Service Manual

LCD PC

LP200C/LP200T

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ABOUT THIS MANUAL

This manual is intended for service personnel who have completed sufficient training to undertake the maintenance and inspection of personal computers.

It is organized to allow you to look up basic information for servicing and/or upgrading components of the LCD PC. The following information is included:

Chapter 1, *Introduction*, provides general information about the location of system elements and their specifications.

Chapter 2, *Disassembly,* provides step-by-step instructions for disassembling parts and subsystems and how to upgrade elements of the system.

Appendix A, *Part Lists*

Appendix B, *Switches & Jumpers*

Appendix C, *Circuit Diagrams*

RELATED DOCUMENTS

You may also need to consult the following manuals for additional information:

User's Manual on CD

This describes the LCD PC's features and the procedures for operating the computer and its ROM-based setup program. It also describes the installation and operation of the utility programs provided with the LCD PC.

Concise User's Manual

This gives a quick guide to the LCD PC and a brief introduction to its features.

Table of Contents

2. DISASSEMBLY

1 INTRODUCTION

OVERVIEW

This manual covers the information you need to service or upgrade both the LP200C and LP200T LCD PCs. The two models mainly differ in appearance. All the description in this manual applies to both models unless otherwise specified.

Information about operating the computer (e.g. getting started, and the System Configuration Utility) is in the *User's Manual*. Information about drivers (e.g. VGA & audio) is also found in the *User's Manual*. That manual is shipped with the computer.

Operating systems (e.g. *Windows 98 Second Edition, Windows 2000 Professional,* etc.) have their own manuals as do application software (e.g. word processing and database programs). If you have questions about those programs, you should consult those manuals.

The LCD PC comes with a built-in 15" LCD display and is upgradeable in the areas of CPU, system memory and hard disk. See *Chapter 3, "Disassembly*," for a detailed description of the upgrade procedure for each specific component.

This chapter briefly introduces the computer's technical specifications, external features and system board features.

SYSTM SPECIFICATIONS

CPU

INTEL CELERON

Socket Type	Socket 370 (PPGA)
Speed	500/533/600/633MHz
L1 cache (in CPU)	16KB code + 16KB data
L2 cache (on die)	128KB

INTEL PENTIUM III

Socket Type	Socket 370 (FCPGA)
Speed	600/650/700/750/800MHz
L1 cache (in CPU)	16KB code + 16KB data
L2 cache (on die)	256KB

SYSTEM MEMORY

Type	SDRAM, 3.3V, 100/133MHz (PC100/133)
Base	0MB (onboard)
Expansion	up to 512MB using one or both 168-pin DIMM sockets (DIMM sizes: 64MB, 128MB, 256MB)

CORE LOGIC

SiS630 digital I/F

BIOS

Insyde 2Mb Flash ROM, APM 1.2, ACPI

VIDEO

Controller	built-in SiS630
Memory*	SSMA
Interface	digital I/F
Display	built-in 15” LCD color TFT XGA (1024 x 768), 256K colors
Port	analog 15-pin VGA port for CRT

*The system allocates or “shares” a portion of system memory for video use. “Shared memory size is user-configurable via the SCU.

STORAGE DEVICES

HDD	fixed, 3.5”, 25.4mm, PCI local bus IDE interface
FDD	3.5”, 1.44MB (3-mode)
CD Device (factory option)	
CD-ROM	24X, full size (5.25”) ATAPI interface tray-loading mechanism, access time below 100ms
DVD	8X, full size (5.25”) ATAPI interface tray-loading mechanism, access time below 100ms (with software MPEG support)
CD-RW	4X, full size (5.25”) ATAPI interface tray-loading mechanism, access time below 100ms

Audio

Controller	built-in SiS630
Compatibility	Sound Blaster, MS Windows Sound System
Compliance	AC'97 specs
Output	2 built-in speakers
Ports	line-in
	phones-out
	microphone-in

PCMCIA

Controller	TI 1420
Socket	(x 2) Type II or (x 1) Type III

I/O

Controller	SMSC37N869
Ports	
USB	(x 4) LP200C
	(x 2) LP200T
Serial	(x 1) 9-pin, 16550A compatible
	(x 1) infrared (modes: IrDA, ASK, FIR)
Parallel	(x 1) 25-pin (modes: Standard AT, Bidirectional, ECP, EPP)
PS/2	(x 2) 6-pin, for mouse and keyboard
IEEE1394*	(x1) 6-pin, unpowered

(*The IEEE1394 module is a dealer option.)

INPUT

Keyboard (dealer option) 104-key, AT-compatible, with special function keys

COMMUNICATIONS

MODEM*

Type MDC, V.90, 56K (software-based)

Output RJ-11 jack (on-board)

(* The modem module is a dealer option.)

LAN

Type built-in SiS630

Output RJ-45 jack (on-board)

SECURITY

BIOS Password

Kensington Lock Port

POWER SYSTEM

Adapter internal AC, 90W, 90-264V (full range, auto-sensing)

Power Management ACPI-compliant (S1, S4 & S5)

Physical Specifications

Dimensions	**W:** 369mm (14.5”) **L:** 384mm (15.1”) **D:** 175mm (6.9”)
Weight	7.9Kg/17.4lbs
Panel Tilt	0° to 15°
Stand Swivel	270°

Environmental Specifications

Temperature

Operating	5°C to 35°C (41°F to 95°F)
Storage	-10°C to 65°C (14°F to 149°F)

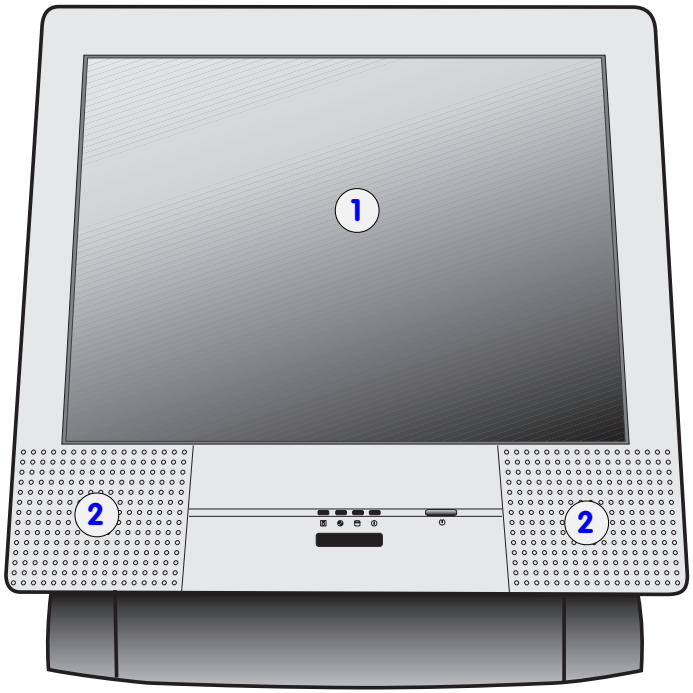
Humidity (Non-condensing)

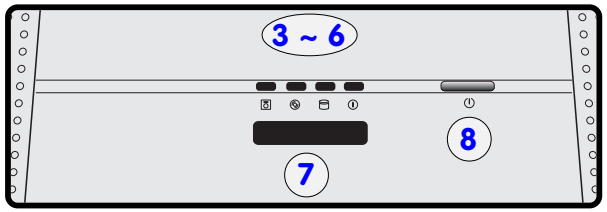
Operating	20 % to 80 %
Storage	10 % to 90 %

EXTERNAL LOCATOR

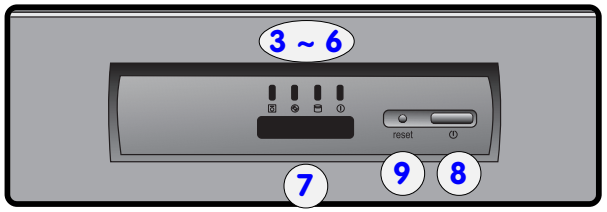
The following figures show the external locations of the main features of the LCD PC.

LP200C





LP200T



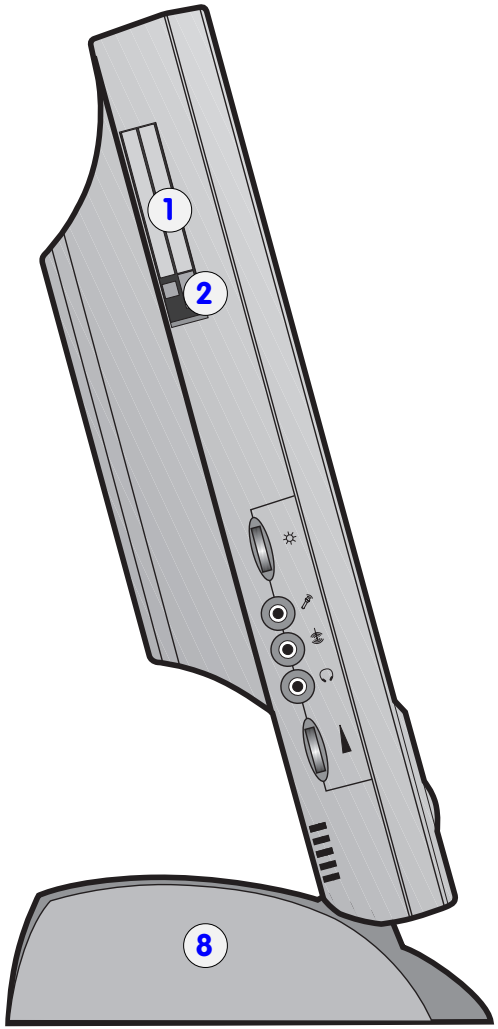
FRONT VIEW
FIG. 1 – 1

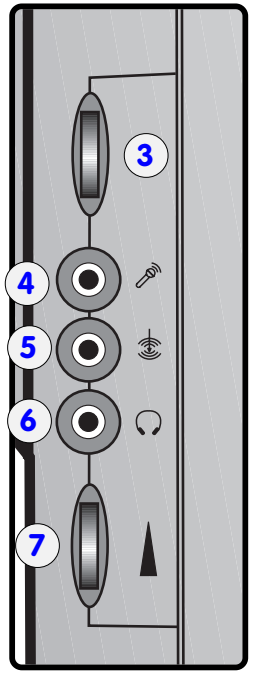
1. LCD
2. Speakers
3. FDD activity LED
4. CD-device activity LED
5. HDD activity LED
6. Power LED
7. IrDA port
8. ON/OFF & Standby/ Resume button
9. Reset button* (*LP200T only)

LEFT VIEW

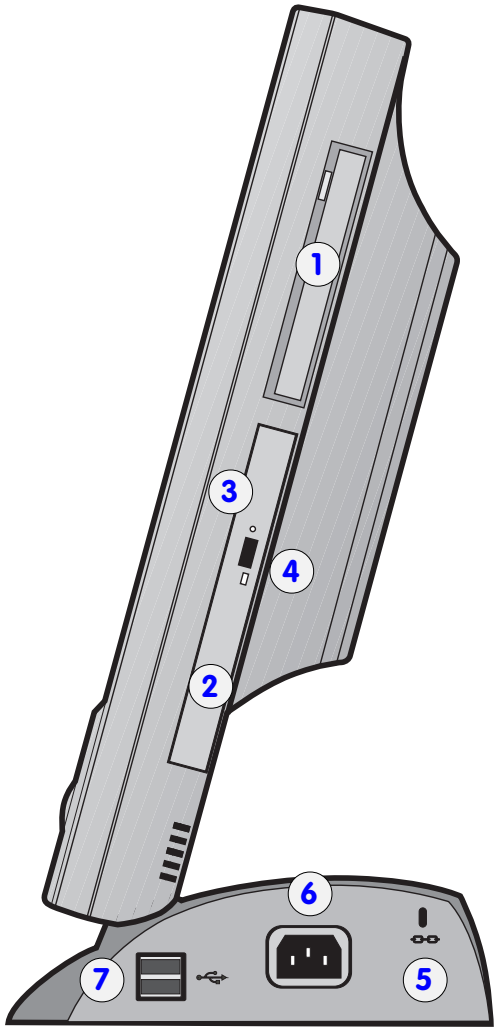
FIG. 1 - 2

1. PC Card (PCMCIA) socket
2. PC Card eject button
3. LCD brightness control
4. Microphone input jack
5. Line-in jack
6. Phones out jack
7. Volume control knob
8. HDD bay

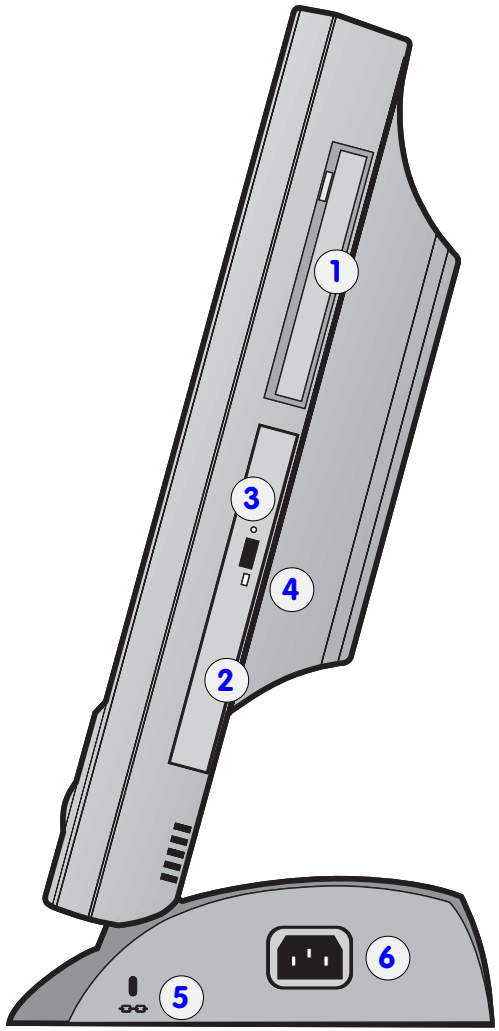




LP200C



LP200T



RIGHT VIEW

FIG. 1 - 3

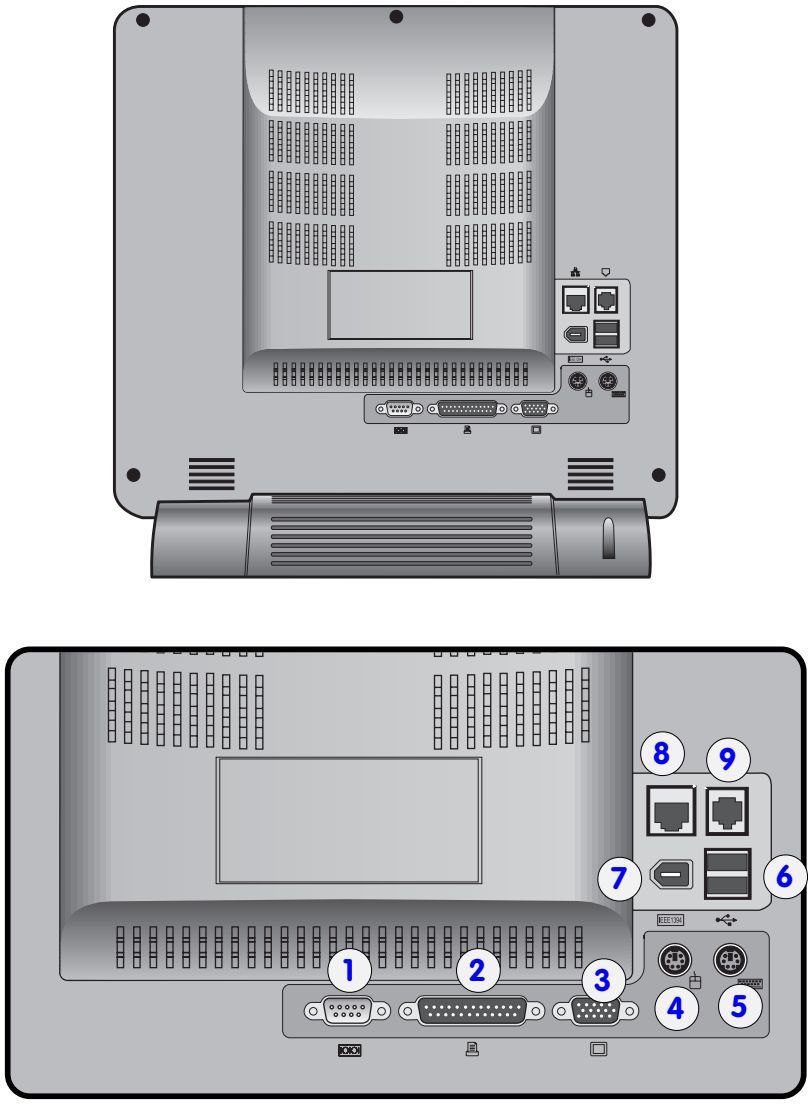
1. FDD bay
2. CD-Device bay
3. Emergency eject button

   - Use a probe (e.g. a straightened paper clip).
4. Eject button
5. Kensington lock port
6. AC-in port
7. two USB ports

   (* LP200C only)

Rear View

Fig. 1 - 4



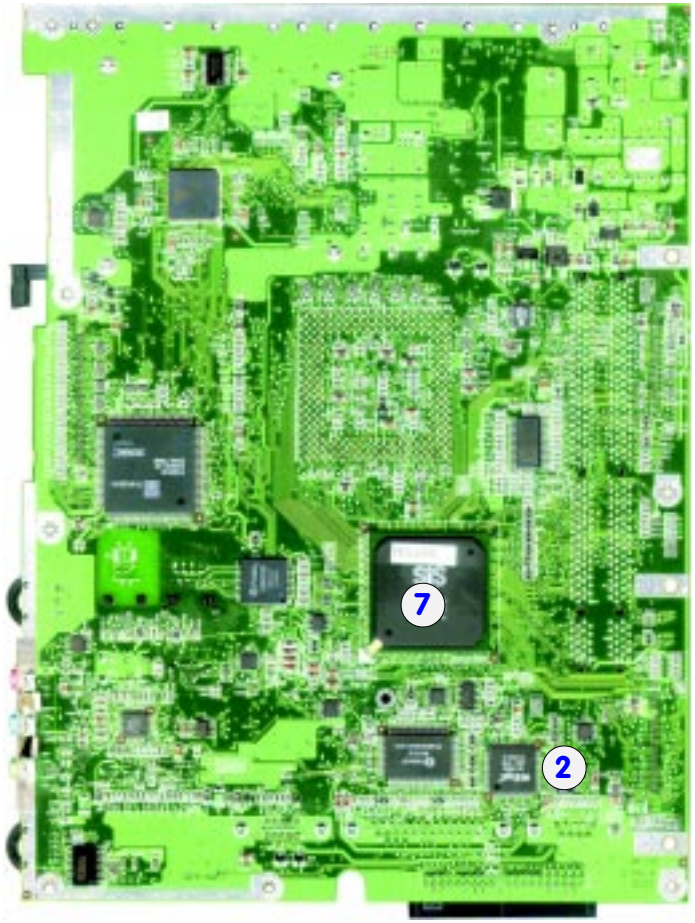
1. Serial port (COM A)
2. Printer/Parallel port
3. VGA port
4. PS/2 mouse port
5. PS/2 keyboard port
6. USB ports (x2))
7. IEEE1394 port
8. RJ-45 LAN port
9. RJ-11 Modem port

SYSTEM BOARD OVERVIEW

KEY PARTS

Top View

Bottom View



KEY PARTS

FIG. 1 - 5

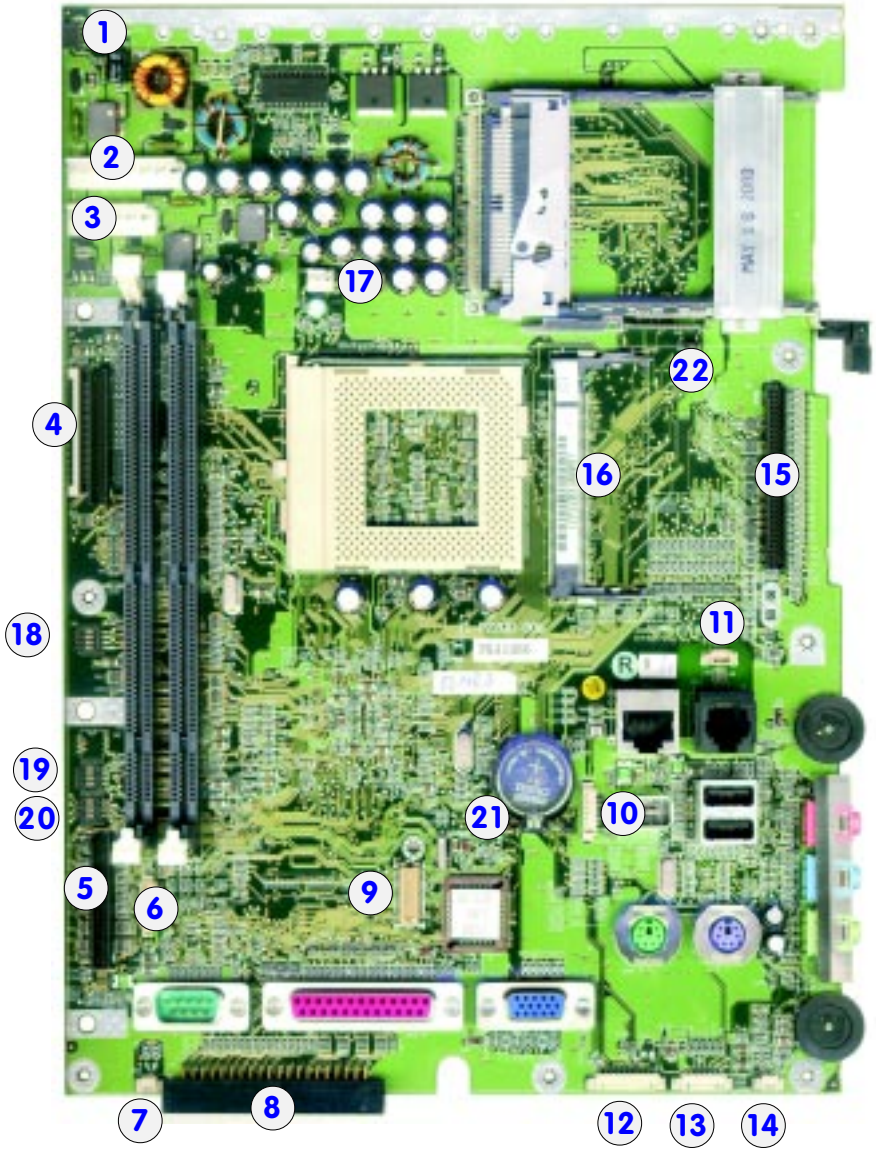
1. CPU (Intel Pentium III or Celeron) with Fan
2. SMSC37N869 Super I/O Controller
3. Flash ROM
4. two DIMM Sockets
5. CMOS Battery
6. PCMCIA Socket
7. SiS630 Integrated Chip (Core Logic, Video, Audio & LAN)

Connectors, Switches & Jumpers

Cable Connectors, Switches & Jumpers

Fig. 1 - 6

1. CN1 (Inverter Cable)
2. CN2 (Power Cable)
3. CN4 (Power Cable)
4. CN6 (FDD Cable)
5. CN22 (CD Device Cable)
6. CN35 (USB Cable)
7. CN33 (Left Speaker Cable)
8 CN30 (HDD Cable)
9. CN21 (Modem Module)
10. CN16 (IEEE1394 Cable)
11. CN11 (Modem Cable)
12. CN31 (LED Cable)
13. CN32 (Inverter Cable)
14. CN34 (Right Speaker Cable)
15. CN8 (LCD Cable)
16. CN9 (IEEE1394 Module)
17. CN5 (Fan Cable)
18. SW1 (CPU Frequency Switch)
19. SW3 (LCD Type Switch)
20. SW4 (System Board ID Switch)
21. J1 (CMOS Clear Jumper)
22. J2 (Panel VCC Jumper)



2 DISASSEMBLY

OVERVIEW

This chapter provides step-by-step instructions for disassembling parts and subsystems. When it comes to reassembly, reverse the procedures (unless otherwise indicated). All the procedures apply to both the LP200C and LP200T unless otherwise specified.

We suggest you completely review any procedure before you take the computer apart.

CPU and Memory Upgrades:

The upgrade procedures for CPU and system memory involve more than the component-specific removal and replacement procedure. Please pay attention to the component-specific upgrade notes.

Maintenance Tools

The following tools are recommended when working on the LCD PC:

- M3 Philips-head screwdriver
- M2.5 Philips-head screwdriver (magnetized)*
- M2 Philips-head screwdriver
- Small flat-head screwdriver
- Pair of needle-nose pliers
- Anti-static wrist-strap

* note Maintenance Precaution #3.

Connections

Connections within the computer are one of four types:

Locking collar sockets for ribbon connectors	To release these connectors, use a small flat-head screwdriver to gently pry the locking collar away from its base. When replacing the connection, make sure the connector is oriented in the same way. The pin1 side is usually *not* indicated.
Pressure sockets for multi-wire connectors	To release this connector type, grasp it at its head and gently rock it from side to side as you pull it out. *Do not pull on the wires themselves.* When replacing the connection, do not try to force it. The socket only fits one way.
Pressure sockets for ribbon connectors	To release these connectors, use a small pair of needle-nose pliers to gently lift the connector away from its socket. When replacing the connection, make sure the connector is oriented in the same way. The pin1 side is usually *not* indicated.
Board-to-board or multi-pin sockets	To separate the boards, gently rock them from side to side as you pull them apart. If the connection is very tight, use a small flat-head screwdriver - *use just enough force to start the separation.*

MAINTENANCE PRECAUTIONS

The following precautions are a reminder.
To avoid personal injury or damage to the computer while performing a removal and/or replacement job, take the following precautions:

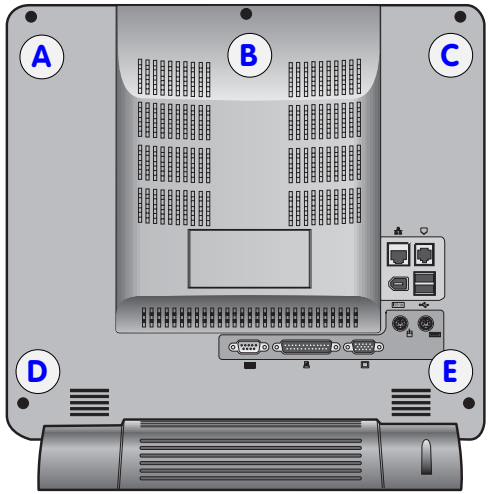
1. **Don't drop it.** Perform your repairs and/or upgrades on a stable surface. If the computer falls, the case and other components could be damaged.
2. **Don't overheat it.** Note the proximity of any heating elements. Keep the computer out of direct sunlight.
3. **Avoid interference.** Note the proximity of any high capacity transformers, electric motors, and other strong magnetic fields. These can hinder proper performance and damage components and/or data. You should also monitor the position of magnetized tools (i.e. screwdrivers).
4. **Keep it dry**. This is an electrical appliance. If water or any other liquid gets into it, the computer could be badly damaged.
5. **Be careful with power.** Avoid accidental shocks, discharges or explosions.
   - Before removing or servicing any part from the computer, turn the computer off and detach any power supplies.
   - When you want to unplug the power cord or any cable/wire, be sure to disconnect it by the plug head. Do not pull on the wire.
6. **Peripherals** –Turn off and detach any peripherals.
7. **Beware of static discharge.** ICs, such as the CPU and main support chips, are vulnerable to static electricity. Before handling any part in the computer, discharge any static electricity inside the computer. When handling a printed circuit board, do not use gloves or other materials which allow static electricity buildup. We suggest that you use an anti-static wrist strap instead.
8. **Beware of corrosion.** As you perform your job, avoid touching any connector leads. Even the cleanest hands produce oils which can attract corrosive elements.
9. **Keep your work environment clean.** Tobacco smoke, dust or other air-born particulate matter is often attracted to charged surfaces, reducing performance.
10. **Keep track of the components.** When removing or replacing any part, be careful not to leave small parts, such as screws, loose inside the computer.

CLEANING

Do not apply cleaner directly to the computer, use a soft clean cloth.
Do not use volatile (petroleum distillates) or abrasive cleaners on any part of the computer.

Back Cover Removal

1. Place the system with its LCD display facing down.
2. Remove 5 screws (A, , B, C, D & E) which secure the Back Cover to the rest of the system.



Removing 5 Screws from the back of the system

Fig. 2-1

3. Gently remove the cover from the rest of the system.

Back Cover and the rest of the system

Fig. 2-2

CPU Removal

Part A

Remove the Back Cover. (page 2-4)

Part B

☞**Note:** If you want to upgrade the CPU, replace the old CPU with the upgraded one and also see the CPU Upgrade Notes on the next page.

1. Unplug the Fan Cable from Connector **CN5**.
2. Disengage both caches at the sides of the Fan from the CPU socket.
3. A thermal pad is attached to the Fan. Remove the Fan with the Thermal Pad from the CPU.
4. Disengage the CPU lever and remove the CPU.

Removing the Fan and the CPU
Fig. 2-3

☞**Note for Replacing the CPU:** : Reverse the removal procedure. Please also note the following:

When inserting the CPU, put the CPU in the CPU socket with the notched corner of the CPU aligning with the notched corner of the CPU socket and then engage the lever.

CPU Upgrade Notes

After you install the upgraded CPU, check against the following table to see if you need to adjust switch settings.

Switch Settings for All Supported CPUs

CPU Switch Settings
Table 2-1

CPU		Switch SW1 (CPU Frequency Switch)			
Type	**FSB Speed**	**SW1-1**	**SW1-2**	**SW1-3**	**SW1-4**
Celeron 466/Celeron 500 Celeron 533/Celeron 566 Celeron 600	66.7MHz	OFF	OFF	OFF	OFF
Pentium III 600/Pentium III 650 Pentium III 700/Pentium III 750 Pentium III 800	100MHz	ON	OFF	OFF	OFF
Pentium III 667/Pentium III 733 Pentium III 866	133MHz	ON	ON	ON	OFF

Locating Switch SW1

Fig. 2-4 shows the location of Switch **SW1**.

Switch SW1 Location
Fig. 2-4

Memory Module Removal

Removing DIMMs

Part A

Remove the Back Cover. (page 2-4)

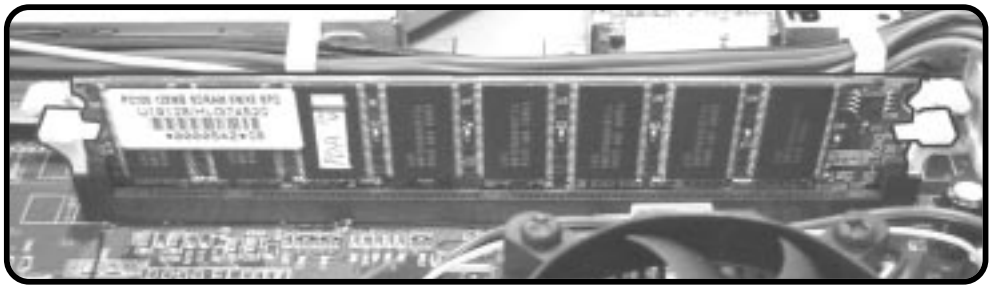
Part B

Release the levers on the two ends of the DIMM slot. As you do so, the module will rise slightly and remove the seated DIMM, one at a time.

