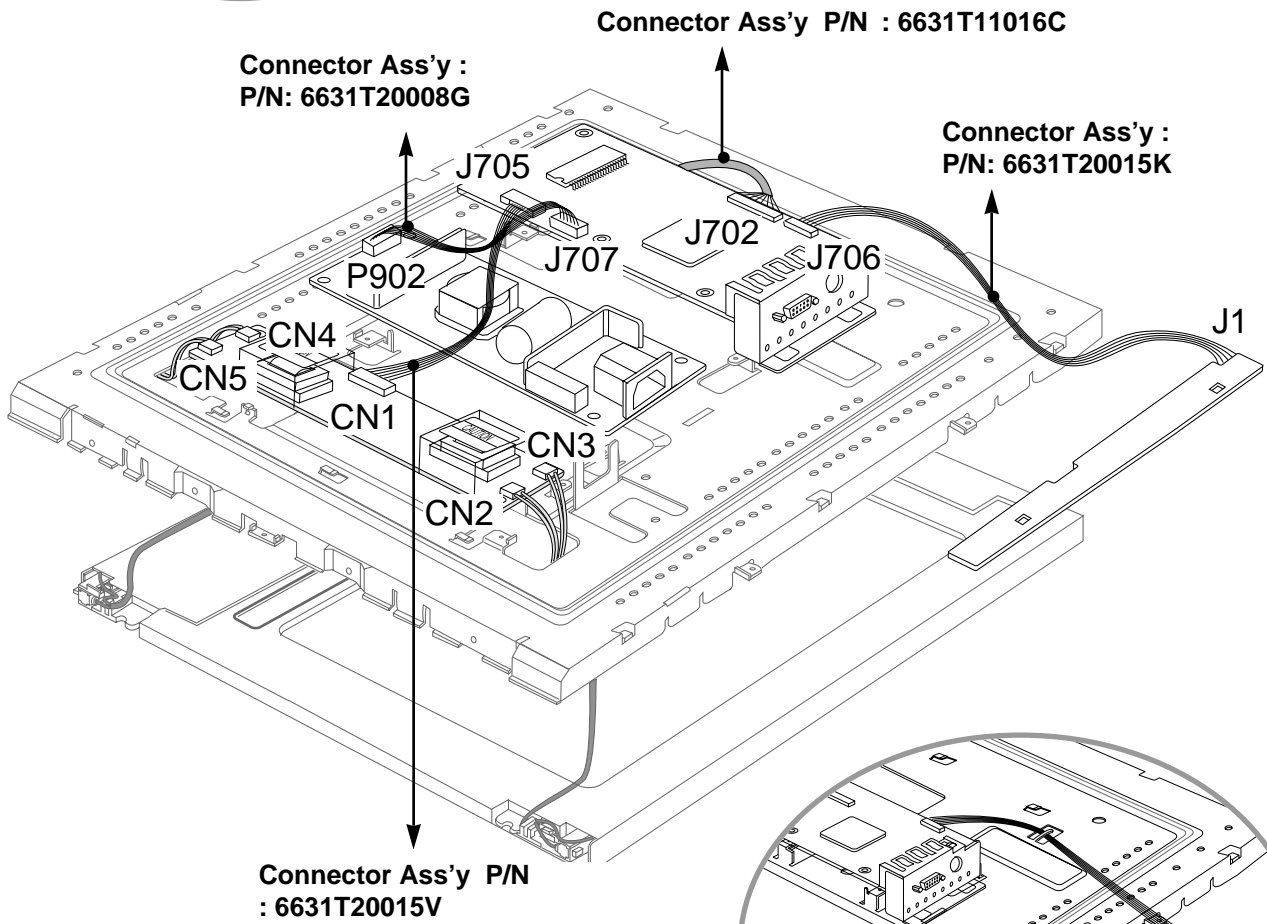
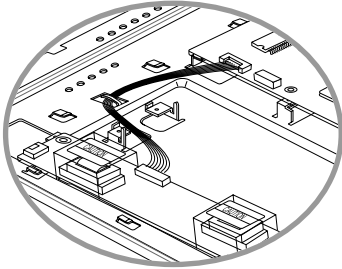
5. OSD Button

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



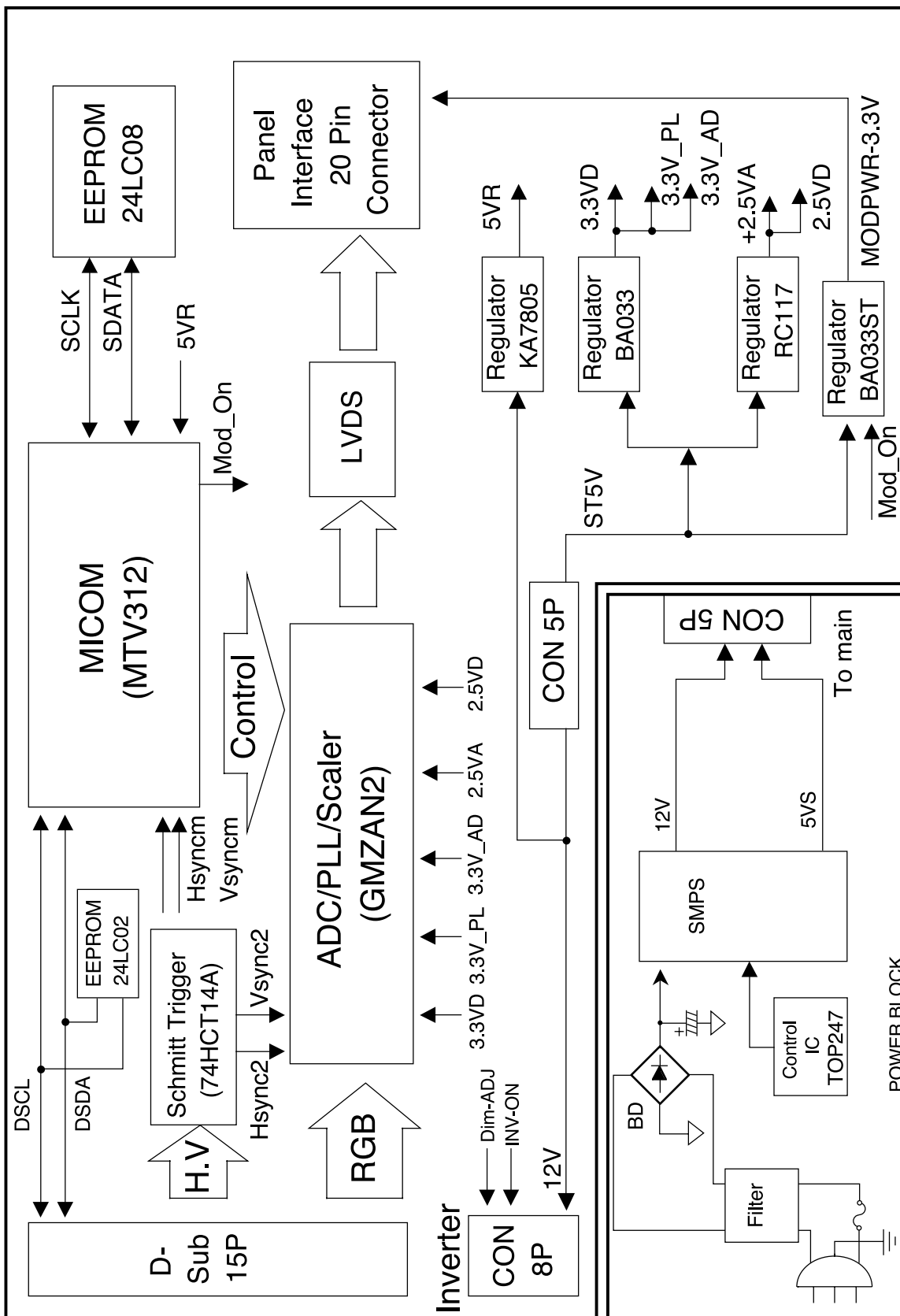
WIRING DIAGRAM

Connector the Main PCB Ass'y and Inverter.



Connector the Control PCB Ass'y and Main PCB Ass'y.

BLOCK DIAGRAM



DESCRIPTION OF BLOCK DIAGRAM

1. Input signal switching 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 78.75MHz.

The Scaler gets the video signal converted analog to digital, interpolates input to 1024 X 768 resolution signal and outputs 8-bit R, G, B signal to LCD module.

Especially pre-amp / ADC / Video controller are merged to one chip 'gmZAN2' 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.

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.
- Alignment Adapter and Software.

1. Adjustment for Factory Preset Mode

- 1) Run alignment program for LG508K on the IBM compatible PC.
- 2) Select EEPROM All Init. command and Enter.
- 3) Display cross hatch pattern at Mode 1.
- 4) Select COMMAND PRESET START command.
- 5) Select EDID WRITE[A0] [A6] command and Enter.

2. Adjustment for White Balance

- 1) Display color 0,0 pattern at Mode 13.
- 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 13.
- 6) Select DRIVE CAL command and Enter.
- 7) Color 1 (9300K) and Color 2 (6500K) are automatically adjusted and saved to the EEPROM.
- 8) Select PRESET EXIT command and Enter.

