

LG

COLOR MONITOR

SERVICE MANUAL

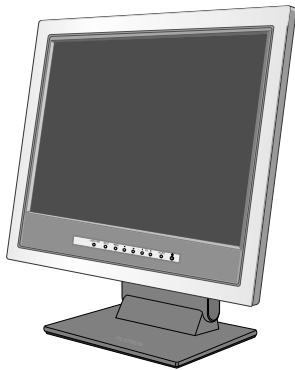
CHASSIS NO. : CL-38

FACTORY MODEL: LM505J

MODEL: FLATRON L1510M (LM505J-GL)

CAUTION

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



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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	: 8Bits/ 16M colors
Active Video Area	: 15.0 inch (304.128 x 228.096)
Surface Treatment	: Anti-Glare
Backlight Unit	: Top/Bottom edge side 2CCFL
Electrical Interface	: LVDS/TTL interface

2. OPTICAL CHARACTERISTICS

2-1. Viewing Angle by Contrast Ratio ≥ 10	
Left	: 60° min.
Right	: 60° min.
Top	: 45° min.
Bottom	: 45° 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(Automatic)
Vertical	: 56 ~ 75Hz(Automatic)

4. POWER SUPPLY

4-1. Power	100~240V, 50/60Hz 0.6A
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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 3 W	AMBER
SUSPEND	ON/OFF	OFF	less than 3 W	AMBER
DPMS OFF	OFF/OFF	OFF	less than 3 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	: 30,000 Hours (min.)

6. DIMENSIONS (with TILT/SWIVEL)

Width	: 360.0mm (14.17")
Depth	: 153.0mm (6.02")
Height	: 359.8mm (14.16")

7. WEIGHT (with TILT/SWIVEL)

Net. Weight	: 4.15kg (9.15 lbs)
Gross Weight	: 5.5kg (12.13 lbs)

8. Audio

RMS Audio Output	: 1W + 1W(R+L)
Input Sensitivity	: 0.7Vrms
Speaker Impedance	: 4 Ω

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.

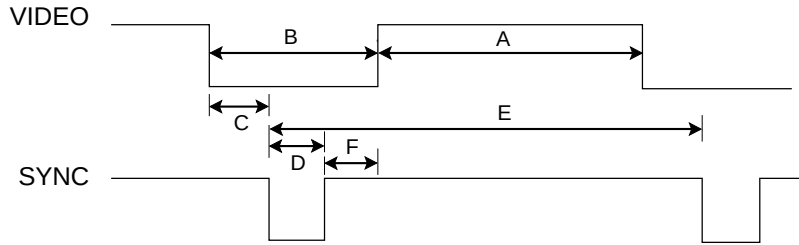
TAKE CARE DURING HANDLING THE LCD MODULE WITH BACKLIGHT UNIT.

- 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.

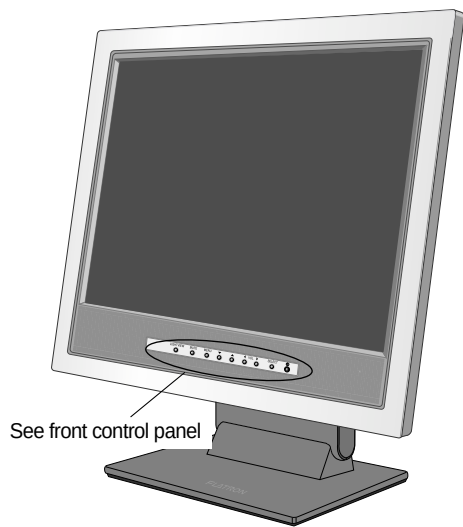
TIMING CHART



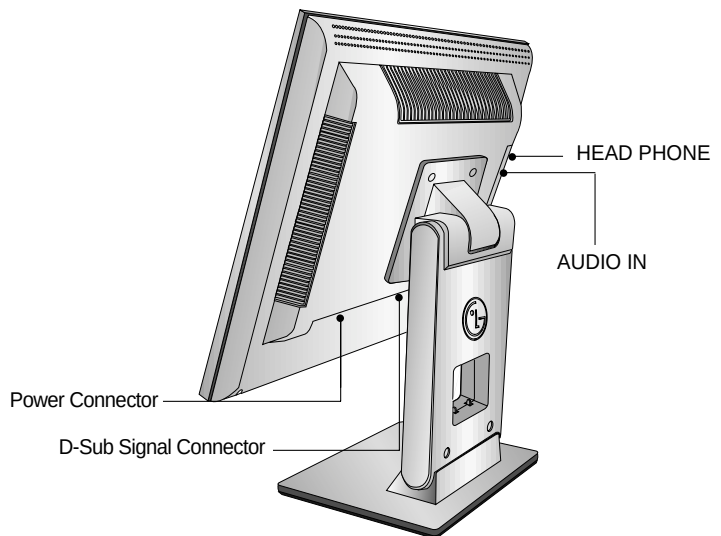
MODE	H / V	Sync Polarity	Dot Clock	Frequency	Total Period (E)	Video Active Time (A)	Blanking Time (B)	Sync Duration (D)	Back Porch (F)	Front Porch (C)	Resolution
1	H (Pixels)	+	25.175	31.468 KHz	800	640	160	96	48	16	640 x 350
	V (Lines)	-		70.0 Hz	449	350	99	2	60	37	
2	H (Pixels)	-	28.322	31.468 KHz	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

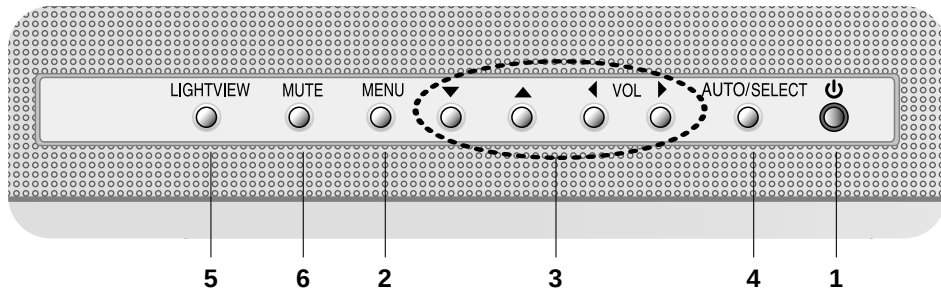
FRONT VIEW



REAR VIEW



Front Control Panel



1. Power Button

Use this button to turn the display on or off.

<Power (DPMS) Indicator>

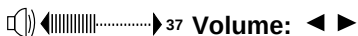
This Indicator lights up green when the display operates normally. If the display is in DPM (Energy Saving) mode, this indicator color changes to amber.

2. Menu Button

Use this button to enter or exit the On Screen Display.

3. ▼▲◀▶ Button

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



Use these buttons to decrease or increase the volume level.

4. AUTO/SELECT Button

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



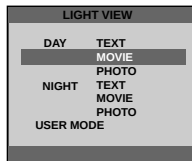
When adjusting your display settings, always press the **AUTO/SELECT** button before entering the On Screen Display(OSD). This will automatically adjust your display image to the ideal settings for the current screen resolution size (display mode). The best display mode is **1024x768**.

OPERATING INSTRUCTIONS

Front Control Panel

5. LIGHT VIEW

This function optimizes the brightness, contrast or color value to the surrounding conditions and settings and enables you to enjoy the most suitable picture by adjusting the surroundings (DAY/NIGHT /USER MODE)



- TEXT: For viewing letters
- MOVIE: For viewing movies
- PHOTO: For viewing pictures or the photographs
- USER MODE: This function memorizes the manual adjustment -Brightness, Contrast and Color value on the On Screen Display.

6. 37 MUTE

Used to select mute on (means sound off) and mute off (means sound on).

※ CONTROLS LOCKED/UNLOCKED

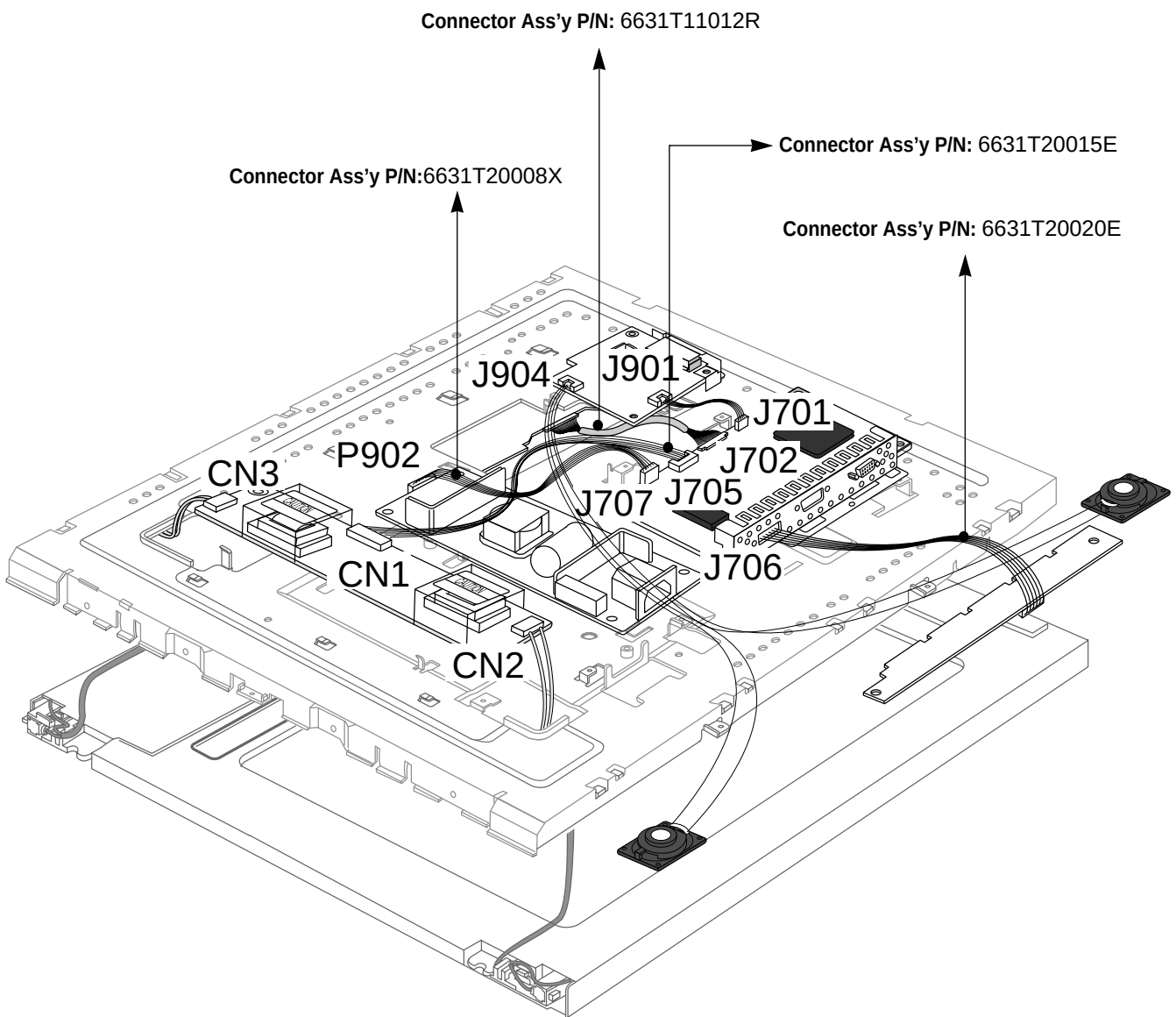
: MENU and ►Button for 3 seconds

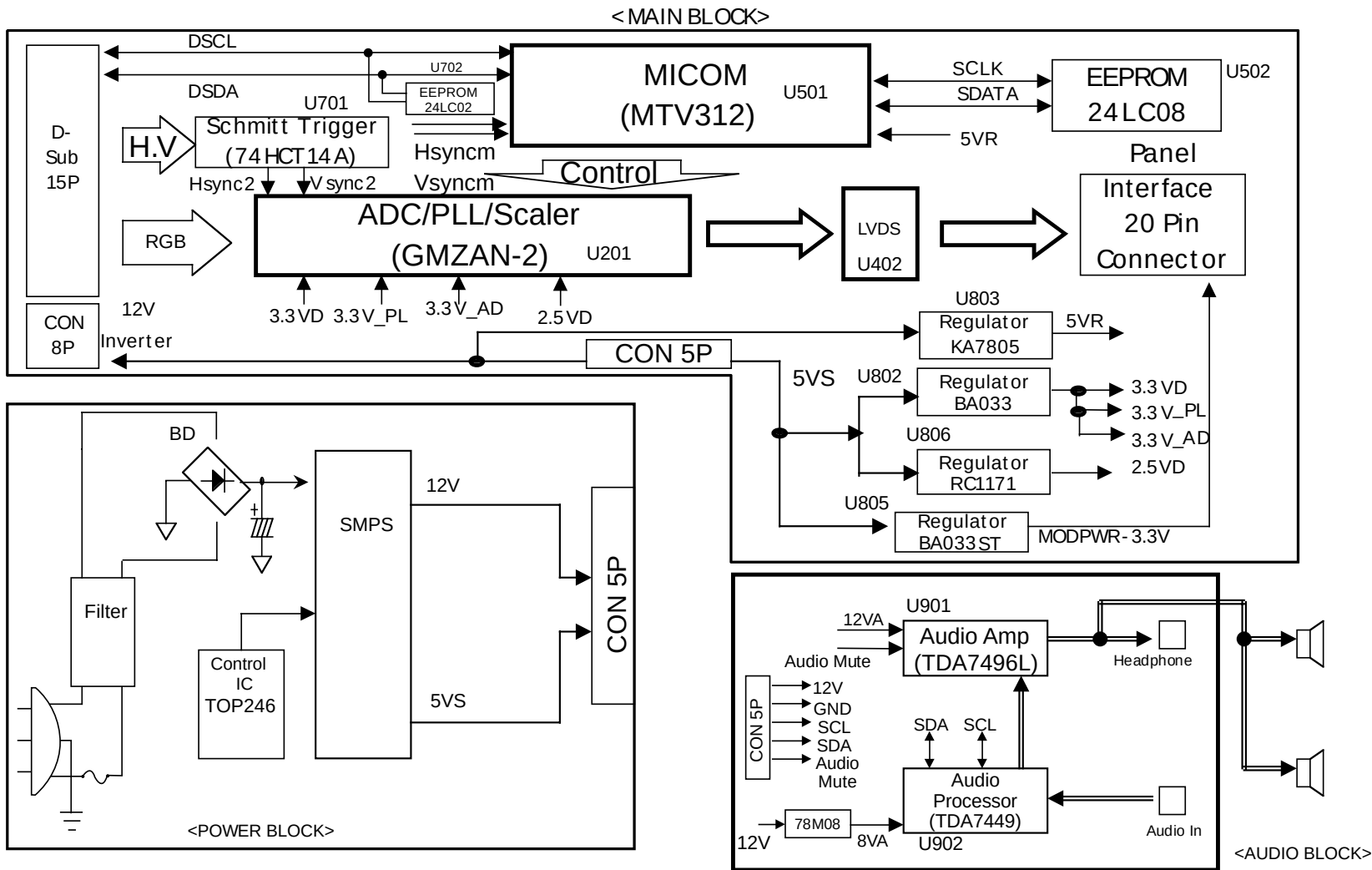
Use this button to enter or exit the On Screen Display.