Removing the DIMMs
Fig. 2-5

Installing DIMMs

1. Insert a DIMM in either slot at about a 20° angle. Grooves on the sides of the module allow you to insert it only one way. Make sure it is seated as far into the slot as it will go. DO NOT FORCE IT. The module should fit in without much pressure. If there is a lot of resistance, check to make sure the DIMM is properly seated.
2. Click in the slot levers to secure the module.
3. Reinstall the back cover.



Installing the DIMMs
Fig. 2-6

☞Memory Upgrade Note:

- If you have changed the memory configuration, run SCU so the new total can be registered in the CMOS.
- If you have increased memory, check to see if you need to recreate the Hibernate-specific file if the system runs Windows 98 SE with Hibernate support enabled. (Refer to *Chapter 3, Advanced Controls* & *Chapter 5, Drivers & Utilities* of the CD-based complete *User's Manual* for details.)

FDD Module Removal

Part A

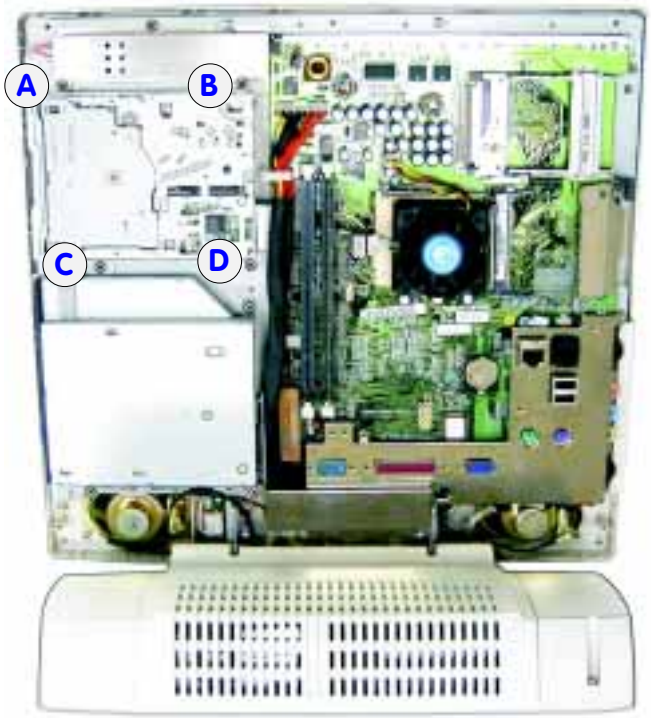
Remove the Back Cover. (page 2-4)

Part B

1. Remove 4 screws (A, B, C & D).
2. Separate the FDD module from the rest of the system by disconnecting the FDD Cable from the System Board at Connector **CN6**.

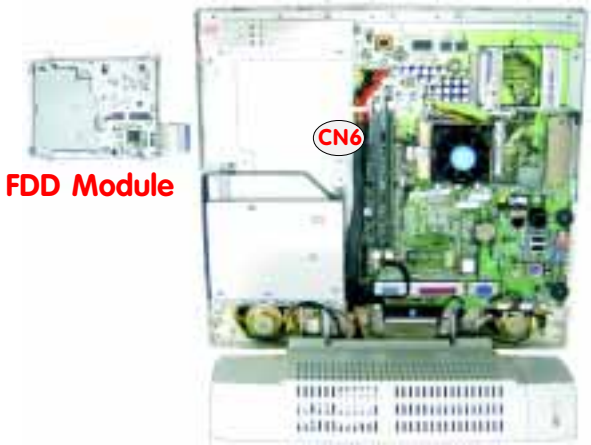
Removing the FDD Module (1)

Fig. 2-7



Removing the FDD Module (2)

Fig. 2-8



CD Device Module Removal

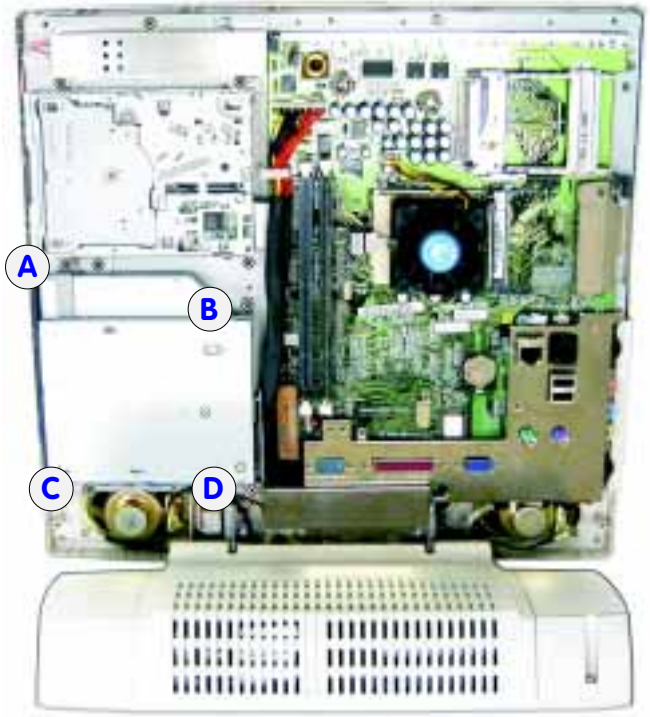
The CD device module can be the CD-ROM module, DVD module or CD-RW module.

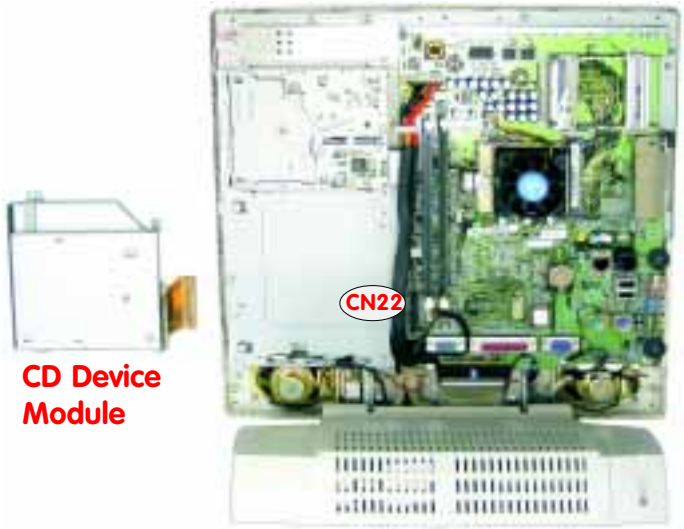
Part A

Remove the Back Cover. (Page 2-4)

Part B

1. Remove 4 screws (A, B, C & D).
2. Separate the CD Device Module from the rest of the system by disconnecting the device cable from Connector **CN22** on the System Board.





Removing the CD Device Module (1)
Fig. 2-9

Removing the CD Device Module (2)
Fig. 2-10

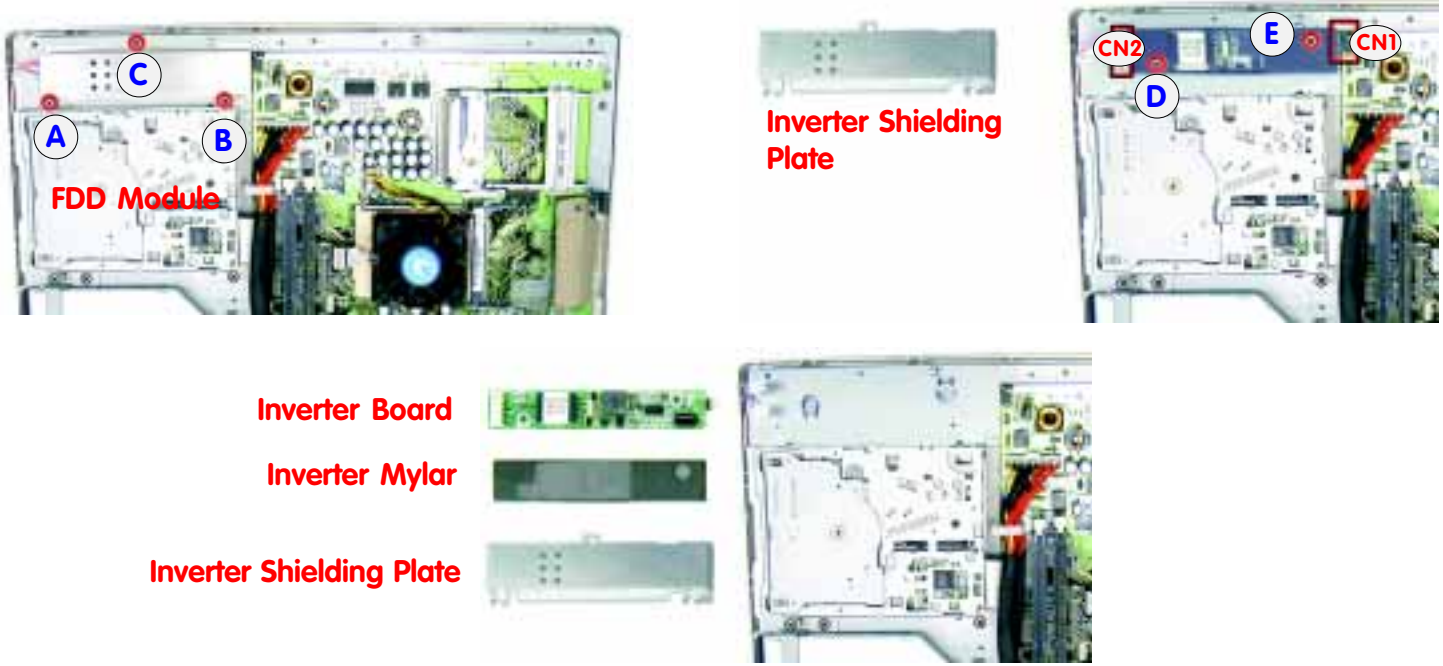
Inverter Board Removal

Part A

Remove the Back Cover. (Page 2-4)

Part B

1. Remove the Inverter Shielding Plate by removing 3 screws (A, B & C) which secure it to the rest of the system. (If you have already removed the FDD module, Screws A & B have already been removed during the process.)
2. Remove 2 screws (D & E) which secure the Inverter Board and the Inverter Mylar to the rest of the system.
3. Disconnect the following 3 cables:
   (C1 & C2) The LCD to Inverter Board (2 cables from Connectors **CN2**).
   (C3) The Inverter Board to System Board (from Connector **CN1**).
4. Separate the Inverter Board and the Inverter Mylar.



Removing the Inverter Board

Fig. 2-11

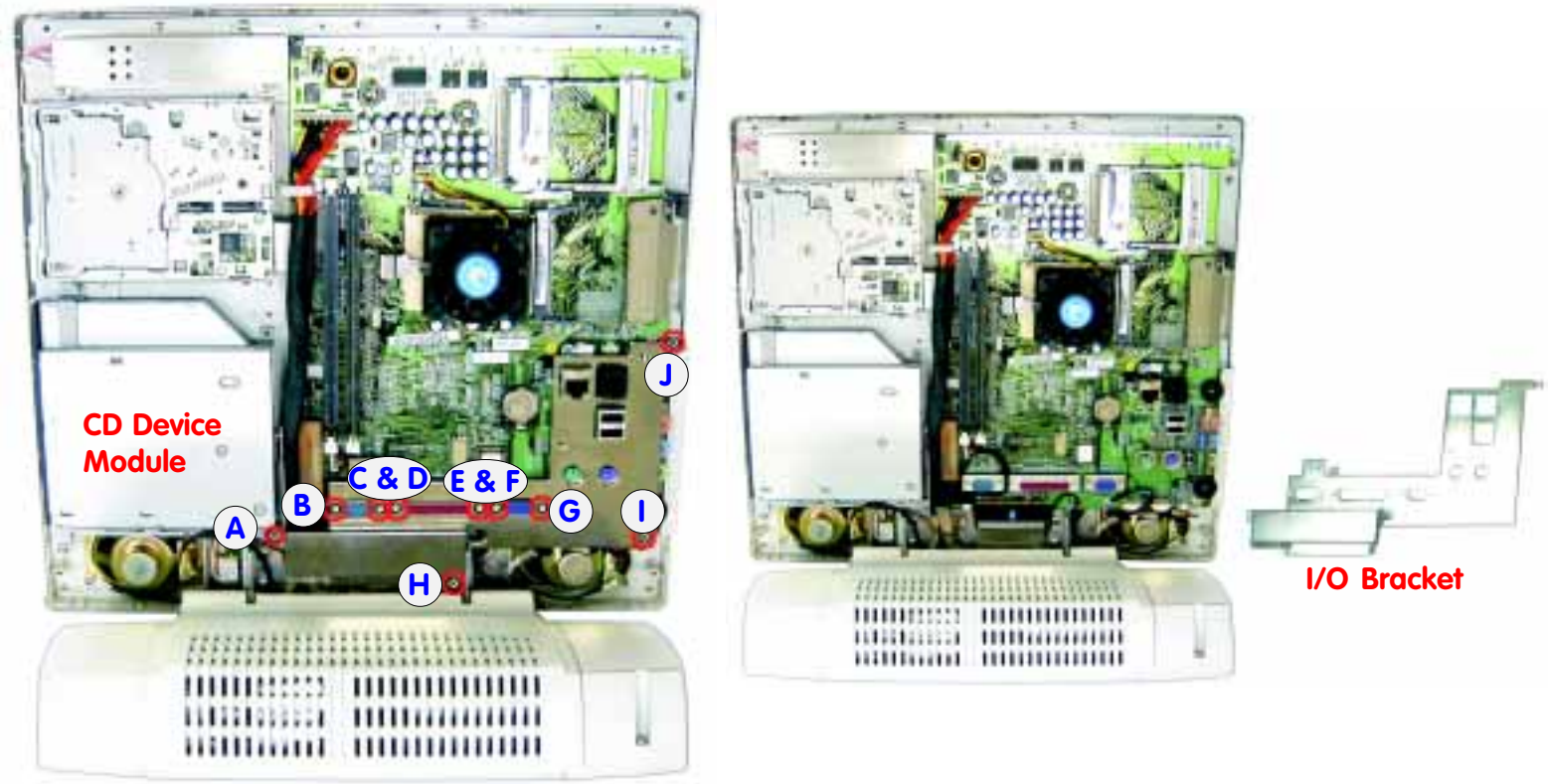
I/O BRACKET REMOVAL

Part A

Remove the Back Cover. (page 2-4)

Part B

Remove the I/O Bracket by removing 10 screws (A ~ J) which secure it to the rest of the system.
(If you have already removed the CD Device Module, Screw A has already been removed during the process.)



REMOVING THE I/O BRACKET
FIG. 2-12

System Board Removal

Part A

Remove the Back Cover. (page 2-4)
Remove the I/O Bracket. (page 2-11)

Part B

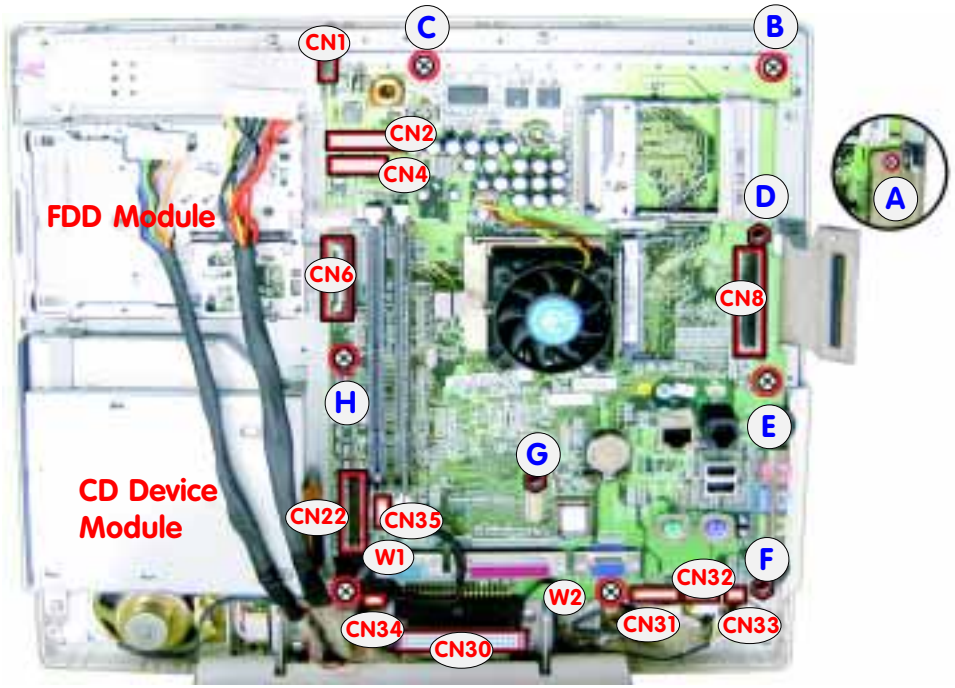
1. Remove Screw A.
2. Disconnect the following 12 cables and 2 ground wires from the System Board:

   12 Cables

   (C1) The Inverter Board to System Board (from Connector **CN1**).
   (C2) The FDD Module to System Board (from Connector **CN6**).
   (If you have already removed the FDD Module, the FDD Cable has already been removed during the process.)
   (C3) The CD Device Module to System Board (from Connector **CN22**).
   (If you have already removed the CD Device Module, the device cable has already been removed during the process.)
   (C4 & C5) The Power Supply to System Board (2 cables from Connector **CN2**, upper, and Connector **CN4**, lower).
   (Remove the clip which holds the above two cables together and put it aside.)
   (C6) The Right Speaker to System Board (from Connector **CN34**).
   (C7) The Left Speaker to System Board (from Connector **CN33**).
   (C8) The LED + Inverter Board to System Board (LED cable from Connector **CN31**).
   (C9) The LED + Inverter Board to System Board (Inverter cable from Connector **CN32**).
   (C10) The HDD to System Board (from Connector **CN30**).
   (C11) The LCD to System Board (from Connector **CN8**).
   (C12) The USB Board to System Board (from Connector **CN35**).

   2 Ground Wires

   (W1) A ground wire with the USB Cable fixed to the System Board with a screw.
   (W2) A ground wire fixed to the System Board with a screw.
3. Remove the System Board by removing 7 screws (B ~ H).



REMOVING THE SYSTEM BOARD

FIG. 2-13

LCD Module Removal

Part A

Remove the Back Cover. (page 2-4)
Remove the I/O Bracket. (page 2-11)

Part B

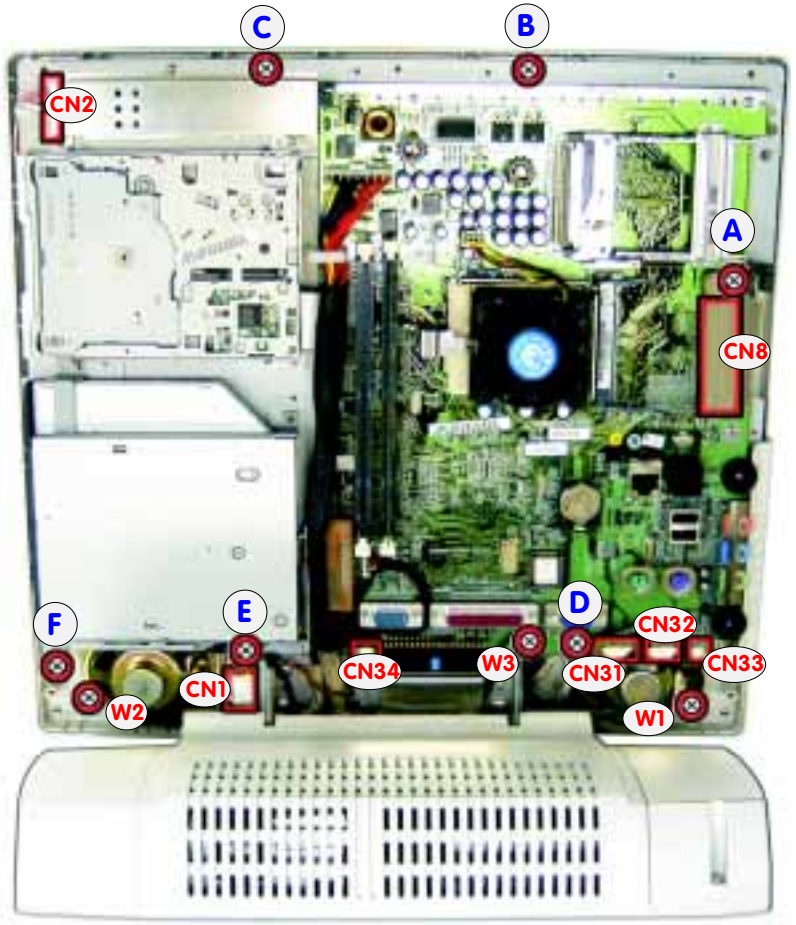
1. Remove 6 screws (A, B, C, D, E & F).
2. Disconnect the following 8 cables and 3 ground wires.

   8 Cables

   (C1 & C2) The LCD to Inverter Board (two cables from Connectors **CN2**).
   (C3) The LED + Inverter Board to System Board (LED cable from Connector **CN31**).
   (C4) The LED + Inverter Board to System Board (Inverter cable from Connector **CN32**).
   (C5) The LCD to LED + Inverter Board (from Connector **CN1**).
   (C6) The Left Speaker to System Board (from Connector **CN33**)
   (C7) The Right Speaker to System Board (from Connector **CN34**)
   (C8) The LCD to System Board (from Connector **CN8**)

   3 Ground Wires

   (W1) A ground wire fixed to the Left Speaker with a screw.
   (W2) A ground wire fixed to the Right Speaker with a screw.
   (W3) A ground wire fixed to the System Board with a screw.



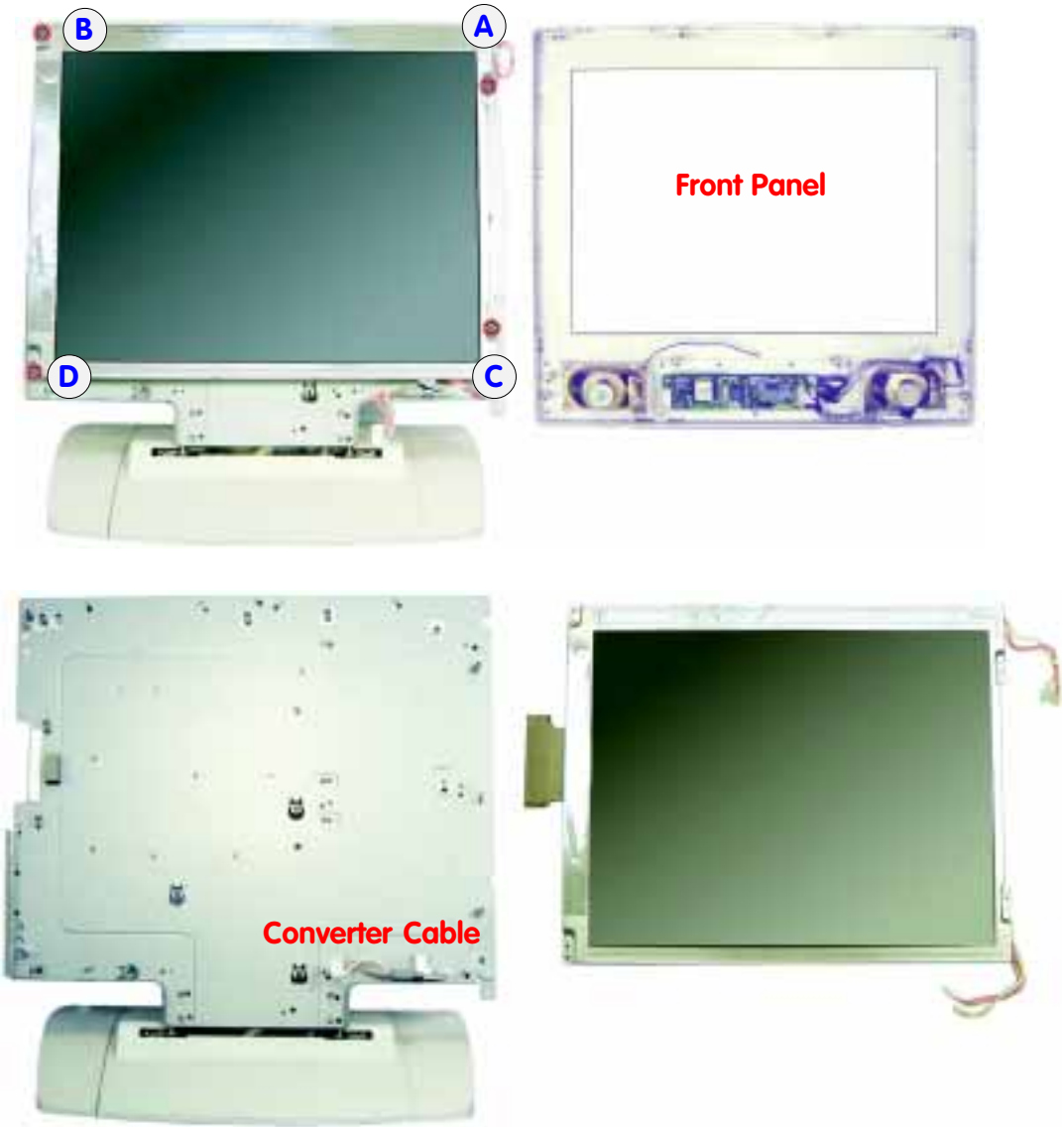
REMOVING 6 SCREWS, 8 CABLES & 3 GROUND WIRES

FIG. 2-14

3. Remove the LCD Module.

A. Remove 4 screws (A, B, C & D) to separate the Front Panel from the rest of the system.

B. Disconnect the Converter Cable from the LCD Module.



REMOVING THE LCD MODULE

FIG. 2-15

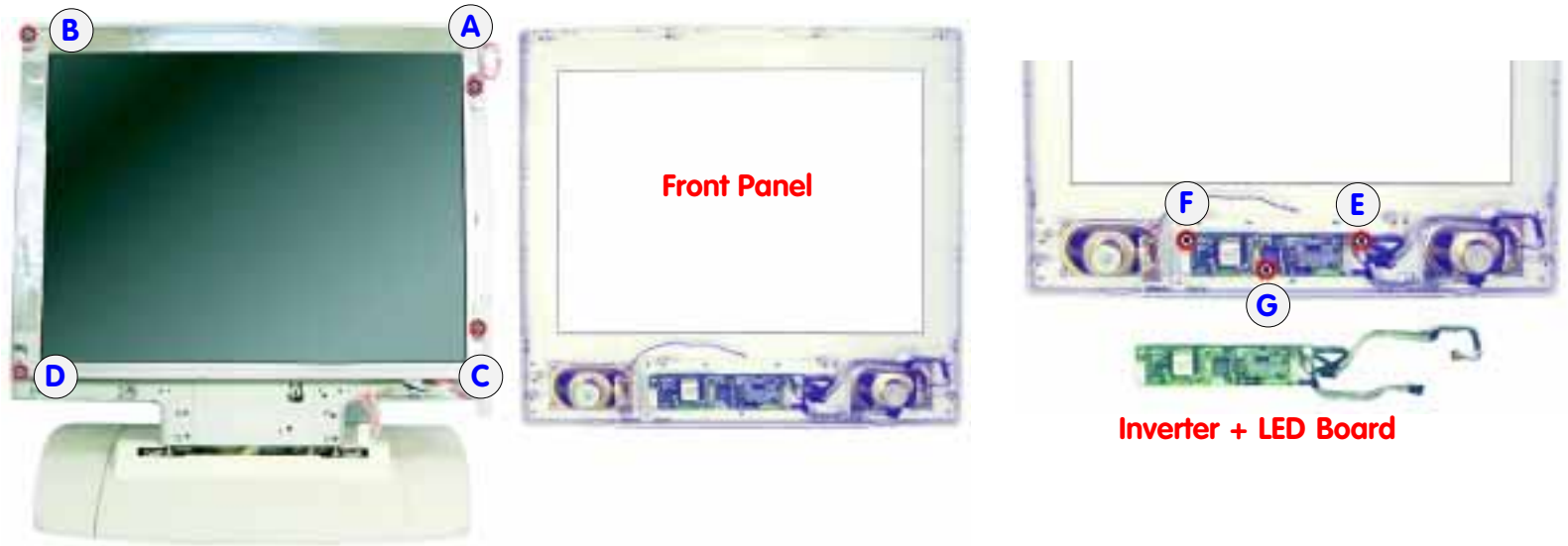
Inverter + LED Board Removal

Part A

Remove the Back Cover. (page 2-4)
Remove the I/O Bracket. (page 2-11)
Remove the Front Panel with the LCD Module. (Steps 1 & 2 of Part B of the LCD Module Removal Procedure, pages 2-14 & 2-15)

Part B

1. Separate the Front Panel from the rest of the system by removing 4 screws (A, B, C & D).
2. Separate the Inverter + LED Board from the Front Panel by removing 3 screws (E, F & G).



Removing the Inverter + LED Board

Fig. 2-16

Converter Board Removal

Part A

Remove the LCD Module. (pages 2-14 ~ 2-16)

Part B

Separate the Converter Board from the rest of the system by removing Screw A.