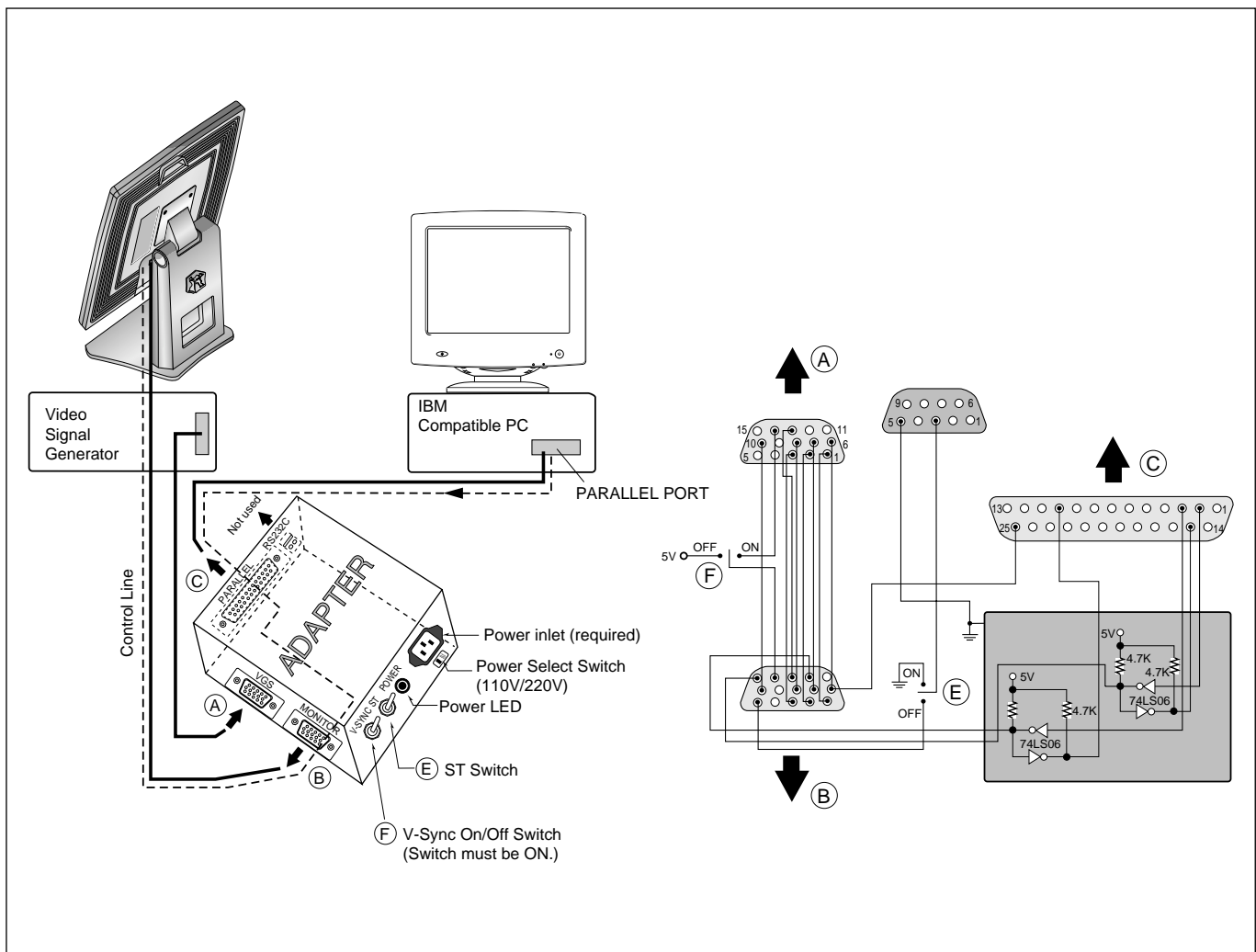
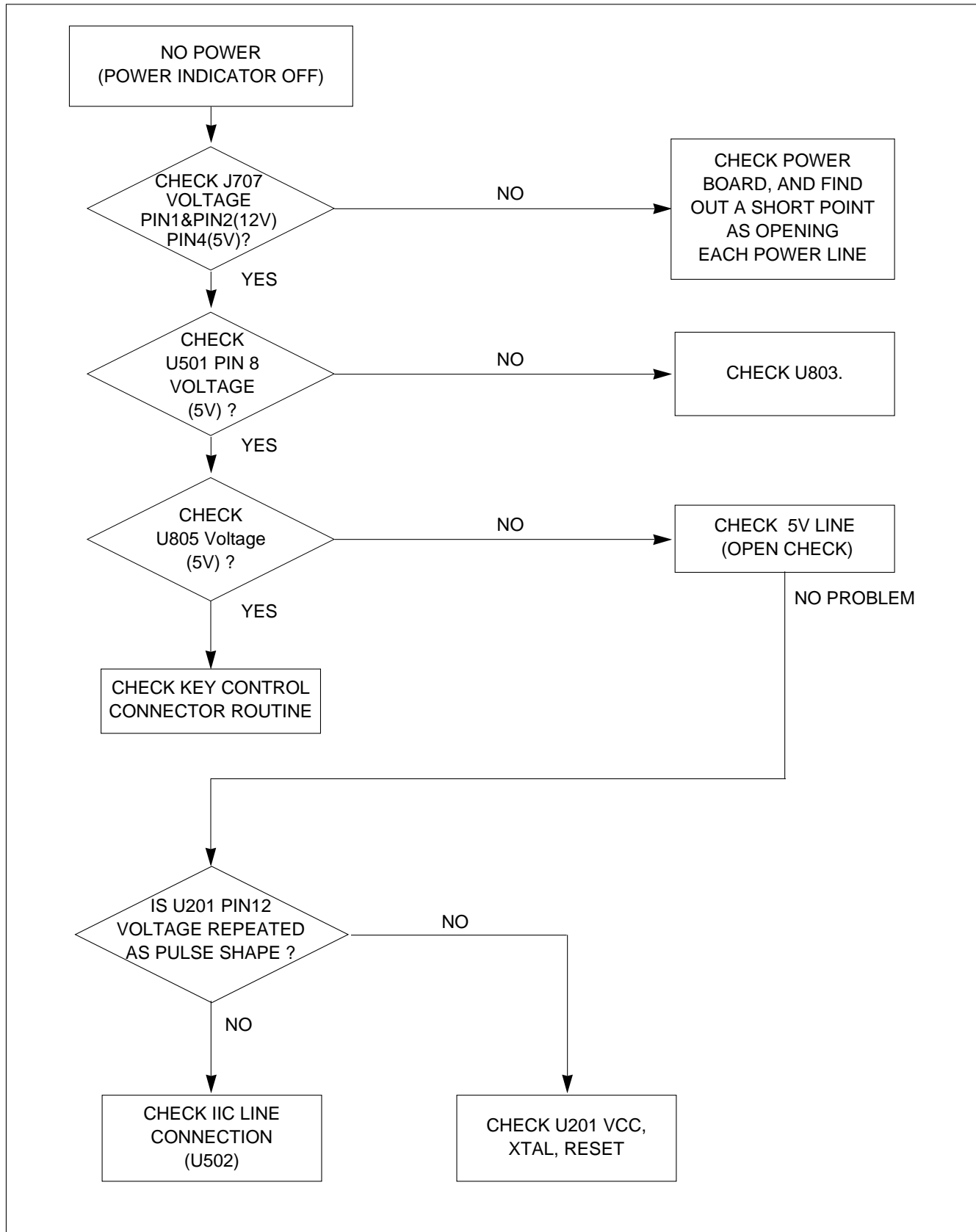