This function allows you to secure the current control settings, so that they cannot be inadvertently changed. Press and hold the MENU button and ► button for 3 seconds: the message **"CONTROLS LOCKED"** appears.

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





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 C209, 208, 207 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 generates Clock, Horizontal and Vertical sync, Data Enable signals as LCD Panel'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 6 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, U402)

LVDS transmitter (U402) 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, 3.3V, and 5V.

Each regulator's source power is 5VS and 12V from power block.

U806 supplies 2.5VD, 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 5VS from power block.

U805 supplies MODPWR-3.3V for LCD module's operation by dropping down 5VS from power block.

U803 supplies 5VR for Microprocessor and Logic IC(U701)'s operation by dropping down 12V from power block.

5. Power Block

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

Converting method is SMPS(Switching Mode Power Supply).

6. Audio Part(TDA7449, TDA7496L)

In the circuit, audio processor(TDA7449) which is controlled by microprocessor(U501) adjust volume/treble/bass/balance of audio signal which come from PC.

The signal come from TDA7449 is amplified by TDA7496L. The final output signal is output through speaker.

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 LM505J 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 command and Enter.
- 6) Press "Y"key, it will automatically save all FOS data to EEPROM.

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 END command and Enter.

3. DDC Data Write Procedure

- 1) Use this procedure only when there is some probelm on EDID data.
- 2) Select EDID → Write EDID[AΦ] command and Enter.
- 3) This will write the EDID data to EEPROM.

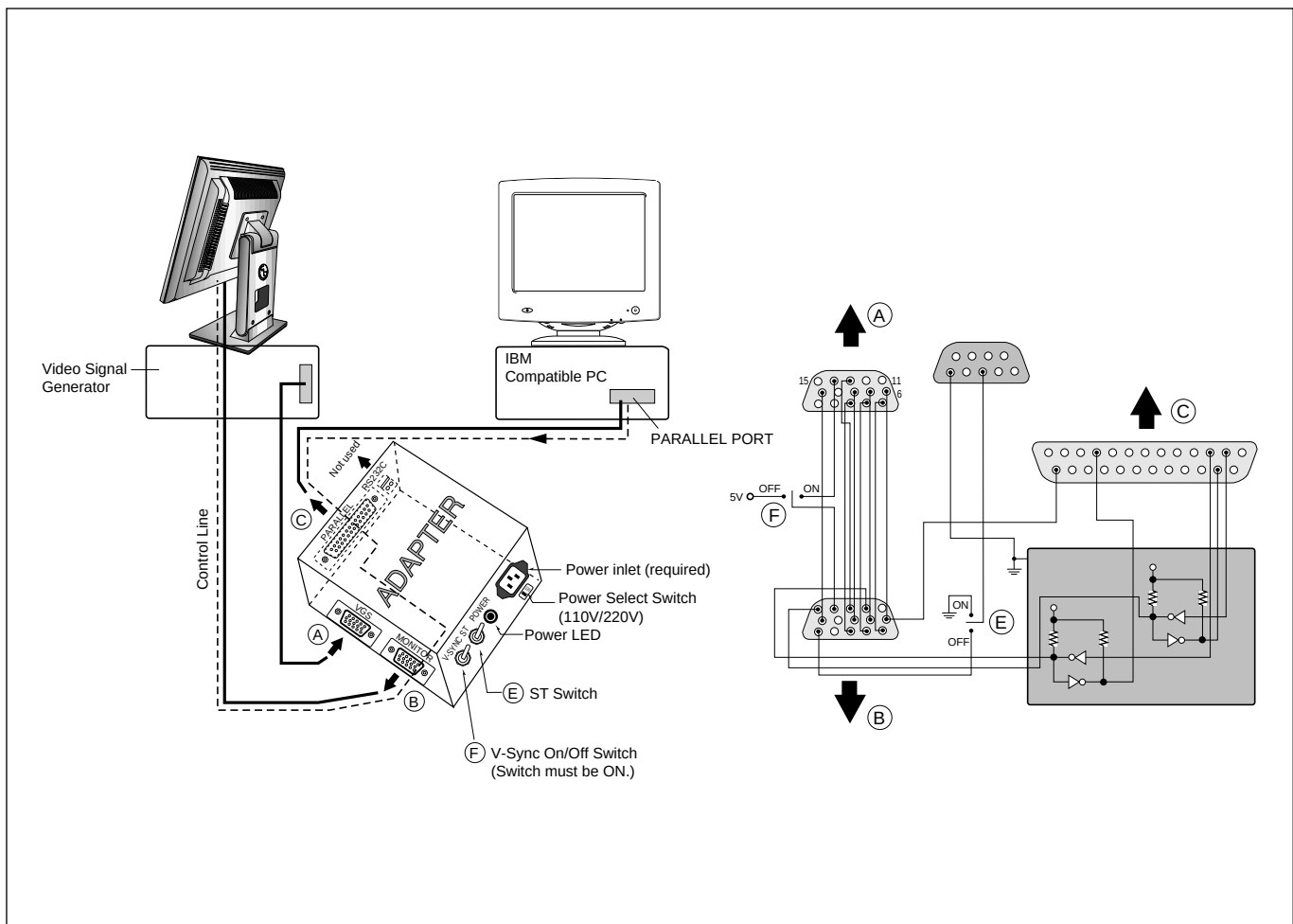
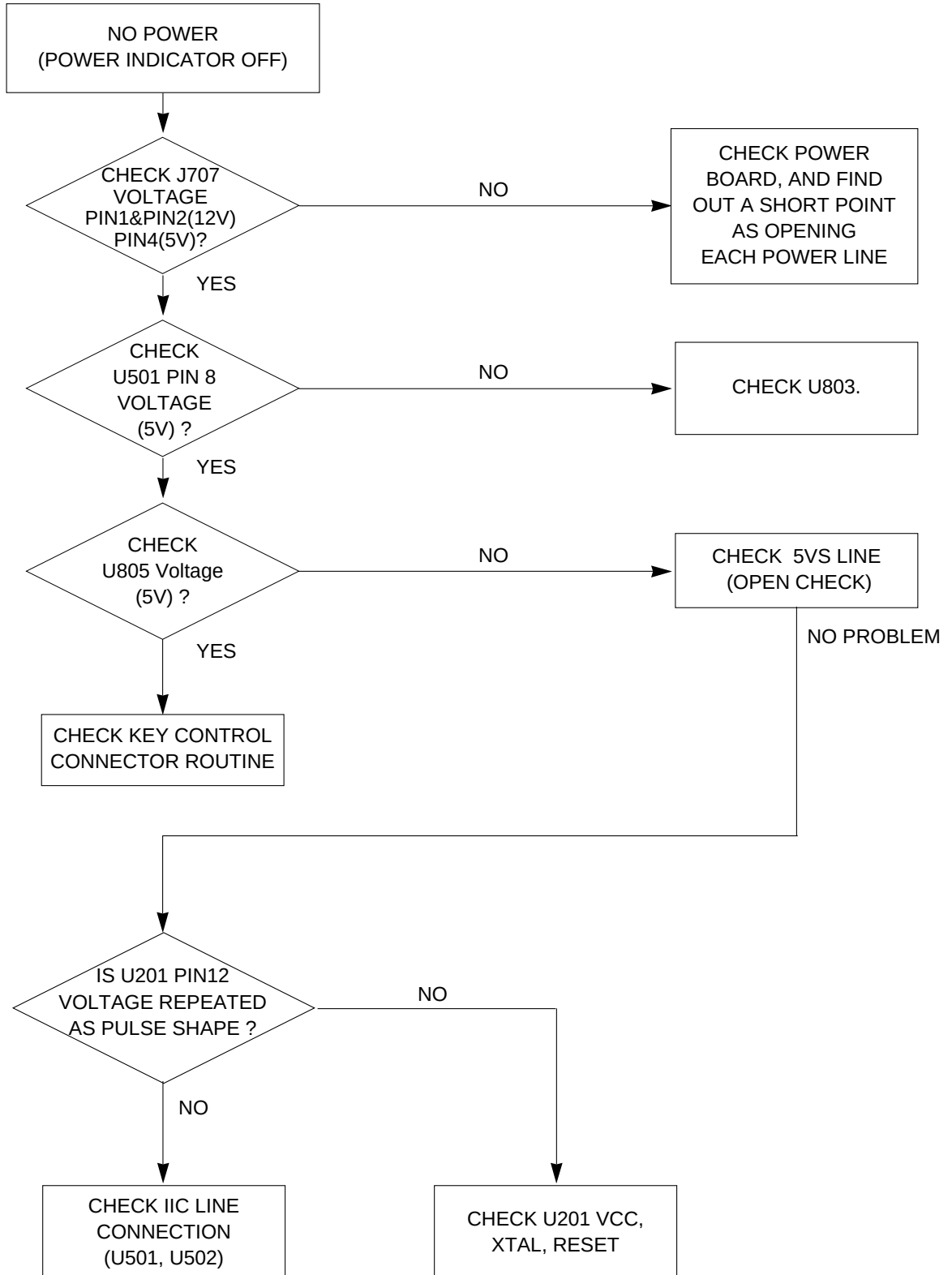