Removing the Converter Board

Fig. 2-17

Converter Board

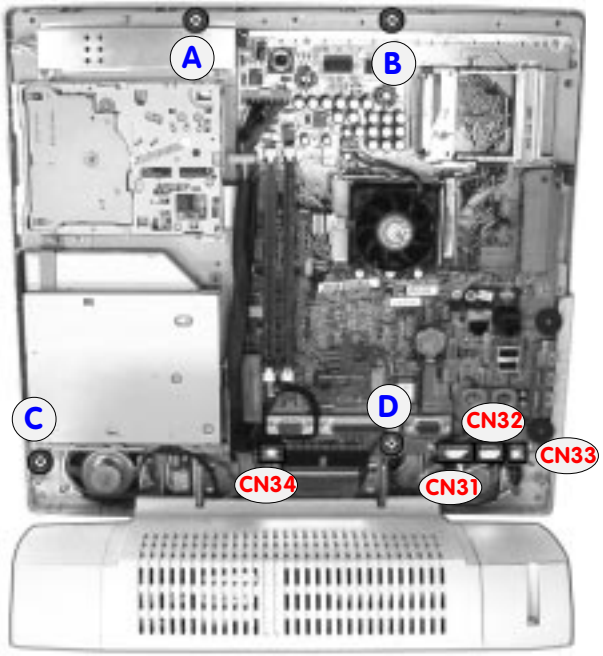
Speaker Removal

Part A

Remove the Back Cover. (page 2-4)
Remove the I/O Bracket. (page 2-11)

Part B

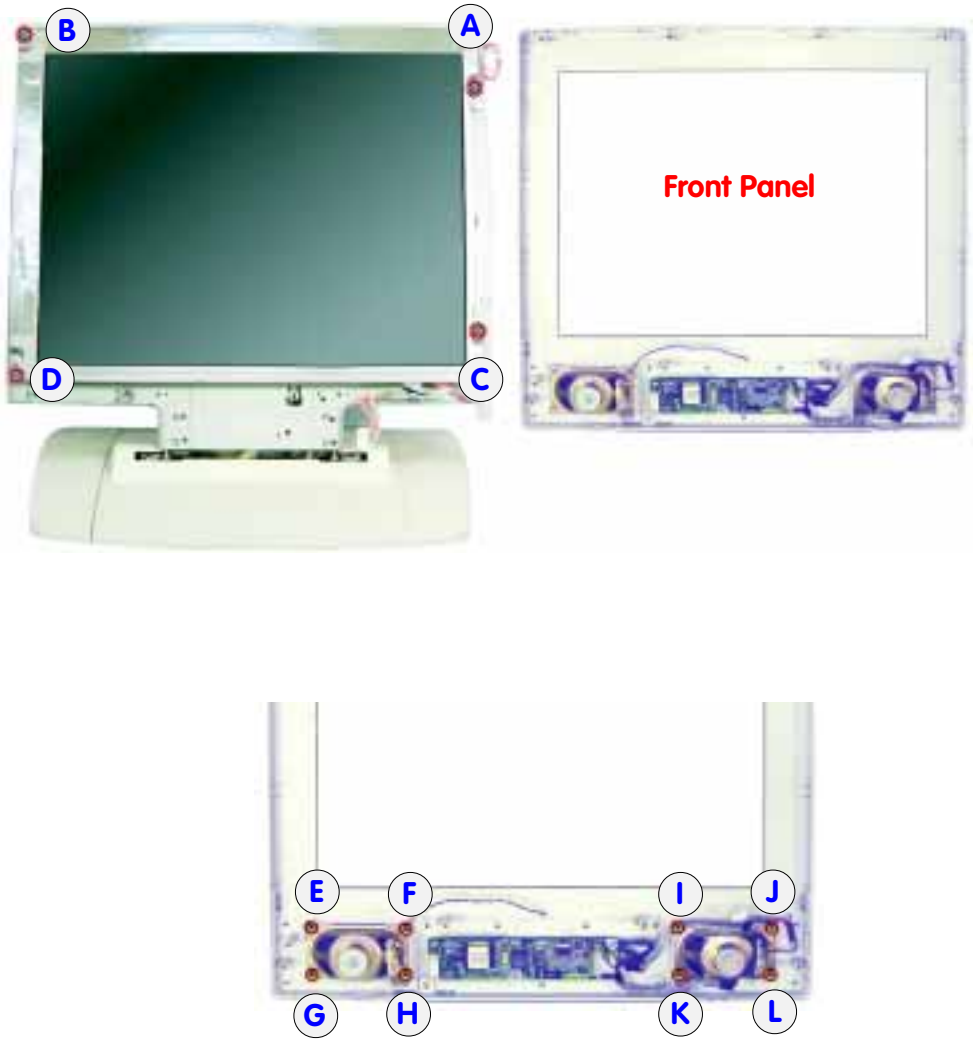
1. Disconnect the following 4 cables.
   (C1) The Right Speaker to System Board (from Connector **CN34**).
   (C2) The Left Speaker to System Board (from Connector **CN33**).
   (C3) The LED + Inverter Board to System Board (LED cable from Connector **CN31**).
   (C4) The LED + Inverter Board to System Board (Inverter cable from Connector **CN32**).
2. Remove 4 screws (A, , B, C & D).



Disconnecting 4 Cables & Removing 4 screws (for speaker removal)

Fig. 2-18

3. Separate the Front Panel from the rest of the system by removing 4 screws (A, B, C & D).
4. Separate the Speakers from the Front Panel by removing 8 screws (E ~ L).



SEPARATING THE SPEAKERS FROM THE FRONT PANEL

FIG. 2-19

Base Assembly Removal

Part A

Remove the Back Cover. (page 2-4)
Remove the I/O Bracket. (page 2-11)

Part B

Separate the Base Assembly from the rest of the system.

A. Disconnect the following 4 cables and 3 ground wires from the System Board.

4 Cables

(C1 & C2) The Power Supply to System Board (two cables from Connector **CN2**,upper, and Connector **CN4**, lower). (Remove the clip which holds the above two cables together and put it aside.)

(C3) The HDD to System Board (from Connector **CN30**)

(C4) The USB Board to System Board (from Connector **CN35**)

3 Ground Wires

(W1) A ground wire with the USB Cable fixed to the System Board with a screw.

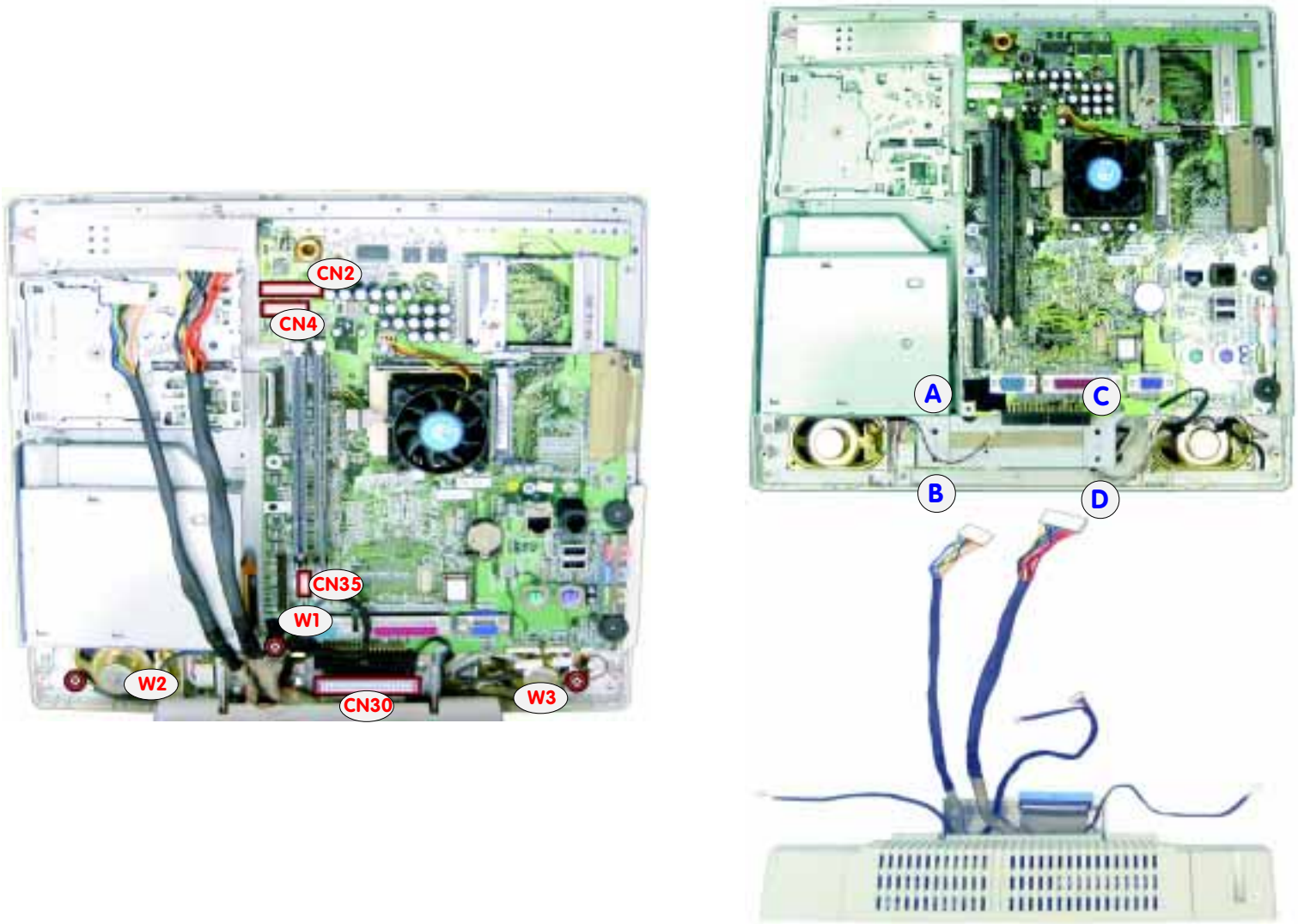
(W2) A ground wire fixed to the Right Speaker with a screw.

(W3) A ground wire fixed to the Left Speaker with a screw.

B. Remove 4 screws (A, B, C & D).

Separating the Base Assembly from the System

Fig. 2-20



Power Supply Removal

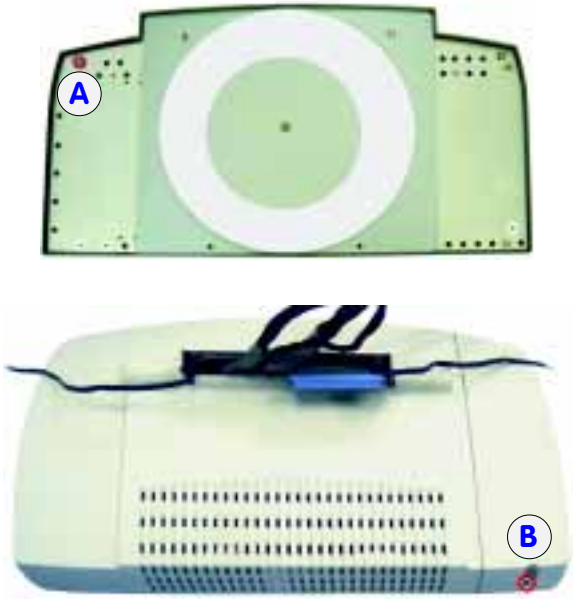
The Power Supply is in the Base Assembly.

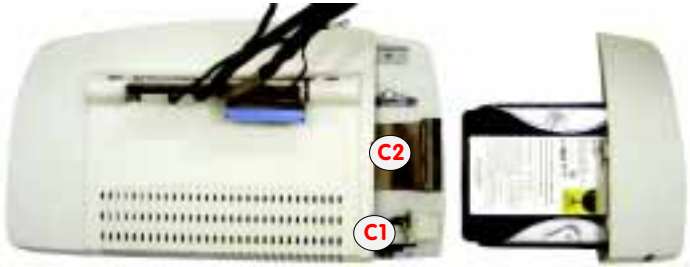
Part A

Remove the Base Assembly. (pages 2-21 & 2-22)

Part B

1. Remove the HDD Cartridge.
   A. Turn the Base Assembly upside down and remove Screw A. (Only the LP200T has this screw.)
   B. Remove Screw B and pull the HDD Cartridge out from its bay until the HDD's connectors are exposed.
   C. Disconnect the following cables.
   (C1) The Power Supply to HDD (power cable).
   (C2) The System Board to HDD (HDD signal cable).



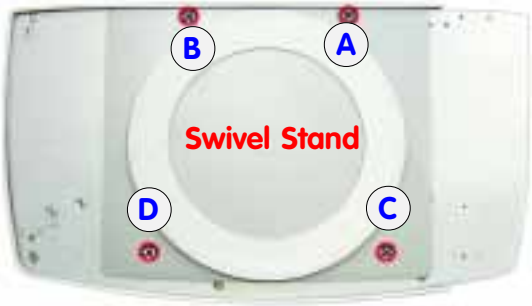


HDD Cartridge

Removing the HDD Cartridge
Fig. 2-21

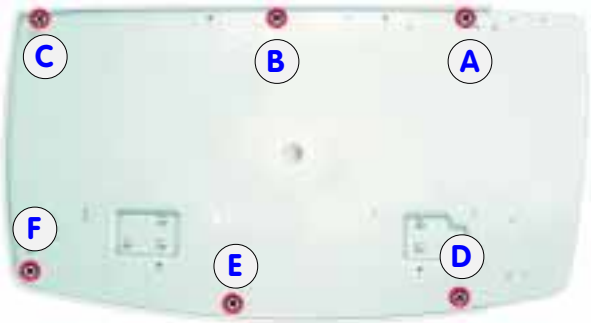
2. Remove the Swivel Stand.
   A. Turn the Base Assembly upside down.
   B. Remove 4 screws (A, B, C & D).

REMOVING THE SWIVEL STAND
FIG. 2-22

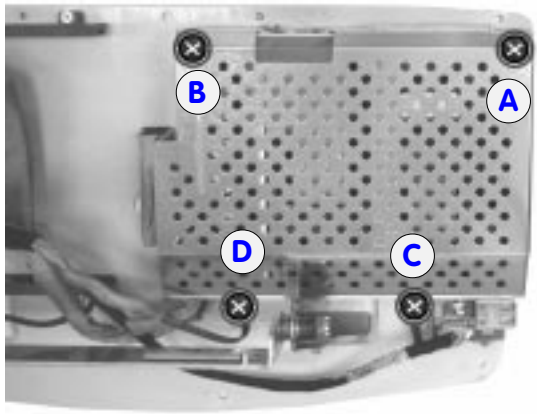


3. Separate the Top Cover of the Base Assembly from the rest of the Base Assembly by removing 6 screws (A, B, C, D, E & F).

REMOVING THE TOP COVER OF THE BASE ASSEMBLY
FIG. 2-23

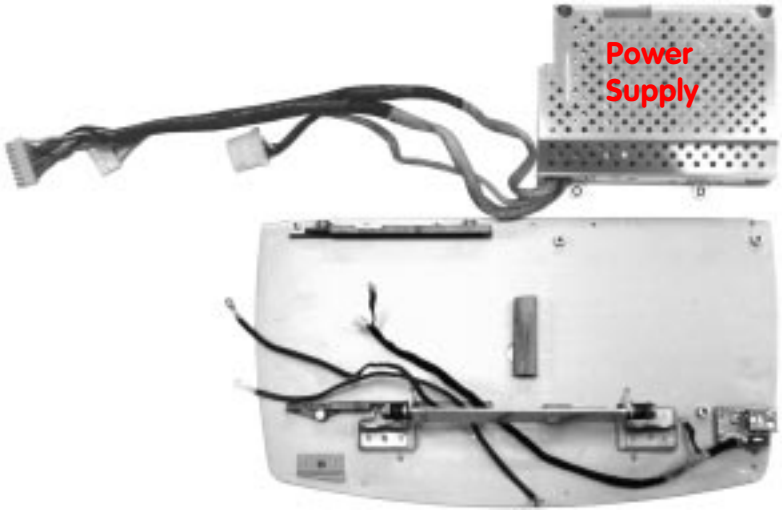


4. Separate the Power Supply from the rest of the Base Assembly by removing 4 screws (A, B, C & D).



REMOVING THE POWER SUPPLY

FIG. 2-24



USB Board Removal

The USB Board is in the Base Assembly. Only the LP200C has this feature.

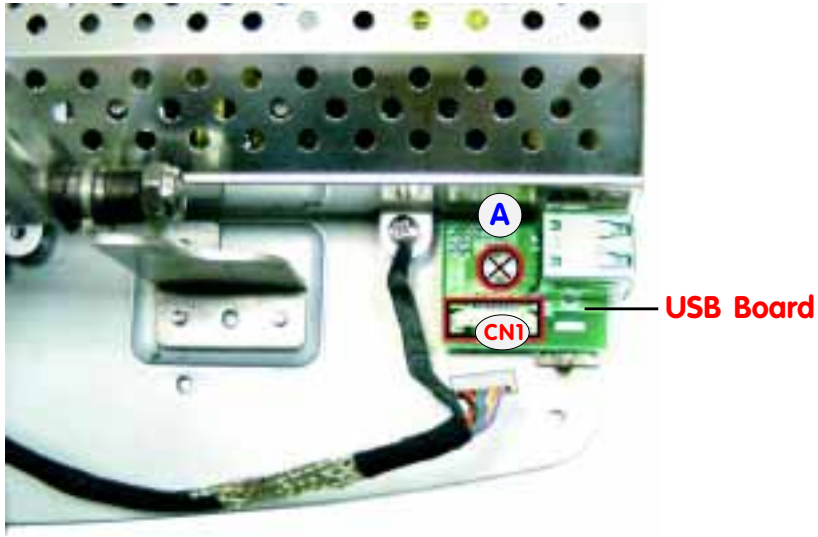
Part A

Remove the Base Assembly. (pages 2-21 & 2-22)
Remove the HDD Cartridge. (Step 1 of Part B of the Power Supply Removal Procedure, page 2-23)
Remove the Swivel Stand. (Step 2 of Part B of the Power Supply Removal Procedure, page 2-24)
Remove the Top Cover of the Base Assembly (Step 3 of Part B of the Power Supply Removal Procedure, page 2-24)

Part B

Separate the USB Board from the rest of the Base Assembly.

A. Disconnect the USB Cable from Connector **CN1** on the USB Board.
B. Remove Screw A which secures the board to the Bottom Cover of the Base Assembly.

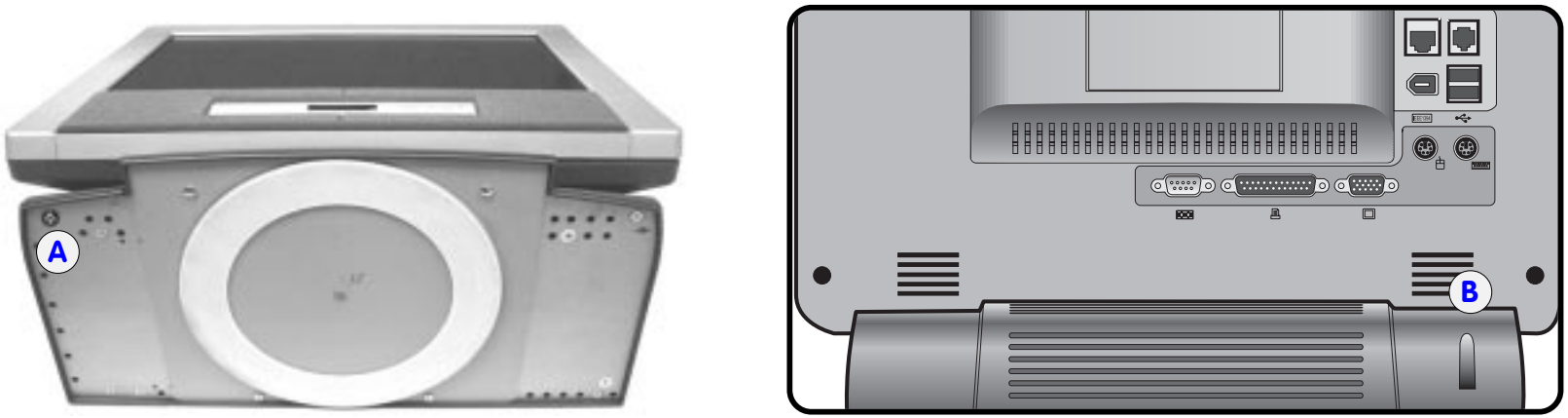


Removing the USB Board
Fig. 2-25

Hard Disk Drive Removal

The HDD is housed in the Base Assembly.

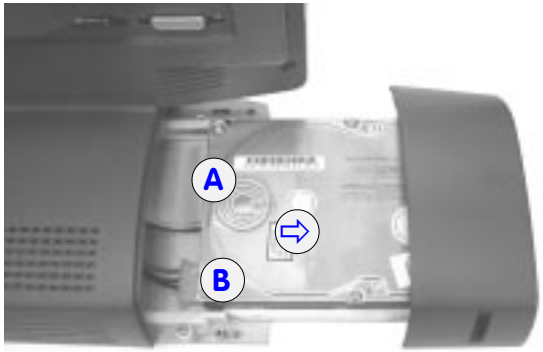
1. Place the LCD PC with its LCD panel facing up and remove Screw A. (Only the LP200T has this screw.)
2. Remove Screw B.



Removing Screws A & B

Fig. 2-26

3. Pull the HDD Cartridge out from its bay until the HDD's connectors are exposed.
4. Separate the HDD cartridge from the rest of the system by disconnecting the HDD's IDE Cable (A) and Power Cable (B). (Both of these cables are a tight fit.)



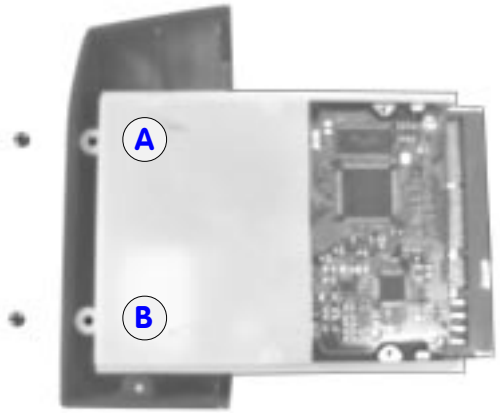
Pulling the HDD Cartridge out and Disconnecting the IDE & Power Cables

Fig. 2-27

5. Turn the cartridge upside down.
6. Remove Screws A & B to separate the HDD Frame from the Cartridge Casing.

SEPARATING THE HDD FRAME FROM THE CARTRIDGE CASING

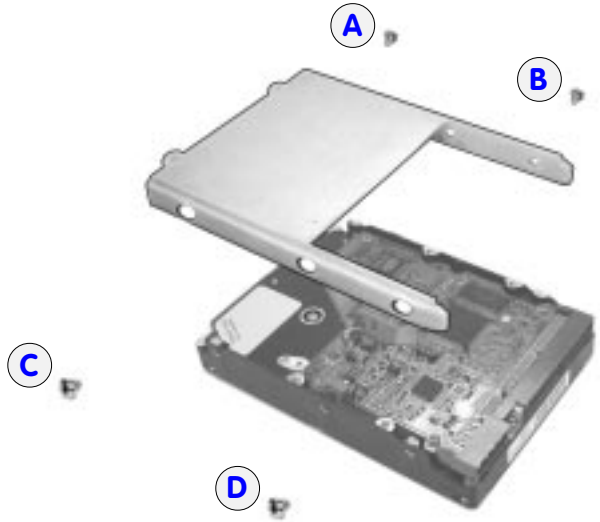
FIG. 2-28



7. Remove Screws A, B, C & D to separate the HDD from its frame.

SEPARATING THE HDD FROM ITS FRAME

FIG. 2-29



FAX/MODEM MODULE & IEEE1394 MODULE (OPTIONAL)

The Fax/Modem and IEEE1394 Modules are optional.

Part A

Remove the Back Cover. (page 2-4)
Remove the I/O Bracket. (page 2-11)

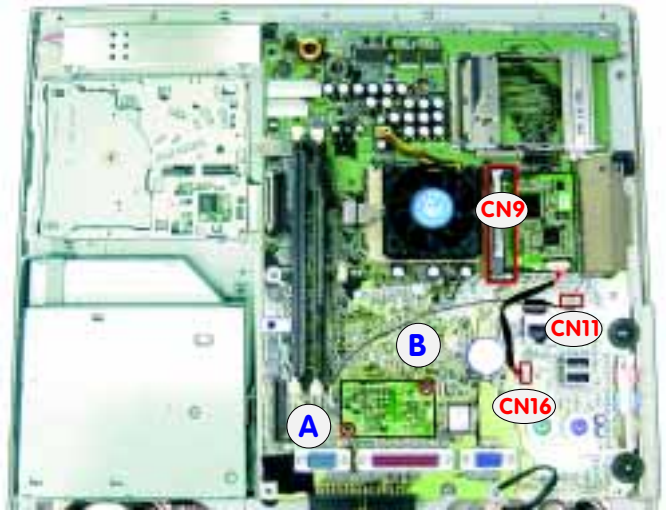
Part B

IEEE1394 Module Removal

1. Disconnect the IEEE1394 cable from Connector **CN16**.
2. Disconnect the module with the cable from Connector **CN9** on the System Board.

Fax/Modem Module Removal

1. Disconnect the Fax/Modem cable from Connector **CN11**.
2. Remove 2 screws (A & B).
2. Disconnect the module with the cable from Connector **CN21** on the System Board.



REMOVING THE FAX/MODEM & IEEE1394 MODULES
FIG. 2-30

NOTES:

A PART LISTS

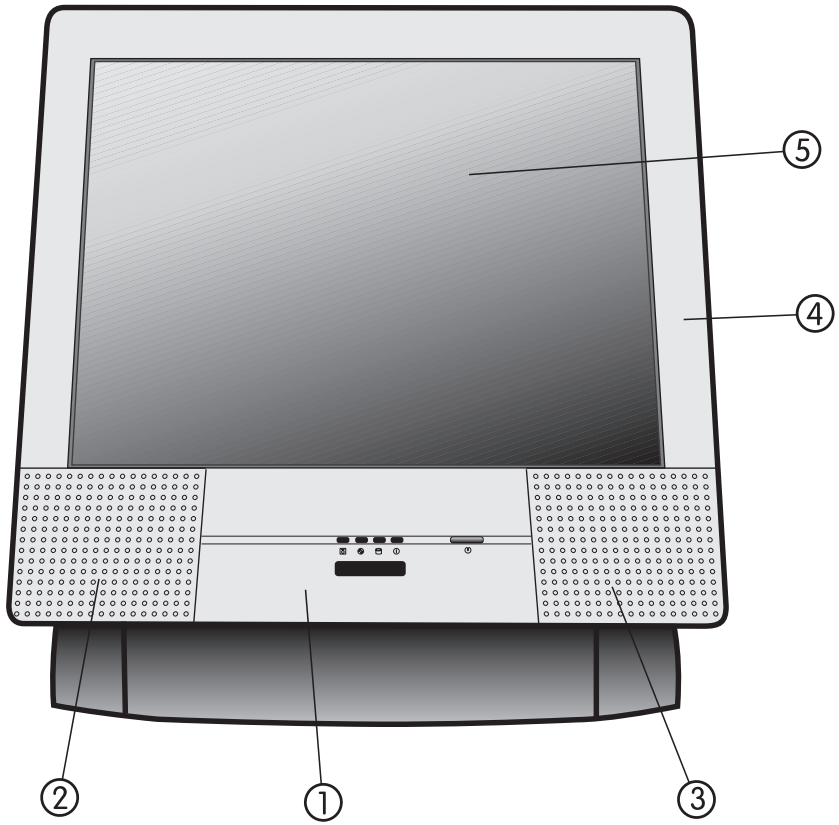
This appendix breaks down the LCD PC's construction into a series of illustrations. The component part numbers are indicated in the tables opposite the drawings. It includes two sets of part lists for the LP200C and the LP200T respectively.

> **Note:** This section indicates the *manufacturer's* part numbers. Your organization may use a different system, so be sure to cross-check any relevant documentation.
>
> **Note:** Be sure to check any update notices. The parts shown in these illustrations are appropriate for the system at the time of publication. Over the product life, some parts may be improved or re-configured, resulting in *new* part numbers.

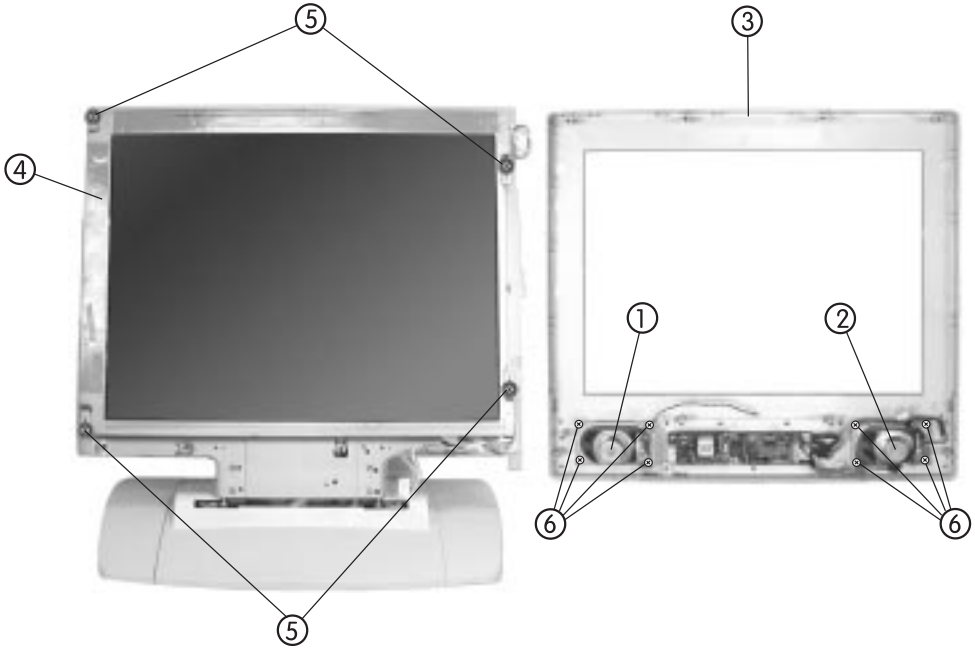
LP200C

LP200C FRONT ASSEMBLY
(PART I)

FIG. A-1



ITEM	PART NAME	PART NO.	Q'TY	REMARK
01	CONTROL PANEL MODULE LP200C	79-P200D-0B1	1	
02	SPEAKER COVER(L) PC/ABS LP200C	39-P2010-001	1	
03	SPEAKER COVER(R) PC/ABS LP200C	39-P2009-001	1	
04	LCD F-CVR MODULE FOR HYU./SHARP LP200C	79-P200D-0A4	1	
05	LCD T SHARP LQ150xIDG51 15"	50-L2215-A01	1	



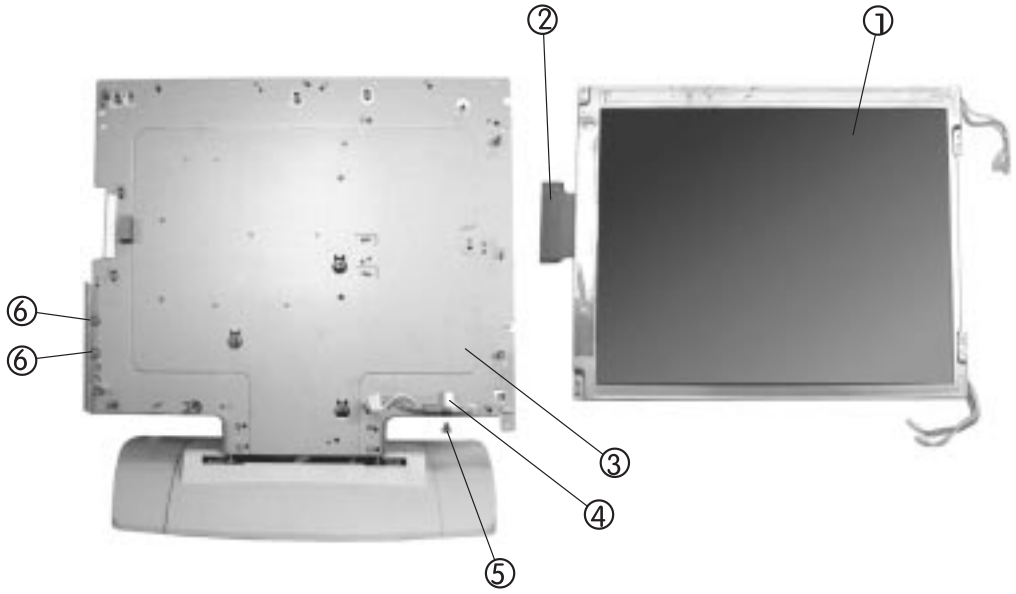
ITEM	PART NAME	PART NO.	Q'TY	REMARK
01	SPK.WITH CABLE(R) 71Wx41Dx28.7H 3W 8Ω (DSH411-001)	23-5A230-131	1	
02	SPK.WITH CABLE(L) 71Wx41Dx28.7H 3W 8 Ω(DSH411-002)	23-5A230-600	1	
03	LCD F-CVR MODULE FOR HYU./SHARP LP200C	79-P200D-0A4	1	
04	LCD T SHARP LQ150xIDG51 15"	50-L2215-A01	1	
05	SCREW M3x10L PNI ICT NY	35-01130-100	4	
06	SCREW M3x4L KI NI ICT	35-B1130-4RB	8	