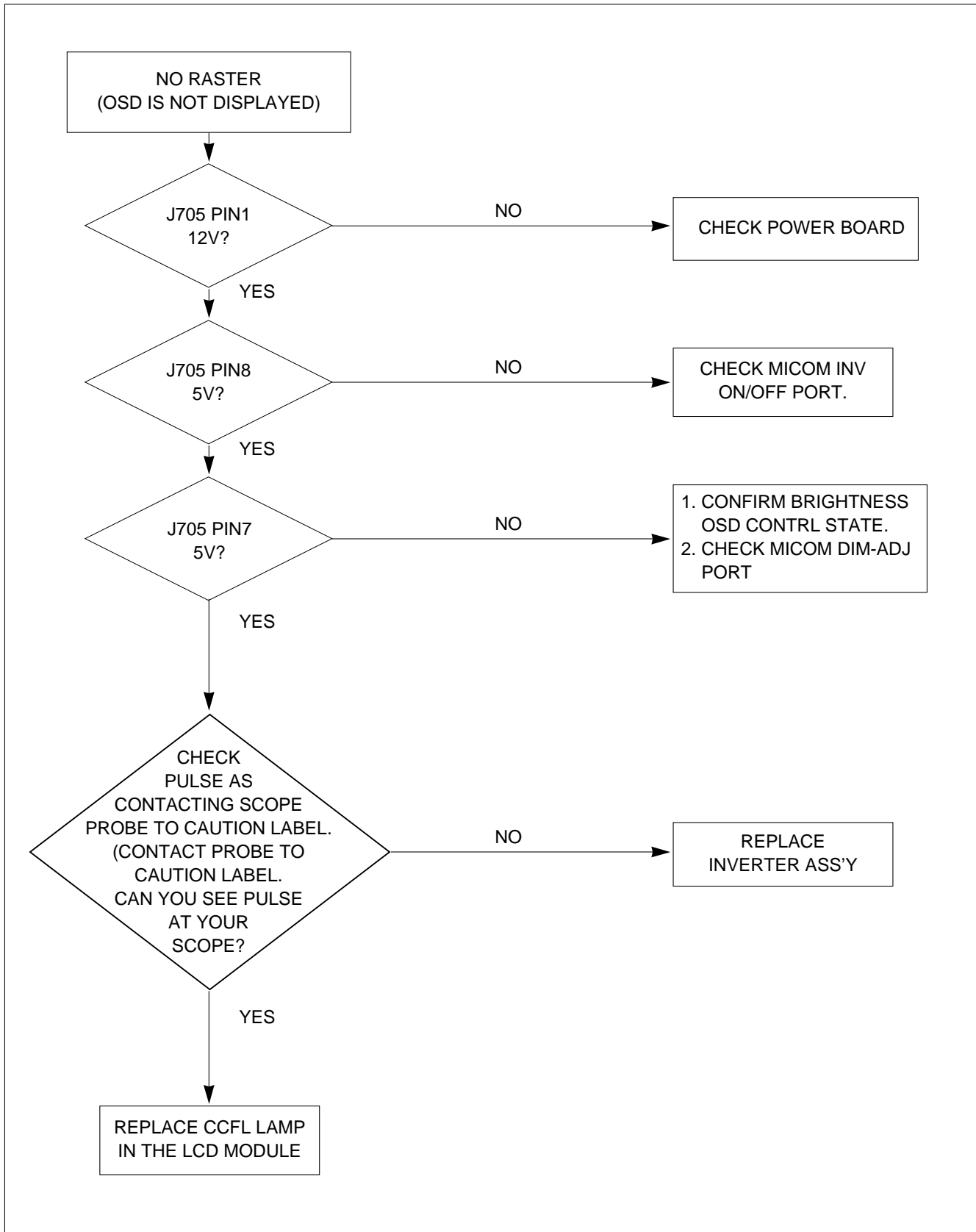
Figure 1. Cable Connection

TROUBLESHOOTING GUIDE

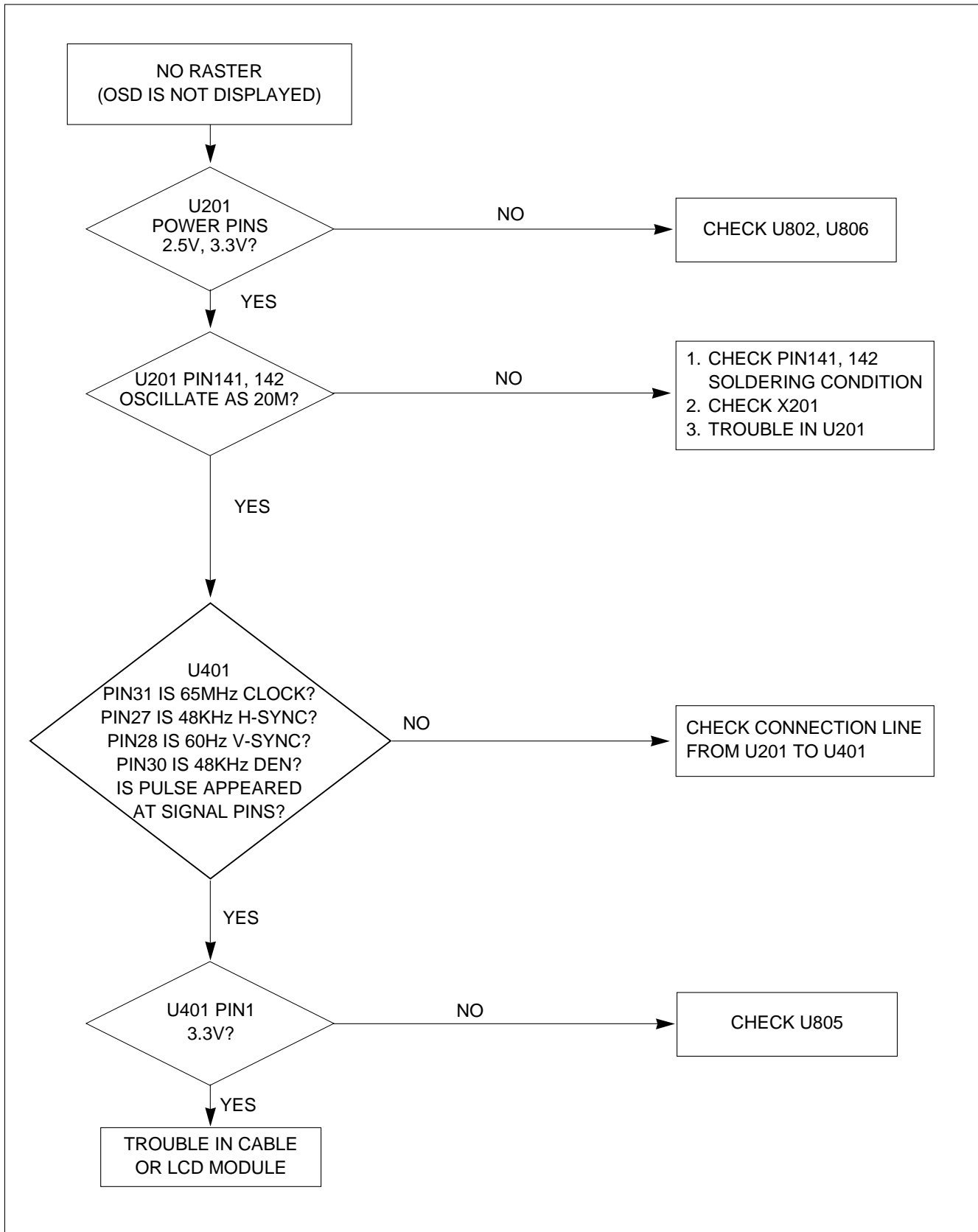
1. NO POWER



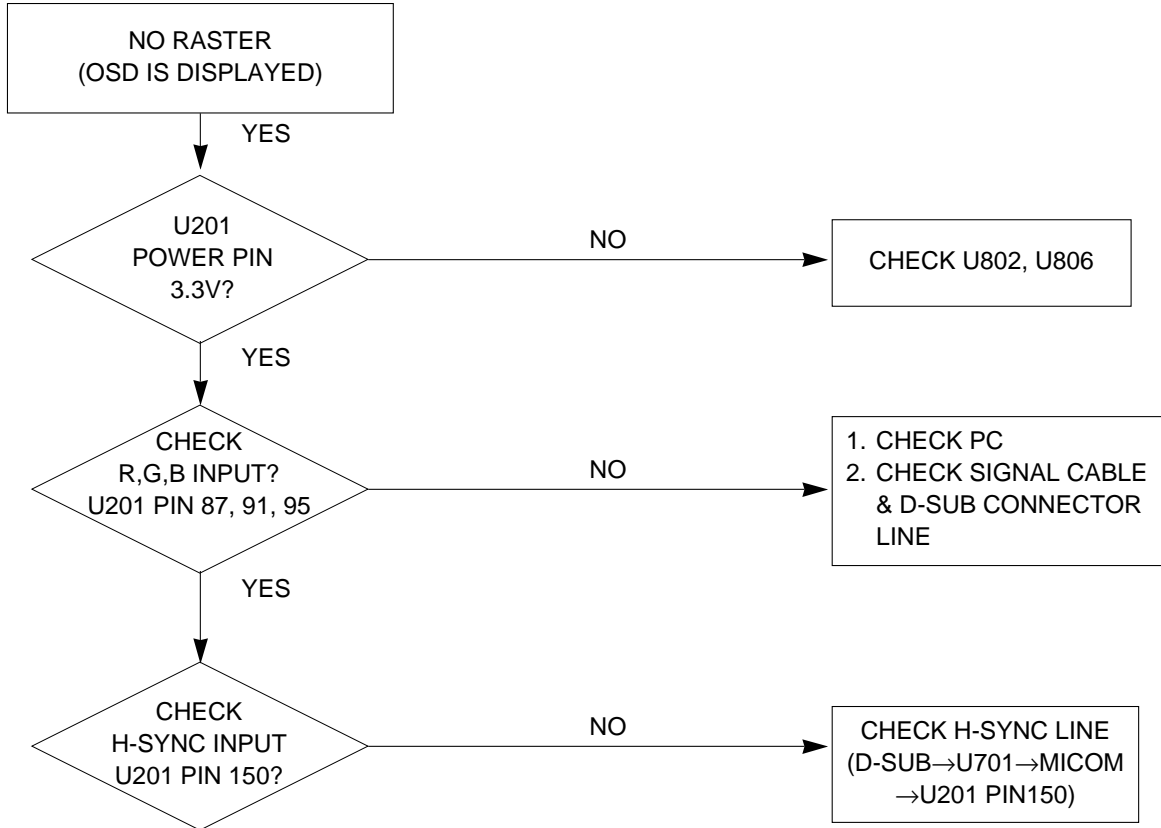
2. NO RASTER (OSD IS NOT DISPLAYED) – INVERTER