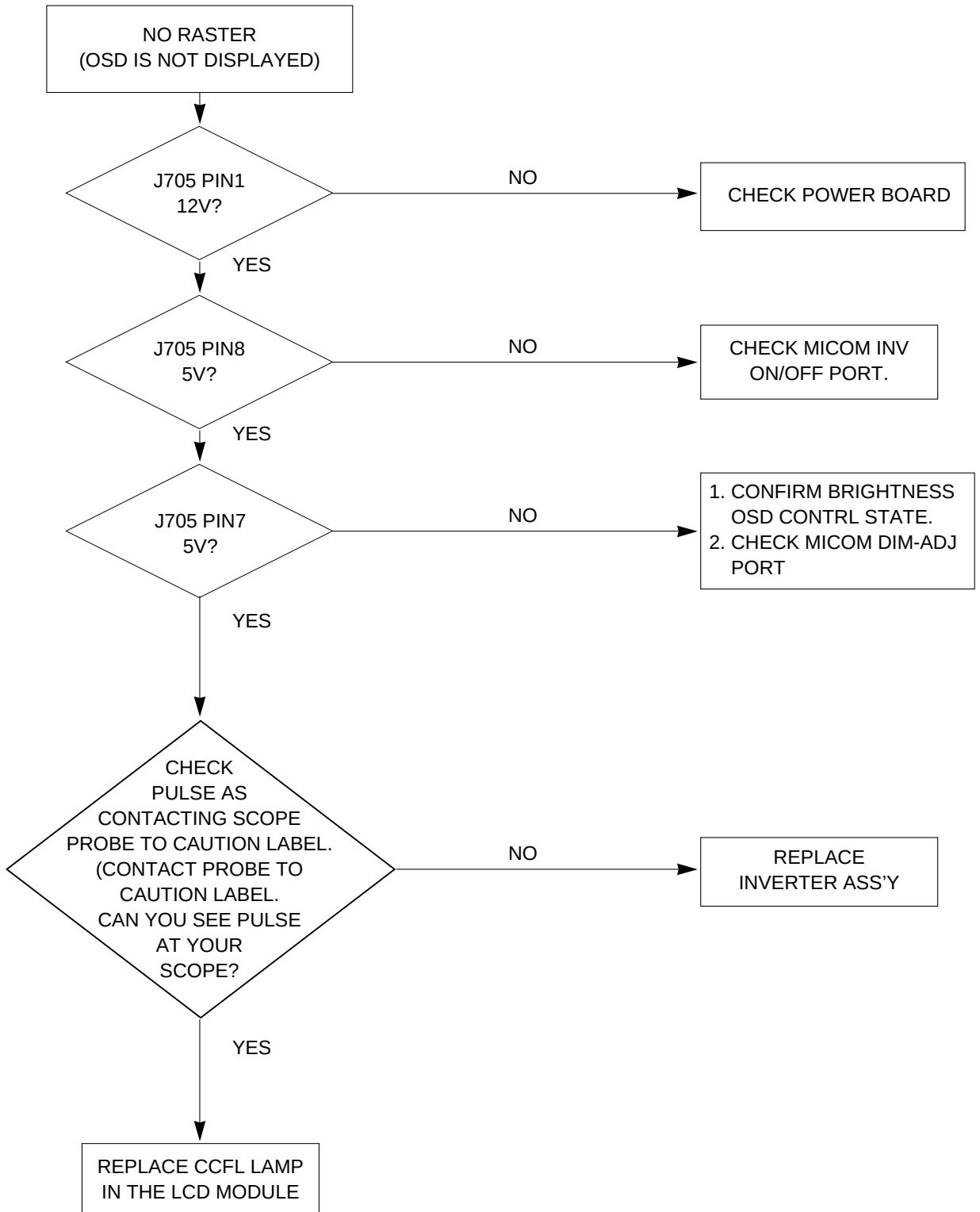
Figure 1. Cable Connection

TROUBLESHOOTING GUIDE

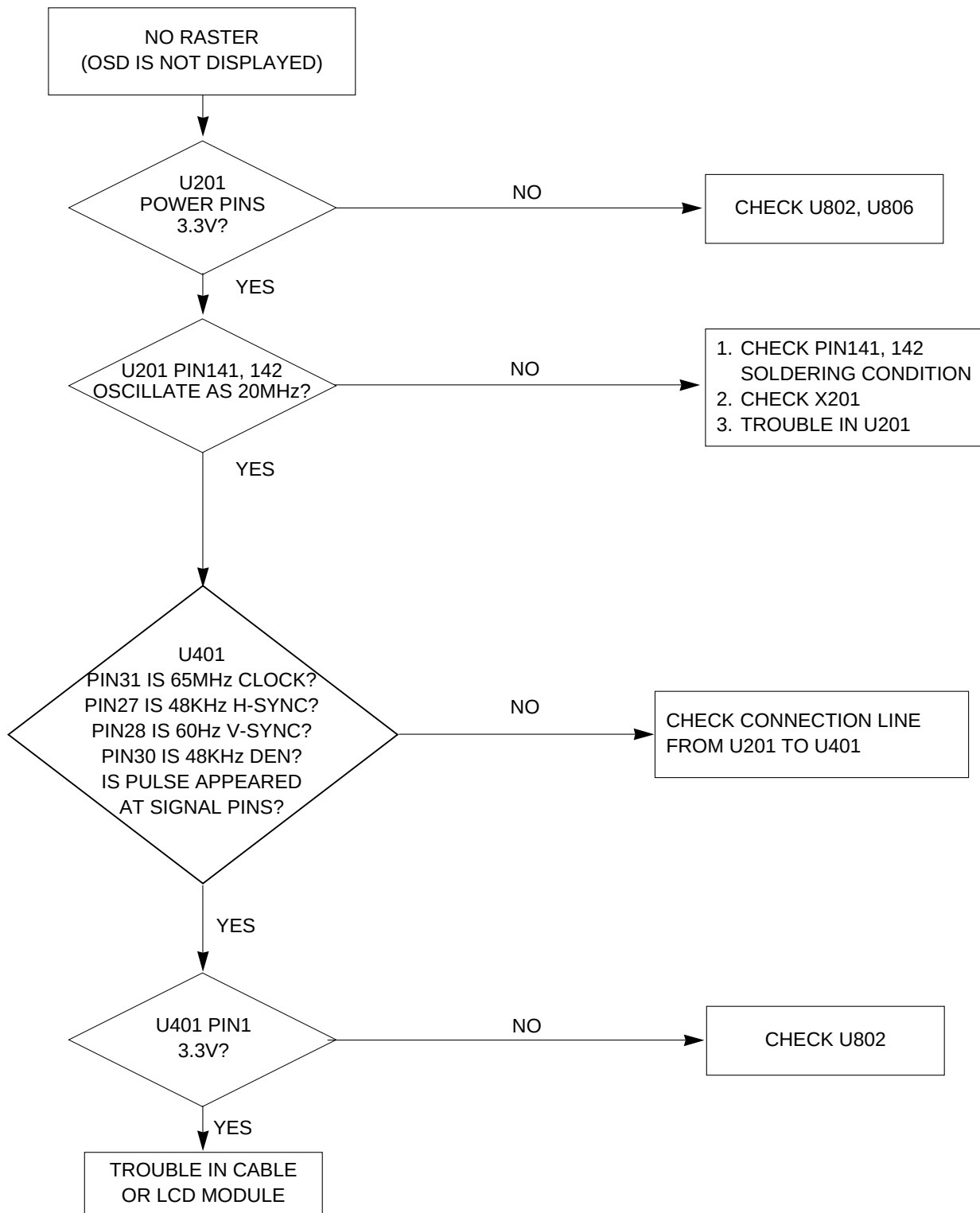
1. NO POWER



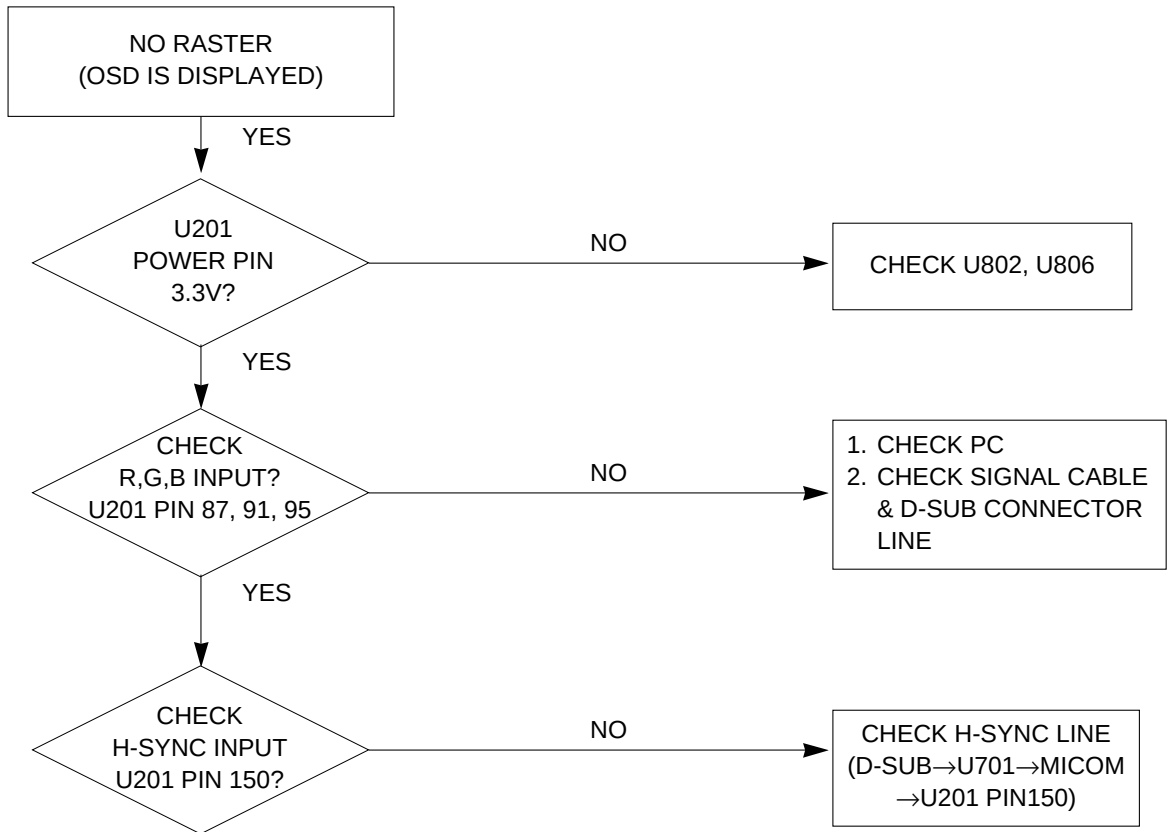
2. NO RASTER (OSD IS NOT DISPLAYED) – INVERTER