LP200C FRONT ASSEMBLY (PART II)

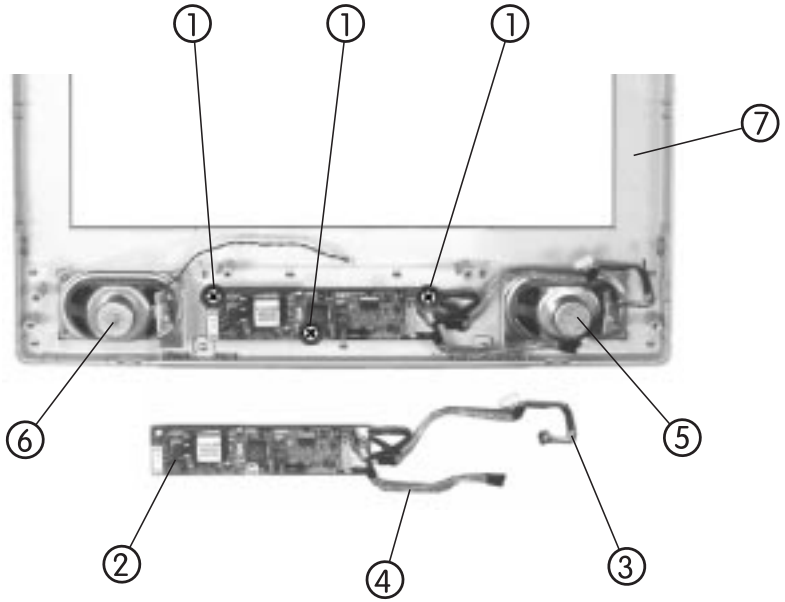
FIG. A–2

LP200C FRONT ASSEMBLY
(PART III)

FIG. A–3



ITEM	PART NAME	PART NO.	Q'TY	REMARK
01	LCD T SHARP LQ150xIDG51 15" (EPSON 專用)	50-L2215-A01	1	
02	FPC CABLE FOR SHARP 150 V2.0 LP200	43-P2216-002	1	
03	BRACKET MODULE FOR SHARP 150 LP200C	79-P200C-0A2	1	
04	CONVERTER BOARD FOR SHARP V4.0 LP200	77-P2204-024	1	
05	SCREW M2.5x4L B NI ICT NY	35-41125-4RA	1	
06	M2x3L KI BZ ICT NY	35-B6120-3R0	2	



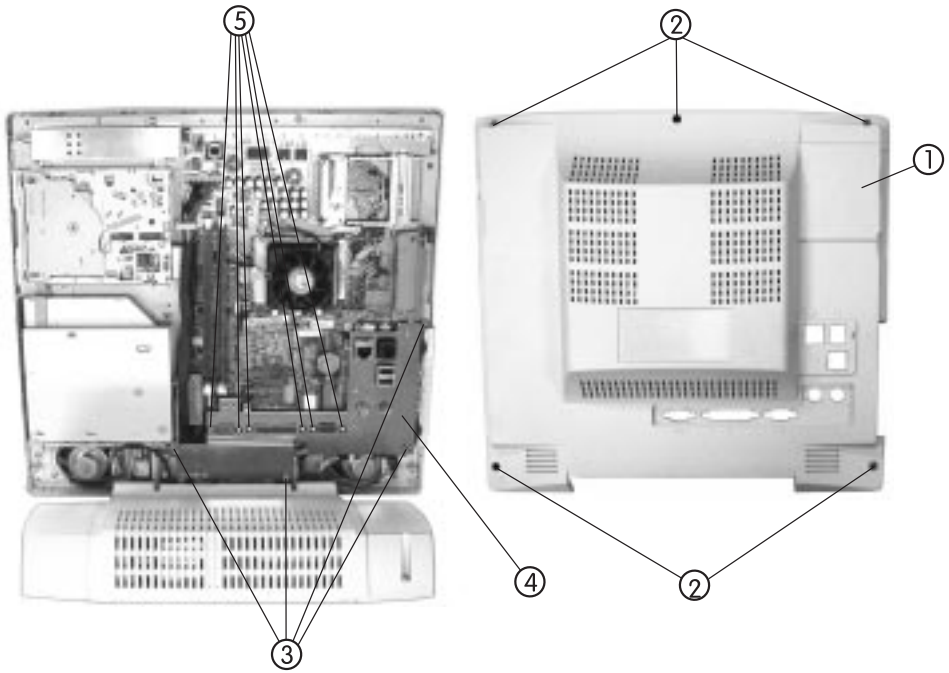
LP200C FRONT ASSEMBLY
(PART IV)

FIG. A–4

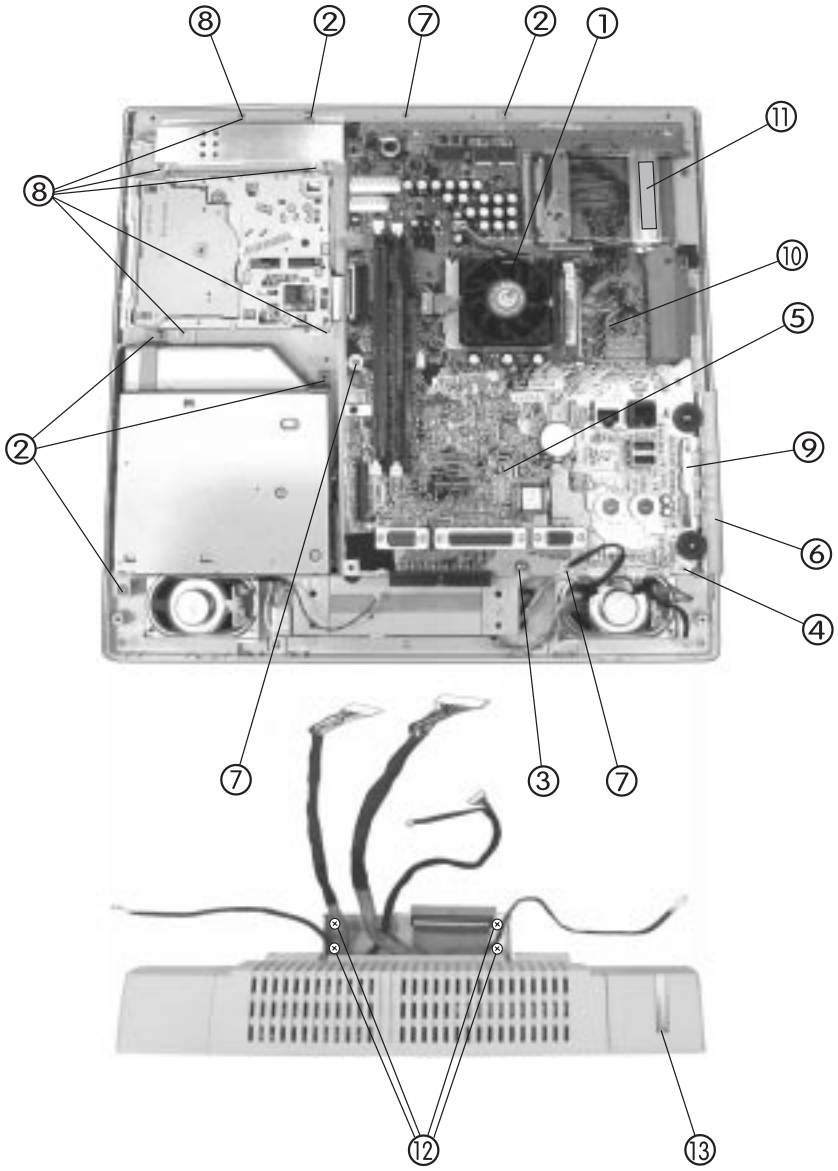
ITEM	PART NAME	PART NO.	Q'TY	REMARK
01	SCREW M3x4L KI NI ICT	35-B1130-4RB	3	
02	INVERTER+LED BOARD FOR HYU./SHARP V6.0	77-P2003-006	1	
03	WIRE CABLE FOR LED SIGNAL 12P V2.0 LP200	43-P2206-002	1	
04	WIRE CABLE FOR LED POWER 8P V2.0 LP200	43-P2209-002	1	
05	SPEAKER & CABLE (L) ASSY LP200	79-P220D-0C0	1	
06	SPEAKER & CABLE (L) ASSY LP200	79-P220D-0B0	1	
07	LCD F-CVR MODULE FOR LP200	79-P220D-0A2	1	
	LCD F-CVR MODULE FOR LP200C	79-P220D-0A3	1	

LP200C BACK ASSEMBLY
(PART I)

FIG. A–5



ITEM	PART NAME	PART NO.	Q'TY	REMARK
01	BACK COVER MODULE LP200C	79-P2000-012	1	
02	M3x6L B NI ICT	39-P2211-001	5	
03	M2.5x6L B NI ICT NY	35-41125-6R0	4	
04	I/O BRACKET+GASKET MODULE SPCC LP200C	33-P2004-010	1	
05	HEX STUD SUM22 NIPL 10mm	34-96002-000	6	

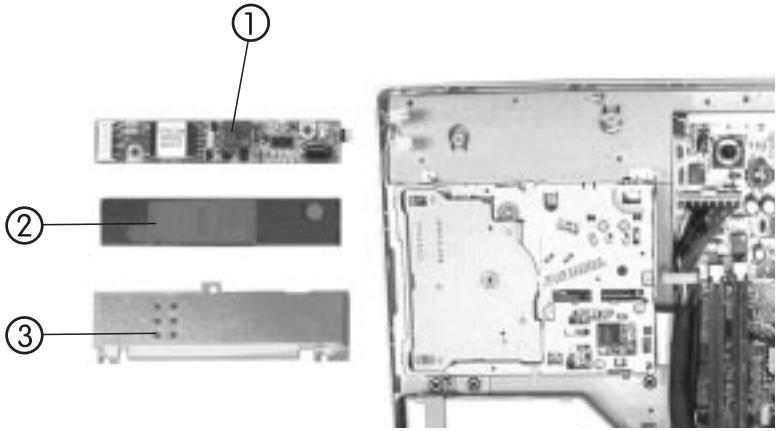


ITEM	PART NAME	PART NO.	Q'TY	REMARK
01	HEAT SINK W/FAN (AD0512LB0-G70) LP200C	33-P2214-000	1	
02	M3x6Lx0.5P BIND HEAD NI-PL	35-41130-6R0	5	
03	HEX STUD NI-PL FOR GROUNDING, CU LP200	34-P2203-000	1	
04	HEX STUN, 銅 NI-PL FOR ADD/LAN CARD 280H	34-28H04-000	1	
05	HEX STUD FOR MDC,SUM22 LP200	43-P2201-001	3	
06	AUDIO COVER,PC/ABS LP200C	39-P2005-000	1	
07	M2.5x6L B NI ICT NY	35-41125-6R0	3	
08	M2.5x3L KI NI ICT NY	35-41125-4RA	5	
09	AUDIO GROUDING PLATE, 磷青銅 LP2000	33-P2209-000	1	
10	MAIN BOARD LP200C (W/O 1394,PE 133)	77-P2200-006	1	
11	CONDUCTIVE GASKET (L48xW9xH3.5)mm LP200	47-P2202-200	1	
12	M4x6L B NI ICT NY	35-41140-6RA	4	
13	M3x6L B NI ICT	35-41130-6R0	1	

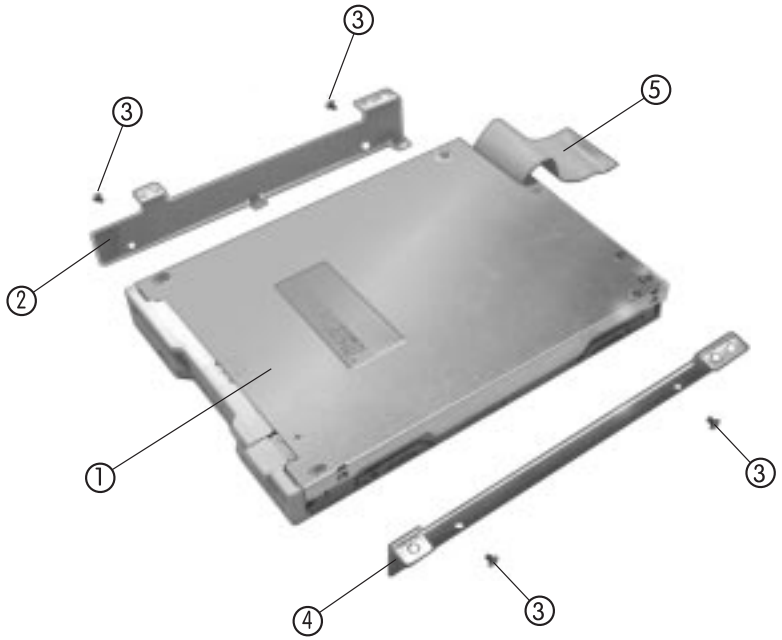
LP200C BACK ASSEMBLY
(PART II)
FIG. A–6

LP200C BACK ASSEMBLY
(PART III)

FIG. A–7



ITEM	PART NAME	PART NO.	Q'TY	REMARK
01	INVERTER BOARD FOR SHARP V6.0 LP200	77-P2202-026	1	
02	INVERTER MYLAR,PC LP200	40-P2202-001	1	
03	INVERTER SHIELDING PLATE LP200	33-P2213-000	1	



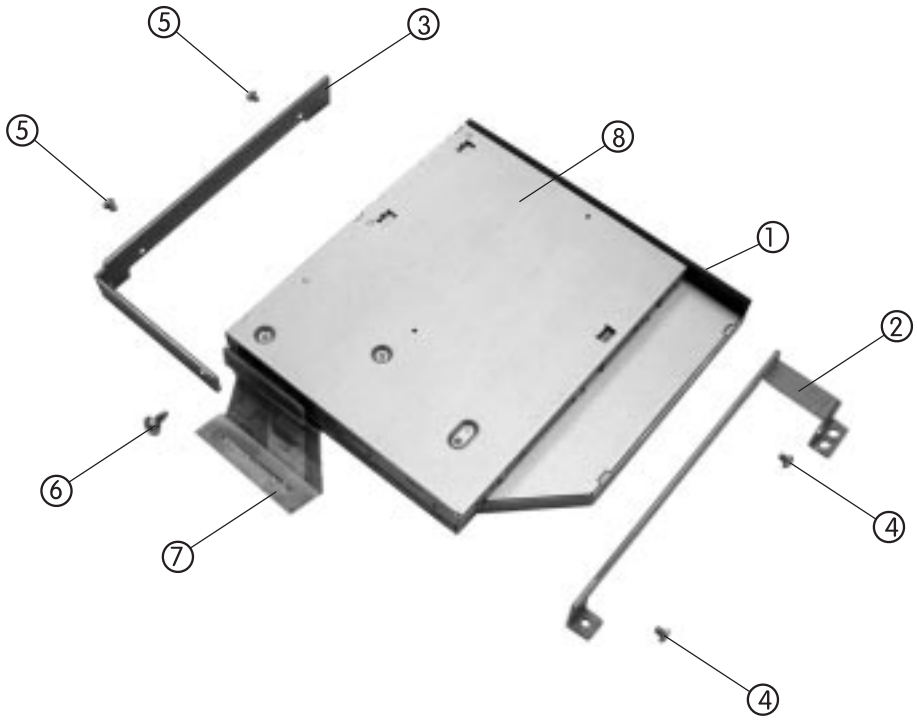
ITEM	PART NAME	PART NO.	Q'TY	REMARK
01	FDD 3.5" 1.44 MB 12.7mm YD-702J-6637J	85-11700-Y05	1	
02	FDD BRACKET (R),SUS LP2000	33-P2204-000	1	
03	SCREW M2.5*3L PBZ ICT NY	35-06125-3R0	4	
04	FDD BRACKET (L),SUS LP2000	33-P2205-000	1	
05	FFC CABLE FOR FDD V1.0 P22	43-P2212-001	1	

LP200C FDD MODULE

FIG. A–8

LP200C CD DEVICE MODULE

FIG. A–9



CD-ROM

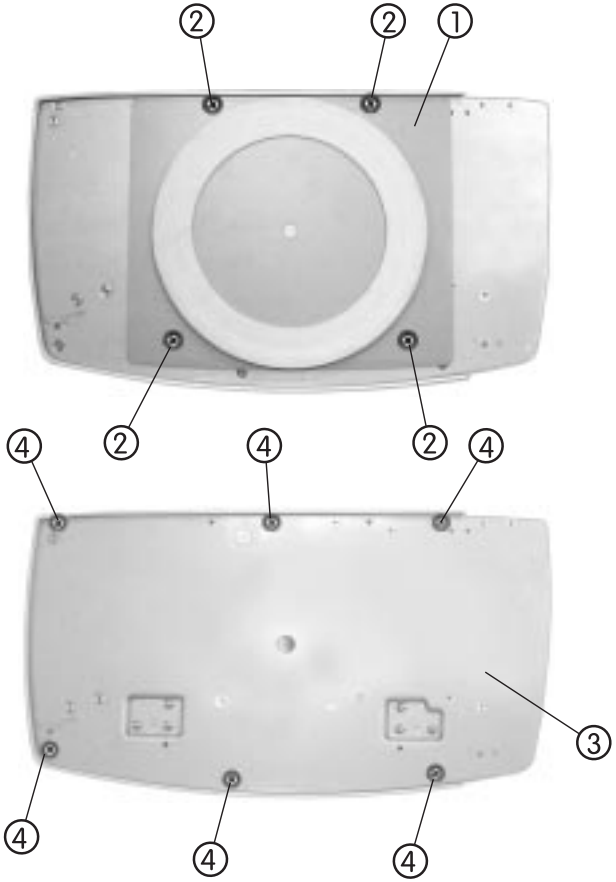
ITEM	PART NAME	PART NO.	Q'TY	REMARK
01	CD-ROM BEZEL MODULE FOR MKE LP200C	79-P2002-011	1	
	TEAC CD-ROM BEZEL MODULE	39-P207Z-010	1	
02	CD-ROM BRACKET(R),SECC LP200	33-P2206-002	1	
03	CD-ROM BRACKET(L),SECC LP200	33-P2207-003	1	
04	SCREW M2.0*3L F NI ICT NY	35-21120-3RA	2	
05	SCREW M2*3.5L F BNI ICT NY (Dd = ϕ 3.2)	35-21120-35B	2	
06	CD-ROM STANDOFF LP200	34-P2202-000	1	
07	FPC CABLE FOR CD-ROM V1.0 LP200	43-P2223-001	1	
08	CD-ROM+W/BEZEL(BK) 5 1/4" 24X CR-176	85-607OX-P03	1	
	CD-ROM 5 1/4" 24X CD-224E-B20 12.7mm	85-607OX-701	1	

CD-R/W

ITEM	PART NAME	PART NO.	Q'TY	REMARK
01	CD-ROM BEZEL (WHITE) LP200C	39-P2014-000	1	
02	CD-ROM BRACKET(R),SECC LP200	33-P2206-002	1	
03	CD-ROM BRACKET(L),SECC LP200	33-P2207-003	1	
04	SCREW M2.0*3L F NI ICT NY	35-21120-3RA	2	
05	SCREW M2*3.5L F BNI ICT NY (Dd = ϕ 3.2)	35-21120-35B	2	
06	CD-ROM STANDOFF LP200	34-P2202-000	1	
07	FPC CABLE FOR CD-ROM V1.0 LP200	43-P2223-001	1	
08	CD-R/W 5 1/4" 20/4X UJDA310V 12.7mm	985-8074X-K00	1	

DVD

ITEM	PART NAME	PART NO.	Q'TY	REMARK
01	CD-ROM BEZEL (WHITE) LP200C	39-P2014-000	1	
02	CD-ROM BRACKET(R),SECC LP200	33-P2206-002	1	
03	CD-ROM BRACKET(L),SECC LP200	33-P2207-003	1	
04	SCREW M2.0*3L F NI ICT NY	35-21120-3RA	2	
05	SCREW M2*3.5L F BNI ICT NY (Dd = ϕ 3.2)	35-21120-35B	2	
06	CD-ROM STANDOFF LP200	34-P2202-000	1	
07	FPC CABLE FOR CD-ROM V1.0 LP200	43-P2223-001	1	
08	DVD 5 1/4" 8X 12.7mm CD-S200 HITACHI	985-7078X-501-E	1	



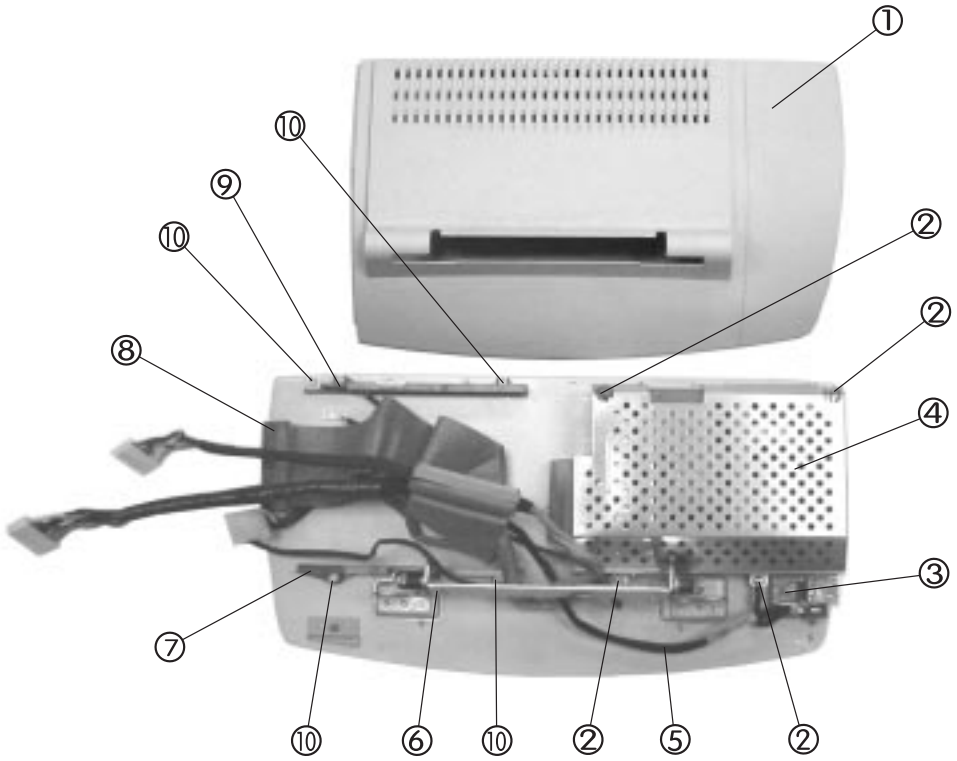
ITEM	PART NAME	PART NO.	Q'TY	REMARK
01	STAND MODULE LP200	79-P220E-012	1	
02	M3x6L KI NI ICT NY	35-B1130-6RA	4	
03	BASE BRACKET,SECC LP200C	33-P2002-002	1	
04	M3x6L F NI ICT NY	35-21130-6RA	6	

LP200C BASE ASSEMBLY
(PART I)

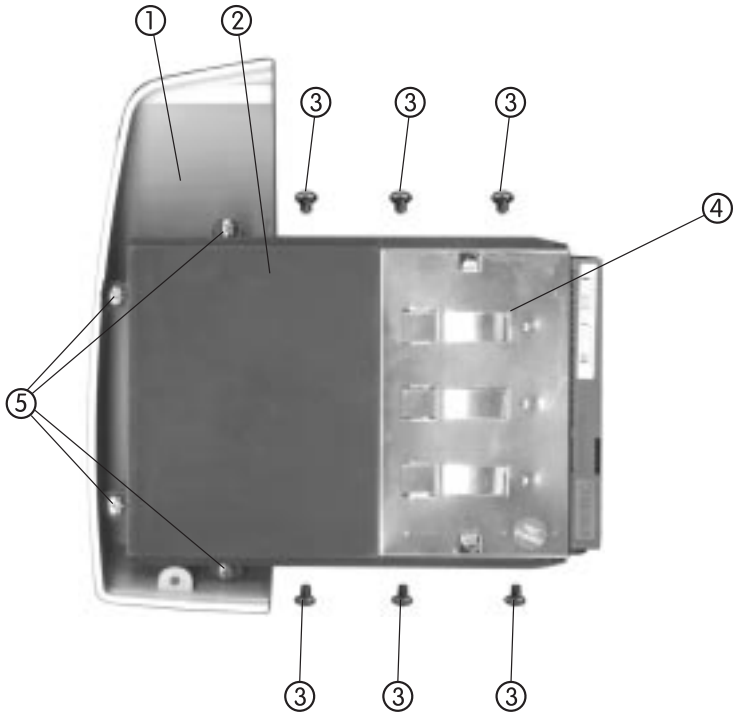
FIG. A–10

LP200C BASE ASSEMBLY
(PART II)

FIG. A–11



ITEM	PART NAME	PART NO.	Q'TY	REMARK
01	BASE COVER+BRACKET MODULE LP200C	39-P2003-010	1	
02	M3 x 6L B NI ICT	35-41130-6R0	4	
03	EXT. USB BOARD V1.0 LP200	77-P2206-001	1	
04	POWER SUPPLE 5V/8A V7.0 LP200	51-P2203-051	1	
05	EXT, USB CABLE V3.0 LP200	43-P2217-003	3	
06	HINGE MODULE SUS LP200	79-P220Y-012	1	
07	HDD HOLDER (B),PC/ABS LP200	39-P2213-001	1	
08	FLAT CABLE FOR HDD 40P V2.0 LP200	43-P2211-002	1	
09	HDD HOLDER (A),PC/ABS LP200	39-P2212-001	1	
10	M3 x 6L KI NI ICT NY	35-B1130-6RA	4	



ITEM	PART NAME	PART NO.	Q'TY	REMARK
01	HDD COVER,PC/ABS LP200C	39-P2004-001	1	
02	HDD HOLDER,PC/ABS LP200	39-P2211-001	1	
03	SCREW # 6-32x5L BNI ACT	35-413+06-5R0	6	
04	HDD 3.5" 7.5GB FIREBALL 1CT10 QUANTUM (EPSON)	985-01675-Q00-E		
	HDD 3.5" 10GB FIREBALL 1CT10 QUANTUM (EPSON)	985-016A0-Q00-E		
	HDD 3.5" 15GB FIREBALL 1CT10 QUANTUM (EPSON)	985-016F0-Q00-E		
	HDD 3.5" 15GB FIREBALL LCT-15 QUANTUM (EPSON)	985-016F0-Q01-E		
	HDD 3.5" 30GB QUANTUM (EPSON)	985-016U0-Q00-E		
05	M3x6Lx0.5P BIND HEAD NI-PL	35-41130-6R0	4	

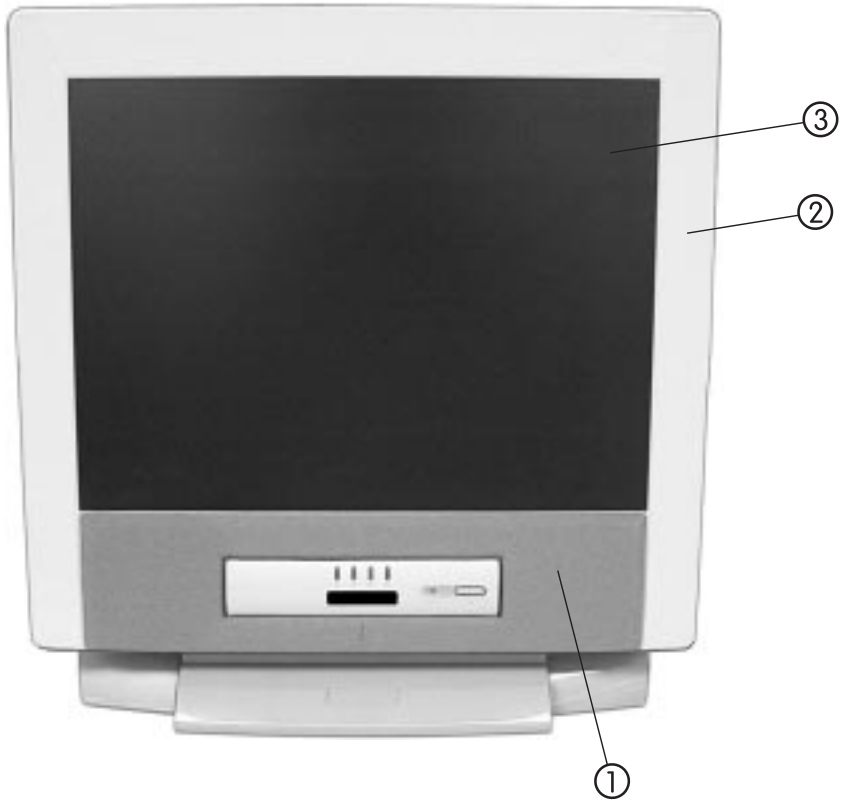
LP200C HDD MODULE

FIG. A–12

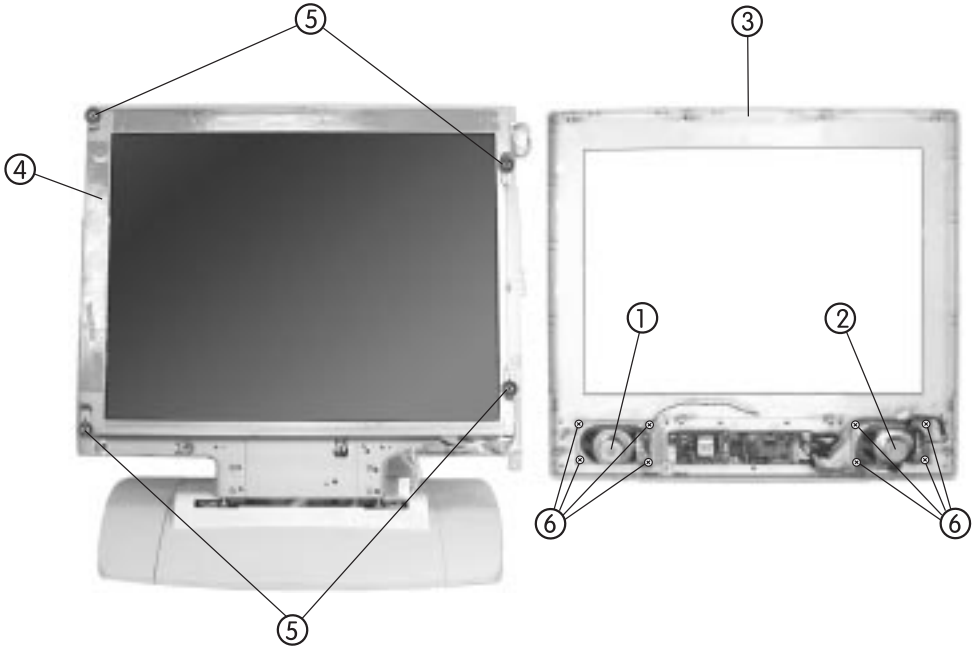
LP200T

LP200T FRONT ASSEMBLY
(PART I)

FIG. A-13



ITEM	PART NAME	PART NO.	Q'TY	REMARK
01	SPEAKER COVER ASS'Y	79-P2208-021	1	
02	LCD F-CVR MODULE FOR HYU LP200 (CHANGE F-CVR)	79-P200D-0A3	1	
03	LCD 15.0"T HYUNDAI HT 15x11-200 17.2mm	50-L22H2-H01	1	