3. NO RASTER (OSD IS NOT DISPLAYED) – gmZAN2

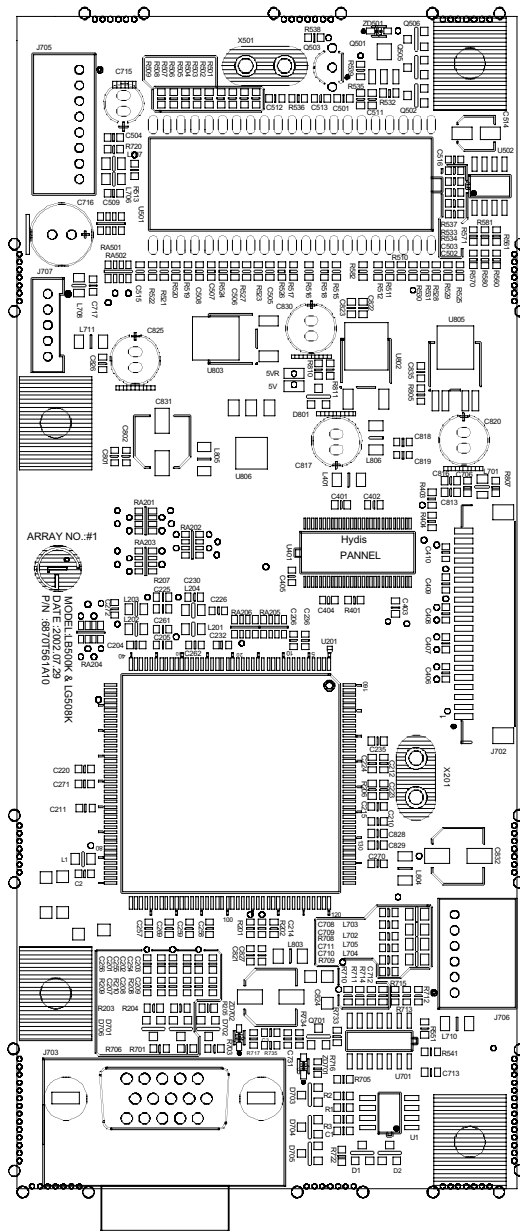


4. NO RASTER (OSD IS DISPLAYED) – gmZAN2

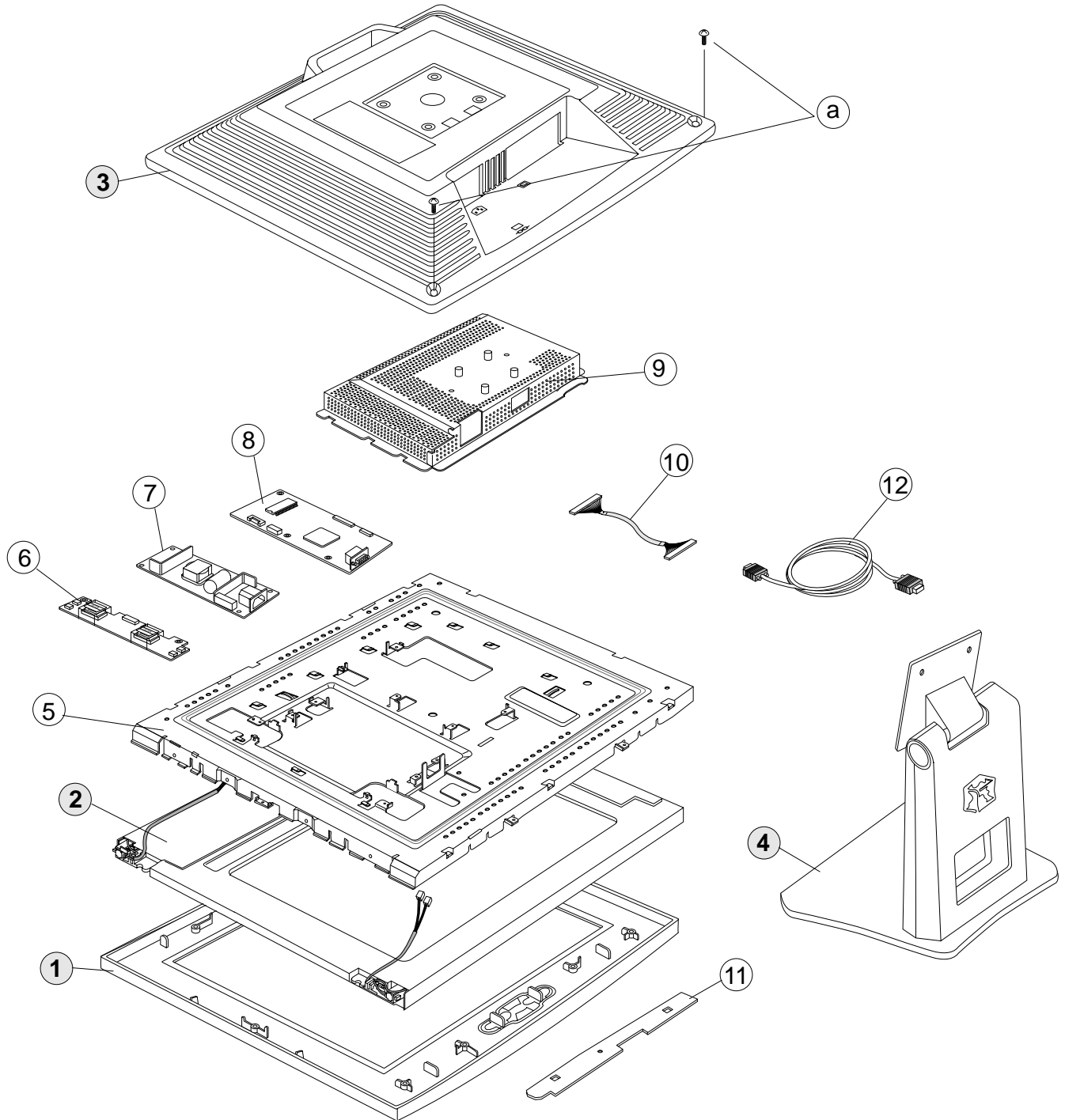


PRINTED CIRCUIT BOARD

1. MAIN BOARD (Component Side)




EXPLODED VIEW



EXPLODED VIEW PARTS LIST

Note:  SAFETY Mark

Ref. No.	Part No.	Description
1	3091TKL041E	CABINET ASSEMBLY, LG508J G/WAY LOCAL SUB_MATERIAL C/SKD
2	6304FTS003A	LCD(LIQUID CRYSTAL DISPLAY), LTM15C462L TOSHIBA TFT COLOR XGA 15.0 INCH LVDS
3	3809TKL027E	BACK COVER ASSEMBLY LG508J 3808TKL032A MX LOCAL
4	3043TKK078M	TILT SWIVEL ASSEMBLY LG508J . MX, SEMI-CKD
5	4951TKS085N	METAL ASSEMBLY, FRAME MAIN (LB500J,TOSHIBA)
6	6633TZA003L	 INVERTER ASSEMBLY, SAMSUNG LG1512 4-LAMP, LB500J, HYDIS
7	6871TPT223C	PWB(PCB) ASSEMBLY, POWER, LB500J POWER TOTAL BRAND CL-32
8	3313TL5056B	MAIN TOTAL ASSEMBLY, LG508K G/WAY CL-32 TOSHIBA_MODULE
9	4950TKK424D	METAL REAR LB508J C/SKD
10	6631T11016C	CONNECTOR ASSEMBLY 20P H-H 100MM UL20276 I/FACE CABLE LB500K
11	6871TST245E	PWB(PCB) ASSEMBLY, SUB, LG508J CONTROL TOTAL G/WAY
12	6850TD9001G	CABLE, D-SUB, UL 2990-9C(7.5) DT 1870MM BLACK(9930) , DM
a	332-113E	SCREW, DRAWING, D3.0 L10.0 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. 10. 07.				
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
MAIN BOARD				
CAPACITORS				
		C1	OCK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C2	OCK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C3	OCC680CK41A	68PF 1608 50V 5% R/TP NP0
		C201	OCC100CK41A	10PF 1608 50V 5% R/TP NP0
		C202	OCC100CK41A	10PF 1608 50V 5% R/TP NP0
		C203	OCC100CK41A	10PF 1608 50V 5% R/TP NP0
		C204	OCK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C205	OCK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P
		C206	OCK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		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	OCK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C215	OCK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P
		C223	OCC150CK41A	15PF 1608 50V 5% R/TP NP0
		C224	OCC150CK41A	15PF 1608 50V 5% R/TP NP0
		C225	OCC100CK41A	10PF 1608 50V 5% R/TP NP0
		C226	OCC680CK41A	68PF 1608 50V 5% R/TP NP0
		C230	OCC150CK41A	15PF 1608 50V 5% R/TP NP0
		C254	OCK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P
		C255	OCK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P
		C256	OCK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P
		C257	OCK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P
		C258	OCK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P
		C259	OCK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P
		C261	OCC680CK41A	68PF 1608 50V 5% R/TP NP0
		C262	OCC680CK41A	68PF 1608 50V 5% R/TP NP0
		C269	OCK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P
		C270	OCK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P
		C271	OCK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P
		C401	OCK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C402	OCK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C403	OCK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C404	OCK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C405	OCK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C406	OCC100CK41A	10PF 1608 50V 5% R/TP NP0
		C407	OCC100CK41A	10PF 1608 50V 5% R/TP NP0
		C408	OCC100CK41A	10PF 1608 50V 5% R/TP NP0
		C409	OCC100CK41A	10PF 1608 50V 5% R/TP NP0
		C410	OCC100CK41A	10PF 1608 50V 5% R/TP NP0
		C501	OCK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C502	OCC101CK41A	100PF 1608 50V 5% R/TP NP0
		C503	OCC101CK41A	100PF 1608 50V 5% R/TP NP0
		C504	OCK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C505	OCC101CK41A	100PF 1608 50V 5% R/TP NP0
		C506	OCC101CK41A	100PF 1608 50V 5% R/TP NP0
		C507	OCK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C508	OCK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C509	OCK104CK56A	0.1UF 1608 50V 10% R/TP X7R