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

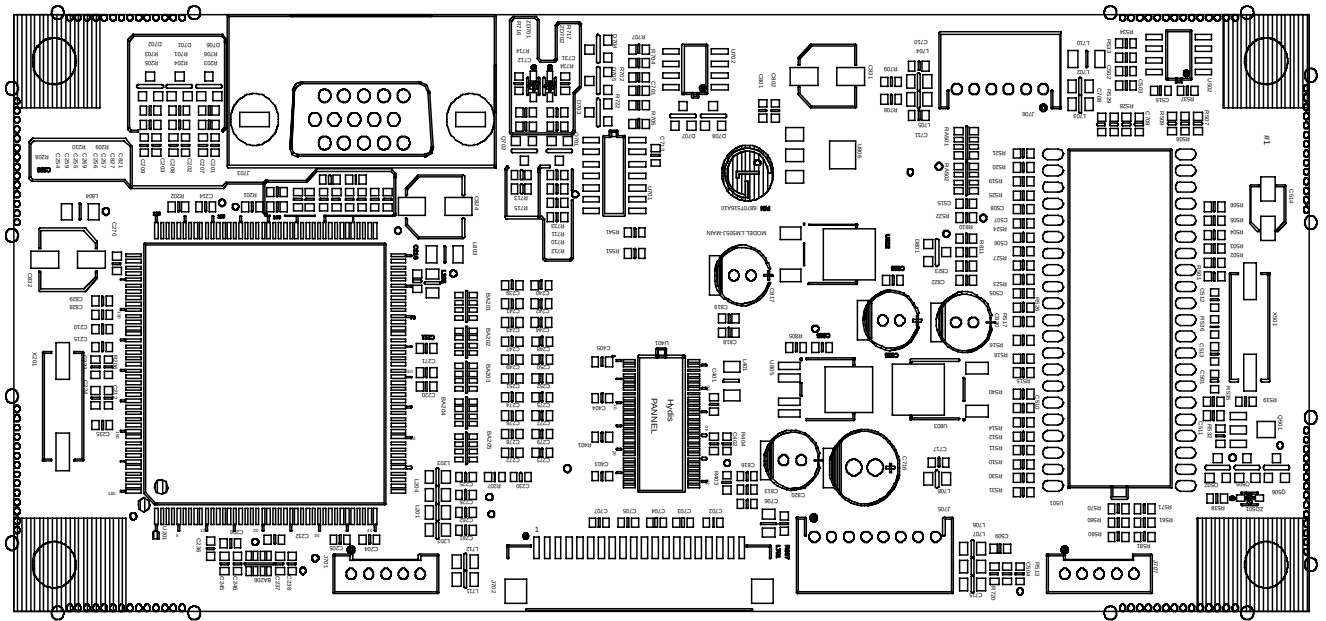


4. NO RASTER (OSD IS DISPLAYED) – gmZAN2

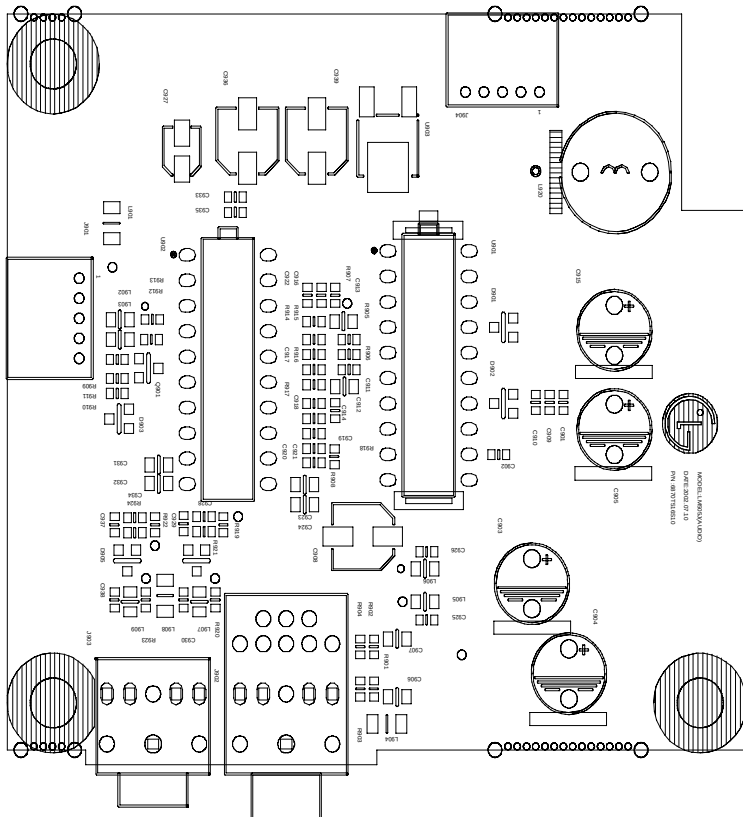


PRINTED CIRCUIT BOARD

1. MAIN BOARD

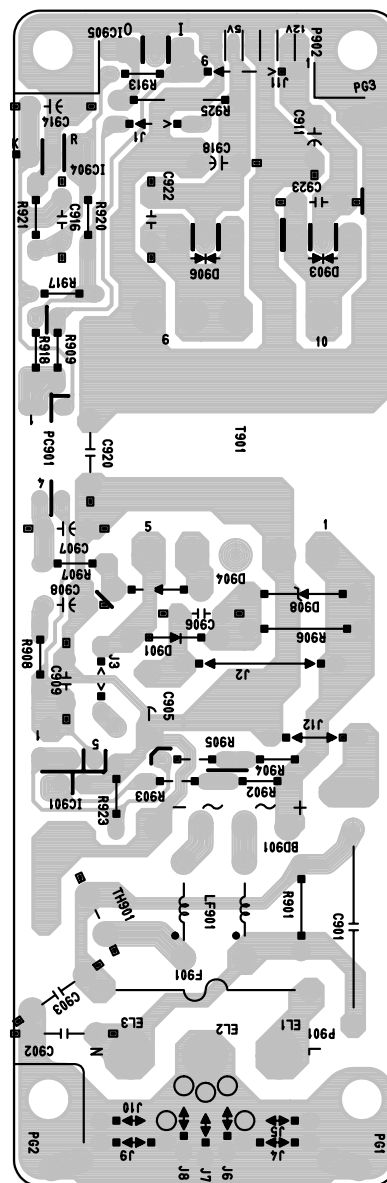
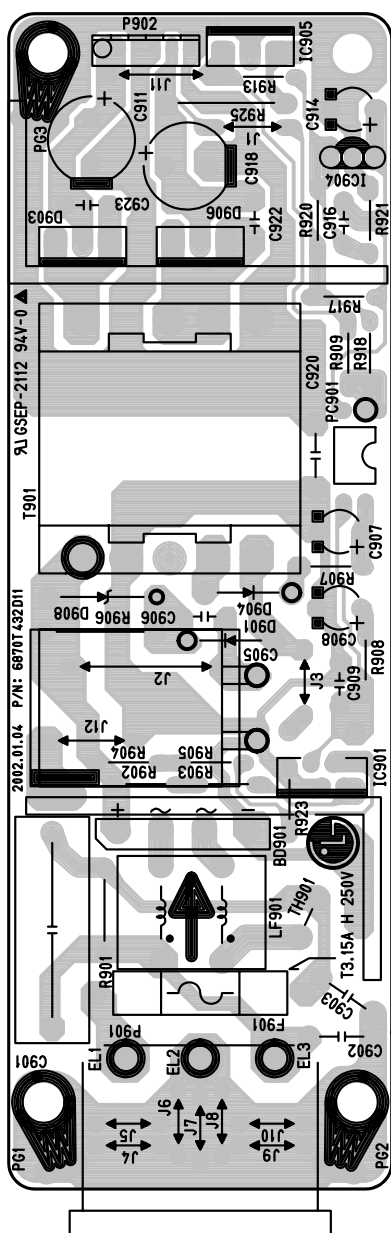


2. AUDIO BOARD



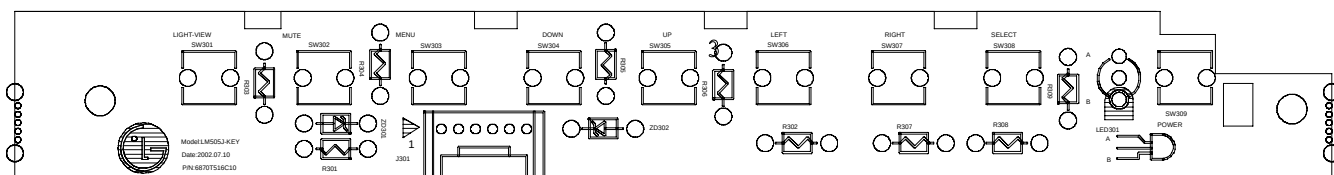
3. POWER BOARD(Component Side)

4. POWER BOARD(Solder Side)

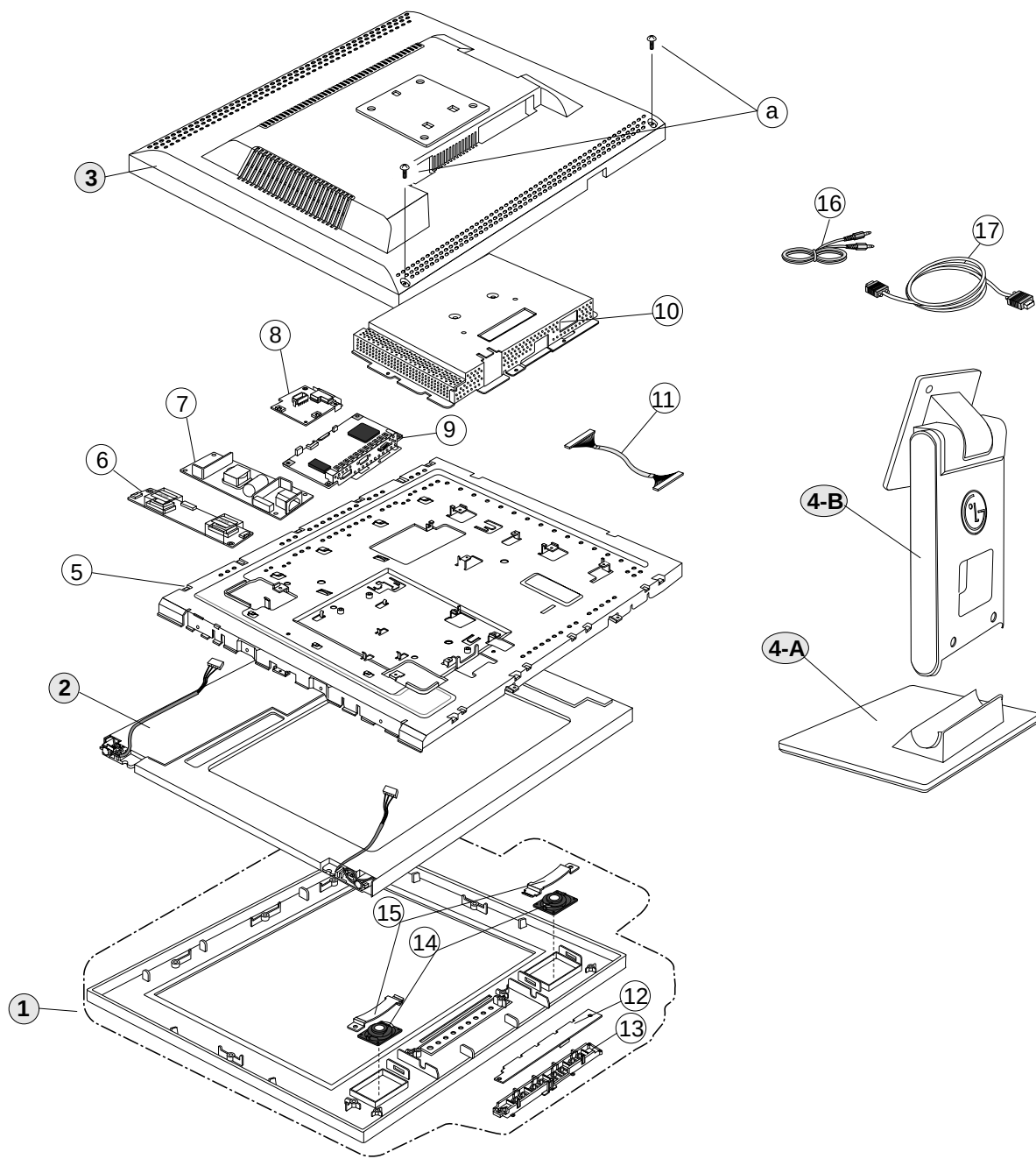


OSYM LAYER LG MNT

5. CONTROL BOARD



EXPLODED VIEW



EXPLODED VIEW PARTS LIST

Note:  SAFETY Mark

Ref. No.	Part No.	Description	
1	3091TKL050A		CABINET ASSEMBLY, LM505J BRAND 3090TKL049A (M/MEDIA)
2	6304FLP024A		LCD(LIQUID CRYSTAL DISPLAY), LM150X07-B4 LG PHILPS TFT COLOR 15.0 INCH XGA LVDS SMM
3	3809TKL032A		BACK COVER ASSEMBLY, LM505J 3808TKL035A (M/MEDIA)
4-A	3043TKK097A		TILT SWIVEL ASSEMBLY, LB500J . (BASE)
4-B	3043TKK092A		TILT SWIVEL ASSEMBLY LB500J . .
5	4951TKS089B		METAL ASSEMBLY, FRAME MAIN(LM505J)
6	6633TZA003H		INVERTER ASSEMBLY, SAMSUNG LG1510 LG56AH
	or 6632Z-1507C		INVERTER ASSEMBLY, NMC 1507 15.1 12V (CHOI JEONG GYU)
7	6871TPT223G		PWB(PCB) ASSEMBLY, POWER, LB500J POWER TOTAL BRAND CL-38
8	6871TST306A		PWB(PCB) ASSEMBLY, SUB, LM505J SOUND TOTAL BRAND CL-38
9	3313TL5051A		MAIN TOTAL ASSEMBLY LM505J BRAND CL-32
10	4950TKK466A		METAL, FRAME REAR(LM505J)
11	6631T11012R		CONNECTOR ASSEMBLY, 20P H-H 120MM UL20276 PANEL LINK CABLE LM567D
12	6871TST307A		PWB(PCB) ASSEMBLY, SUB, LM505J CONTROL TOTAL BRAND CL-38
13	4940TKT162B		KNOB, TACT CONTROL (LM505J/LM805L)9EA
14	6401TZZ025B		SPEAKER ASSEMBLY, LM505J L284014 CSGAS07 SPEAKER ASSY 1W 4OHM
15	4950TKK337A		METAL, FIX SPEAKER (LM568E)
16	6852TAZ006F		CORD, A/V DH-1560SP-BL UL2851#28 1560MM GRAY(85964) L/BUE-LIME KSD LM568E
17	6850TD9001A		CABLE, D-SUB, UL 2990-9C(7.5) DT 1870MM GRAY(85964) BRAND DM
a	332-068U		SCREW, PPB+3x8(MSWR/FZMW1)

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. 7. 15.				
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
MAIN BOARD				
CAPACITORS				
		C201	0CC100CK41A	10PF 1608 50V 5% R/TP NP0
		C202	0CC100CK41A	10PF 1608 50V 5% R/TP NP0
		C203	0CC100CK41A	10PF 1608 50V 5% R/TP NP0
		C205	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C207	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C208	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C209	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C210	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C211	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C212	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C215	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C216	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C223	0CC150CK41A	15PF 1608 50V 5% R/TP NP0
		C224	0CC150CK41A	15PF 1608 50V 5% R/TP NP0
		C225	0CC100CK41A	10PF 1608 50V 5% R/TP NP0
		C226	0CC680CK41A	68PF 1608 50V 5% R/TP NP0
		C230	0CC150CK41A	15PF 1608 50V 5% R/TP NP0
		C254	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C255	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C256	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C257	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C258	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C259	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C261	0CC680CK41A	68PF 1608 50V 5% R/TP NP0
		C262	0CC680CK41A	68PF 1608 50V 5% R/TP NP0
		C269	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C270	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C271	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C401	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C402	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C403	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C404	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C405	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C501	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C502	0CC101CK41A	100PF 1608 50V 5% R/TP NP0
		C503	0CC101CK41A	100PF 1608 50V 5% R/TP NP0
		C504	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C505	0CC101CK41A	100PF 1608 50V 5% R/TP NP0
		C506	0CC101CK41A	100PF 1608 50V 5% R/TP NP0
		C507	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C508	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C509	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C510	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C512	0CC220CK41A	22PF 1608 50V 5% R/TP NP0
		C513	0CC220CK41A	22PF 1608 50V 5% R/TP NP0
		C514	0CH8106F611	10UF 16V M 85STD(CYL) R/TP
		C515	0CC680CK41A	68PF 1608 50V 5% R/TP NP0
		C516	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C701	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C702	0CC100CK41A	10PF 1608 50V 5% R/TP NP0
		C703	0CC100CK41A	10PF 1608 50V 5% R/TP NP0
		C704	0CC100CK41A	10PF 1608 50V 5% R/TP NP0

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		C705	0CC100CK41A	10PF 1608 50V 5% R/TP NP0
		C706	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C707	0CC100CK41A	10PF 1608 50V 5% R/TP NP0
		C712	0CC101CK41A	100PF 1608 50V 5% R/TP NP0
		C713	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C715	0CH3105F946	1UF 16V Z F 2012 R/TP
		C716	0CE107CH610	100UF SHL,SD 25V 20% BULK FL
		C717	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C731	0CC680CK41A	68PF 1608 50V 5% R/TP NP0
		C801	0CC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C802	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C813	0CC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C816	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C817	0CE107CF610	100UF SHL,SD 16V 20% BULK FL
		C818	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C819	0CC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C820	0CE107CF610	100UF SHL,SD 16V 20% BULK FL
		C821	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C822	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C823	0CC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C824	0CH8107F611	100UF 16V M 85STD(CYL) R/TP
		C825	0CE107CF610	100UF SHL,SD 16V 20% BULK FL
		C826	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C827	0CC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C828	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C829	0CC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C830	0CE107CF610	100UF SHL,SD 16V 20% BULK FL
		C831	0CH8107F611	100UF 16V M 85STD(CYL) R/TP
		C832	0CH8107F611	100UF 16V M 85STD(CYL) R/TP
		C835	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
DIODEs				
		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
		D705	0DS226009AA	KDS226 TP KEC SOT-23 80V 300MA
		D706	0DS226009AA	KDS226 TP KEC SOT-23 80V 300MA
		D707	0DS301109AA	MMBD301LT1 TP MOTOROLA SOT23 30
		D708	0DS301109AA	MMBD301LT1 TP MOTOROLA SOT23 30
		D801	0DS181009AA	KDS181 TP KEC SOT-23 80V 300M
		D903	0DRGS00281A	MBRF10H100CT GENERAL SEMICONDUCT
		D906	0DR206000AA	MBRF2060CT BK G.I ITO220 60V 20
		ZD501	0DZ910009FE	UDZS 9.1B TP ROHM - - 9.1V - -
		ZD701	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323 200
		ZD702	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323 200
ICs				
		U201	0IPRPGA002A	GMZAN2-160P GENESIS MICROCHIP 1
		U401	0IPRPNV010A	NT7181F NOVATEK 56P,TSSOP R/TP
		U501	0IZZTS2192A	MYSON 42PIN BK OTP LM505J
		U502	0ISG240860B	M24C08W6 SGS-THOMSON 8SOP R/TP