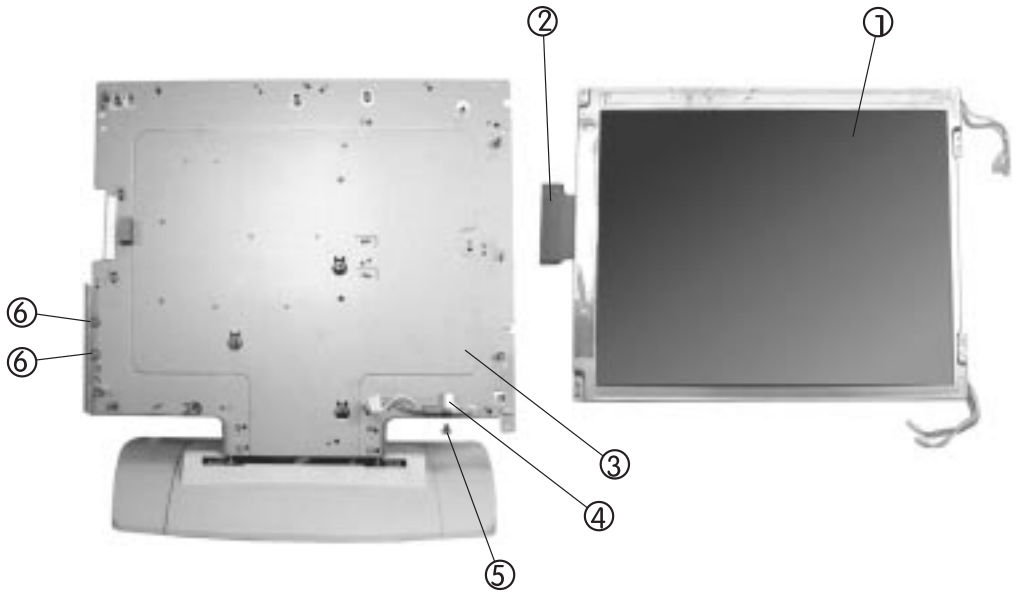
ITEM	PART NAME	PART NO.	Q'TY	REMARK
01	SPK.WITH CABLE(R) 71Wx41Dx28.7H 3W 8Ω (DSH411-001)	23-5A230-131	1	
02	SPK.WITH CABLE(L) 71Wx41Dx28.7H 3W 8 Ω(DSH411-002)	23-5A230-600	1	
03	LCD F-CVR MODULE FOR HYU./SHARP LP200C	79-P200D-0A4	1	
04	LCD T SHARP LQ150xIDG51 15"	50-L2215-A01	1	
05	SCREW M3x10L PNI ICT NY	35-01130-100	4	
06	SCREW M3x4L KI NI ICT	35-B1130-4RB	8	

LP200T FRONT ASSEMBLY (PART II)

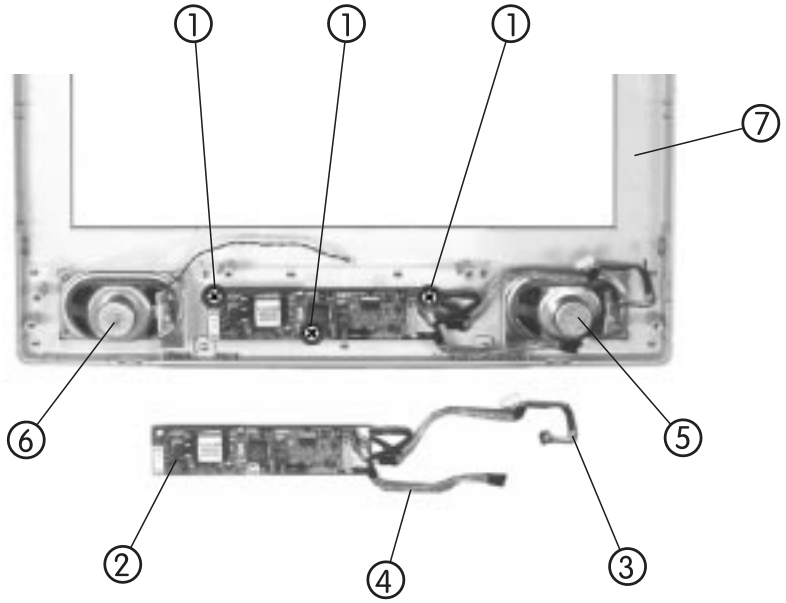
FIG. A–14

LP200T FRONT ASSEMBLY
(PART III)

FIG. A–15



ITEM	PART NAME	PART NO.	Q'TY	REMARK
01	LCD T SHARP LQ150xIDG51 15" (EPSON 專用)	50-L2215-A01	1	
02	FPC CABLE FOR SHARP 150 V2.0 LP200	43-P2216-002	1	
03	BRACKET MODULE FOR SHARP 150 LP200C	79-P200C-0A2	1	
04	CONVERTER BOARD FOR SHARP V4.0 LP200	77-P2204-024	1	
05	SCREW M2.5x4L B NI ICT NY	35-41125-4RA	1	
06	M2x3L KI BZ ICT NY	35-B6120-3R0	2	



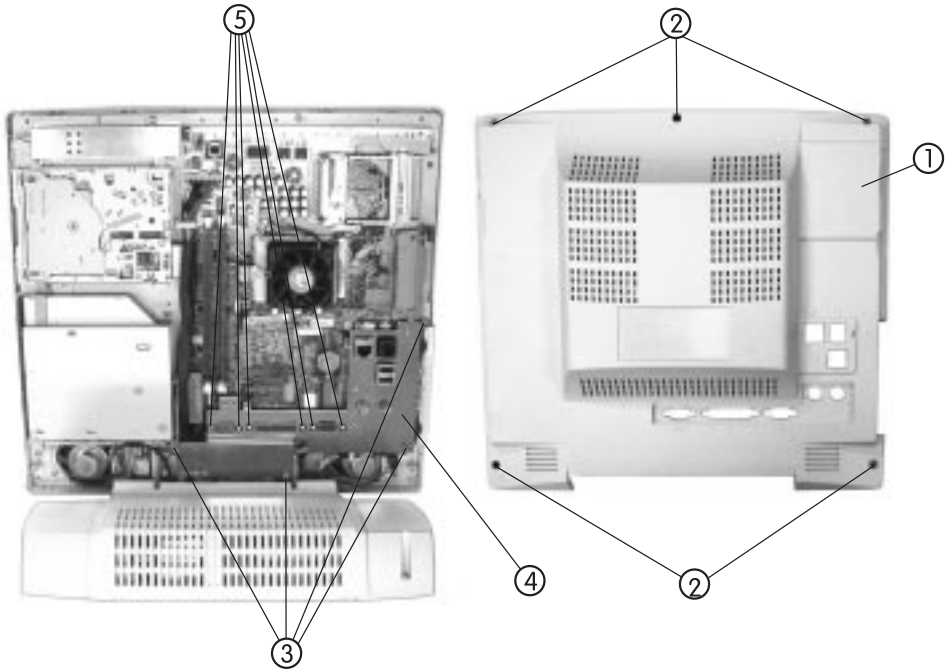
ITEM	PART NAME	PART NO.	Q'TY	REMARK
01	SCREW M3x4L KI NI ICT	35-B1130-4RB	3	
02	INVERTER+LED BOARD FOR HYU./SHARP V6.0	77-P2003-006	1	
03	WIRE CABLE FOR LED SIGNAL 12P V2.0 LP200	43-P2206-002	1	
04	WIRE CABLE FOR LED POWER 8P V2.0 LP200	43-P2209-002	1	
05	SPEAKER & CABLE (L) ASSY LP200	79-P220D-0C0	1	
06	SPEAKER & CABLE (L) ASSY LP200	79-P220D-0B0	1	
07	LCD F-CVR MODULE FOR LP200	79-P220D-0A2	1	
	LCD F-CVR MODULE FOR LP200C	79-P220D-0A3	1	

LP200T FRONT ASSEMBLY
(PART IV)

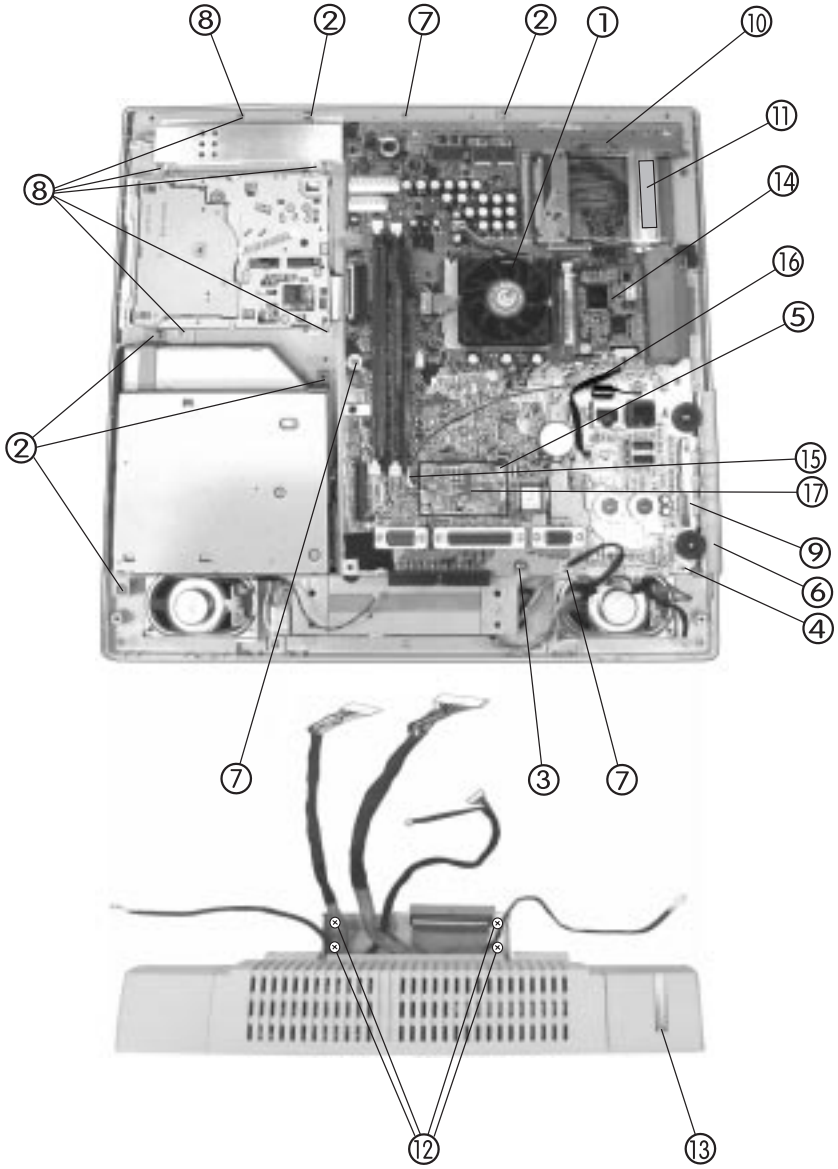
FIG. A-16

LP200T BACK ASSEMBLY
(PART I)

FIG. A–17



ITEM	PART NAME	PART NO.	Q'TY	REMARK
01	BACK COVER MODULE LP200C	79-P2000-012	1	
02	M3x6L B NI ICT	39-P2211-001	5	
03	M2.5x6L B NI ICT NY	35-41125-6R0	4	
04	I/O BRACKET+GASKET MODULE SPCC LP200C	33-P2004-010	1	
05	HEX STUD SUM22 NIPL 10mm	34-96002-000	6	



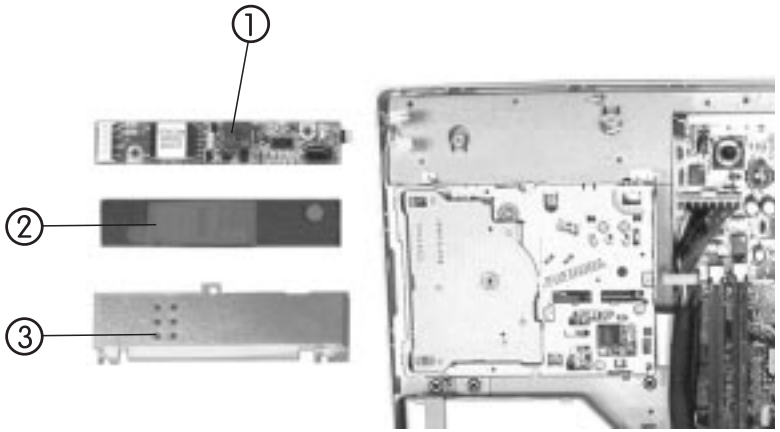
ITEM	PART NAME	PART NO.	Q'TY	REMARK
01	HEAT SINK W/FAN (AD0512LB0-G70) LP200C	33-P2214-000	1	
02	M3x6Lx0.5P BIND HEAD NI-PL	35-41130-6R0	5	
03	HEX STUD NI-PL FOR GROUNDING, CU LP200	34-P2203-000	1	
04	HEX STUN, 銅 NI-PL FOR ADD/LAN CARD 280H	34-28H04-000	1	
05	HEX STUD FOR MDC,SUM22 LP200	43-P2201-001	3	
06	AUDIO COVER,PC/ABS LP200C	39-P2005-000	1	
07	M2.5x6L B NI ICT NY	35-41125-6R0	3	
08	M2.5x3L KI NI ICT NY	35-41125-4RA	5	
09	AUDIO GROUDING PLATE, 磷青銅 LP2000	33-P2209-000	1	
10	MAIN BOARD LP200C (W/O 1394,PE 133)	77-P2200-006	1	
11	CONDUCTIVE GASKET (L48xW9xH3.5)mm LP200	47-P2202-200	1	
12	M4x6L B NI ICT NY	35-41140-6RA	4	
13	M3x6L B NI ICT	35-41130-6R0	1	
14	MINI PCI CARD FOR 1394	77-P2205-001A	1	
15	MDC MODEM	76-32200-002	1	
16	WIRE CABLE FOR MINI PCI IEEE-1394	43-P2210-001	1	
17	WIRE CABLE FOR MDC MODEM	43-P2213-002	1	

LP200T BACK ASSEMBLY
(PART II)

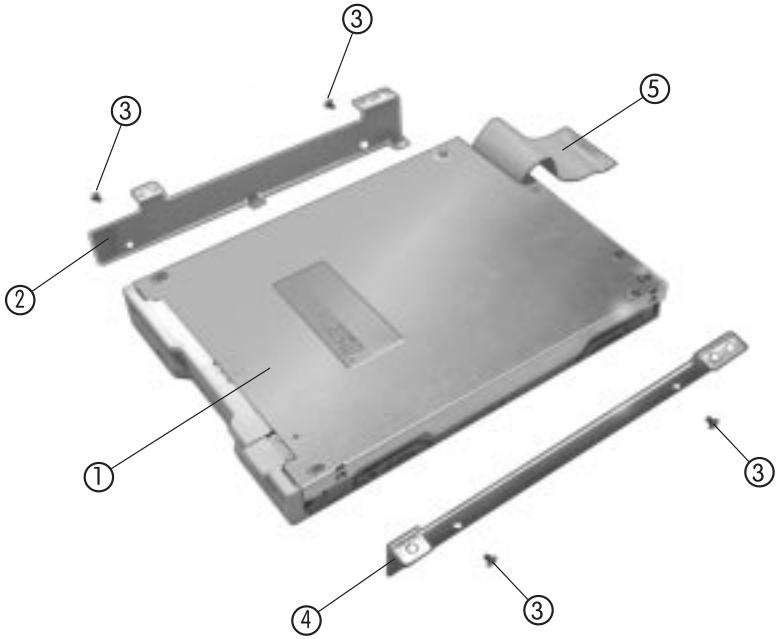
FIG. A–18

LP200T BACK ASSEMBLY
(PART III)

FIG. A–19



ITEM	PART NAME	PART NO.	Q'TY	REMARK
01	INVERTER BOARD FOR SHARP V6.0 LP200	77-P2202-026	1	
02	INVERTER MYLAR,PC LP200	40-P2202-001	1	
03	INVERTER SHIELDING PLATE LP200	33-P2213-000	1	



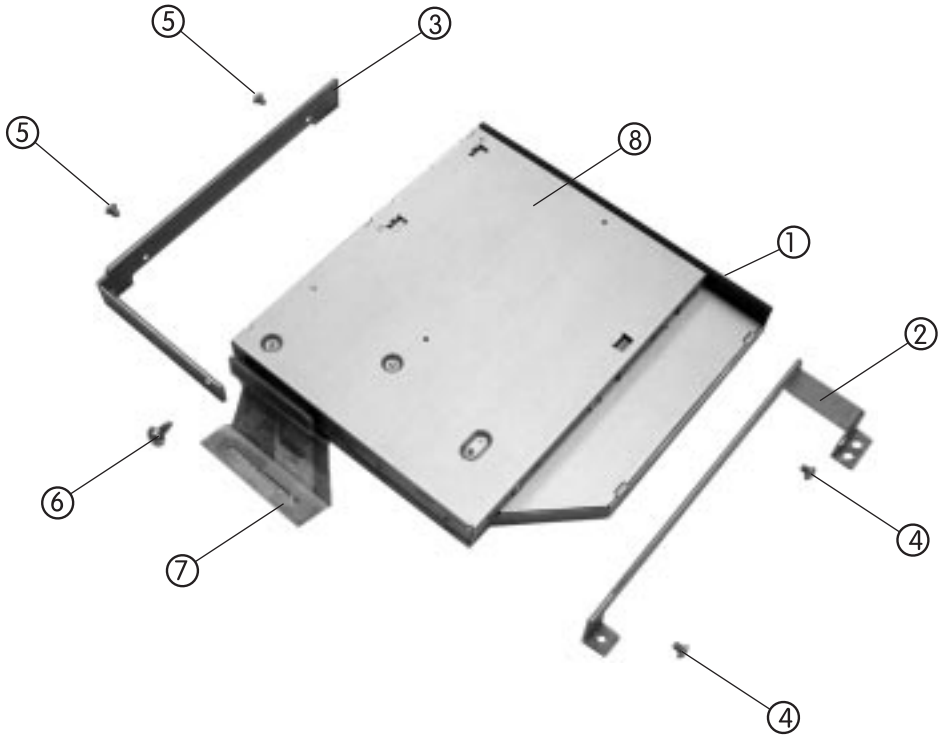
ITEM	PART NAME	PART NO.	Q'TY	REMARK
01	FDD 3.5" 1.44 MB 12.7mm YD-702J-6637J	85-11700-Y05	1	
02	FDD BRACKET (R),SUS LP2000	33-P2204-000	1	
03	SCREW M2.5*3L PBZ ICT NY	35-06125-3R0	4	
04	FDD BRACKET (L),SUS LP2000	33-P2205-000	1	
05	FFC CABLE FOR FDD V1.0 P22	43-P2212-001	1	

LP200T FDD MODULE

FIG. A–20

LP200T CD DEVICE MODULE

FIG. A-21



CD-ROM

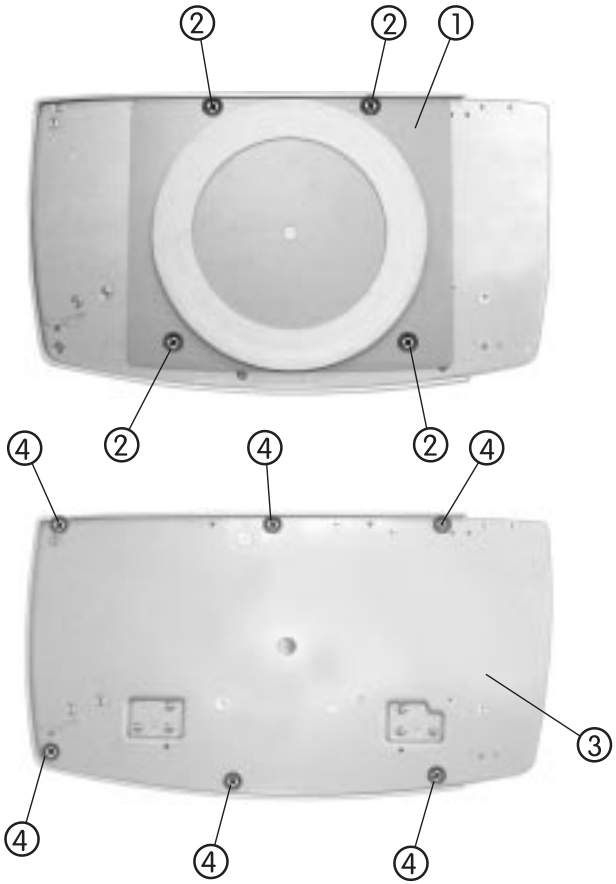
ITEM	PART NAME	PART NO.	Q'TY	REMARK
01	CD-ROM BEZEL MODULE FOR MKE LP200	79-P2202-010	1	
02	CD-ROM BRACKET(R),SECC LP200	33-P2206-002	1	
03	CD-ROM BRACKET(L),SECC LP200	33-P2207-003	1	
04	SCREW M2.0*3L F NI ICT NY	35-21120-3RA	2	
05	SCREW M2*3.5L F BNI ICT NY (Dd = ϕ 3.2)	35-21120-35B	2	
06	CD-ROM STANDOFF LP200	34-P2202-000	1	
07	FPC CABLE FOR CD-ROM V1.0 LP200	43-P2223-001	1	
08	CD-ROM+W/O BEZEL 5 1/4" 24X CR-176-D	85-607OX-P01	1	

CD-R/W

ITEM	PART NAME	PART NO.	Q'TY	REMARK
01	CD-ROM BEZEL (WHITE) LP200C	39-P2014-000	1	
02	CD-ROM BRACKET(R),SECC LP200	33-P2206-002	1	
03	CD-ROM BRACKET(L),SECC LP200	33-P2207-003	1	
04	SCREW M2.0*3L F NI ICT NY	35-21120-3RA	2	
05	SCREW M2*3.5L F BNI ICT NY (Dd = ϕ 3.2)	35-21120-35B	2	
06	CD-ROM STANDOFF LP200	34-P2202-000	1	
07	FPC CABLE FOR CD-ROM V1.0 LP200	43-P2223-001	1	
08	CD-R/W 5 1/4" 20/4X UJDA310V 12.7mm	85-8074X-K01	1	

DVD

ITEM	PART NAME	PART NO.	Q'TY	REMARK
01	CD-ROM BEZEL (WHITE) LP200C	39-P2014-000	1	
02	CD-ROM BRACKET(R),SECC LP200	33-P2206-002	1	
03	CD-ROM BRACKET(L),SECC LP200	33-P2207-003	1	
04	SCREW M2.0*3L F NI ICT NY	35-21120-3RA	2	
05	SCREW M2*3.5L F BNI ICT NY (Dd = ϕ 3.2)	35-21120-35B	2	
06	CD-ROM STANDOFF LP200	34-P2202-000	1	
07	FPC CABLE FOR CD-ROM V1.0 LP200	43-P2223-001	1	
08	DVD TORISON(SANYO) DRD-U624 6X 12.7m	87-11M90-112	1	



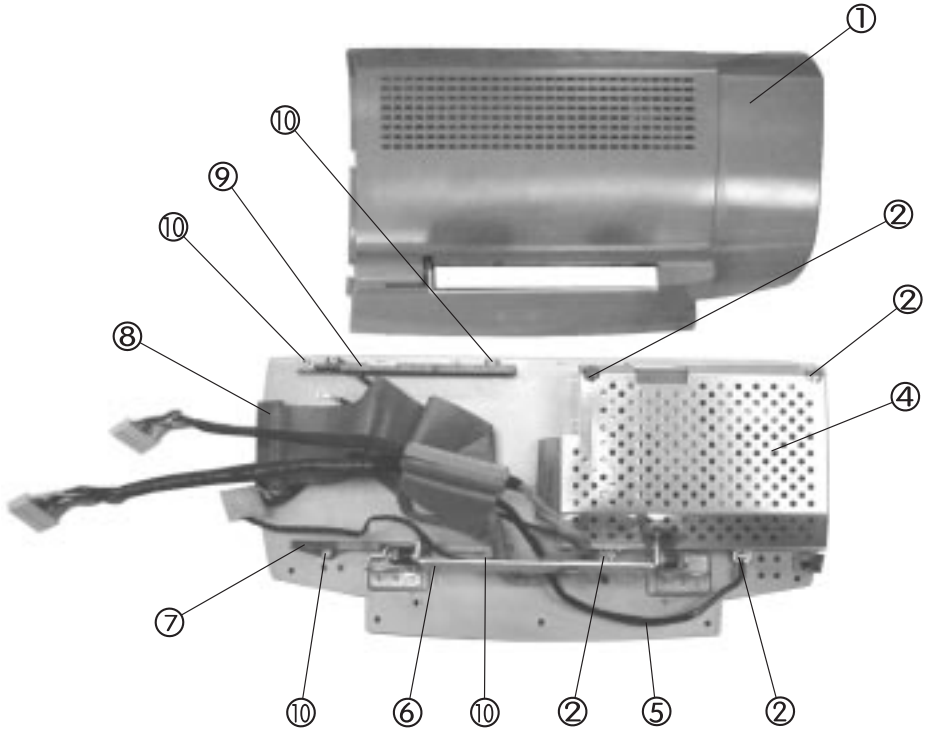
ITEM	PART NAME	PART NO.	Q'TY	REMARK
01	STAND MODULE LP200	79-P220E-012	1	
02	M3x6L KI NI ICT NY	35-B1130-6RA	4	
03	BASE BRACKET,SECC LP200C	33-P2002-002	1	
04	M3x6L F NI ICT NY	35-21130-6RA	6	

LP200T BASE ASSEMBLY (PART I)

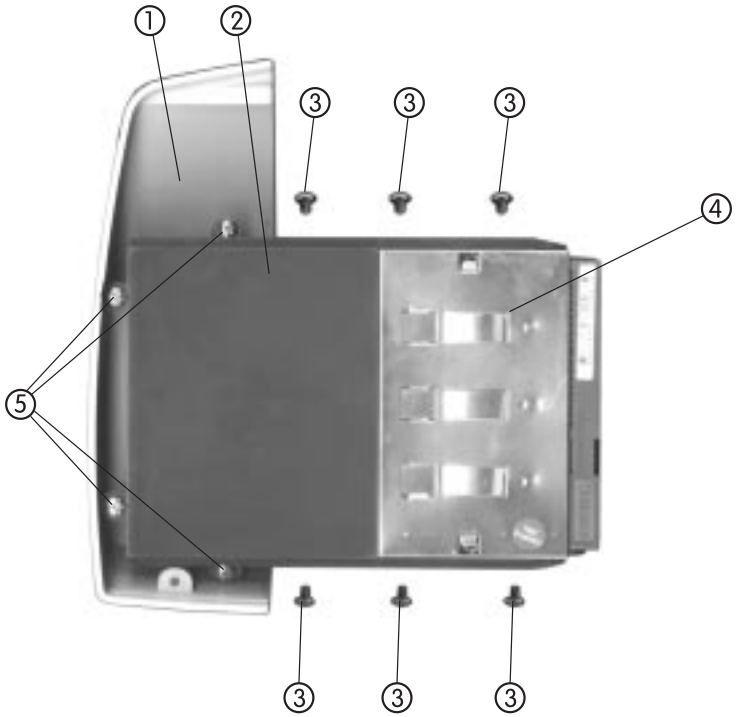
FIG. A–22

LP200T BASE ASSEMBLY
(PART II)

FIG. A-23



ITEM	PART NAME	PART NO.	Q'TY	REMARK
01	BASE COVER+BRACKET MODULE LP200C	39-P2003-010	1	
02	M3 x 6L B NI ICT	35-41130-6R0	4	
04	POWER SUPPLE 5V/8A V7.0 LP200	51-P2203-051	1	
05	EXT, USB CABLE V3.0 LP200	43-P2217-003	3	
06	HINGE MODULE SUS LP200	79-P220Y-012	1	
07	HDD HOLDER (B),PC/ABS LP200	39-P2213-001	1	
08	FLAT CABLE FOR HDD 40P V2.0 LP200	43-P2211-002	1	
09	HDD HOLDER (A),PC/ABS LP200	39-P2212-001	1	
10	M3 x 6L KI NI ICT NY	35-B1130-6RA	4	



ITEM	PART NAME	PART NO.	Q'TY	REMARK
01	HDD COVER,PC/ABS LP200C	39-P2004-001	1	
02	HDD HOLDER,PC/ABS LP200	39-P2211-001	1	
03	SCREW # 6-32x5L BNI ACT	35-413+06-5R0	6	
04	HDD 3.5" 7.5GB FIREBALL 1CT10 QUANTUM (EPSON)	985-01675-Q00-E		
	HDD 3.5" 10GB FIREBALL 1CT10 QUANTUM (EPSON)	985-016A0-Q00-E		
	HDD 3.5" 15GB FIREBALL 1CT10 QUANTUM (EPSON)	985-016F0-Q00-E		
	HDD 3.5" 15GB FIREBALL LCT-15 QUANTUM (EPSON)	985-016F0-Q01-E		
	HDD 3.5" 30GB QUANTUM (EPSON)	985-016U0-Q00-E		
05	M3x6Lx0.5P BIND HEAD NI-PL	35-41130-6R0	4	

LP200T HDD MODULE

FIG. A–24

Notes:

B SWITCHES & JUMPERS

This appendix is about the system's switches and jumpers.