DATE: 2002. 10. 07.				
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		C512	OCC220CK41A	22PF 1608 50V 5% R/TP NP0
		C513	OCC220CK41A	22PF 1608 50V 5% R/TP NP0
		C514	OCH8106F611	10UF 16V M 85STD(CYL) R/TP
		C515	OCC680CK41A	68PF 1608 50V 5% R/TP NP0
		C516	OCK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C706	OCK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C712	OCC101CK41A	100PF 1608 50V 5% R/TP NP0
		C713	OCK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C715	OCE106CK610	100UF SHL,SD 50V 20% BULK FL
		C716	OCE107CH610	100UF SHL,SD 25V 20% BULK FL
		C717	OCK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C731	OCC680CK41A	68PF 1608 50V 5% R/TP NP0
		C801	OCC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C802	OCK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C813	OCC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C816	OCK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C817	OCE107CF610	100UF SHL,SD 16V 20% BULK FL
		C818	OCK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C819	OCC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C820	OCE107CF610	100UF SHL,SD 16V 20% BULK FL
		C821	OCK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C822	OCC104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C823	OCC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C824	OCH8107F611	100UF 16V M 85STD(CYL) R/TP
		C825	OCE107CF610	100UF SHL,SD 16V 20% BULK FL
		C826	OCK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C827	OCC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C828	OCK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C829	OCC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C830	OCE107CF610	100UF SHL,SD 16V 20% BULK FL
		C831	OCH8107F611	100UF 16V M 85STD(CYL) R/TP
		C832	OCH8107F611	100UF 16V M 85STD(CYL) R/TP
		C835	OCK104CK56A	0.1UF 1608 50V 10% R/TP X7R
DIODEs				
		D1	0DS301109AA	MMBD301LT1 TP MOTOROLA SOT23 3
		D2	0DS301109AA	MMBD301LT1 TP MOTOROLA SOT23 3
		D701	0DS226009AA	KDS226 TP KEC SOT-23 80V 300M
		D702	0DS226009AA	KDS226 TP KEC SOT-23 80V 300M
		D703	0DS226009AA	KDS226 TP KEC SOT-23 80V 300M
		D704	0DS226009AA	KDS226 TP KEC SOT-23 80V 300M
		D705	0DS226009AA	KDS226 TP KEC SOT-23 80V 300M
		D706	0DS226009AA	KDS226 TP KEC SOT-23 80V 300M
		D801	0DS181009AA	KDS181 TP KEC SOT-23 80V 300
		D903	0DRGS00281A	MBRF10H100CT GENERAL SEMICONDU
		D906	0DR206000AA	MBRF2060CT BK G.I ITO220 60V 2
		ZD501	0DZ910009FE	UDZS 9.1B TP ROHM - - 9.1V - -
			0DZ560009GB	BZT52C5V6S DIODES R/TP SOD323
ICs				
		U1	0ICS240213A	CAT24WC02J-TE13 8P SOP TP 2K I
		U201	0IPRPGA002A	GMZAN2-160P GENESIS MICROCHIP

DATE: 2002. 10. 07.				
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		U401	0ITH638300B	THC63LVDM83R THINE 56P,TSSOP R
		U501	0IZZTSZ207A	MYSON 42PIN BK OTP LG508K
		U502	0ISG240860B	M24C08W6 SGS-THOMSON 8SOP R/TP
		U701	0IMO741420B	MC74HCT14ADR2 14P,SOIC TP LEVE
		U802	0IPMGKE011A	KIA78D33F KEC DPAK R/TP 3.3V L
		U803	0ISS780500H	KA78M05-R 3P,D-PAK TP 5V 0.5A
		U805	0IRH033000A	BA033SFP P/MOLD-5 TP REGULATOR
		U806	0IPMGON007A	NCP1117ST25T3 ON SEMI SOT223 R
		IC901	0IPMPGF004A	TOP246F POWER INTEGRATION TO26
COILS & CORES				
		L1	6210TCE001S	HU-1M2012-121 CERATECH 2012MM
		L201	6210TCE001P	HB-1S2012-121JT CERATECH 2012M
		L202	6210TCE001P	HB-1S2012-121JT CERATECH 2012M
		L203	6210TCE001P	HB-1S2012-121JT CERATECH 2012M
		L204	6210TCE001P	HB-1S2012-121JT CERATECH 2012M
		L401	6210TCE001G	HH-1M3216-501 CERATEC 3216MM R
		L701	6210TCE001S	HU-1M2012-121 CERATECH 2012MM
		L702	6210TCE001P	HB-1S2012-121JT CERATECH 2012M
		L703	6210TCE001P	HB-1S2012-121JT CERATECH 2012M
		L704	6210TCE001P	HB-1S2012-121JT CERATECH 2012M
		L705	6210TCE001P	HB-1S2012-121JT CERATECH 2012M
		L706	6210TCE001P	HB-1S2012-121JT CERATECH 2012M
		L707	6210TCE001P	HB-1S2012-121JT CERATECH 2012M
		L708	6210TCE001S	HU-1M2012-121 CERATECH 2012MM
		L710	6210TCE001G	HH-1M3216-501 CERATEC 3216MM R
		L711	6210TCE001G	HH-1M3216-501 CERATEC 3216MM R
		L803	6210TCE001G	HH-1M3216-501 CERATEC 3216MM R
		L804	6210TCE001G	HH-1M3216-501 CERATEC 3216MM R
		L805	6210TCE001G	HH-1M3216-501 CERATEC 3216MM R
		L806	6210TCE001G	HH-1M3216-501 CERATEC 3216MM R
TRANSISTOR				
		Q502	0TR390409AE	FAIRCHILD KST3904(LGEMTF) TP S
		Q503	0IKE704200H	KIA7042AP TO-92 TP 4.2 VOLT.
		Q505	0TR162309CA	KSC1623 TP SAMSUNG SOT23 NPN
		Q506	0TR162309CA	KSC1623 TP SAMSUNG SOT23 NPN
		Q701	0TR390409AE	FAIRCHILD KST3904(LGEMTF) TP S
RESISTORS				
		R1	0RJ1500D677	150 OHM 1/10 W 5% 1608 R/TP
		R2	0RJ1500D677	150 OHM 1/10 W 5% 1608 R/TP
		R3	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R201	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R202	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R203	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R204	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R205	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R206	0RJ2701D677	2.7K OHM 1/10 W 5% 1608 R/TP
		R207	0RJ0332D677	33 OHM 1/10 W 5% 1608 R/TP
		R208	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R209	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R210	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R401	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R403	0RJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R404	0RJ5601D477	5.6K OHM 1/10 W 1% 1608 R/TP
		R501	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R502	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R503	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP

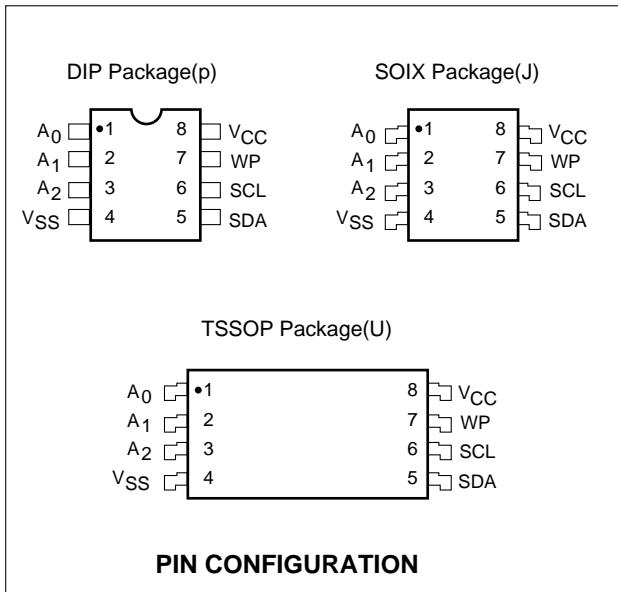
DATE: 2002. 10. 07.				
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		R504	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R505	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R506	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R507	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R508	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R509	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R510	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R511	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R512	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R513	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R515	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R516	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R517	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R518	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R519	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R520	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R521	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R522	0RJ1500D677	150 OHM 1/10 W 5% 1608 R/TP
		R523	0RJ0332D677	33 OHM 1/10 W 5% 1608 R/TP
		R524	0RJ0332D677	33 OHM 1/10 W 5% 1608 R/TP
		R525	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R526	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R527	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R528	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R529	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R530	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R531	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R532	0RJ3301D677	3.3K OHM 1/10 W 5% 1608 R/TP
		R533	0RJ1500D677	150 OHM 1/10 W 5% 1608 R/TP
		R534	0RJ1500D677	150 OHM 1/10 W 5% 1608 R/TP
		R535	0RJ3301D677	3.3K OHM 1/10 W 5% 1608 R/TP
		R536	0RJ1004D677	1000000 OHM 1/10 W 5% 1608 R/TP
		R537	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R538	0RJ2202D677	22K OHM 1/10 W 5% 1608 R/TP
		R539	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R541	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R551	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R560	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R570	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R581	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R582	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R701	0RJ0752D677	75 OHM 1/10 W 5% 1608 R/TP
		R703	0RJ0752D677	75 OHM 1/10 W 5% 1608 R/TP
		R705	0RJ4700D677	470 OHM 1/10 W 5% 1608 R/TP
		R706	0RJ0752D677	75 OHM 1/10 W 5% 1608 R/TP
		R708	0RJ1500D677	150 OHM 1/10 W 5% 1608 R/TP
		R709	0RJ1500D677	150 OHM 1/10 W 5% 1608 R/TP
		R711	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R712	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R713	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R714	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R715	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R716	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R717	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R722	0RJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R733	0RJ1501D677	1.5K OHM 1/10 W 5% 1608 R/TP
		R734	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R735	0RJ0272D677	27 OHM 1/10 W 5% 1608 R/TP
		R805	0RJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R807	0RJ1003D677	100K OHM 1/10 W 5% 1608 R/TP
		R810	0RJ0221D677	2.2 OHM 1/10 W 5% 1608 R/TP
		R811	0RJ0221D677	2.2 OHM 1/10 W 5% 1608 R/TP

DATE: 2002. 10. 07.				
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		RA201	0RHZTCZ001A	100 OHM 1/16 W 5% 3215 R/TP CH
		RA202	0RHZTCZ001A	100 OHM 1/16 W 5% 3215 R/TP CH
		RA203	0RHZTCZ001A	100 OHM 1/16 W 5% 3215 R/TP CH
		RA204	0RHZTCZ001A	100 OHM 1/16 W 5% 3215 R/TP CH
		RA205	0RHZTCZ001A	100 OHM 1/16 W 5% 3215 R/TP CH
		RA206	0RHZTCZ001A	100 OHM 1/16 W 5% 3215 R/TP CH
		RA501	0RHZTCZ001A	100 OHM 1/16 W 5% 3215 R/TP CH
		RA502	0RHZTCZ001A	100 OHM 1/16 W 5% 3215 R/TP CH
OTHERs				
		X201	6212AA2004B	HC-49U TXC 20.0MHZ +/- 30 PPM
		X501	6212AA2004A	HC-49U TXC 12.0MHZ +/- 30 PPM
POWER BOARD				
		BD901	0DD260000BE	D2SB60 SHINDENKEN
△		C901	0CBZTBU002D	0.33UF D 275V K M/PP NI FM22.5
△		C902	0CKZTBU003D	SC SAMWHA 250V 1000PF M BULK 7
△		C902	0CKZTBU003D	SC SAMWHA 250V 1000PF M BULK 7
		C903	0CKZTBU003D	SC SAMWHA 250V 1000PF M BULK 7
		C903	0CKZTBU003D	SC SAMWHA 250V 1000PF M BULK 7
		C905	0CZZTAB004B	KMG SYE / SWE 400V 68UF 20% BU
		C906	0CK10201515	1000P 1KV K B TS
		C907	0CE105EK638	1UF KMG 50V M FM5 TP 5
		C908	0CE476EH638	47UF KMG 25V M FM5 TP 5
		C909	181-288B	MKT 100V 104JTR PHS26104
		C911	0CE108EF630	1000UF KMG 16V M FM5 BULK
		C914	0CE335EK638	3.3UF KMG 50V M FM5 TP 5
		C916	181-288L	MKT 100V 823JTR PHS26823
		C918	0CE108EF630	1000UF KMG 16V M FM5 BULK
△		C920	0CKZTBU003C	SC E 472M 14.0BW7 250V BK7.5 S
		C922	0CK10201515	1000P 1KV K B TS
		C923	0CK10201515	1000P 1KV K B TS
		D901	0DD400709CB	UF4007 TP G.I DO204AL 1000V 1
		D904	0DR400409AB	UF4004 TP G.I DO204AL 400V 1A
		D908	0DZ620009AP	P6KE200A GENERAL SEMICONDUCTOR
△		F901	0FZZTTH001E	TIME LAG HBC 2153.15MXE(LEAD),
		IC904	0ISS431000A	KA431AZ (LM431AZ)
△		LF901	6200TZZ001B	- 0 BK L/FILTER, 9MH, LG56BP
△		P901	6620TKB002C	BCP031S-A, BAE EUN AC UNIVERSAL
△		PC901	0ILI817000E	LTV-817M B 4P BK PHOTO COUPLER
		R901	0RD6803A609	680K OHM 1/2 W (7.0) 5% TA52
		R902	0RD1004Q609	1M OHM 1/4 W (3.4) 5% TA52
		R903	0RD1004Q609	1M OHM 1/4 W (3.4) 5% TA52
		R904	0RD4704Q609	4.7M OHM 1/4 W (3.4) 5% TA52
		R905	0RD4704Q609	4.7M OHM 1/4 W (3.4) 5% TA52
		R906	0RX4702J609	47K OHM 1 W 5% TA52
		R907	0RD0471Q609	4.70 1/4W(3 5% TA52
		R908	0RD0681Q609	6.8 OHM 1/4 W (3.4) 5% TA52
		R909	0RD1001Q609	1K 1/4W(3 5% TA52
		R913	0RN1302F409	13K 1/6W 1% TA52
		R917	0RD1201Q609	1.20K 1/4W(3 5% TA52
		R918	0RD1000Q609	100 1/4W(3 5% TA52
		R920	0RN1302F409	13K 1/6W 1% TA52
		R921	0RN2701F409	2.70K 1/6W 1% TA52
		R923	0RD1202Q609	12K 1/4W(3 5% TA52
		T901	6170TMZ133A	EER3016 1200 UH V-10PIN LG500J
△		TH901	6322A00002B	SCK-102L THINKING 10OHM 20% 25
		ZD901	0DZ750009AG	MTZJ7.5B TP ROHM-K DO34 0.5W 7

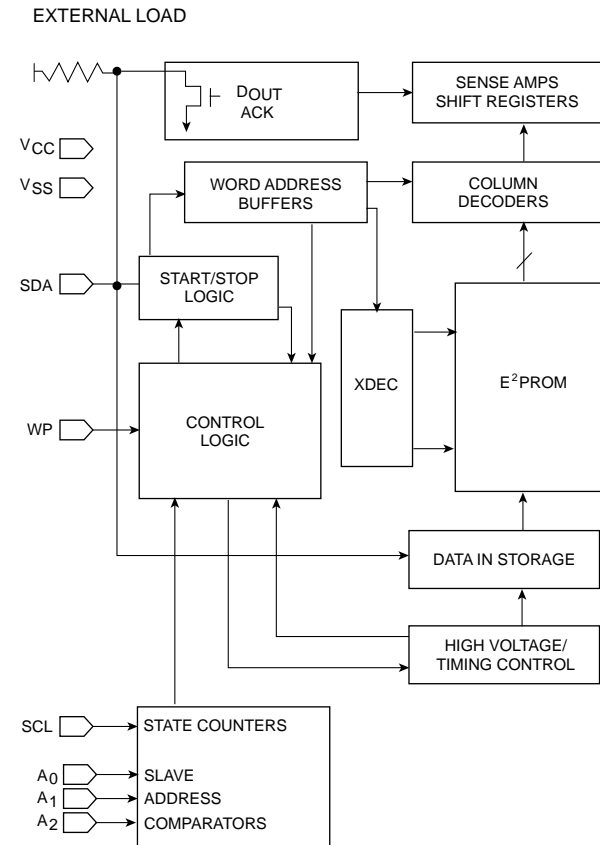
DATE: 2002. 10. 07.				
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
CONTROL BOARD				
		C1	0CN1040K949	0.1M 50V Z F TA52
		C2	0CN1040K949	0.1M 50V Z F TA52
		C3	0CN1040K949	0.1M 50V Z F TA52
		LED1	0DL305029BA	LTL-305DJ-0C2 TP LITEON GREEN/
		R1	0RD4701Q509	4.7K OHM 1/4 W (3.4) 2% TA52
		R2	0RD4701Q509	4.7K OHM 1/4 W (3.4) 2% TA52
		R3	0RD1501Q509	1.5K OHM 1/4 W (3.4) 2% TA52
		R4	0RD1501Q509	1.5K OHM 1/4 W (3.4) 2% TA52
		R5	0RD3301Q509	3.3K OHM 1/4 W (3.4) 2% TA52
		R6	0RD3301Q509	3.3K OHM 1/4 W (3.4) 2% TA52
		R7	0RD9101Q609	9.10K 1/4W(3 5% TA52
		SW1	140-058D	SKHV10911A LGEC NON 12 20 HORI
		SW2	140-058D	SKHV10911A LGEC NON 12 20 HORI
		SW3	140-058D	SKHV10911A LGEC NON 12 20 HORI
		SW4	140-058D	SKHV10911A LGEC NON 12 20 HORI
		SW5	140-058D	SKHV10911A LGEC NON 12 20 HORI
		SW6	140-058D	SKHV10911A LGEC NON 12 20 HORI
		SW7	140-058E	SKHV10910B LGEC NON 12V 20A HO
		ZD1	0DZ560009CE	MTZJ5.6B TP ROHM-K DO34 500MW
		ZD2	0DZ560009CE	MTZJ5.6B TP ROHM-K DO34 500MW

PIN CONFIGURATION

CAT24WC08J-TE13 8P



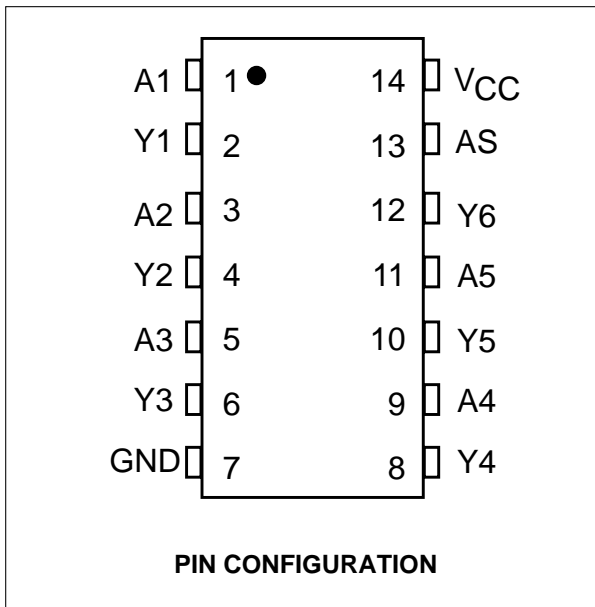
BLOCK DIAGRAM



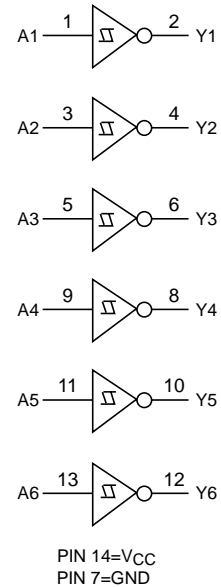
PIN FUNCTION

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

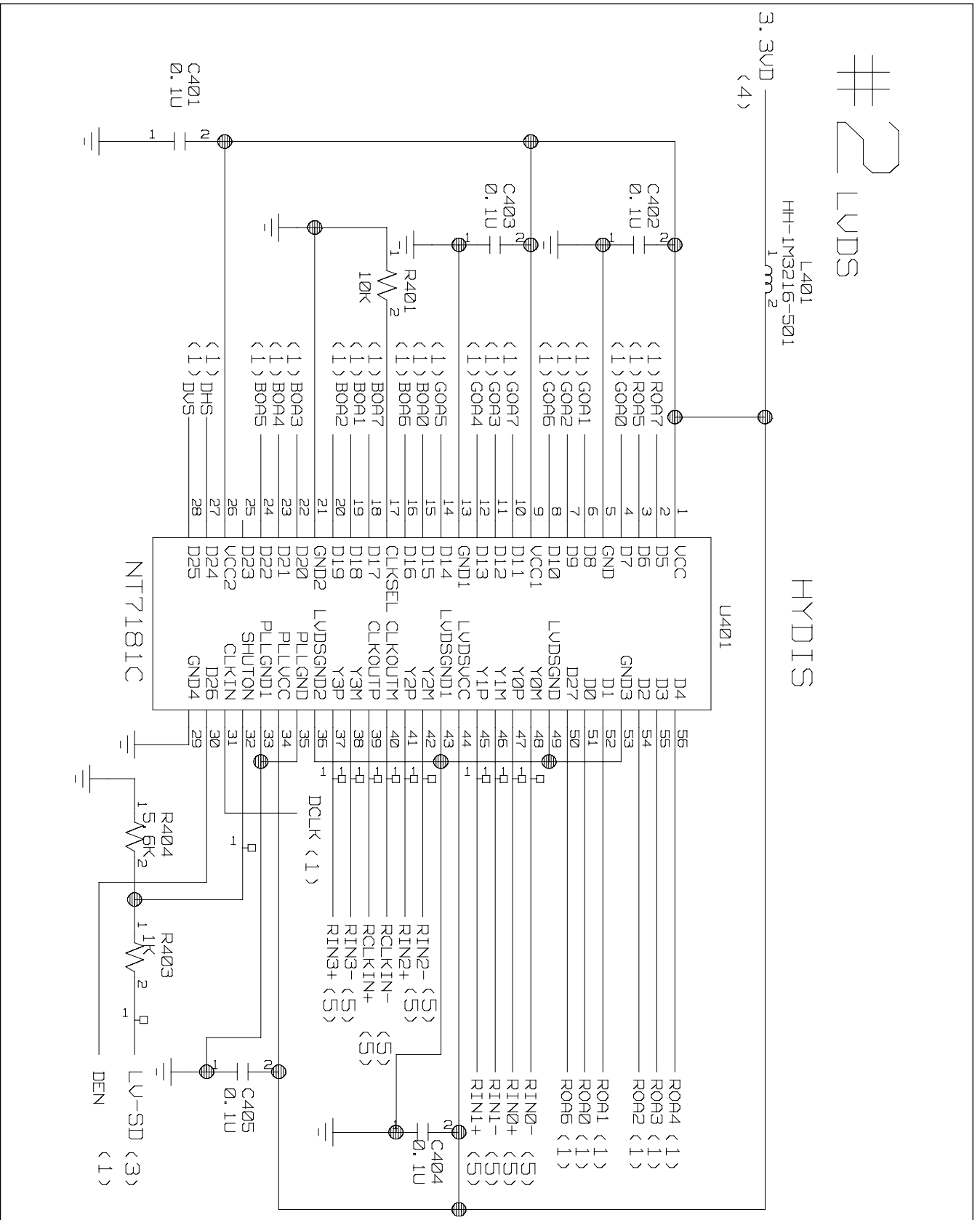
MC74HCT14ADR2 14P



BLOCK DIAGRAM

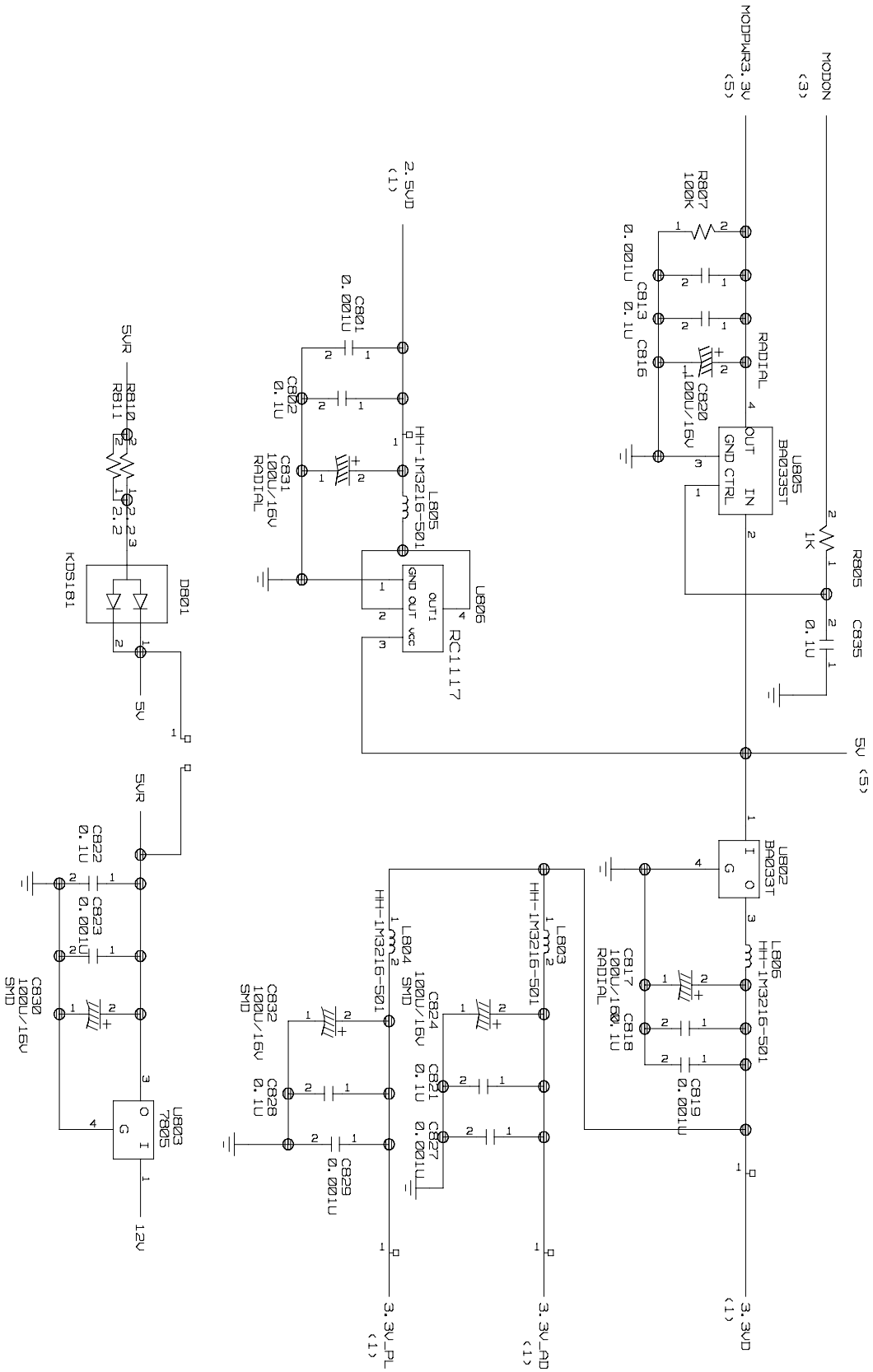


2. LVDS



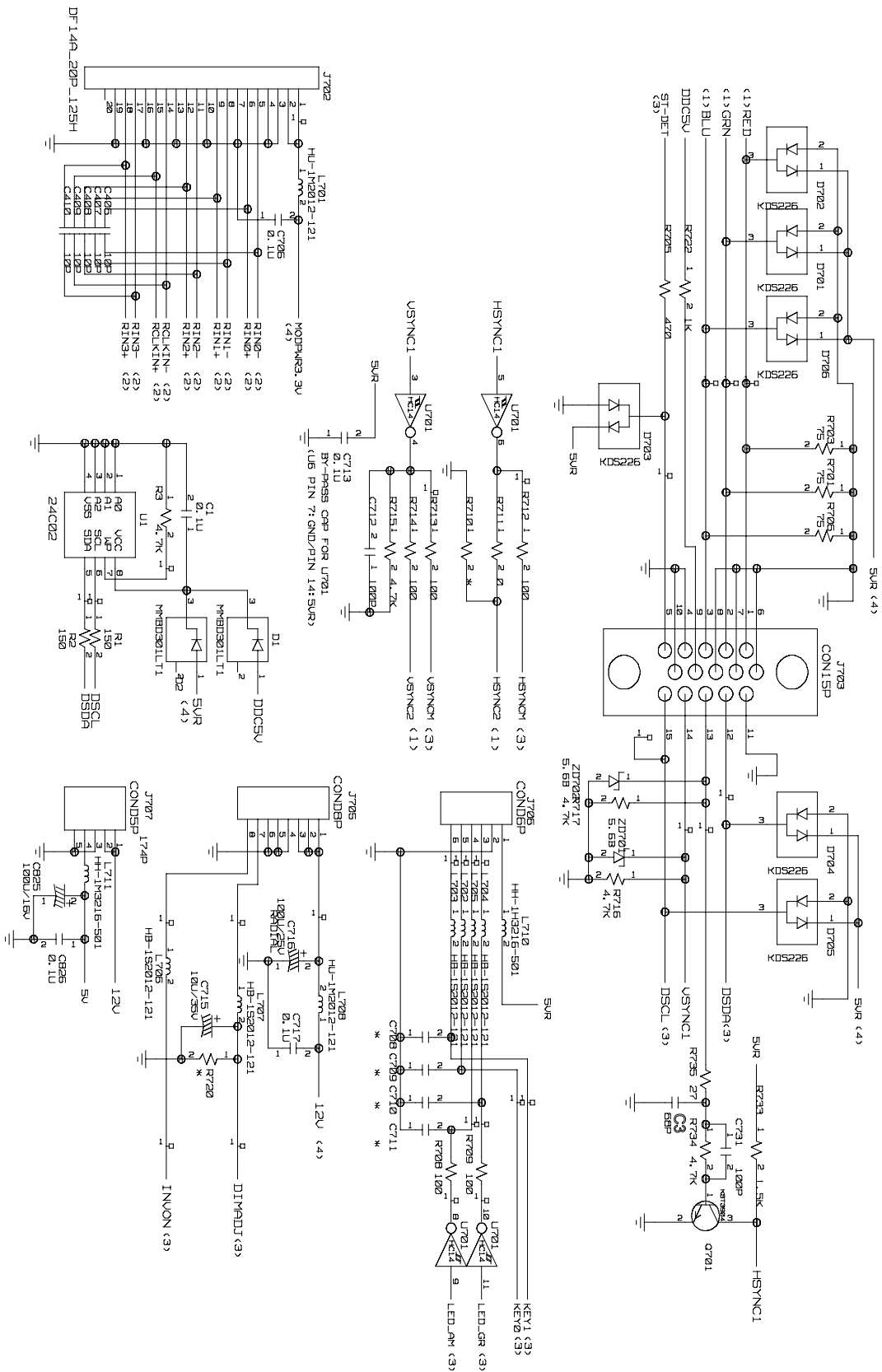
4. DC/DC BLOCK

4 POWER



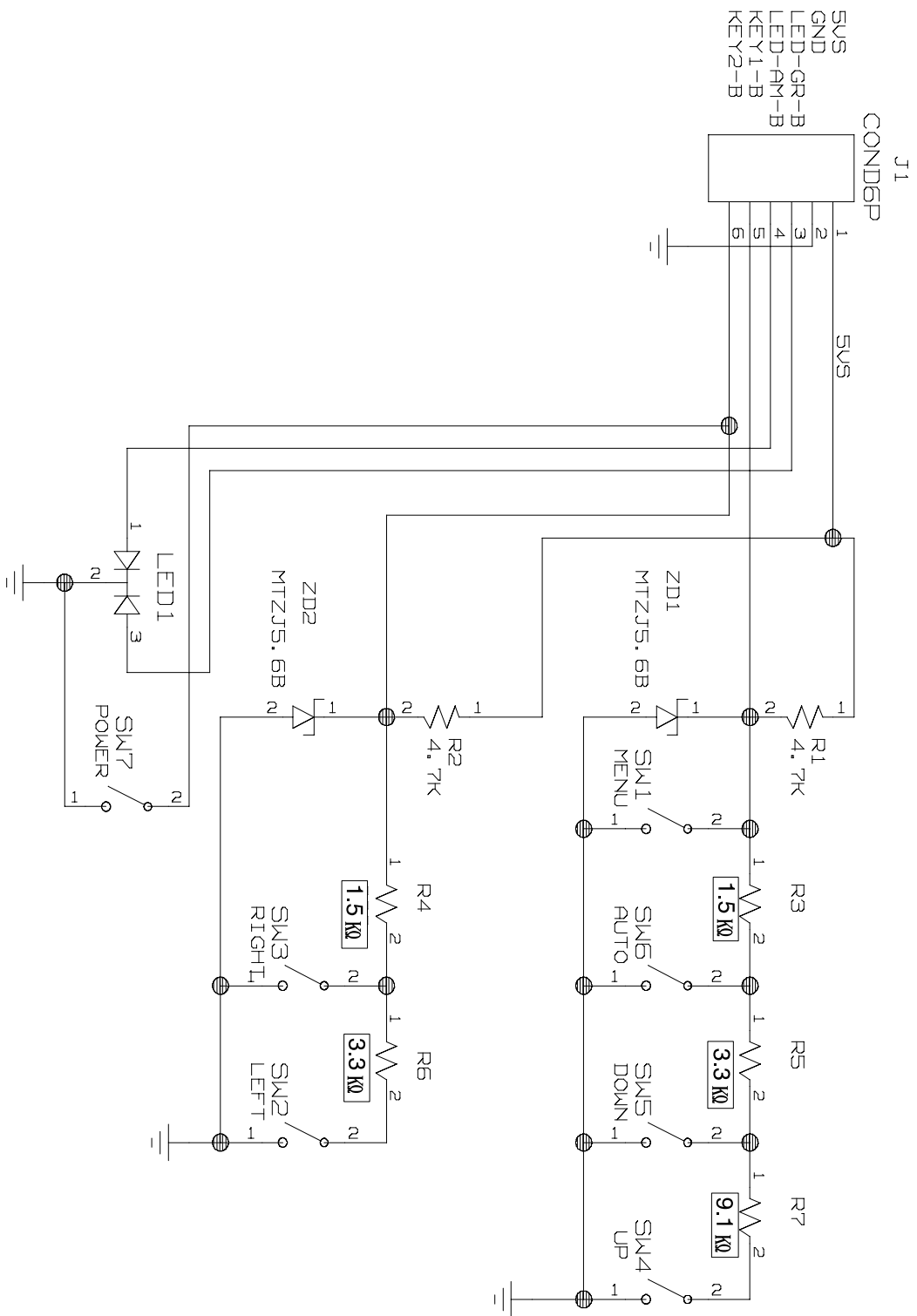
5. CONNECTOR & JACKS

#5 CONNECTOR & JACKS

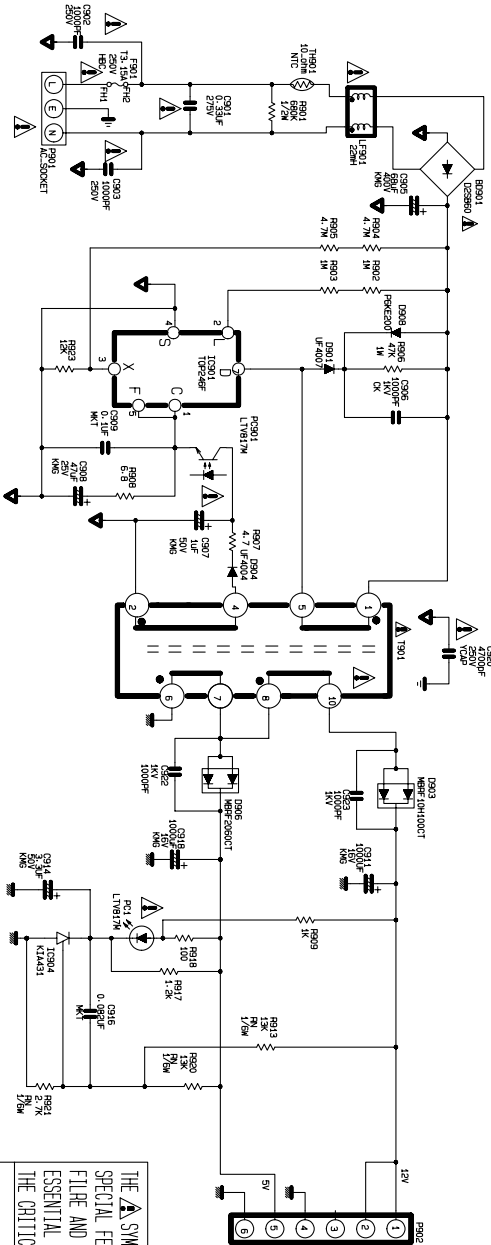


6. CONTROL

CONTROL/POWER



7. POWER



THE SYMBOL MARK OF THIS SCHEMATIC DIAGRAM INCORPORATES SPECIAL FEATURES IMPORTANT FOR PROTECTION FROM X-RADIATION, FIRE AND ELECTRICAL SHOCK HAZARDS. WHEN SERVICING IT IS ESSENTIAL THAT ONLY MANUFACTURER SPECIFIED PARTS BE USED FOR THE CRITICAL COMPONENTS IN THE SYMBOL MARK OF THE SCHEMATIC.

COMPANY CONFIDENTIAL DO NOT COPY!

DRAWN	2002.01.04	REV	01
MODEL	LB500J	Sheet	1 / 1 Page

P/NO : 3828TSO045D

Oct. 2002
Printed in Korea