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		U701	0IMO741420B	MC74HCT14ADR2 14P,SOIC TP LEVEL
		U702	0ISG240260A	M24C02-MN6 SO8 TP 2K SERIAL IIC
		U802	0IPMGKE011A	KIA78D33F KEC DPAK R/TP 3.3V LD
		U803	0ISS780500H	KA78M05-R 3P,D-PAK TP 5V 0.5A R
		U805	0IRH033000A	BA033SFP P/MOLD-5 TP REGULATOR
		U806	0IPMGON007A	NCP1117ST25T3 ON SEMI SOT223 R/
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
		L205	6210TCE001S	HU-1M2012-121 CERATECH 2012MM R
		L401	6210TCE001G	HH-1M3216-501 CERATEC 3216MM R/
		L701	6210TCE001S	HU-1M2012-121 CERATECH 2012MM R
		L702	6210TCE001P	HB-1S2012-121JT CERATECH 2012MM
		L703	6210TCE001P	HB-1S2012-121JT CERATECH 2012MM
		L704	6210TCE001P	HB-1S2012-121JT CERATECH 2012MM
		L705	6210TCE001P	HB-1S2012-121JT CERATECH 2012MM
		L706	6210TCE001P	HB-1S2012-121JT CERATECH 2012MM
		L707	6210TCE001P	HB-1S2012-121JT CERATECH 2012MM
		L708	6210TCE001S	HU-1M2012-121 CERATECH 2012MM R
		L710	6210TCE001G	HH-1M3216-501 CERATEC 3216MM R/
		L711	6210TCE001P	HB-1S2012-121JT CERATECH 2012MM
		L712	6210TCE001P	HB-1S2012-121JT CERATECH 2012MM
		L803	6210TCE001G	HH-1M3216-501 CERATEC 3216MM R/
		L804	6210TCE001G	HH-1M3216-501 CERATEC 3216MM R/
		BA201	6210TCE002B	HB-4M3216-121JT CERATECH 3216MM
		BA202	6210TCE002B	HB-4M3216-121JT CERATECH 3216MM
		BA203	6210TCE002B	HB-4M3216-121JT CERATECH 3216MM
		BA204	6210TCE002B	HB-4M3216-121JT CERATECH 3216MM
		BA205	6210TCE002B	HB-4M3216-121JT CERATECH 3216MM
		BA206	6210TCE002B	HB-4M3216-121JT CERATECH 3216MM
TRANSISTOR				
		Q501	0IKE704200J	KIA7042AF SOT-89 TP 4.2V VOLTAG
		Q502	0TR390409AE	FAIRCHILD KST3904(LGEMTF) TP SO
		Q505	0TR162309CA	KSC1623 TP SAMSUNG SOT23 NPN E
		Q506	0TR162309CA	KSC1623 TP SAMSUNG SOT23 NPN E
		Q701	0TR390409AE	FAIRCHILD KST3904(LGEMTF) TP SO
		Q702	0TR390409AE	FAIRCHILD KST3904(LGEMTF) TP SO
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	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

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		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
		R514	0RJ1000D677	100 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
		R540	0RJ4701D677	4.7K 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
		R702	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R703	0RJ0752D677	75 OHM 1/10 W 5% 1608 R/TP
		R704	0RJ1500D677	150 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	0RJ1500D677	150 OHM 1/10 W 5% 1608 R/TP
		R708	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R709	0RJ1000D677	100 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	0RJ1501D677	1.5K OHM 1/10 W 5% 1608 R/TP
		R714	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R715	0RJ1000D677	100 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
		R805	0RJ1001D677	1K OHM 1/10 W 5% 1608 R/TP

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		R807 R810 R811 RA501 RA502	0RJ1003D677 0RJ0221D677 0RJ0221D677 0RHZTCZ001A 0RHZTCZ001A	100K OHM 1/10 W 5% 1608 R/TP 2.2 OHM 1/10 W 5% 1608 R/TP 2.2 OHM 1/10 W 5% 1608 R/TP 100 OHM 1/16 W 5% 3215 R/TP CHI 100 OHM 1/16 W 5% 3215 R/TP CHI
OTHERs				
		X201 X501	6202TST003F 6202TST003D	HC-49/SM5H KONY 20.0MHZ +/- 30 HC-49/SM5H KONY CHIP 12 MHZ 30
POWER BOARD				
⚠		C901	0CBZTBU002D	0.33UF D 275V K M/PP NI FM22.5
⚠		C902	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% BUL
		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 SA
		C922	0CK10201515	1000P 1KV K B TS
		C923	0CK10201515	1000P 1KV K B TS
		D901	0DD400709CB	UF4007 TP G.I DO204AL 1000V 1A
		D904	0DR400409AB	UF4004 TP G.I DO204AL 400V 1A 3
		D908	0DZ620009AP	P6KE200A GENERAL SEMICONDUCTOR
		BD901	0DD260000BE	D2SB60 SHINDENKEN
		ZD901	0DZ750009AG	MTZJ7.5B TP ROHM-K DO34 0.5W 7.
		IC901	0IPMGPF004A	TOP246F POWER INTEGRATION TO262
		IC904	0ISS431000A	KA431AZ (LM431AZ)
		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
⚠		F901	0FZZTTH001E	TIME LAG HBC 2153.15MXE(LEAD),L
⚠		LF901	6200TZZ001B	- 0 BK L/FILTER, 9MH,LG56BP
⚠		P901	6202TKB002C	BCP031S-A,BAE EUN AC UNIVERSAL
⚠		PC901	0ILI817000E	LTV-817M B 4P BK PHOTO COUPLER
⚠		T901	6170TMZ133A	EER3016 1200 UH V-10PIN LG500J
		TH901	6322A00002B	SCK-102L THINKING 100HM 20% 250
CONTROL BOARD				
		LED301 ZD301 ZD302	0DLLT0089AA 0DZ560009CE 0DZ560009CE	LITEON LTL-1BEDJ-0C2 TP GREEN/Y MTZJ5.6B TP ROHM-K DO34 500MW MTZJ5.6B TP ROHM-K DO34 500MW

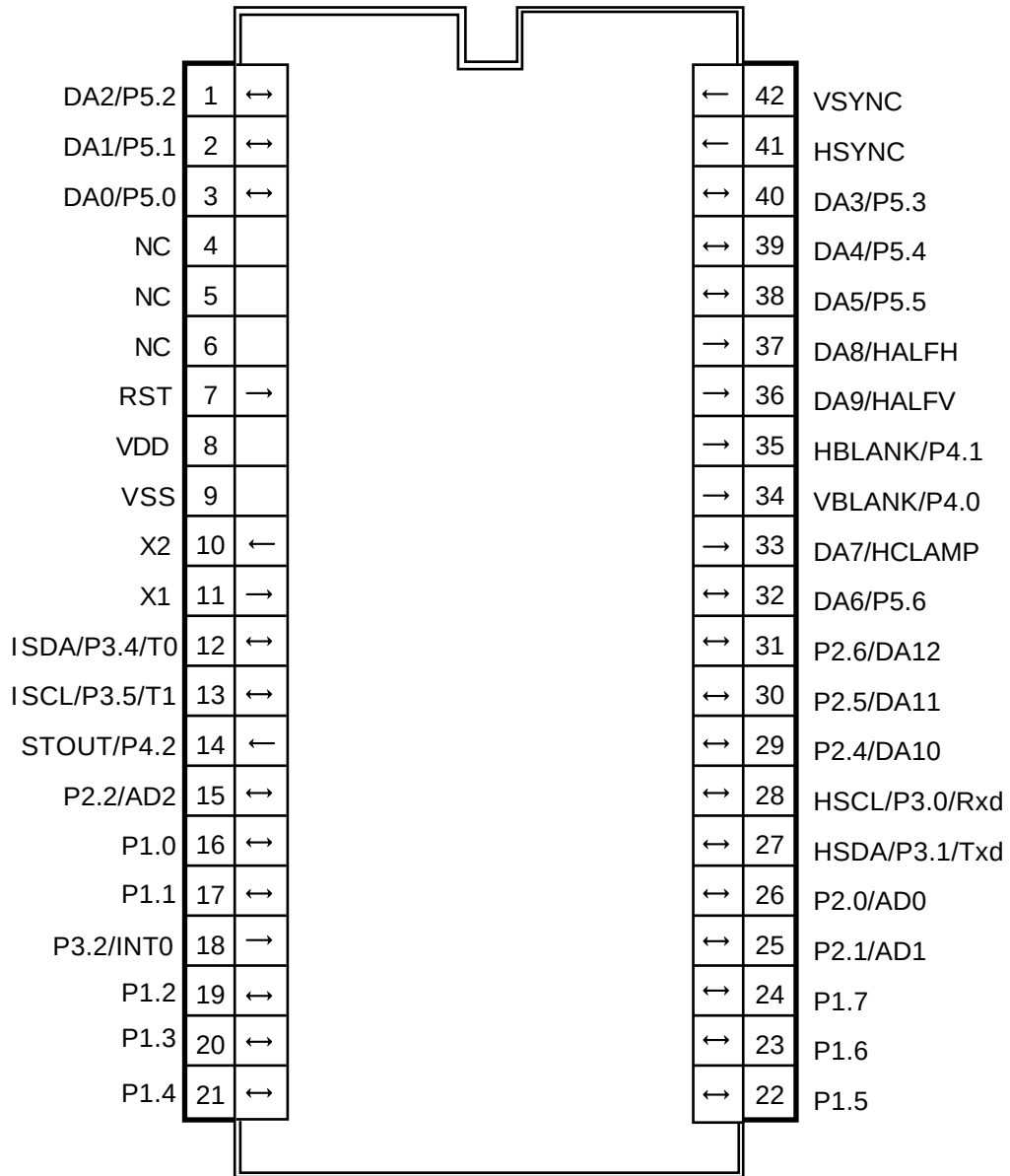
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*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		R301 R302 R303 R304 R305 R306 R307 R308 R309	0RD4701Q509 0RD4701Q509 0RD1001Q509 0RD1601Q509 0RD2701Q509 0RD6801Q509 0RD2701Q509 0RD2701Q509 0RD6801Q509	4.7K OHM 1/4 W (3.4) 2% TA52 4.7K OHM 1/4 W (3.4) 2% TA52 1K OHM 1/4 W (3.4) 2% TA52 1.6K OHM 1/4 W (3.4) 2% TA52 2.7K OHM 1/4 W(3.4) 2% TA52 6.8K OHM 1/4 W(3.4) 2% TA52 2.7K OHM 1/4 W(3.4) 2% TA52 2.7K OHM 1/4 W(3.4) 2% TA52 6.8K OHM 1/4 W(3.4) 2% TA52
		SW301 SW302 SW303 SW304 SW305 SW306 SW307 SW308 SW309	140-058E 140-058E 140-058E 140-058E 140-058E 140-058E 140-058E 140-058E 140-058E	SKHV10910B LGEC NON 12V 20A HOR SKHV10910B LGEC NON 12V 20A HOR SKHV10910B LGEC NON 12V 20A HOR SKHV10910B LGEC NON 12V 20A HOR SKHV10910B LGEC NON 12V 20A HOR SKHV10910B LGEC NON 12V 20A HOR SKHV10910B LGEC NON 12V 20A HOR SKHV10910B LGEC NON 12V 20A HOR SKHV10910B LGEC NON 12V 20A HOR
SOUND BOARD				
		C901	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C902	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C903	0CE477EF610	470UF KMG,RD 16V 20% BULK FL
		C904	0CE477EF610	470UF KMG,RD 16V 20% BULK FL
		C905	0CE477EF610	470UF KMG,RD 16V 20% BULK FL
		C906	0CH3105F946	1UF 16V Z F 2012 R/TP
		C907	0CH3105F946	1UF 16V Z F 2012 R/TP
		C908	0CH8107F611	100UF 16V M 85STD(CYL) R/TP
		C909	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C910	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C911	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C912	0CH3105F946	1UF 16V Z F 2012 R/TP
		C913	0CH3105F946	1UF 16V Z F 2012 R/TP
		C914	0CC121CK41A	120PF 1608 50V 5% R/TP NP0
		C915	0CE477EF610	470UF KMG,RD 16V 20% BULK FL
		C916	0CC121CK41A	120PF 1608 50V 5% R/TP NP0
		C917	0CK562CK51A	5600PF 1608 50V 10% R/TP B(Y5P)
		C918	0CK154CH51A	0.15UF 1608 25V 10% R/TP B(Y5P)
		C919	0CH3334K946	0.33UF 50V Z F(Y5V) 2012 R/TP
		C920	0CH3334K946	0.33UF 50V Z F(Y5V) 2012 R/TP
		C921	0CK154CH51A	0.15UF 1608 25V 10% R/TP B(Y5P)
		C922	0CK562CK51A	5600PF 1608 50V 10% R/TP B(Y5P)
		C923	0CH3473K946	47000PF 50V Z F 2012 R/TP
		C924	0CH3473K946	47000PF 50V Z F 2012 R/TP
		C925	0CC101CK41A	100PF 1608 50V 5% R/TP NP0
		C926	0CC101CK41A	100PF 1608 50V 5% R/TP NP0
		C927	0CH8106F611	10UF 16V M 85STD(CYL) R/TP
		C928	0CH3224K946	0.22UF 50V Z F 2012 R/TP
		C929	0CC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C930	0CC101CK41A	100PF 1608 50V 5% R/TP NP0
		C931	0CH3473K946	47000PF 50V Z F 2012 R/TP
		C932	0CH3473K946	47000PF 50V Z F 2012 R/TP
		C933	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C934	0CH3224K946	0.22UF 50V Z F 2012 R/TP
		C935	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C936	0CH8107F611	100UF 16V M 85STD(CYL) R/TP
		C937	0CC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C938	0CC101CK41A	100PF 1608 50V 5% R/TP NP0
		C939	0CH8107F611	100UF 16V M 85STD(CYL) R/TP
		D901	0DS226009AA	KDS226 TP KEC SOT-23 80V 300MA
		D902	0DS226009AA	KDS226 TP KEC SOT-23 80V 300MA

DATE: 2002. 7. 14.				
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		D903	0DS181009AA	KDS181 TP KEC SOT-23 80V 300M
		U901	0ISG749600A	TDA7496L 20DIP BK 2W+2W AMP WIT
		U902	0ISG744900B	TDA7449 20DIP ST TONE CONT. AUD
		U903	0ISS780800J	KA78M08R 3P,D-PAK TP VOL. REGUL
		L901	6210TCE001G	HH-1M3216-501 CERATEC 3216MM R/
		L902	6210TCE001P	HB-1S2012-121JT CERATECH 2012MM
		L903	6210TCE001P	HB-1S2012-121JT CERATECH 2012MM
		L904	6210TCE001G	HH-1M3216-501 CERATEC 3216MM R/
		L905	6210TCE001P	HB-1S2012-121JT CERATECH 2012MM
		L906	6210TCE001P	HB-1S2012-121JT CERATECH 2012MM
		L907	6210TCE001P	HB-1S2012-121JT CERATECH 2012MM
		L908	6210TCE001G	HH-1M3216-501 CERATEC 3216MM R/
		L909	6210TCE001P	HB-1S2012-121JT CERATECH 2012MM
		L920	6140TBZ016G	- GET DR12*6,7,1.0MH,LM505J
		Q901	0TR387500AA	CHIP 2SC3875S(ALY) KEC
		R901	0RJ0471D677	4.7 OHM 1/10 W 5% 1608 R/TP
		R902	0RJ0471D677	4.7 OHM 1/10 W 5% 1608 R/TP
		R903	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R904	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R905	0RJ1202D677	12K OHM 1/10 W 5% 1608 R/TP
		R906	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R907	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R908	0RJ2001D677	2K OHM 1/10 W 5% 1608 R/TP
		R909	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R910	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R911	0RJ2701D677	2.7K OHM 1/10 W 5% 1608 R/TP
		R912	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R913	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R914	0RJ2002D677	20000 OHM 1/10 W 5% 1608 R/TP
		R915	0RJ2002D677	20000 OHM 1/10 W 5% 1608 R/TP
		R916	0RJ2002D677	20000 OHM 1/10 W 5% 1608 R/TP
		R917	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R918	0RJ2001D677	2K OHM 1/10 W 5% 1608 R/TP
		R919	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R920	0RJ2202D677	22K OHM 1/10 W 5% 1608 R/TP
		R921	0RJ2702D677	27K OHM 1/10 W 5% 1608 R/TP
		R922	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R923	0RJ2202D677	22K OHM 1/10 W 5% 1608 R/TP
		R924	0RJ2702D677	27K OHM 1/10 W 5% 1608 R/TP
		J902	6612F00005D	DJ-SW3P-LM KSD STERO R/A LIME S
		J903	6612F00001C	DJ-S360LB KSD STERO R/A LIGHT B

Table 1: Summary of Data				
Category	Sub-category	Value 1	Value 2	Value 3
A	A1	10	20	30
	A2	15	25	35
	A3	20	30	40
	A4	25	35	45
B	B1	30	40	50
	B2	35	45	55
	B3	40	50	60
	B4	45	55	65
C	C1	50	60	70
	C2	55	65	75
	C3	60	70	80
	C4	65	75	85
D	D1	70	80	90
	D2	75	85	95
	D3	80	90	100
	D4	85	95	105

PIN CONFIGURATION

MYSON 42PIN BK

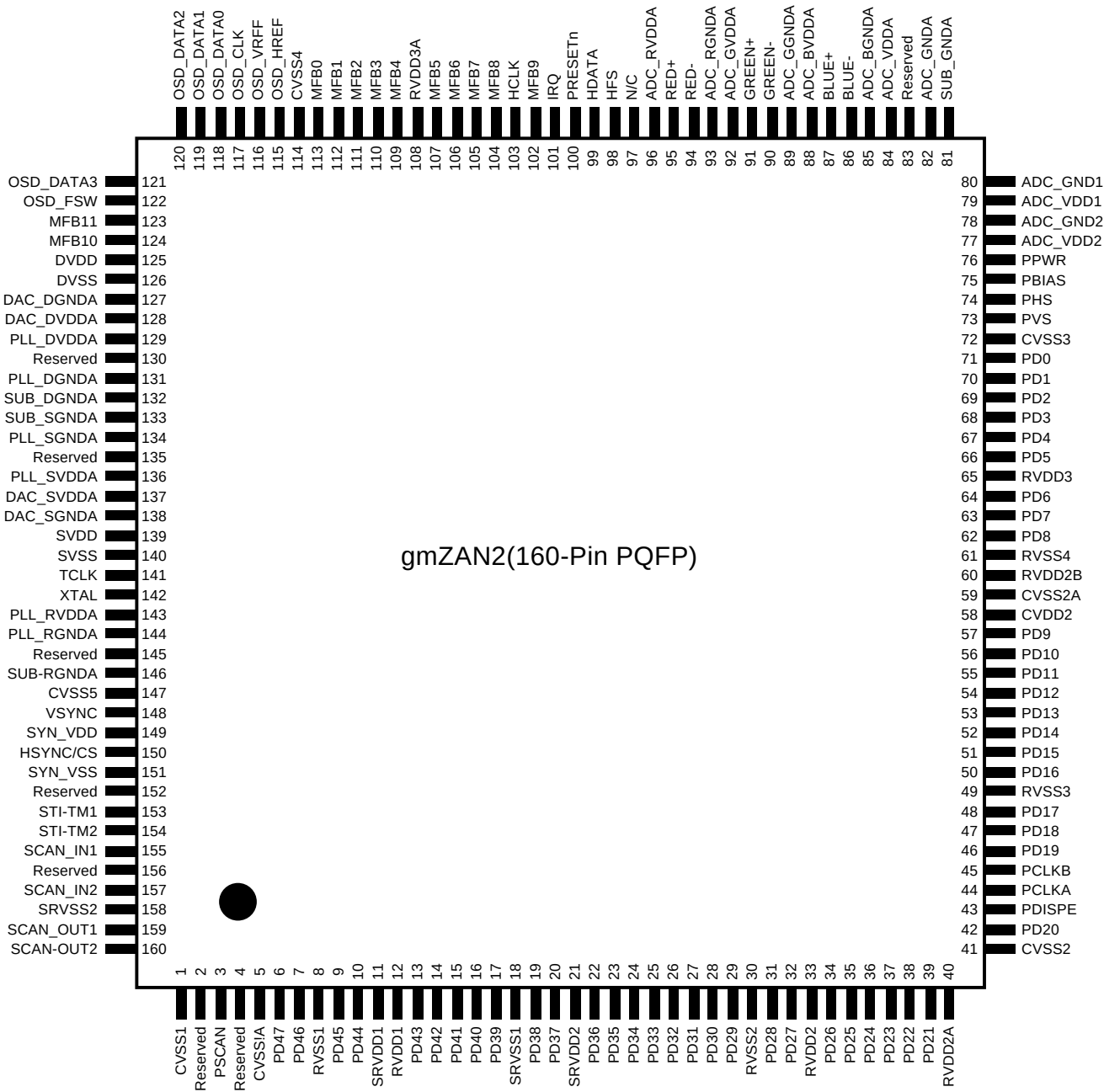


PIN FUNCTION

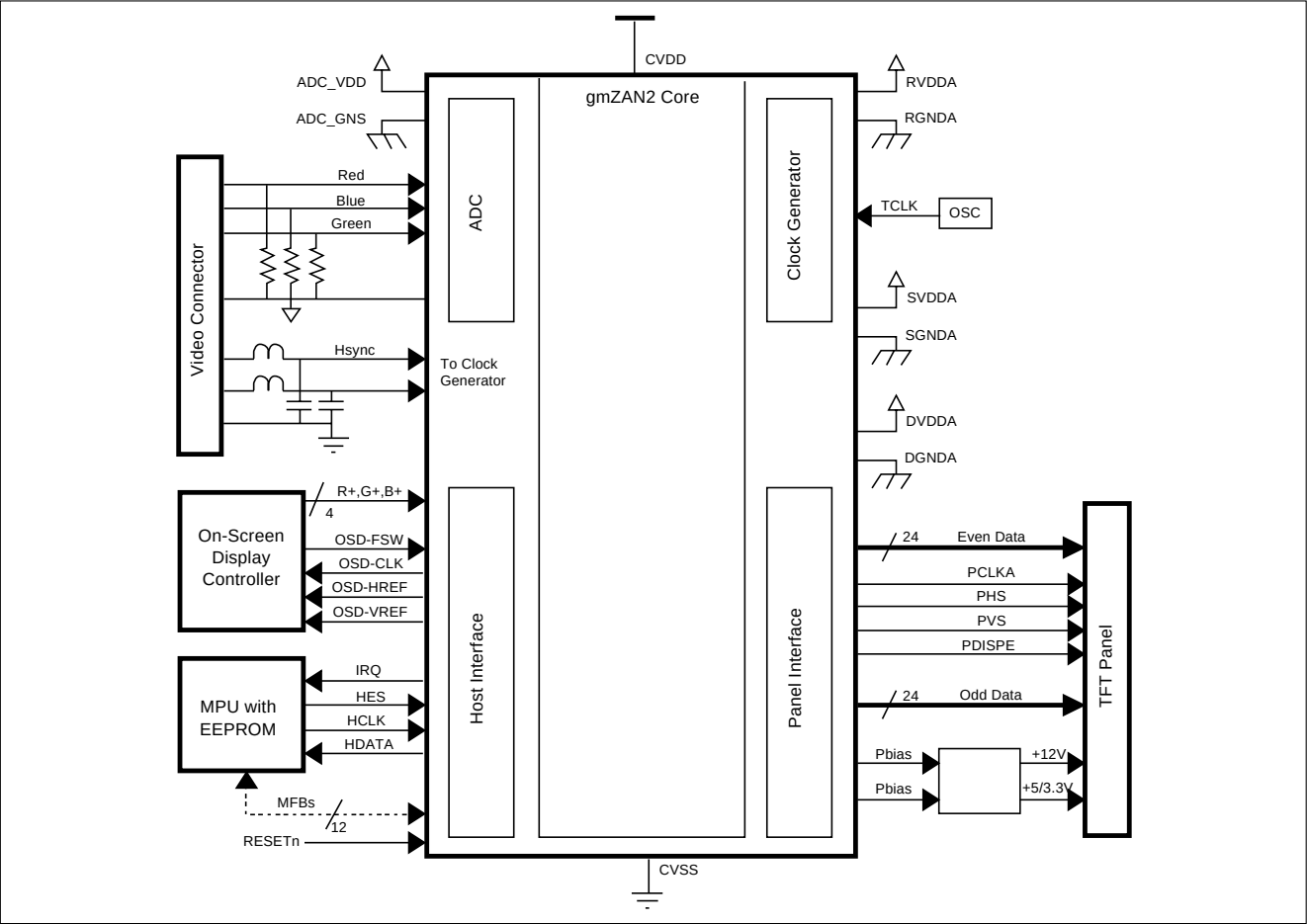
NO	SYMBOL	I/O	Act	Reset	Function
1	DA2/P5.2	I/O			PWM DAC output/General purpose I/O
2	DA1/P5.1	I/O			PWM DAC output/General purpose I/O
3	DA0/P5.0	I/O			PWM DAC output/General purpose I/O
4	NC				
5	NC				
6	NC				
7	RST	I			Active High Reset
8	VDD				Positive Power Supply
9	VSS				Ground
10	X2	O			Oscillator output
11	X1	I			Oscillator input
12	ISDA/P3.4/T0	I/O			Master IIC data/General Purpose I/O / T0
13	ISCL/P3.5/T1	I/O			Master IIC clock/General Purpose I/O / T1
14	STOUT/P4.2	O			Self-test video output / General purpose Output
15	P2.2/AD2	I/O			General purpose I/O / ADC Input
16	P1.0	I/O			General purpose I/O
17	P1.1	I/O			General purpose I/O
18	P3.2/INT0	I			General purpose Input / INTO
19	P1.2	I/O			General purpose I/O
20	P1.3	I/O			General purpose I/O
21	P1.4	I/O			General purpose I/O
22	P1.5	I/O			General purpose I/O
23	P1.6	I/O			General purpose I/O
24	P1.7	I/O			General purpose I/O
25	P2.1/AD1	I/O			General purpose I/O / ADC Input
26	P2.0/AD0	I/O			General purpose I/O / ADC Input
27	HSDA/P3.1/Txd	I/O			Slave IIC data / General purpose I/O / Txd
28	HSCL/P3.0/Rxd	I/O			Slave IIC clock / General purpose I/O / Rxd
29	P2.4/DA10	I/O			General purpose I/O / PWM DAC output
30	P2.5/DA11	I/O			General purpose I/O / PWM DAC output
31	P2.6/DA12	I/O			General purpose I/O / PWM DAC output
32	DA6/P5.6	I/O			PWM DAC Output / General Purpose I/O
33	DA7/HCLAMP	O			PWM DAC output / Hsync clamp pulseoutput
34	VBLANK/P4.0	O			Vertical blank /General purpose Output
35	HBLANK/P4.1	O			Horizontal blank / General purpose Output
36	DA9/HALFH	O			PWM DAC output / vsync half req. Output
37	DA8/HALFH	O			PWM DAC output / hsync half freq. Output
38	DA5/P5.5	I/O			PWM DAC output / General purpose I/O
39	DA4/P5.4	I/O			PWM DAC output / General purpose I/O
40	DA3/P5.3	I/O			PWM DAC output / General purpose I/O
41	HSYNC	I			Horizontal SYNC or Composite SYNC Input
42	VSYNC	I			Vertical SYNC Input

gmZAN2-160P GENESIS MICROCHIP

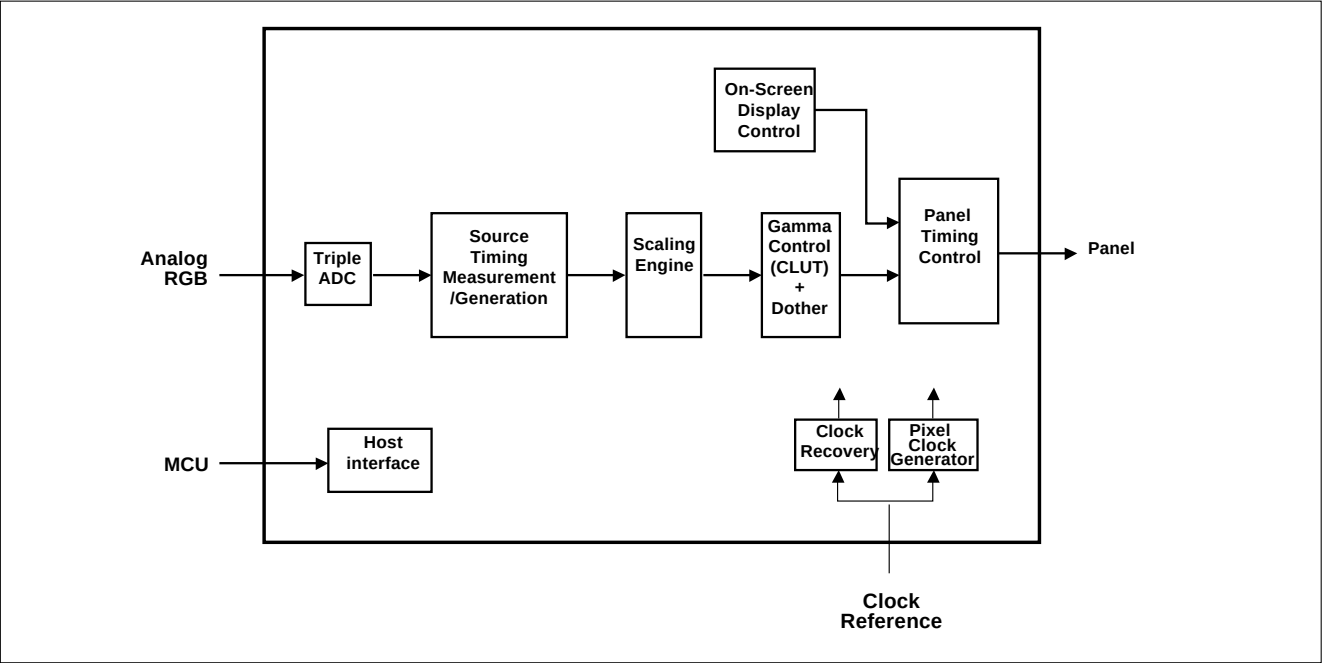
gmZAN2(160-Pin PQFP)



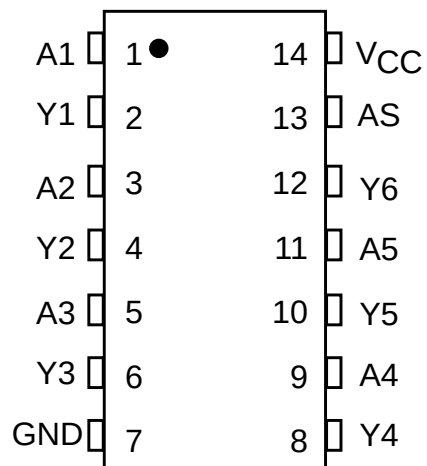
System-level Block Diagram



Block Diagram for gmZAN2

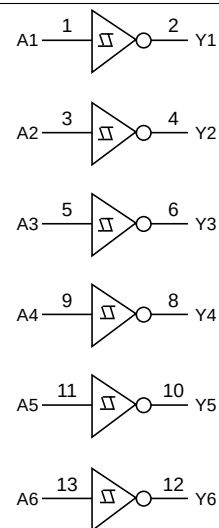


MC74HCT14ADR2 14P



PIN CONFIGURATION

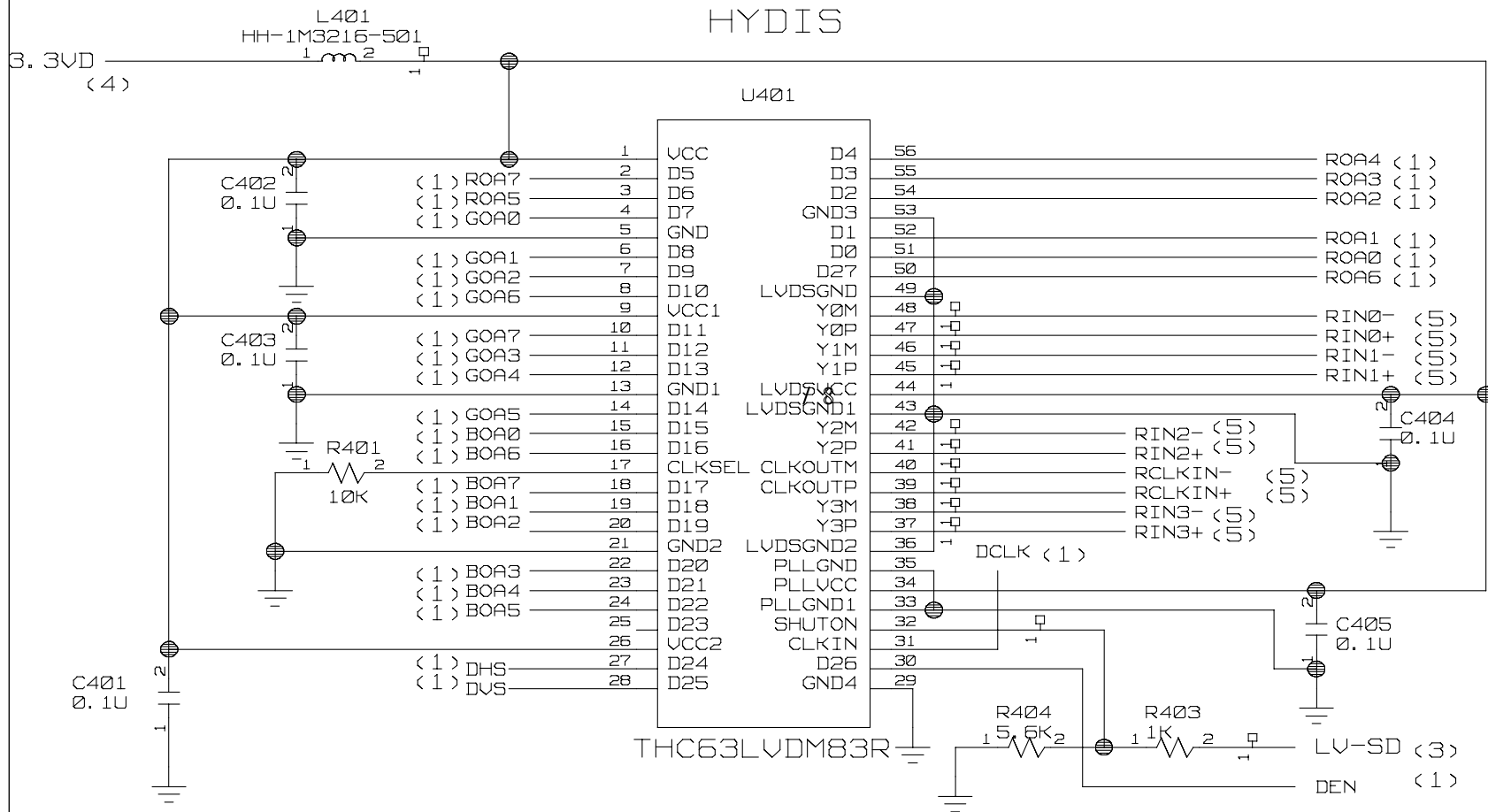
BLOCK DIAGRAM



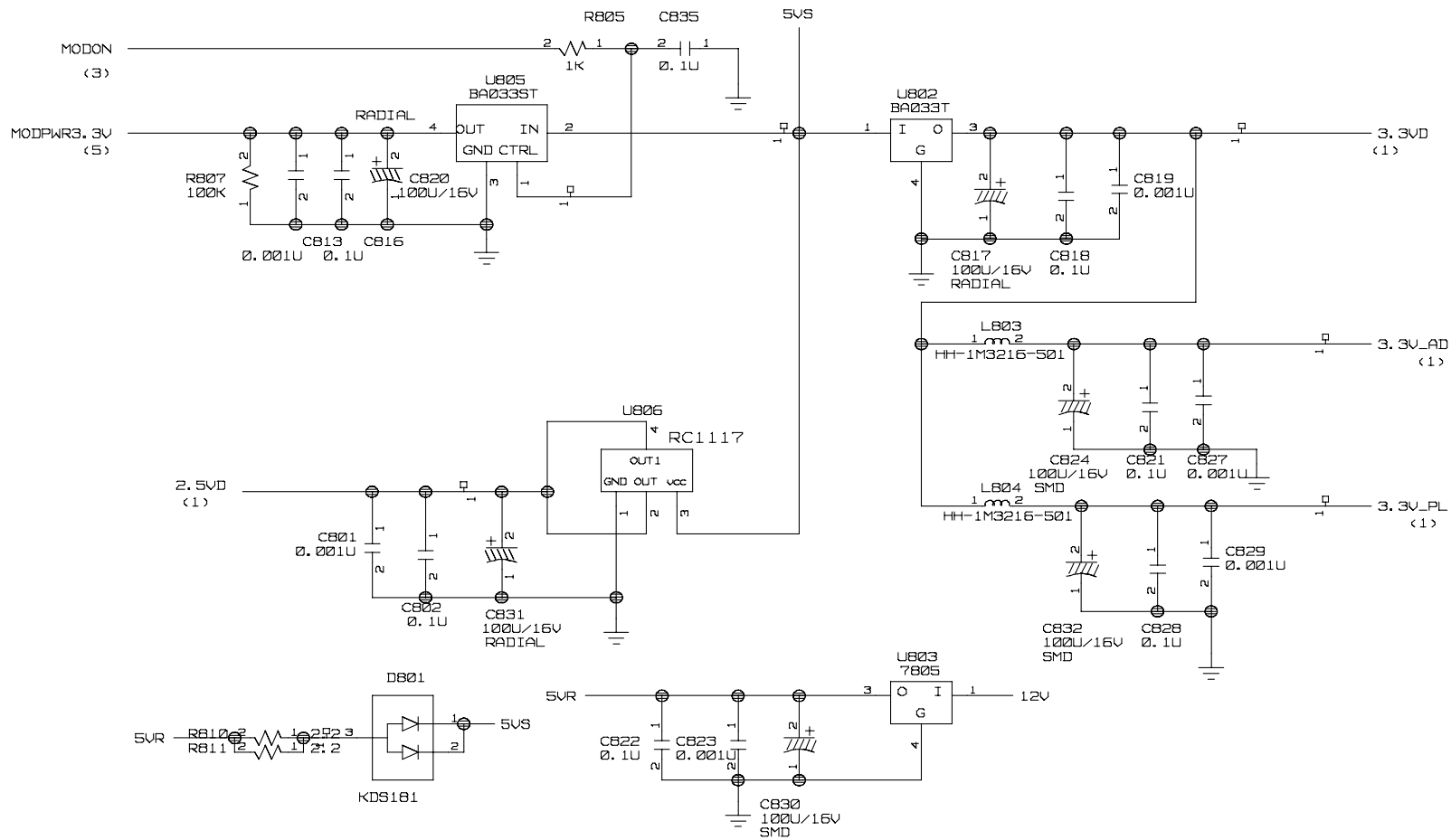
PIN 14=V_{CC}
PIN 7=GND

#2 LM505J
LVDS

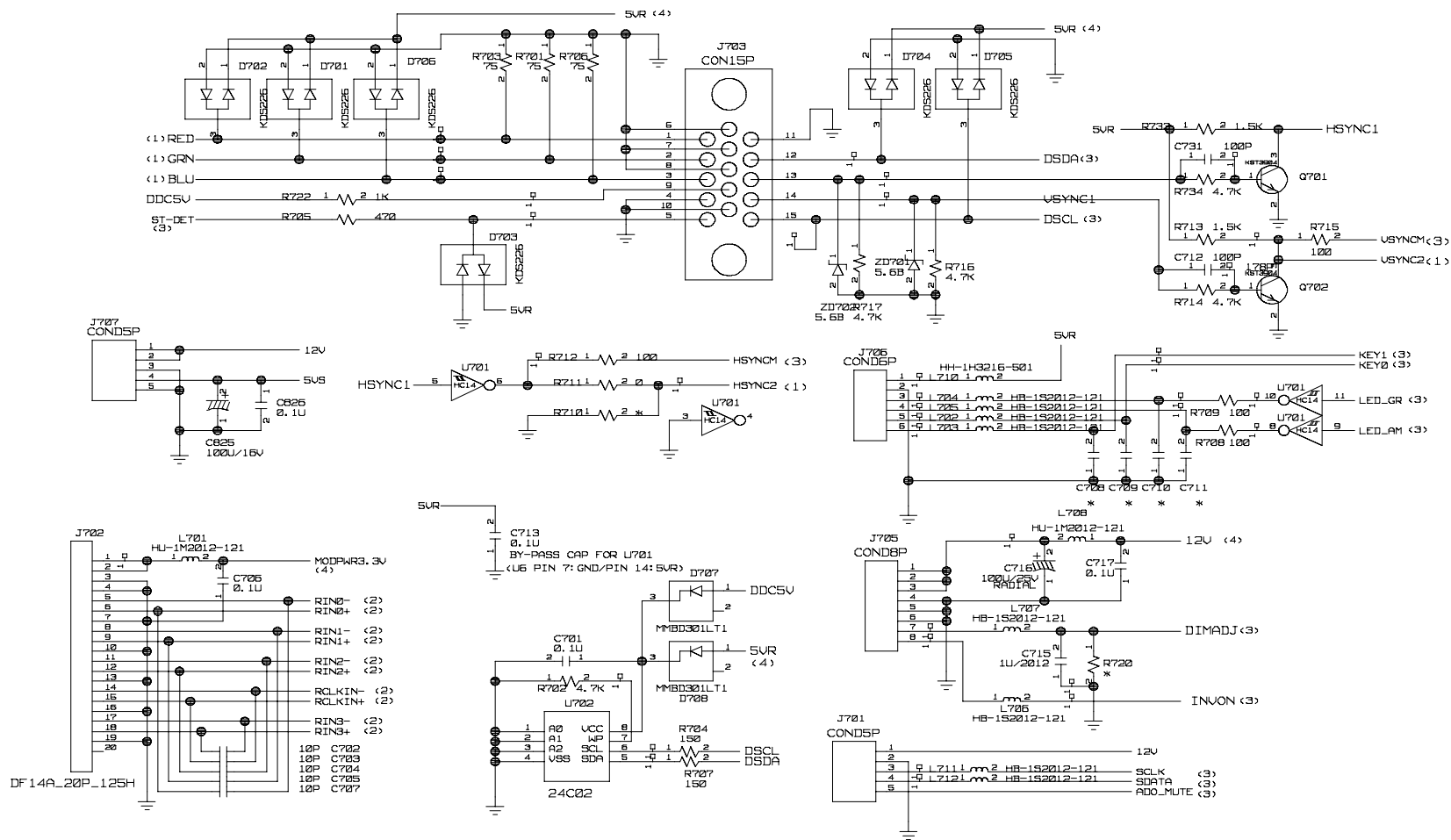
HYDIS



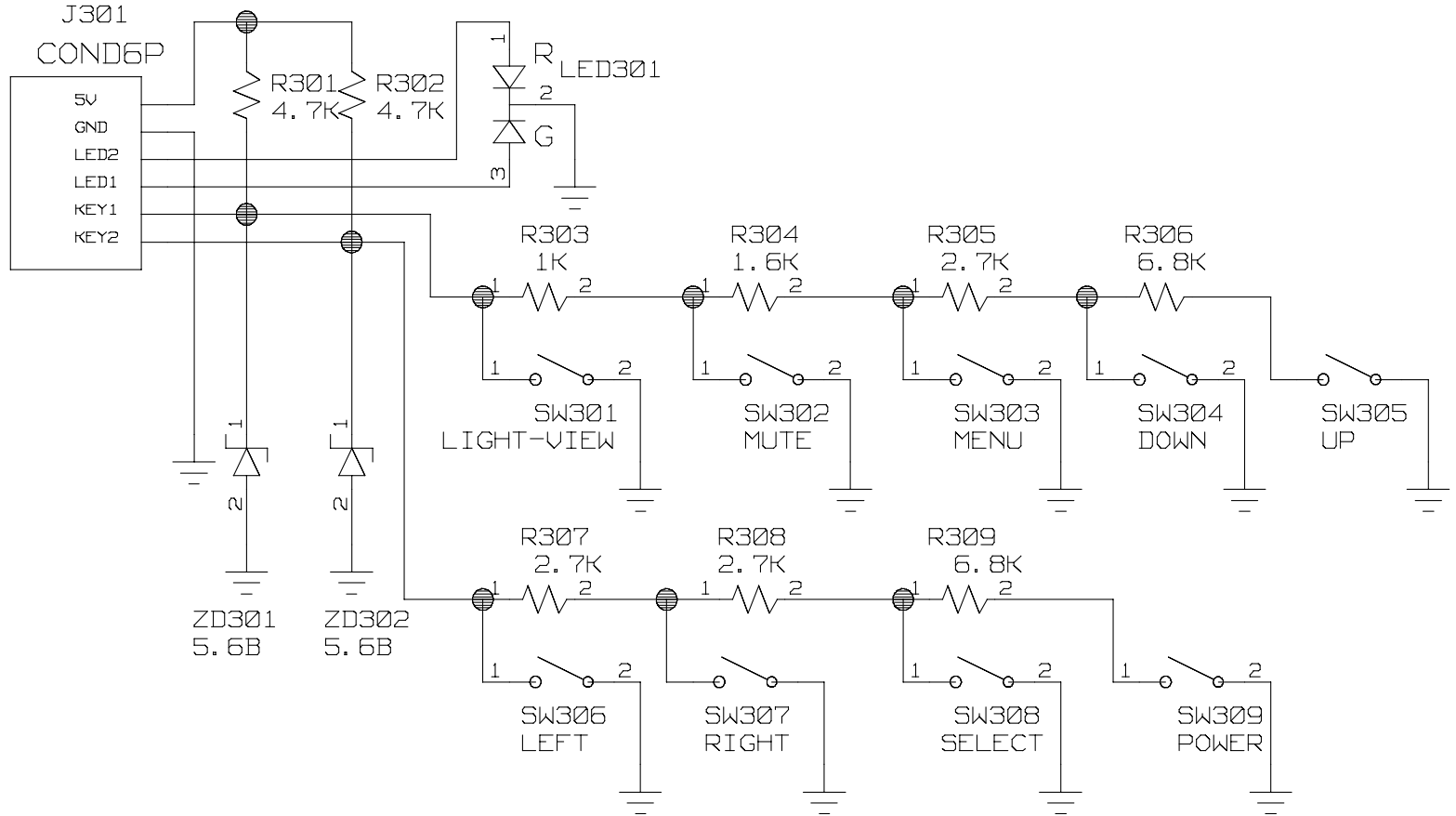
#4 LM505J POWER

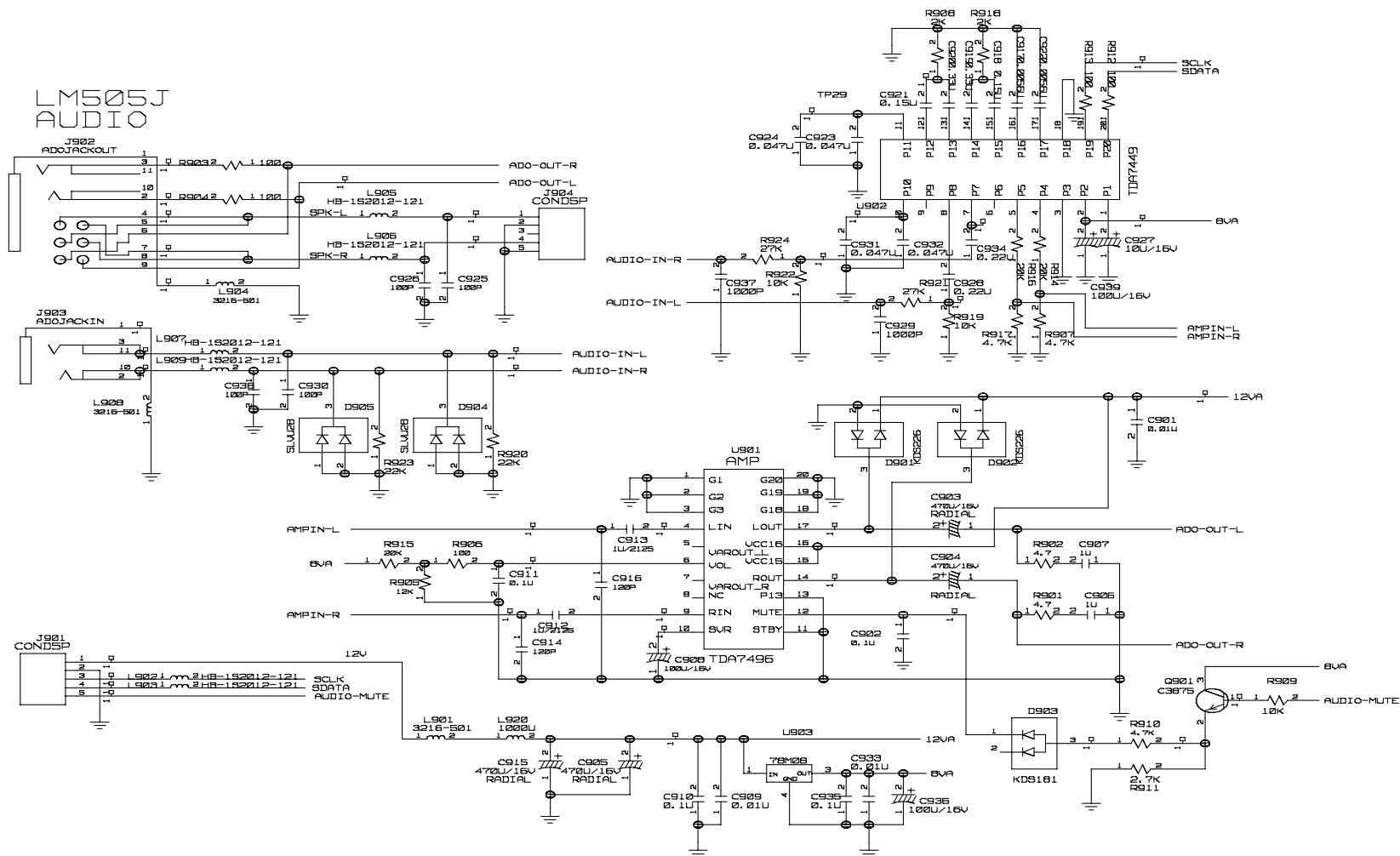


#5 LM505J CONNECTOR & JACKS

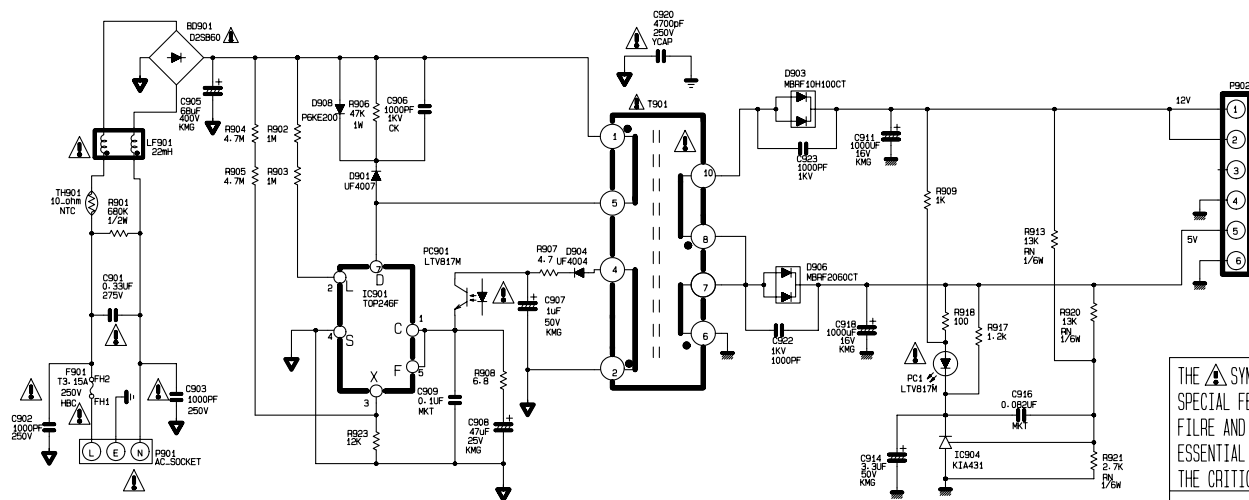


LM505J KEY CONTROL





Internal Power Circuit (LB500J) 2002.01.04



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MODEL	LB500J	Sheet	1 / 1 Page