Switches and Jumpers

Locations

SETTINGS

Switch SW1 CPU Frequency Switch					
CPU		SW1-1	SW1-2	SW1-3	SW1-4
Type	FSB Speed				
Celeron 466/Celeron 500 Celeron 533/Celeron 566 Celeron 600	66.7MHz	OFF	OFF	OFF	OFF
Pentium III 600/Pentium III 650 Pentium III 700/Pentium III 750 Pentium III 800	100MHz	ON	OFF	OFF	OFF
Pentium III 667/Pentium III 733 Pentium III 866	133MHz	ON	ON	ON	OFF

Switch SW3 LCD Type Switch				
LCD Type	SW3-1	SW3-2	SW3-3	SW3-4
Hyundai 15.1" (8bit)	OFF	OFF	OFF	OFF
Sharp 15.1"	ON	OFF	OFF	OFF
Hyundai 15.1" (6bit)	ON	ON	OFF	OFF

Switch SW4 System Board ID Switch				
Type	**SW4-1**	**SW4-2**	**SW4-3**	**SW4-4**
Default	OFF	OFF	OFF	OFF

Jumper J1 CMOS Clear Jumper		
Type	**J1 1 & 2**	**J1 2 & 3**
Normal	ON	
CMOS Clear		ON

Jumper J2 Panel VCC Jumper		
Type	**J2 1 & 2**	**J1 2 & 3**
Hyundai, Sharp	ON	
Reserved		ON

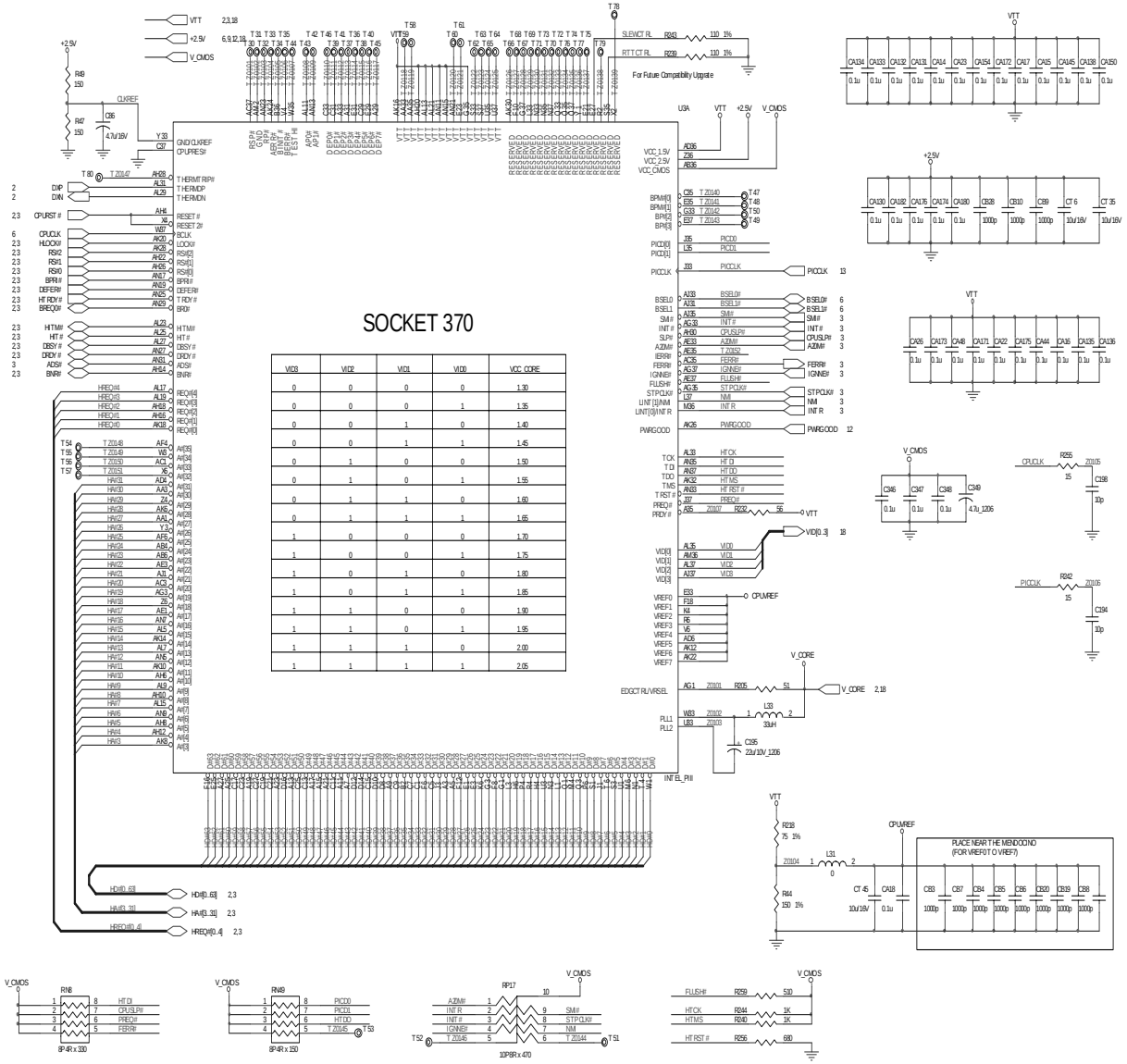
C CIRCUIT DIAGRAMS

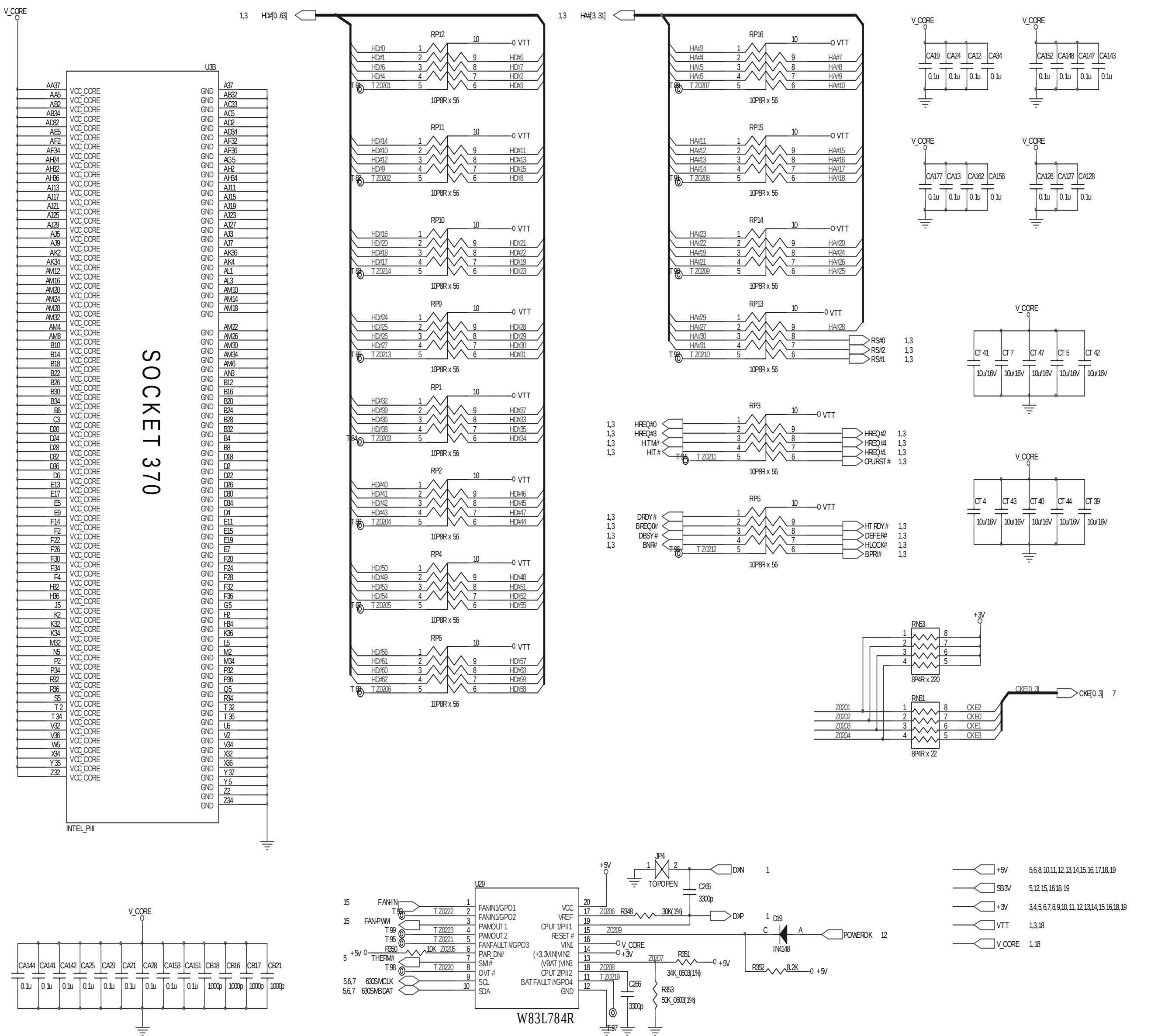
This appendix has circuit diagrams of the system's PCBs.

Printed Circuit Board	**Part No. of the Latest Version**
System Board	71-P2200-006
Inverter Board	71-P2202-006
Inverter + LED Board	71-P2203-007A
Converter Board	71-P2204-004
IEEE1394 Extension Card	71-P2205-001 (This is an optional feature.)
External USB Board	71-P2206-001 (Only the LP200C has this feature.)

We have included the latest versions at the press time. If any board you want to service is newer than listed, please consult the nearest service cneter.

SYSTEM BOARD




SOCKET 370
U38
INTEL_PIII
V_CORE
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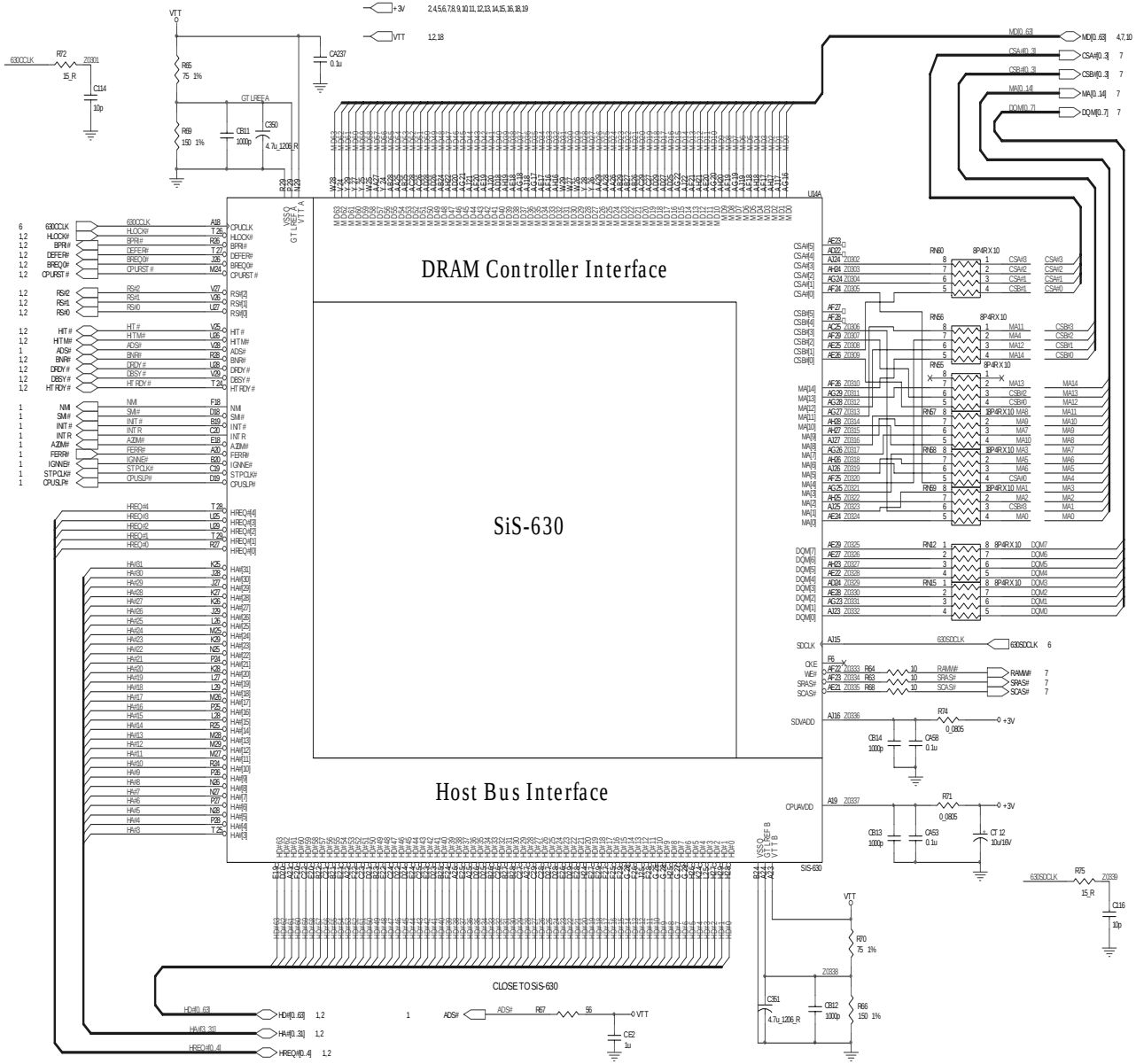
U29
10P8R x 56
8P4R x 220
8P4R x 22
POWEROK
TOPOPEN
IN4148


DRAM Controller Interface
SiS-630
Host Bus Interface
SIS-630
U4A
VTT
+3V
2,4,5,6,7,8,9,10,11,12,13,14,15,16,18,19
VTT
1,2,18
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4,7,10
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CSB#[0..3]
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MA[0..14]
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630SDCLK
HCLK#
BPRI#
DEFER#
BREQ0#
CPURST #
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RS#[1]
RS#[2]
HIT #
HITM#
ADS#
BNR#
DRDY #
DBSY #
HT RDY #
NMI
SMI#
INT #
INT R
A20M#
FERR#
IGNNE#
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CPUSLP#
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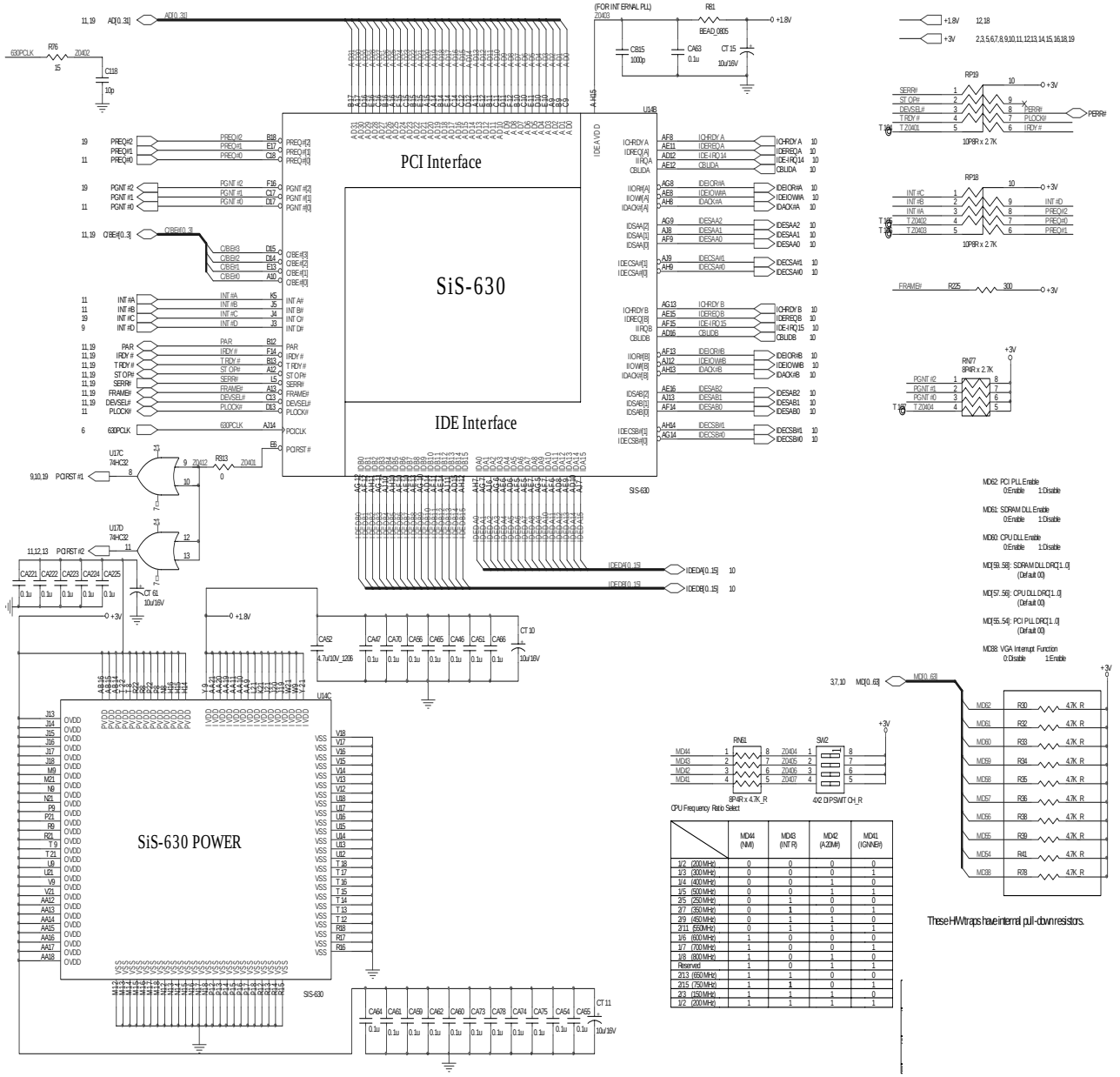
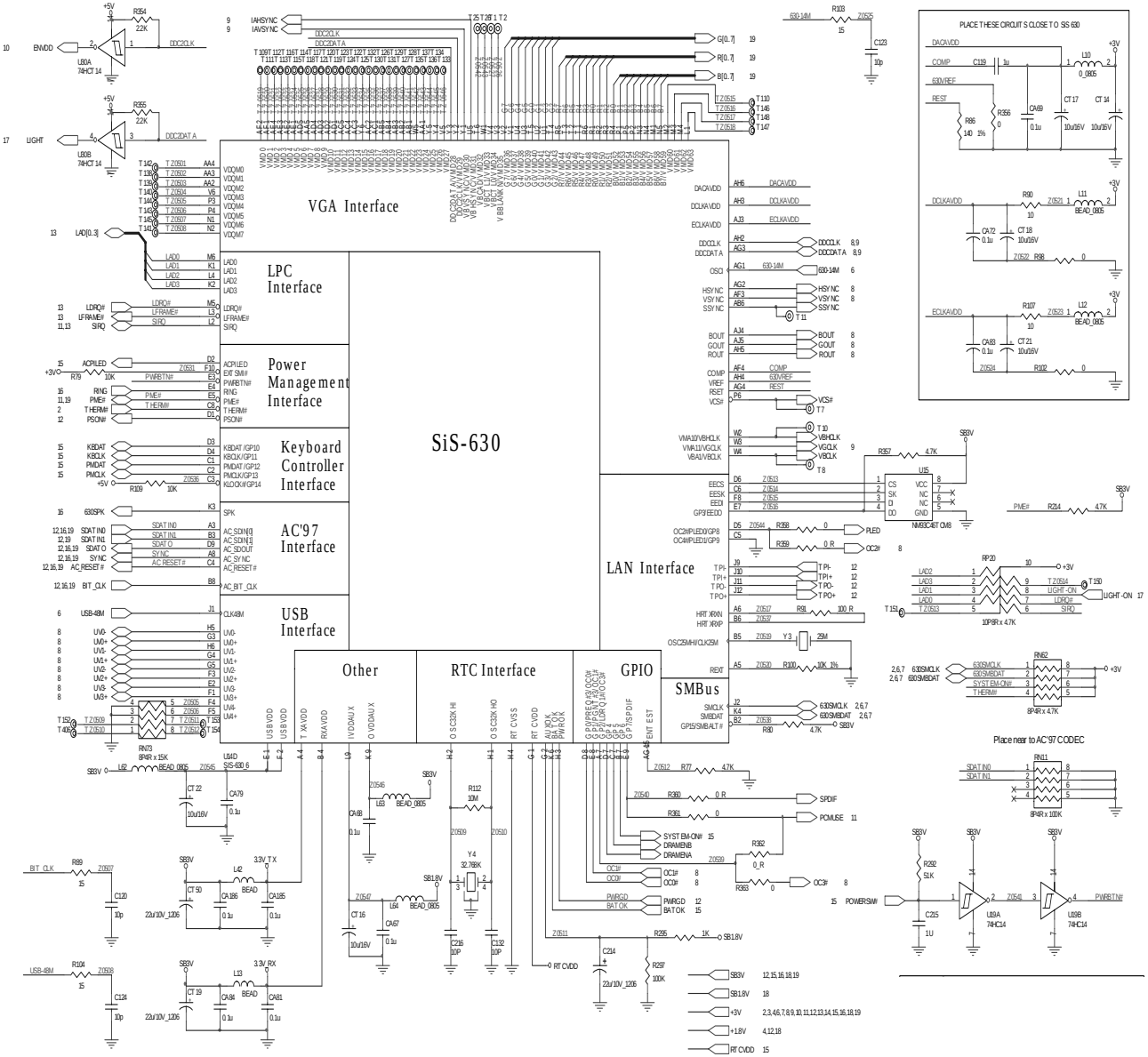
HA#[20]
HA#[21]
HA#[22]
HA#[23]
HA#[24]
HA#[25]
HA#[26]
HA#[27]
HA#[28]
HA#[29]
HA#[30]
HA#[31]
CSA#[0]
CSA#[1]
CSA#[2]
CSA#[3]
CSA#[4]
CSA#[5]
CSB#[0]
CSB#[1]
CSB#[2]
CSB#[3]
CSB#[4]
CSB#[5]
MA0
MA1
MA2
MA3
MA4
MA5
MA6
MA7
MA8
MA9
MA10
MA11
MA12
MA13
MA14
DQM0
DQM1
DQM2
DQM3
DQM4
DQM5
DQM6
DQM7
SDCLK
CKE
WE#
SRAS#
SCAS#
SDVADD
CPUAVDD
RAMW#
CLOSE TO SIS-630
HD#[0..63]
HA#[3..31]
HREQ#[0..4]
ADS#
VTT



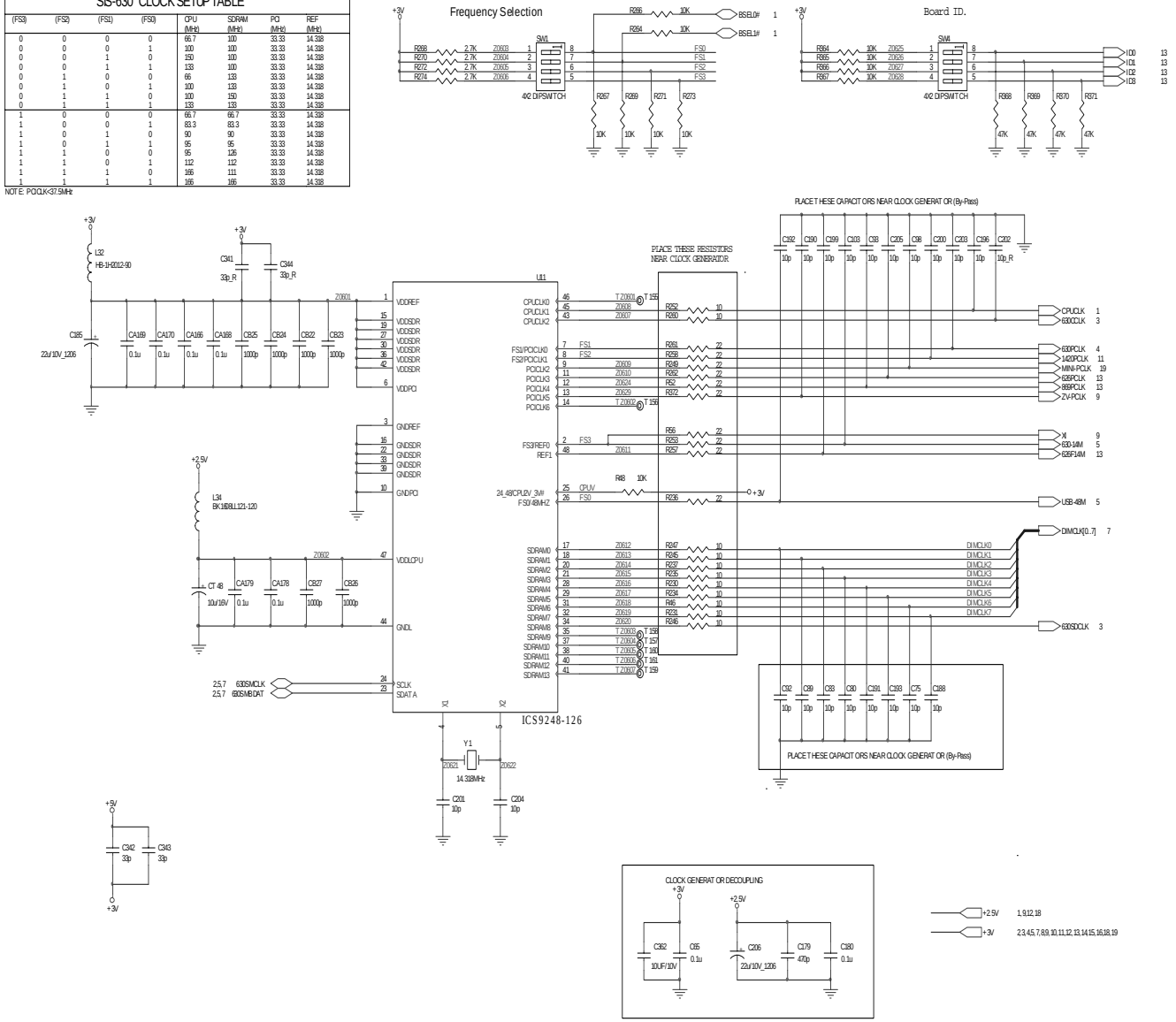
	MD44 (NMI)	MD43 (INT R)	MD42 (A20M#)	MD41 (IGNNE#)
1/2 (200MHz)	0	0	0	0
1/3 (300MHz)	0	0	0	1
1/4 (400MHz)	0	0	1	0
1/5 (500MHz)	0	0	1	1
2/5 (250MHz)	0	1	0	0
2/7 (350MHz)	0	1	0	1
2/9 (450MHz)	0	1	1	0
2/11 (550MHz)	0	1	1	1
1/6 (600MHz)	1	0	0	0
1/7 (700MHz)	1	0	0	1
1/8 (800MHz)	1	0	1	0
Reserved	1	0	1	1
2/13 (650MHz)	1	1	0	0
2/15 (750MHz)	1	1	0	1
2/3 (150MHz)	1	1	1	0
1/2 (200MHz)	1	1	1	1

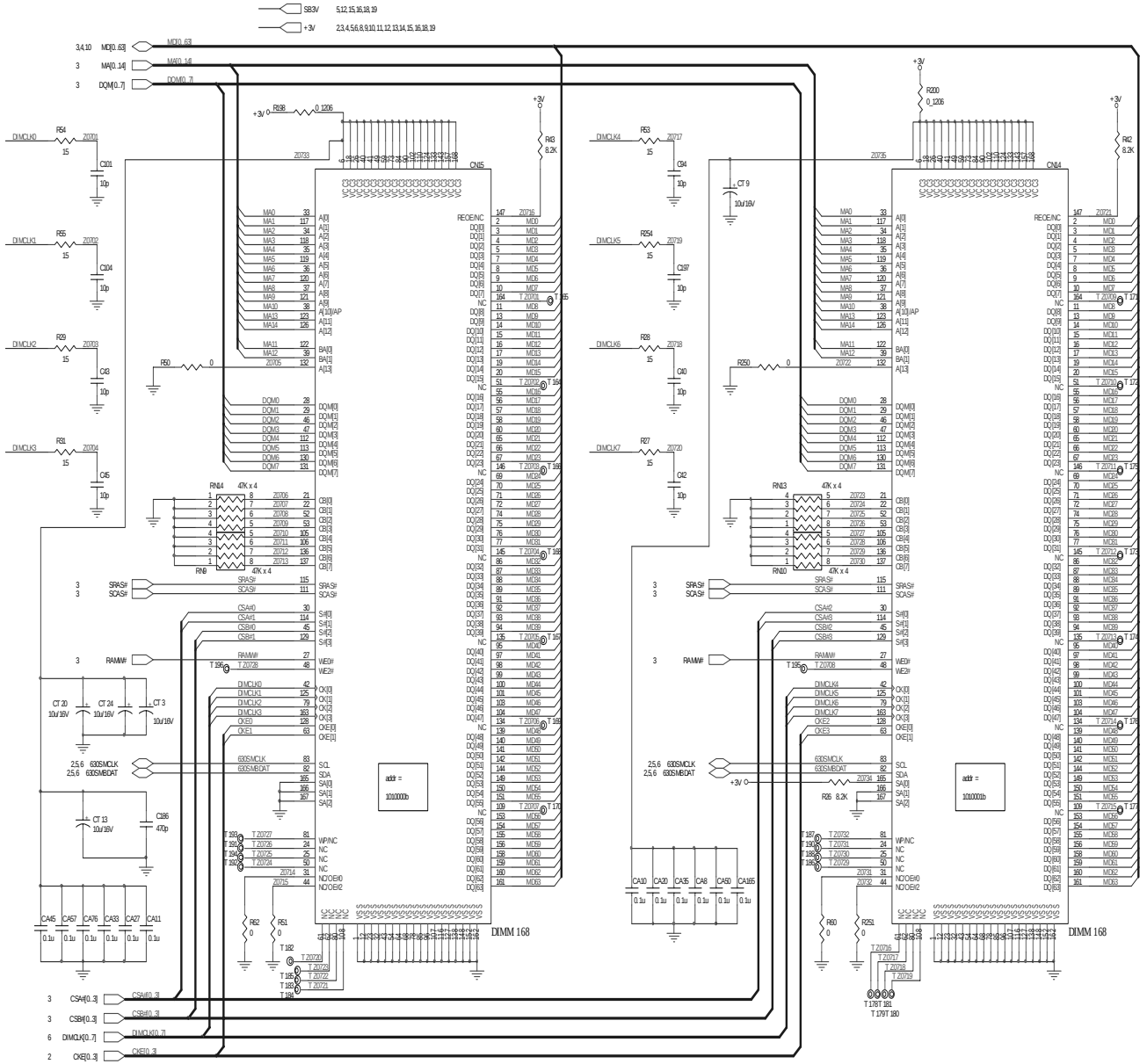

SiS-630
VGA Interface
LPC Interface
Power Management Interface
Keyboard Controller Interface
AC'97 Interface
USB Interface
LAN Interface
Other
RTC Interface
GPIO
SMBus
PLACE THESE CIRCUITS CLOSE TO SIS 630
Place near to AC'97 CODEC

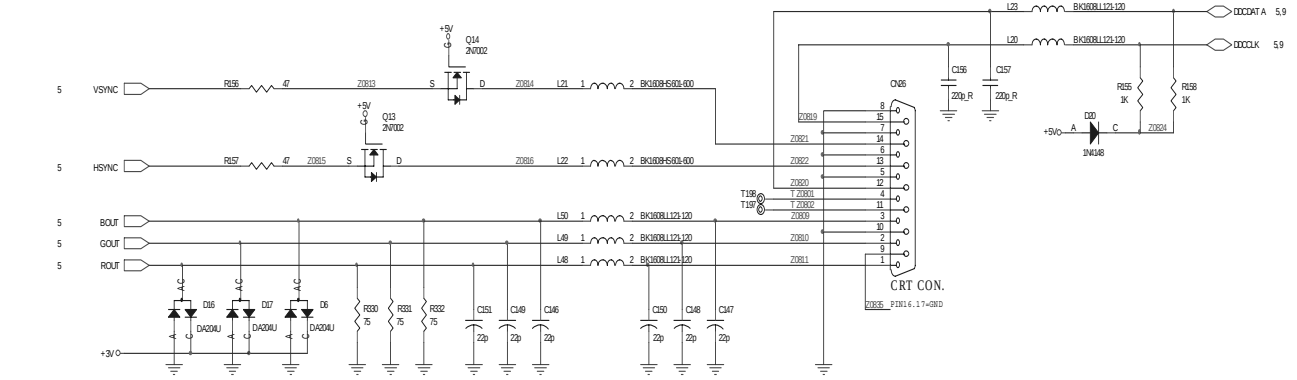
SIS-630 CLOCK SETUP TABLE

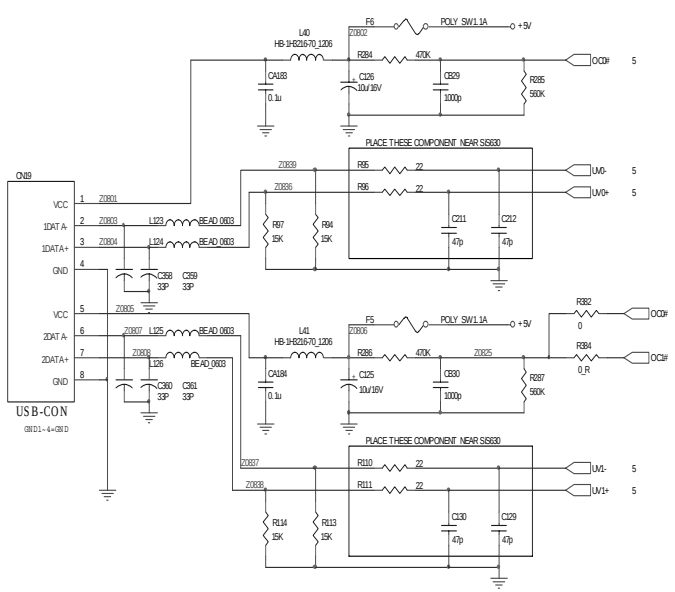
(FS3)	(FS2)	(FS1)	(FS0)	CPU (MHz)	SDRAM (MHz)	PCI (MHz)	REF (MHz)
0	0	0	0	66.7	100	33.33	14.318
0	0	0	1	100	100	33.33	14.318
0	0	1	0	150	100	33.33	14.318
0	0	1	1	133	100	33.33	14.318
0	1	0	0	66	133	33.33	14.318
0	1	0	1	100	133	33.33	14.318
0	1	1	0	100	150	33.33	14.318
0	1	1	1	133	133	33.33	14.318
1	0	0	0	66.7	66.7	33.33	14.318
1	0	0	1	83.3	83.3	33.33	14.318
1	0	1	0	90	90	33.33	14.318
1	0	1	1	95	95	33.33	14.318
1	1	0	0	95	126	33.33	14.318
1	1	0	1	112	112	33.33	14.318
1	1	1	0	166	111	33.33	14.318
1	1	1	1	166	166	33.33	14.318

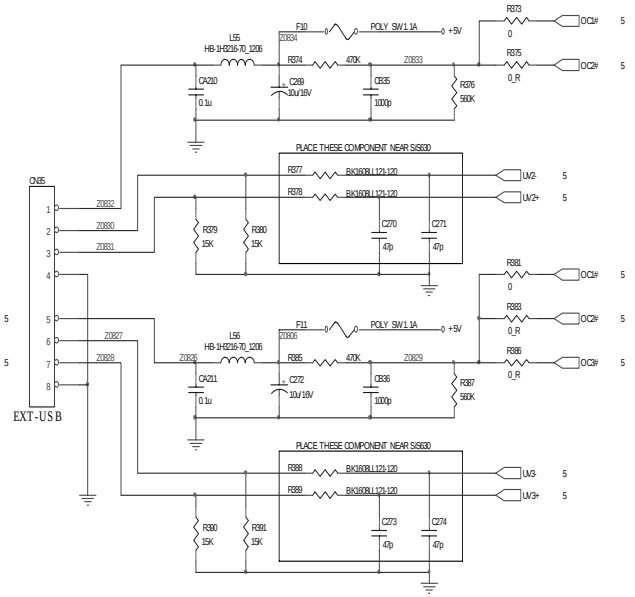
NOTE: PCICLK<37.5MHz



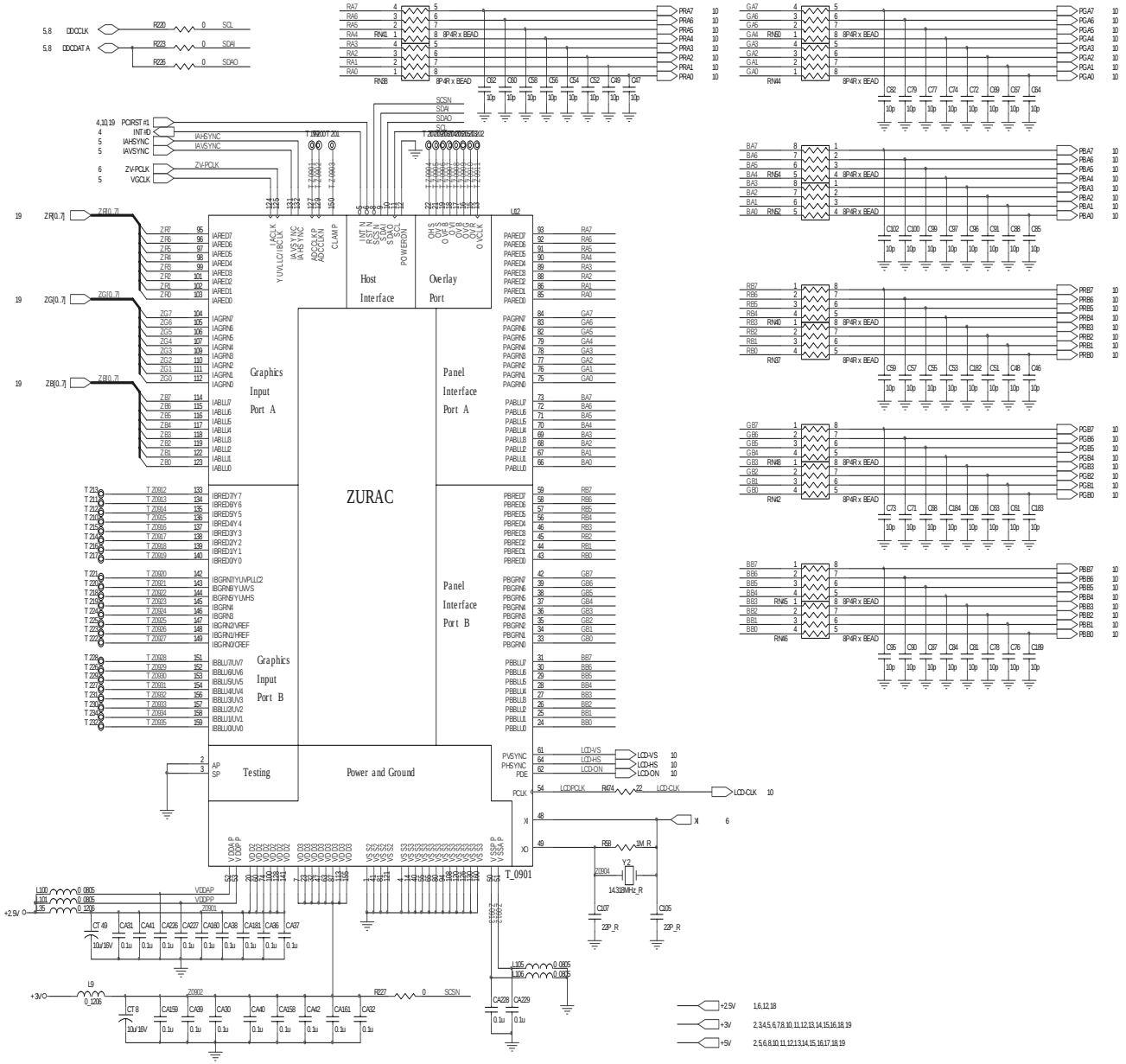

DIMM 168
DIMM 168

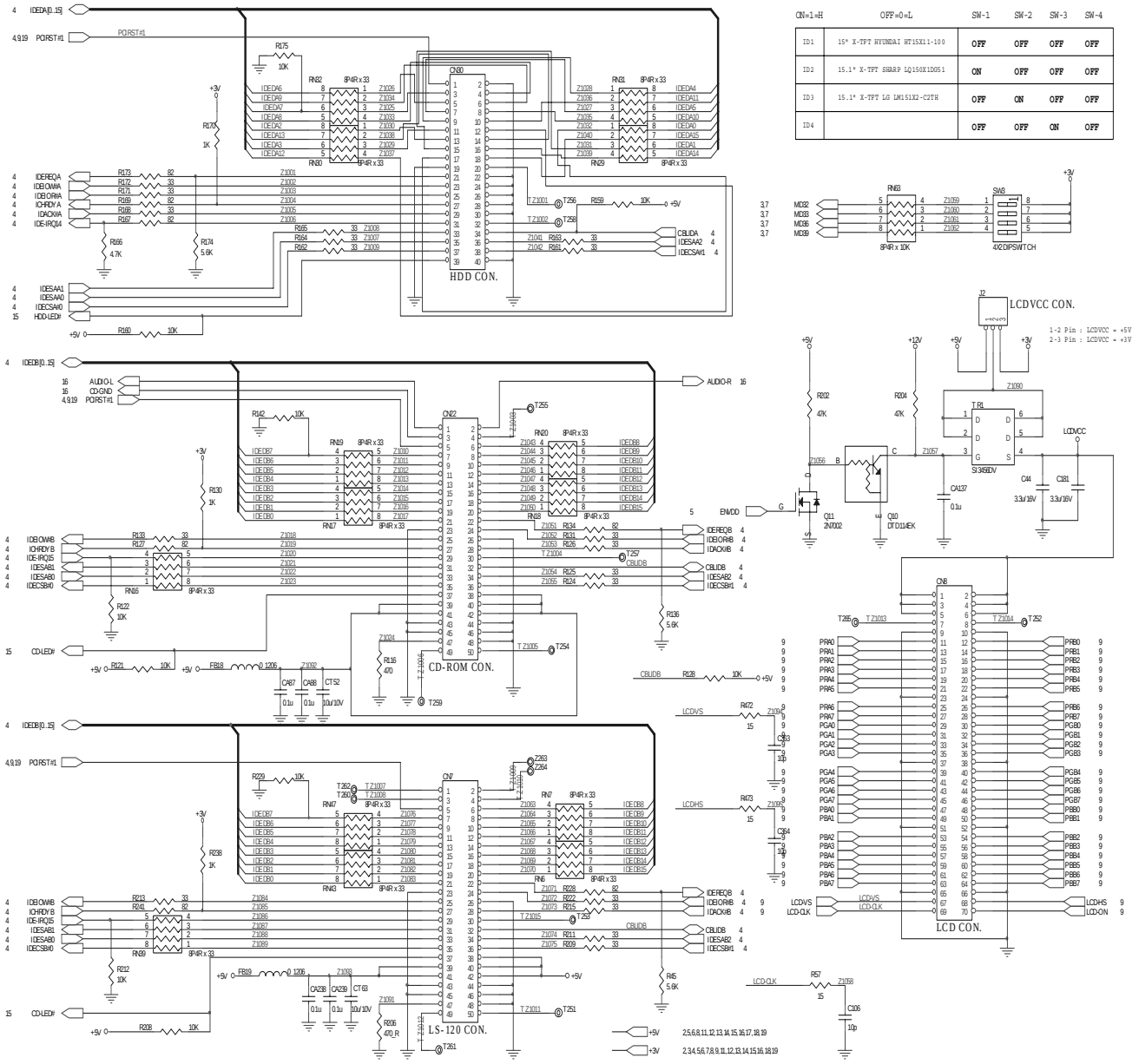




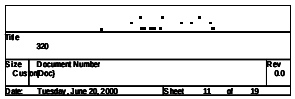


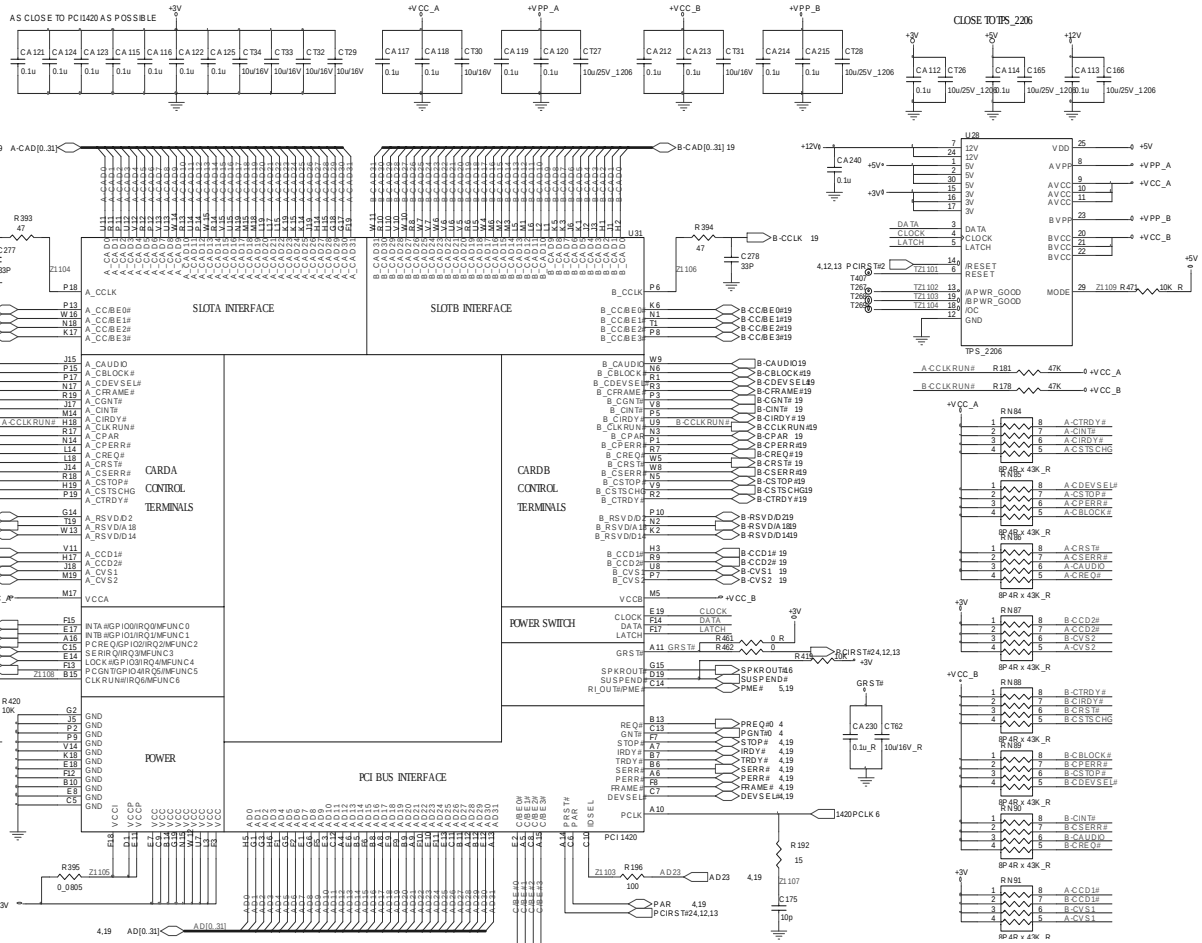
SB3V 5,12,15,16,18,19
+5V 2,5,6,10,11,12,13,14,15,16,17,18,19
+3V 2,3,4,5,6,7,9,10,11,12,13,14,15,16,18,19

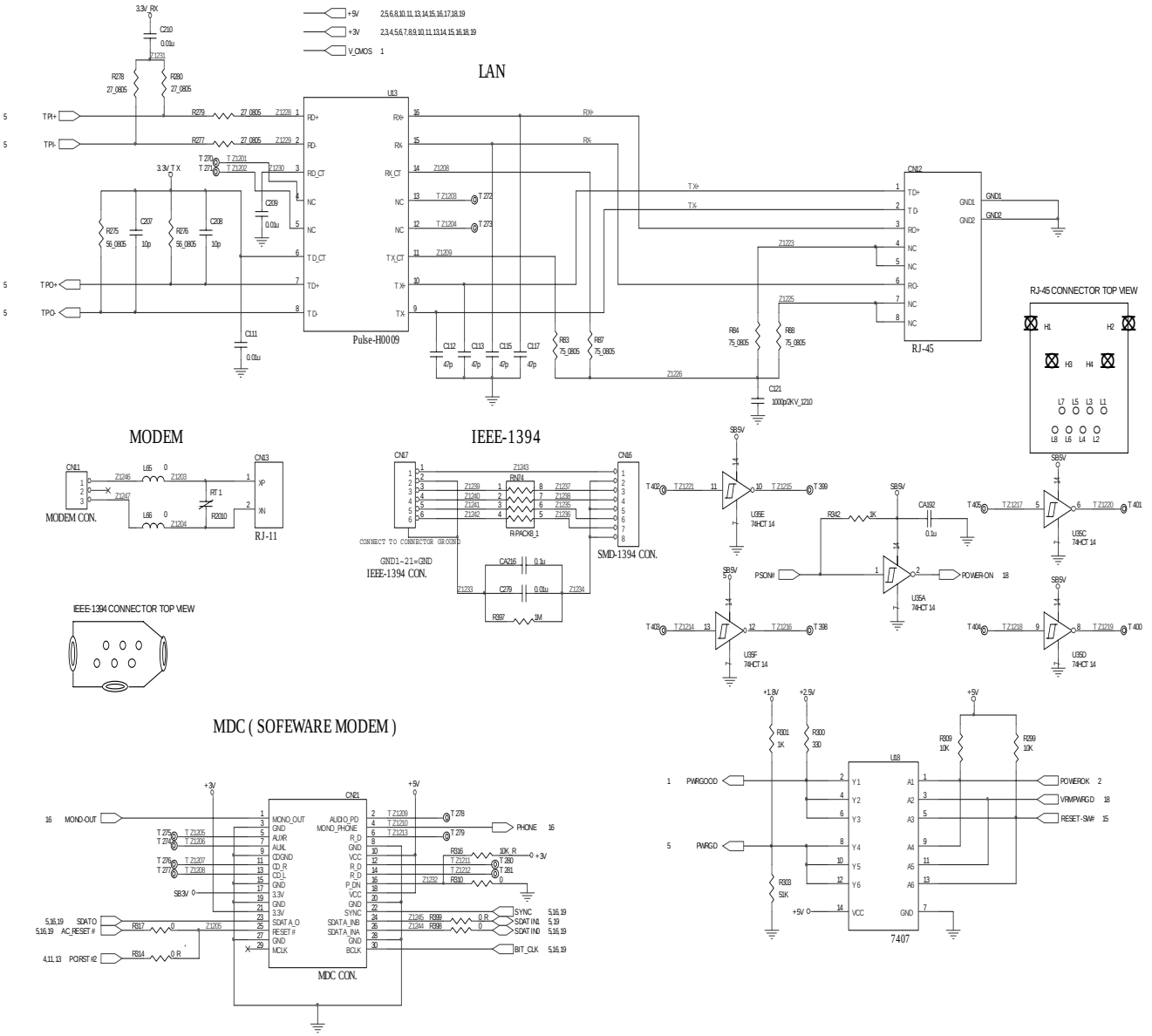

ZURAC
Host Interface
Overlay Port
Graphics Input Port A
Panel Interface Port A
Graphics Input Port B
Panel Interface Port B
Testing
Power and Ground
DDCCLK
DDCDAT A
PCIRST #1
INT #D
IAHSYNC
IAVSYNC
ZV-PCLK
VGCLK
SCSN
SDA
SDAO
SCL
LCD-VS
LCD-HS
LCD-ON
LCDPCLK
LCD-CLK
14.318MHz_R
+2.5V
+3V
+5V

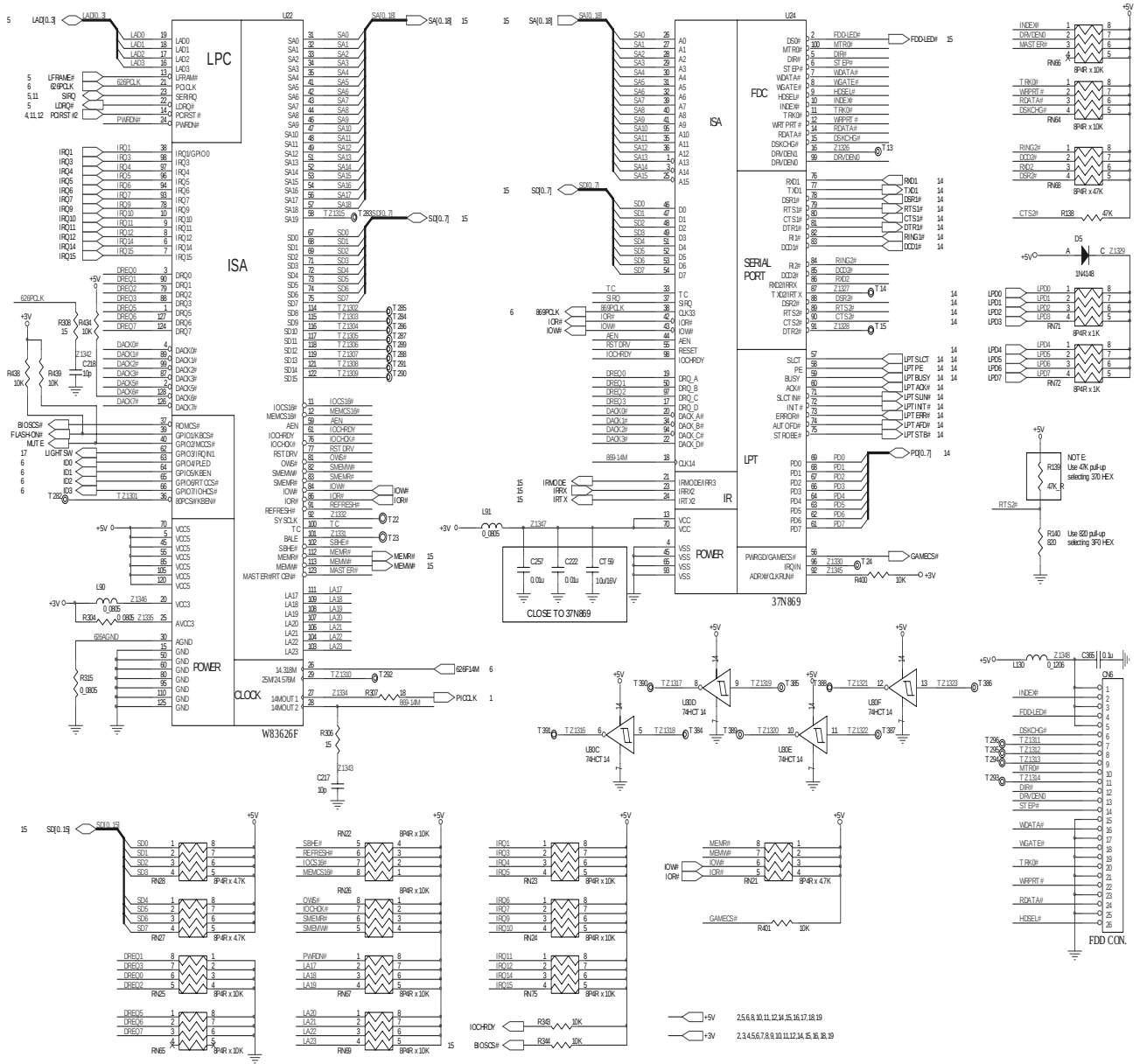


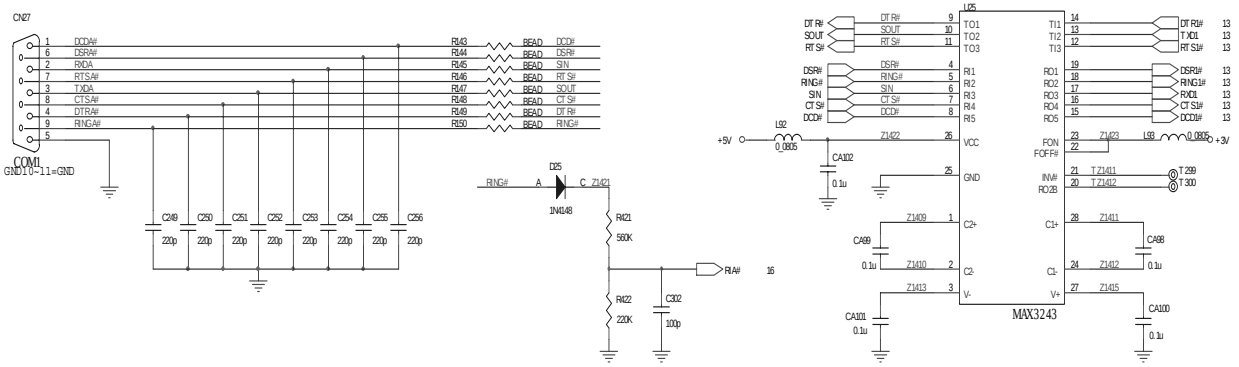
ON=1=H	OFF=0=L	SW-1	SW-2	SW-3	SW-4
ID1	15" X-TFT HYUNDAI HT15X11-100	OFF	OFF	OFF	OFF
ID2	15.1" X-TFT SHARP LQ150X1DG51	ON	OFF	OFF	OFF
ID3	15.1" X-TFT LG LM151X2-C2TH	OFF	ON	OFF	OFF
ID4		OFF	OFF	ON	OFF

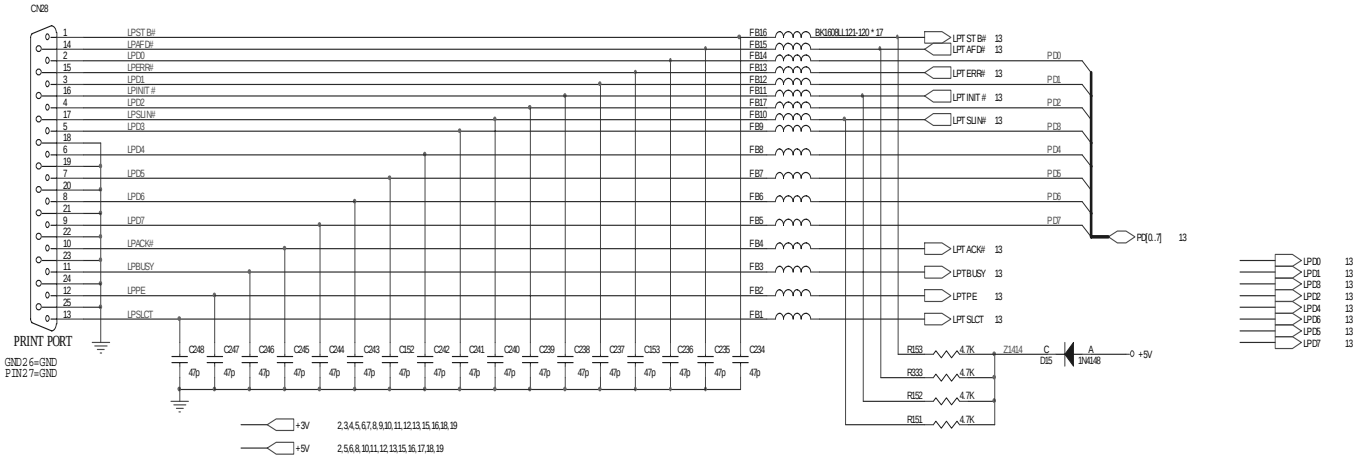

Title
320
Size
Document Number
Custom(Doc)
Rev
0.0
Date: Tuesday, June 20, 2000
Sheet 11 of 19

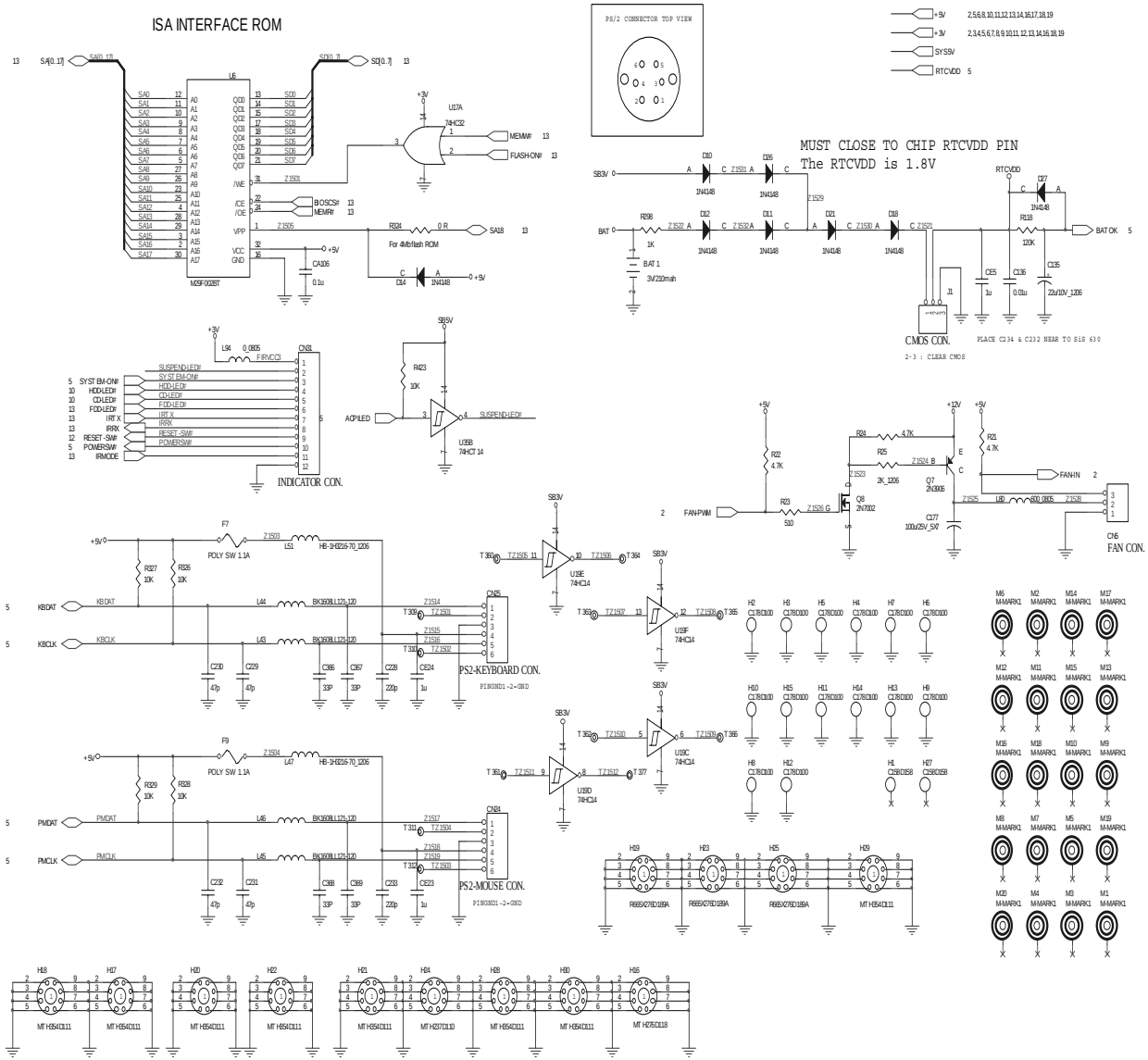

AS CLOSE TO PCI1420 AS POSSIBLE
CLOSE TO TPS_2206
SLOTA INTERFACE
SLOTB INTERFACE
CARDA CONTROL TERMINALS
CARDB CONTROL TERMINALS
POWER SWITCH
POWER
PCI BUS INTERFACE
PCI 1420
TPS_2206

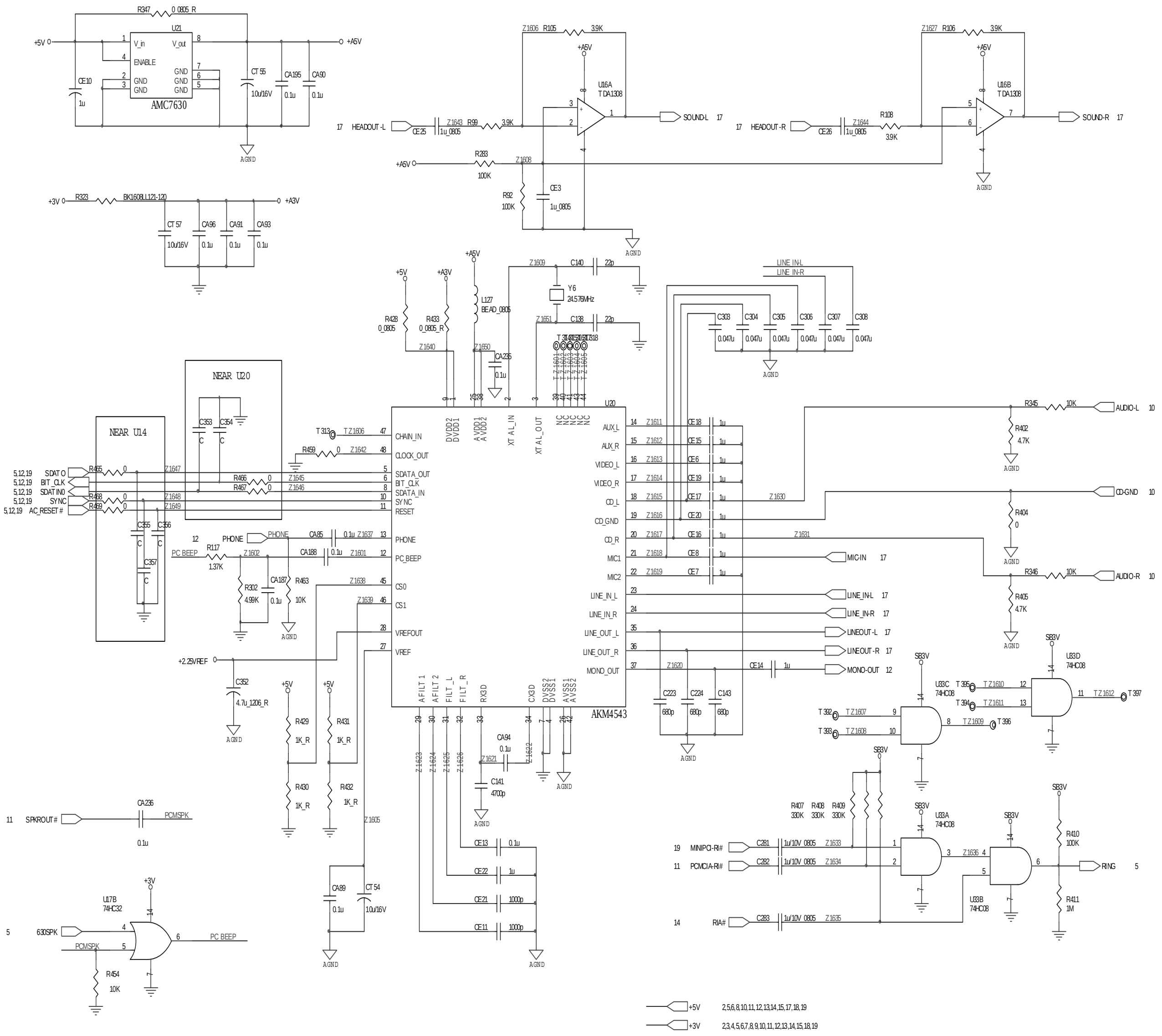

LAN
MODEM
IEEE-1394
MDC (SOFEWARE MODEM)
Pulse-H0009
RJ-45
RJ-45 CONNECTOR TOP VIEW
MODEM CON.
RJ-11
IEEE-1394 CONNECTOR TOP VIEW
IEEE-1394 CON.
SMD-1394 CON.
MDC CON.
7407
+9V
+3V
V_CMOS
3.3V_RX
3.3V_TX
TPI+
TPI-
TPO+
TPO-
MONO-OUT
PHONE
SDATO
AC_RESET #
PCIRST #2
PWRGOOD
PWRGD
POWERON
VRMPWRGD
RESET-SW#
PSON#
POWER-ON
SYNC
SDAT IN1
SDAT IN0
BIT_CLK

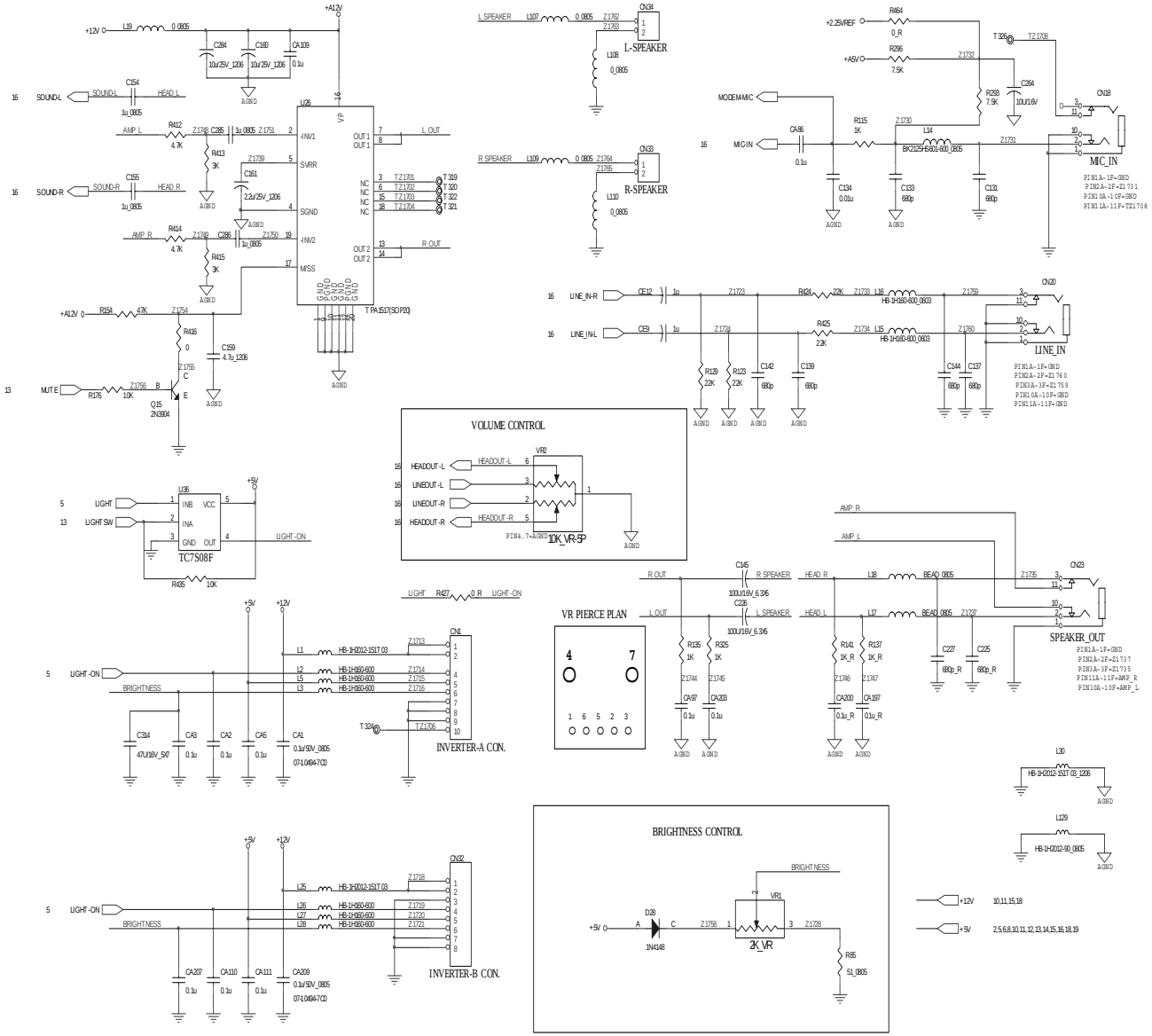

LPC
ISA
POWER
CLOCK
W83626F
FDC
SERIAL PORT
LPT
IR
37N869
CLOSE TO 37N869
FDD CON.

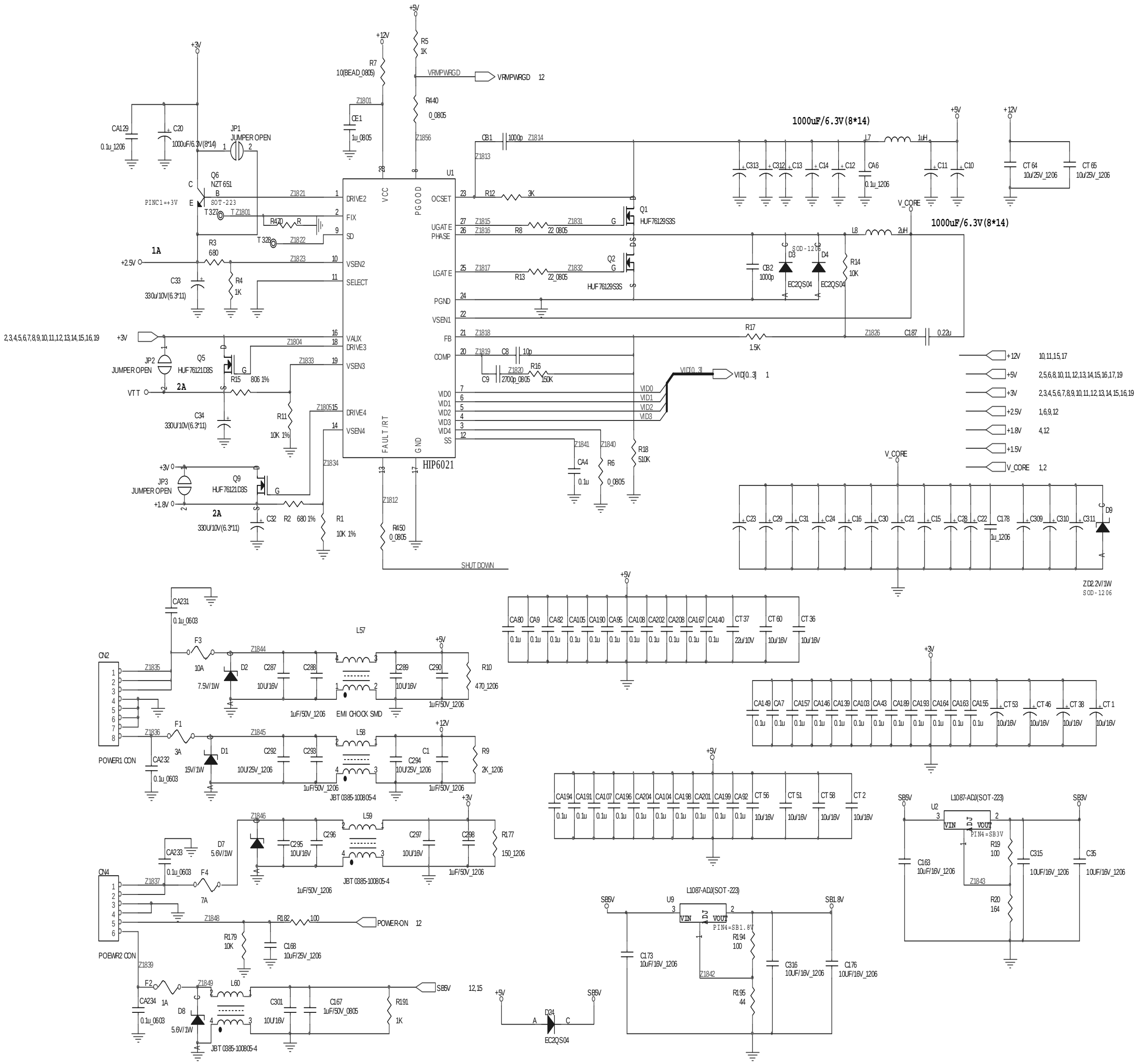

CN27
COM1
GND1 0~11=GND
DCDA#
DSRA#
RXDA
RTSA#
TXDA
CTSA#
DTRA#
RINGA#
R143 BEAD DCD#
R144 BEAD DSR#
R145 BEAD SIN
R146 BEAD RT S#
R147 BEAD SOUT
R148 BEAD CT S#
R149 BEAD DT R#
R150 BEAD RING#
C249 C250 C251 C252 C253 C254 C255 C256 220p
D25 1N4148
R421 560K
R422 220K
C302 100p
RIA# 16
U5 MAX3243
L92 0.0805 +5V
CA102 0.1u
CA99 CA98 CA101 CA100 0.1u
Z1409 Z1410 Z1413 Z1411 Z1412 Z1415 Z1422 Z1423
T Z1411 T Z1412 T Z99 T 300
L98 0.0805 +3V

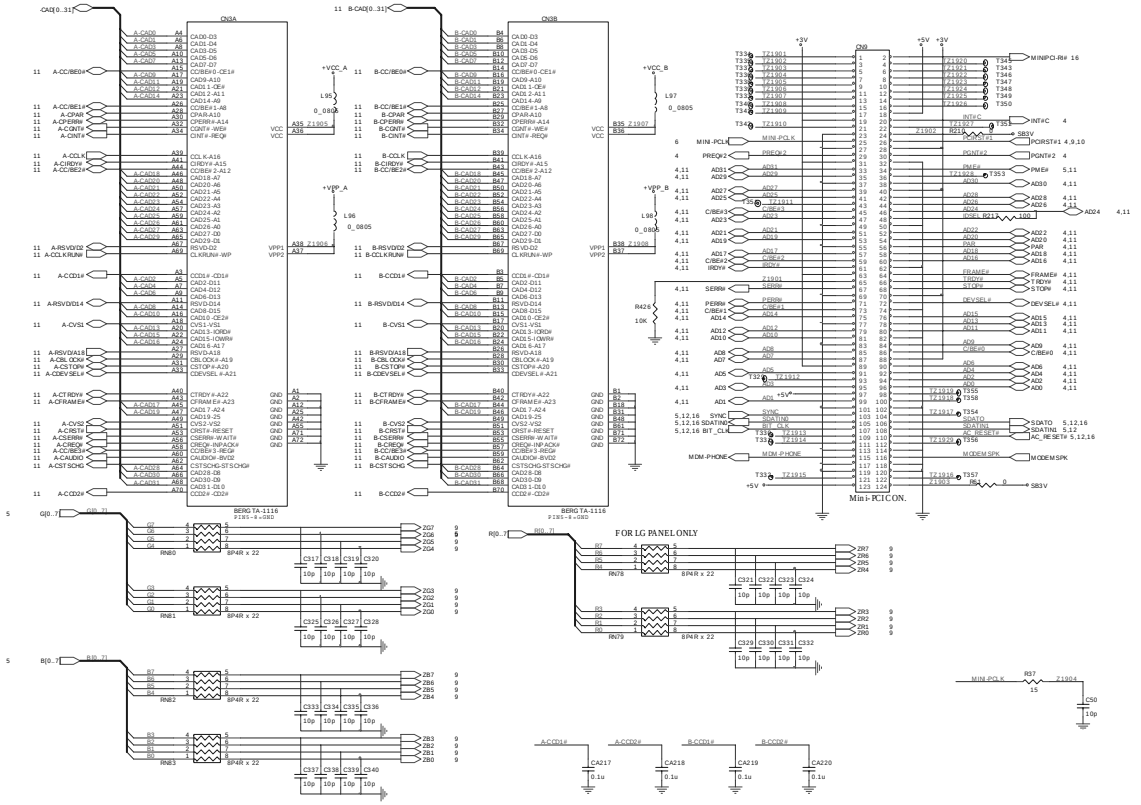

CN28
PRINT PORT
GND 2.6=GND
PIN 2.7=GND
LPST B#
LPAFD#
LPD0
LPERR#
LPD1
LPINIT #
LPD2
LPSLIN#
LPD3
LPD4
LPD5
LPD6
LPD7
LPACK#
LPBUSY
LPPE
LPSLCT
FB16 FB15 FB14 FB13 FB12 FB11 FB17 FB10 FB9 FB8 FB7 FB6 FB5 FB4 FB3 FB2 FB1
BK1608L121-120 * 17
LPT ST B# LPT AFD# LPT ERR# LPT INIT # LPT SLIN# LPT ACK# LPT BUSY LPT PE LPT SLCT
PD0 PD1 PD2 PD3 PD4 PD5 PD6 PD7
PD[0..7]
C248 C247 C246 C245 C244 C243 C152 C242 C241 C240 C239 C238 C237 C153 C236 C235 C234 40p
R153 R333 R152 R151 4.7K
Z1414 D15 1N4148 +5V
LPD0 LPD1 LPD3 LPD2 LPD4 LPD6 LPD5 LPD7
+3V 2,3,4,5,6,7,8,9,10,11,12,13,15,16,18,19
+5V 2,5,6,8,10,11,12,13,15,16,17,18,19


ISA INTERFACE ROM
MUST CLOSE TO CHIP RTCVDD PIN
The RTCVDD is 1.8V
CMOS CON.
INDICATOR CON.
PS2-KEYBOARD CON.
PS2-MOUSE CON.
FAN CON.
POLY SW 1.1A
POLY SW 1.1A

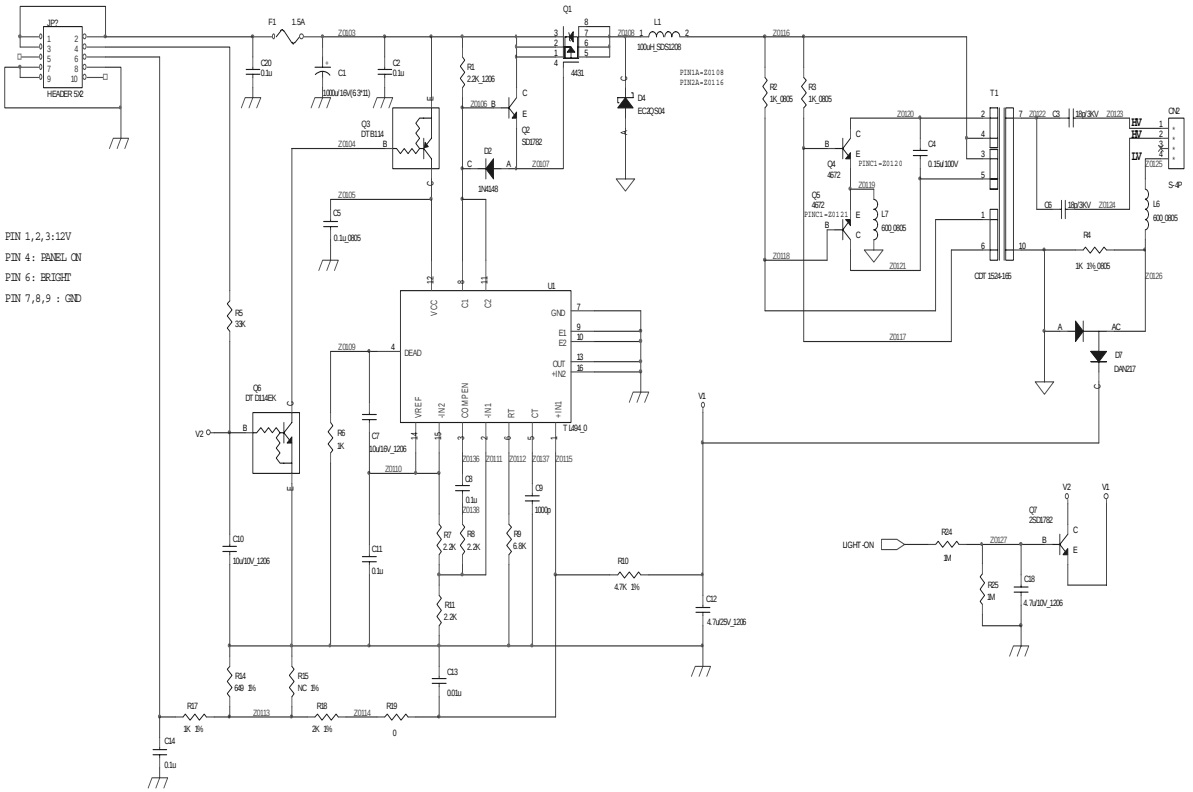

AMC7630
U21
NEAR U20
NEAR U14
U20
AKM4543
HEADOUT-L
HEADOUT-R
SOUND-L
SOUND-R
U16A TDA1308
U16B TDA1308
CHAIN_IN
CLOCK_OUT
SDATA_OUT
BIT_CLK
SDATA_IN
SYNC
RESET
PHONE
PC_BEEP
CS0
CS1
VREFOUT
VREF
AUX_L
AUX_R
VIDEO_L
VIDEO_R
CD_L
CD_GND
CD_R
MIC1
MIC2
LINE_IN_L
LINE_IN_R
LINE_OUT_L
LINE_OUT_R
MONO_OUT
AUDIO-L
CD-GND
AUDIO-R
MIC-IN
LINE IN-L
LINE IN-R
LINEOUT-L
LINEOUT-R
MONO-OUT
SPKROUT#
630SPK
PC BEEP
MINIPCI-RI#
PCMCIA-RI#
RIA#
RING
+5V 2,5,6,8,10,11,12,13,14,15,17,18,19
+3V 2,3,4,5,6,7,8,9,10,11,12,13,14,15,18,19


L-SPEAKER
R-SPEAKER
MIC_IN
LINE_IN
SPEAKER_OUT
VOLUME CONTROL
10K_VR-5P
VR PIERCE PLAN
INVERTER-A CON.
INVERTER-B CON.
BRIGHTNESS CONTROL
2K_VR
TC7S08F
T PA1517(SOP20)

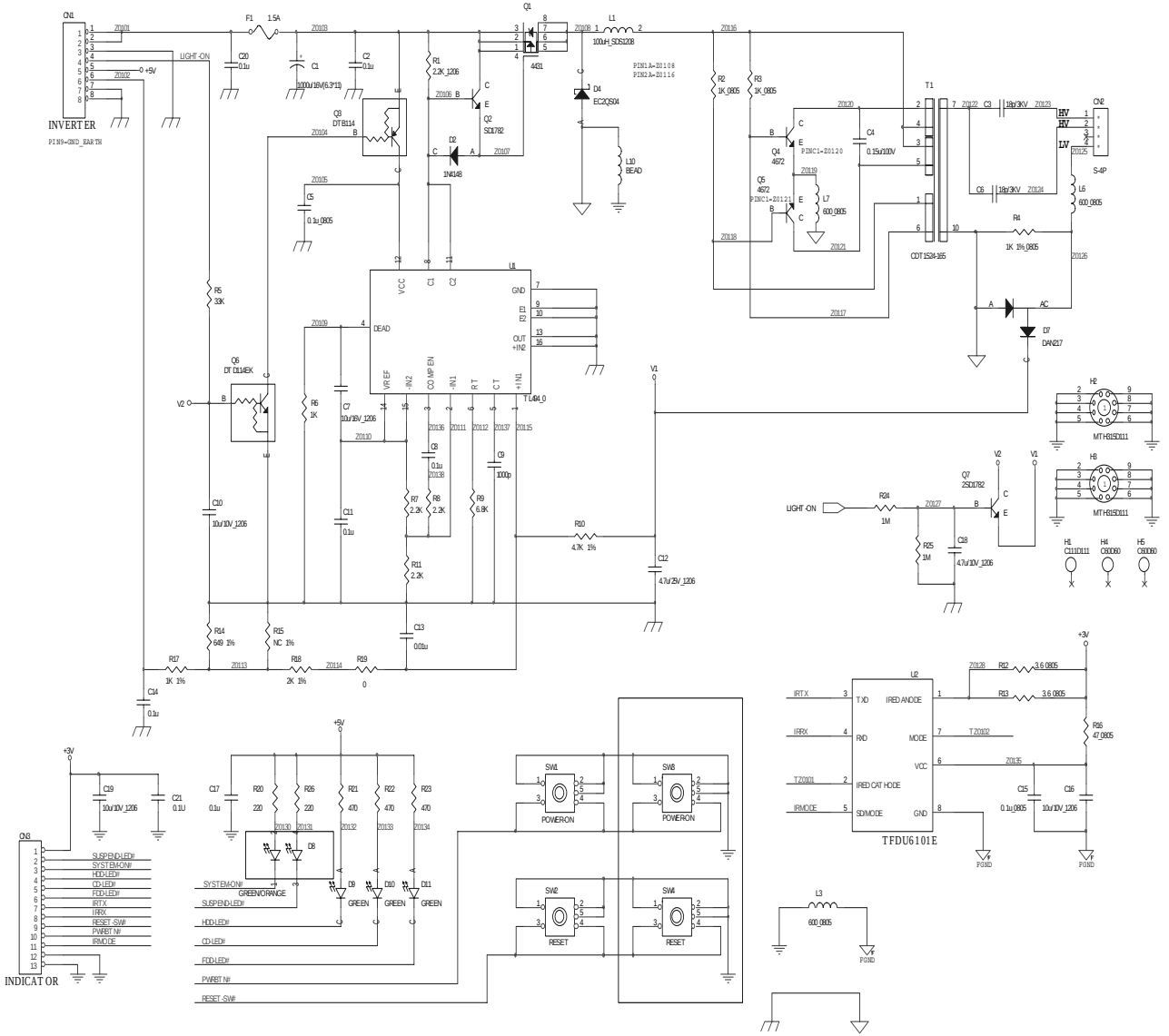

HIP6021
VRMPWRGD
1000uF/6.3V(8*14)
V_CORE
POWER1 CON
POEWR2 CON
EMI CHOOK SMD
POWER-ON
SHUT DOWN
L1087-ADJ(SOT-223)


CN9A
CN9B
BERG TA-1116
FOR LG PANEL ONLY
Mini-PCI CON.
MINI-PCI.K
MDM-PHONE
MODEM SPK

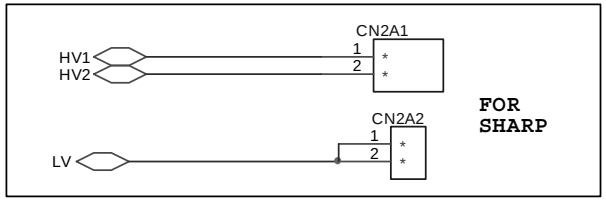
INVERTER BOARD

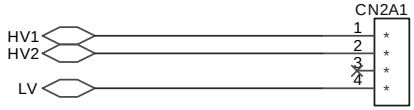


INVERTER + LED BOARD



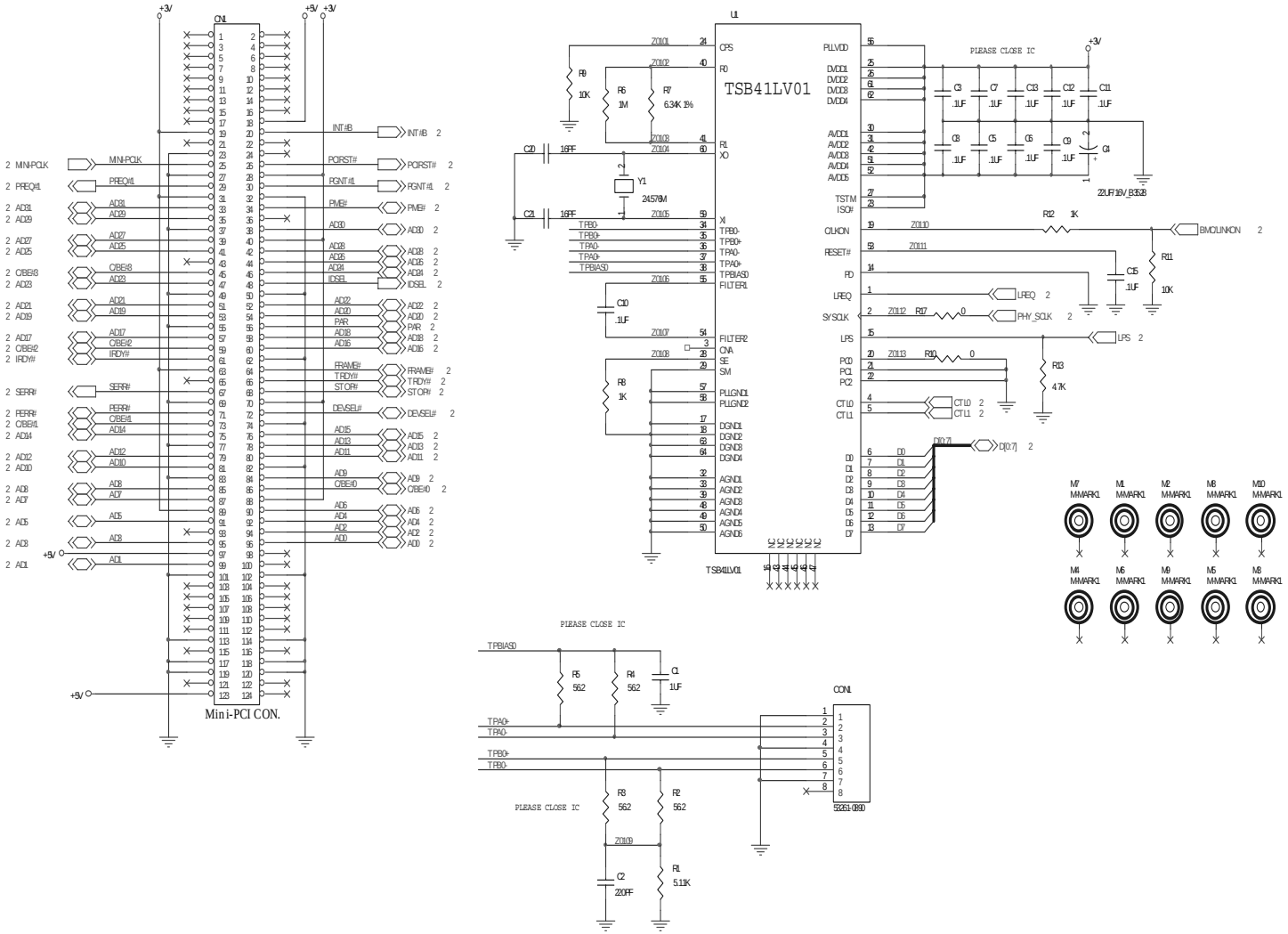
CONVERTER BOARD





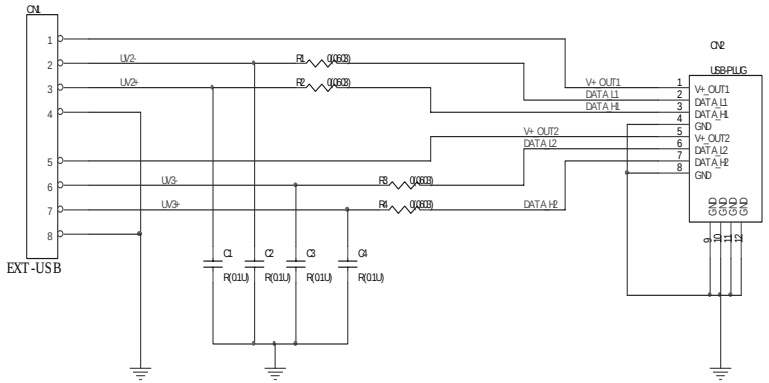
HV1+HV2+LV	Hyundai
HV2+LV	LG

IEEE1394 EXTENSION CARD (OPTIONAL)



EXTERNAL USB BOARD

Only the LP200C has this feature.



Notes: