

Notebook PC Service Manual

Model : 340S2

UNIWILL COMPUTER CORP.

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Notebook PC Service Manual

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Chapter 1

General System Description

UNIWILL TECHNOLOGY CORP.

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1.1 System features

1.1.1 General features

- a. Support cost efficient CPU,
 - Celeron-128K 500~700 MHz in PPGA type
 - Pentium III 500~850 MHz in FC-PGA type
- b. Superior portability with all in one design
- c. Support high quality audio include 2 internal high power speaker
- d. Fully Support ACPI 1.0, meet PC98/PC99 requirement
- e. Built-in 56K modem for Data/Fax/Voice modem or Internet (optional)
- f. Support high performance hardware 2D/3D graphic engine
- g. Support high capacity memory up to 512 MB
- h. Support one most flexibility of 32-bit Cardbus slot and PCMCIA card

1.1.2 Hardware specification

A. CPU:

Celeron-128K 500MHz to 700MHz

- System bus frequency at 66 MHz
- Dynamic execution microarchitecture
- MMX technology capability
- Optimized for 32 bits AP and OS
- Power Management capability
- Integrated 32KB instruction and data L1 cache
- Integrated 128 KB instruction and data L2 cache

Pentium III 500MHz and 850MHz

- System bus frequency at 100MHz
- On-die 256KB L2 advanced transfer cache with ECC
- Dual independent bus architecture
- SIMD extensions for enhanced video, sound and 3D performance

- Dynamic execution micro architecture
- Power management capability
- Optimized for 32bits AP and OS
- Integrated 16KB instruction and 16KB data L1 cache
- 256bit cache data bus
- 8-way cache associativity
- ECC for system bus data

B. Core Logic

SIS 630

- Support 66/100 MHz FSB
- Power management capability
- Integrated AGP bus 2D/3D video processor
- Direct DVD MPEG-2 and AC-3 playback
- Accelerator for Direct 3D API
- Frame buffer share system memory up to 32MB
- Support PC100 VCM SDRAM
- Full support of ACPI and OS directed power management
- Integrated IDE controller support 2 channel ultra DMA transfers up to 66 MB/sec
- Integrated USB root hub
- Integrated audio controller with 64-voices Direct Sound channel support
- Integrated HSP modem
- Forwards PCI I/O and memory cycles into LPC bus

C. PCMCIA Controller

O2 Micro OZ6812

- ACPI-PCI bus power management interface specification Rev.1.0 compliant
- Compliant with PCI specification V2.1S, 1995 PC Card Standard and JEIDA 4.1
- Supports PCMCIA ATA specification
- Supports 5V/3.3V PC Cards and 3.3V Cardbus Cards
- Supports single PC card or Cardbus slot with hot insertion and removal
- Supports multiple FIFOs for PCI/CB data transfer
- Supports Direct memory access for PC/PCI and PC/Way on PC Card socket
- Win98IRQ and PC-97/98 compliant
- Integrated PC98 Subsystem Vendor ID support with auto lock bit

D. Embedded Controller / Keyboard Controller

NS PC87570

- Hot key for brightness, volume control
- ACPI controller
- SMB bus for smart battery
- Support Win-95 defined 3 new keys and down load-able key-matrix

E. Super I/O Controller

NS PC87393

- LPC System Interface with synchronous cycles, up to 33 MHz bus clock
- PC99 and ACPI Compliant

- Floppy Disk Controller (FDC)
- Support SPP, EPP and ECP Parallel port
- Software compatible with the 16550A and the 16450 serial port
- HP-IR, ASK-IR, Fast-IR support

F. Clock Generator

Realtek W83194R-630

- Multiple CPU clocks for SDRAM architecture
- Provide power down mode in slowing down CPU clock
- Spectrum modulation reduce EMI
- Provide programmable clocks

G. DSTN Encoder

NS CS9211

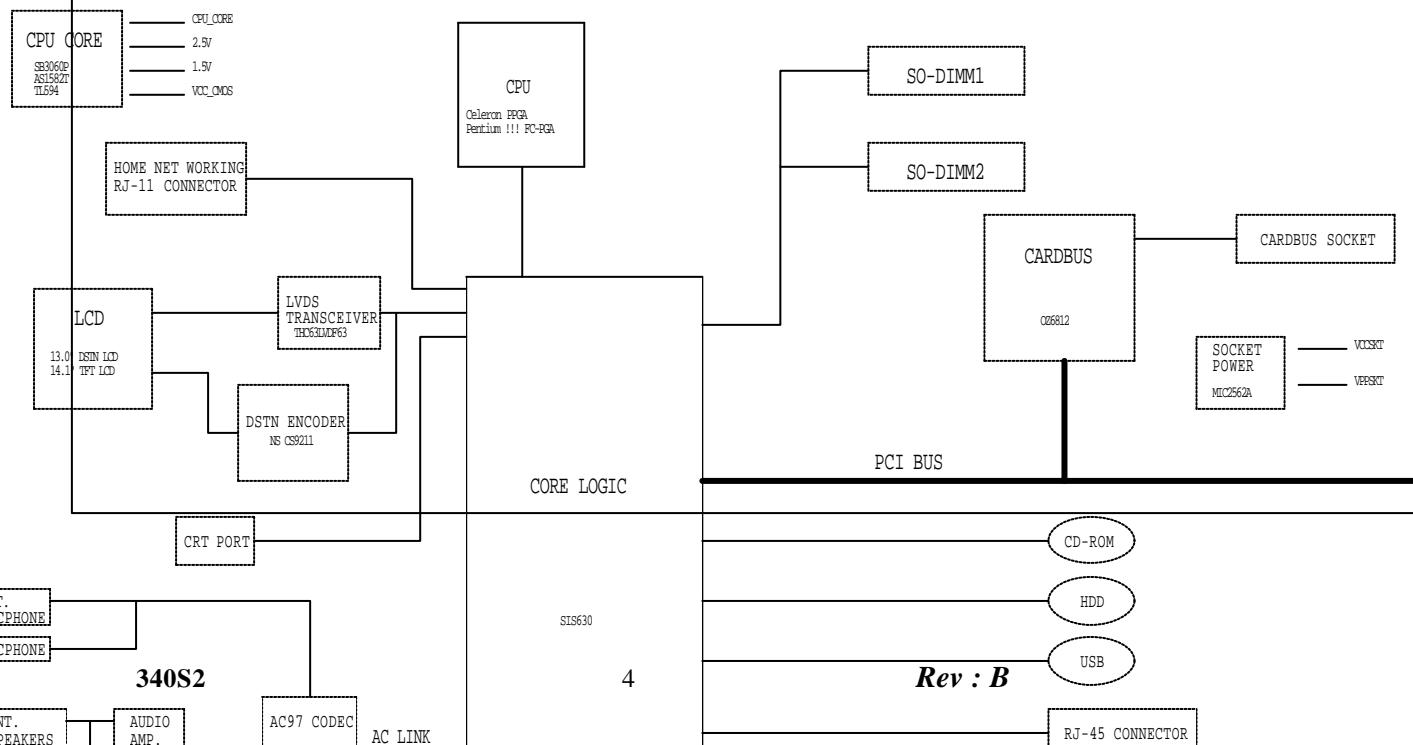
- Support 18 bits color digital pixel input
- Support SVGA DSTN and VESA FPDI SPEC.
- Programmable dither up to 64 levels
- Built in memory controller support both SDRAM and EDO RAM

1.2 System Specification

1.2.1 System Board

The major components of the computer include the system board, XGA color LCD display, FDD module, CD-ROM module (24X rotational speed max) / DVD module, keyboard, built-in glide pad with 2 click buttons, Lithium-ION battery pack, and AC adapter.

The system board incorporates CPU module, system memory, system and VGA BIOS, audio controller, CPU / PCI bus controller, PCI / ISA bus controller. The **System Block Diagram** shows how these components are integrated as shown in the next page.



1.2.2 LCD Display

14.1" TFT

13.3" TFT

12.1" TFT

13.0" HPA

12.1" HPA

1.2.3 Power Plans

Power Source Descriptions

+5V : 5V power source

+3V : 3.3V power source

+12V : 12V power source

CPU_Core : CPU Core power source.

For Celeron, the voltage is 2.0V.

For Pentium III, it is 1.8V.

+1.5V : CPU AGTL+ termination power source

VCC_CMOS : CPU CMOS pull up voltage.

For Celeron, the voltage is 2.5V.

For Pentium III, it is 1.5V.

+2.5V : 2.5V power source

+1.8V : 1.8V power source for SIS630

KBVCC : KBC 3.3V power source

KBVCCA : KBC AD/DA 3.3V reference voltage

VCCRTC : Real time clock power source

+5V_AUX : LAN 5V always power source

+3V_AUX : LAN 3.3V always power source

+3V_RX_TR : LAN 3.3V analog power source

+3V_TX_TR : LAN 3.3V analog power source

LCDVCC : LCD display 3.3V power source

VIN : Inverter 12~20V power source

ADAP+ : 20V Power supply from AC adapter

AMPVDD : 5V analog power for audio

1.2.4 Power Source Status

	5V	3.3V	12V	CPU_core	VCC_CMOS	2.5V	1.5V	1.8V
FULL-ON	ON	ON	ON	ON	ON	ON	ON	ON
SLEEP	ON	ON	ON	ON	ON	ON	ON	ON
STD	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
SOFT-OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF

1.2.5 DC/DC Board

The DC/DC (system power) can support +3.3V, +5V, +12V for the main system.

The DC/DC (CPU power) can support +1.3V~2.05V, +1.8V, +2.5V for the CPU.

1.2.6 AC-DC Adapter

Input Voltage	: 100 ~ 240 ±10% AC
Input Frequency	: 50 ~ 60 Hz ±3Hz
Input AC current	: 1.5 @ 90 VAC
Efficiency	: Better than 80%
Inrush Current	: 50A @ 115VAC, 100A @ 230VAC
Holdup Time	: 5mS (minimum)
Output Voltage/Current	: 20V / 3.0A
Output Load Regulation	: ±5%

1.2.7 Inverter

Input Voltage	: 9-22 VDC
Output Voltage	: 620 Vrms @ 50-60KHz
Start Up Voltage	: 1400 Vrms (min.)
Brightness Adjust Range (tube current)	: 2.5mA rms – 5mA rms
Protection	: Open circuit protect, current limit protect

1.2.8 Battery Pack

A. Lithium – Ion Battery packs

- Battery type : Li-Ion
- Battery cells : 8 cells

- Battery Spec : 14.8V, 3200 mAH
- Battery power : 53 watts (total)
- Battery protection : over charge protect, over discharge protect, over temperature protect, short protect, over current protect

B. Ni-MH battery packs

- Battery type : Ni MH
- Battery cells : 10 cells
- Battery specs : 12V, 4500 mAh
- Battery power : 54 watts (total)
- Battery protection : over charge protect, over discharge protect, over temperature protect, short protect, over current protect

1.2.9 Memory Module

144 pins SO-DIMM, 3.3V, SDRAM

memory type = 1Mx16, 4Mx16, 16Mx16, 2Mx8, 8Mx8, 16Mx8

memory size = 16M, 32M, 64M, 128M,

memory clock = 66 MHz / 100MHz

Memory Configuration Table

DIMM 1	DIMM 2	Total
16M	0	16M
32M	0	32M
64M	0	64M
128M	0	128M
16M	16M	32M
16M	32M	48M
32M	32M	64M
16M	64M	80M
32M	64M	96M
64M	64M	128M
64M	128M	192M
128M	128M	256M

1.2.10 Interrupt Request Channel

Setting	Hardware using the setting
00	System timer
01	Standard 101/102-Key Microsoft Natural Keyboard
02	Programmable Interrupt Controller
03	IrDA V3.0 Fast Infrared Port
04	Communications Port (Com1)
06	Standard Floppy Disk Controller
07	ECP Printer Port (LPT1)
08	System CMOS/ Real Time Clock (RTC)
09	ACPI IRQ Holder for PCI IRQ Steering
09	SiS 900 PCI Fast Ethernet Adapter
10	ACPI IRQ Holder for PCI IRQ Steering
10	HAMR 5600 Voice Modem
10	O2Micro OZ6812 CardBus Controller
10	SIS 7018 Audio Driver
11	ACPI IRQ Holder for PCI IRQ Steering
11	SIS 7001 PCI to USB Open Host Controller
11	SIS 7001 PCI to USB Open Host Controller
11	SCI IRQ used by ACPI bus
12	Microsoft PS/2 Port Mouse
13	Numeric data processor
14	SIS 5513 Dual PCI IDE Controller
14	Primary IDE Controller (dual FIFO)
15	Intel 82371AB/EB PCI Bus Master IDE Controller
15	Secondary IDE Controller (dual FIFO)

1.2.11 DMA Channel

Setting	Hardware using the setting
01	IrDA V3.0 Fast Infrared Port
02	Standard Floppy Disk Controller
03	ECP Printer Port (LPT1)
04	Direct memory access controller

1.2.12 System LED Indicator

- 4 Num-lock (on/off)
- 4 Cap-lock (on/off)
- 4 Scroll-Lock (on/off)
- 4 FDD (on/off)
- 4 HDD (on/off)
- 4 CDROM (on/off)
- 4 Power (on/off)

When the system is powered on, the Power LED will be lighted on.

When ‘Battery Low Warning’ occurs, the Power LED will flash at a rate of 1 time every 16 second.

When ‘Battery Very Low Warning’ occurs, the Power LED will flash at a rate of 1 time every 4 seconds if there is no ‘Suspend to Disk’ partition in the hard disk.

- 4 Charge (flash/off): Will be flashing when the battery pack is being charged.

1.2.13 Hot Key:

Key combination	Function
Fn + F1	Standby Mode
Fn + F3	Mute battery warning beep
Fn + F4	Toggle LCD / CRT display
Fn + F5	Volume increase
Fn + F6	Volume decrease
Fn + F7	Brightness up
Fn + F8	Brightness down
Fn + F9	Contrast up (for DSTN LCD)
Fn + F10	Contrast down(for DSTN LCD)

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Chapter 2

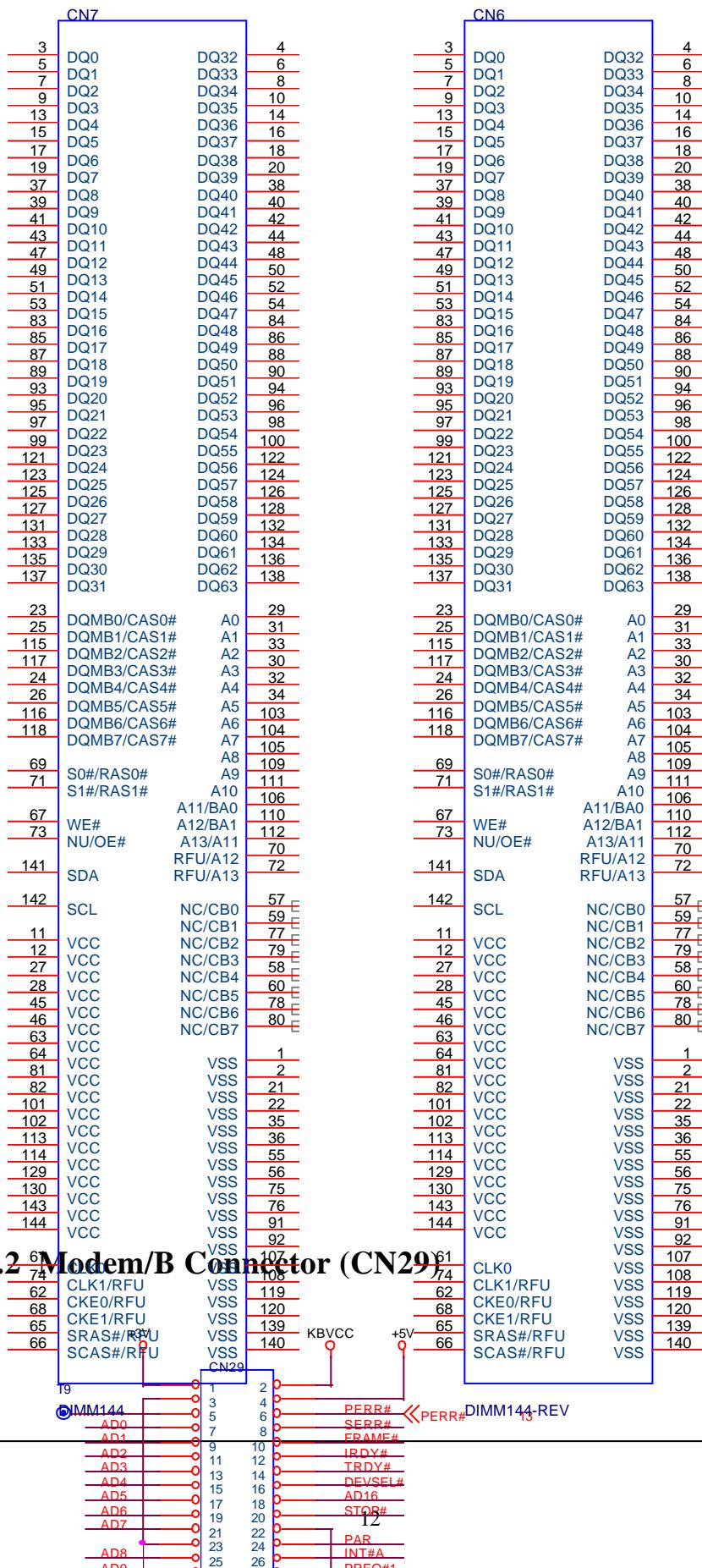
Connectors and Switches

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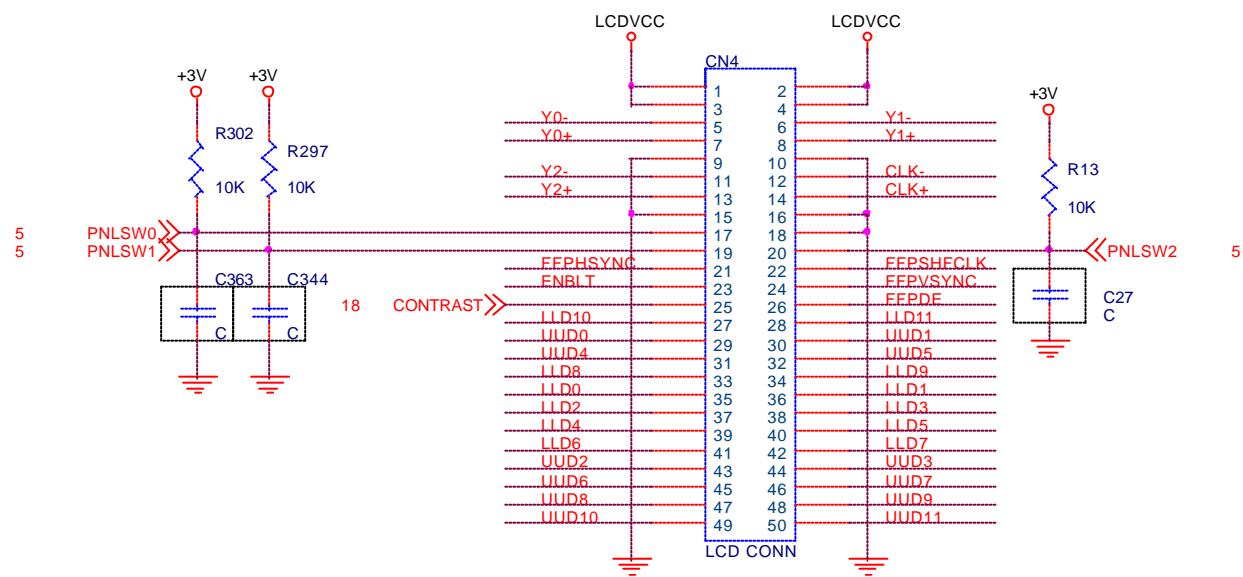
2.1 Connector Definitions

2.1.1 Memory DIMM144 Connector (CN7 and CN6)

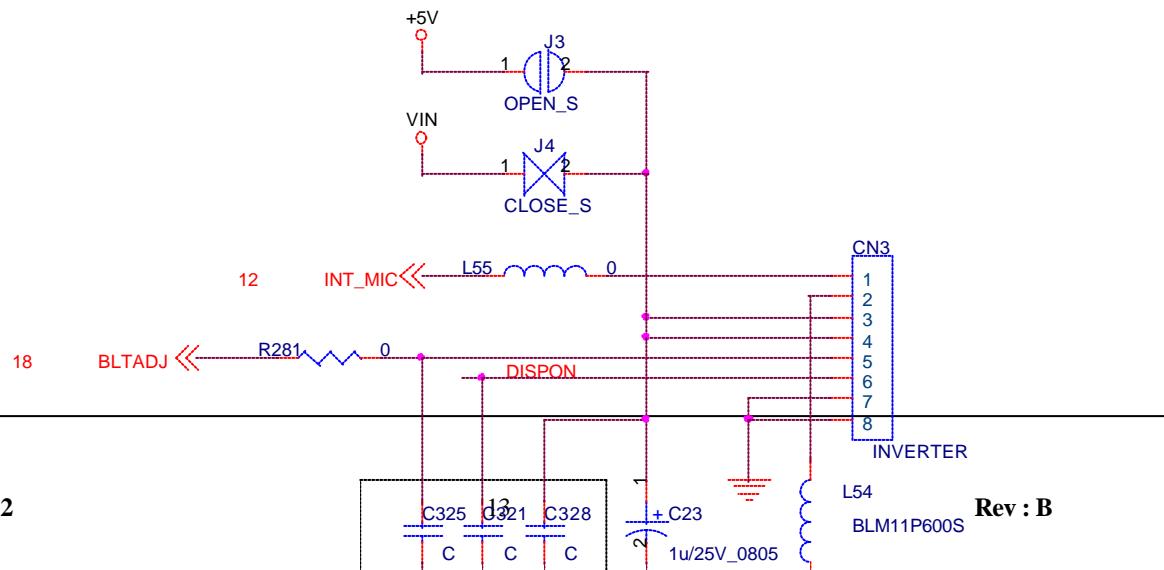


2.1.2 Modem/B Connector (CN29)

2.1.3 LCD Connector (CN4)



2.1.4 Inverter Connector (CN3)



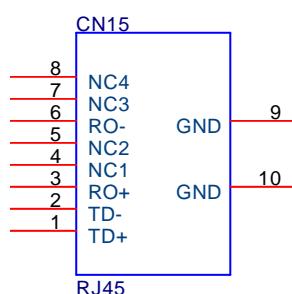
2.1.5 CRT Connector (CN20)

Pin	Description	Pin	Description
1	RED	9	+5V
2	GREEN	10	GND
3	BLUE	11	NC-
4	NC	12	DDCCLK
5	GND	13	H SYNC
6	DACGND	14	V SYNC
7	DACGND	15	DDCDATA
8	DACGND		

2.1.6 USB Connector (CN21)

Pin	Description
1	+5V
2	USBP0-
3	USBP0+
4	GND

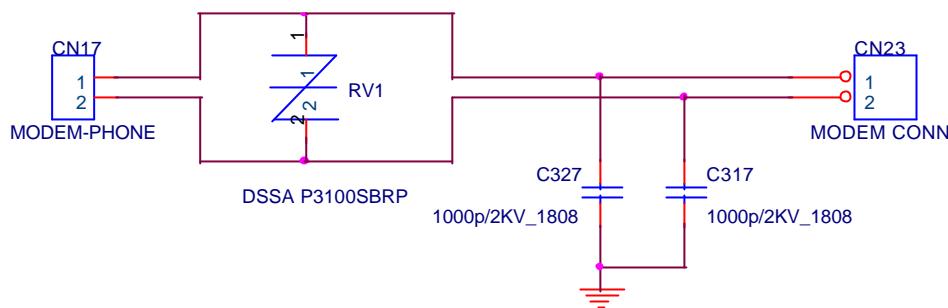
2.1.7 RJ45 (CN15)



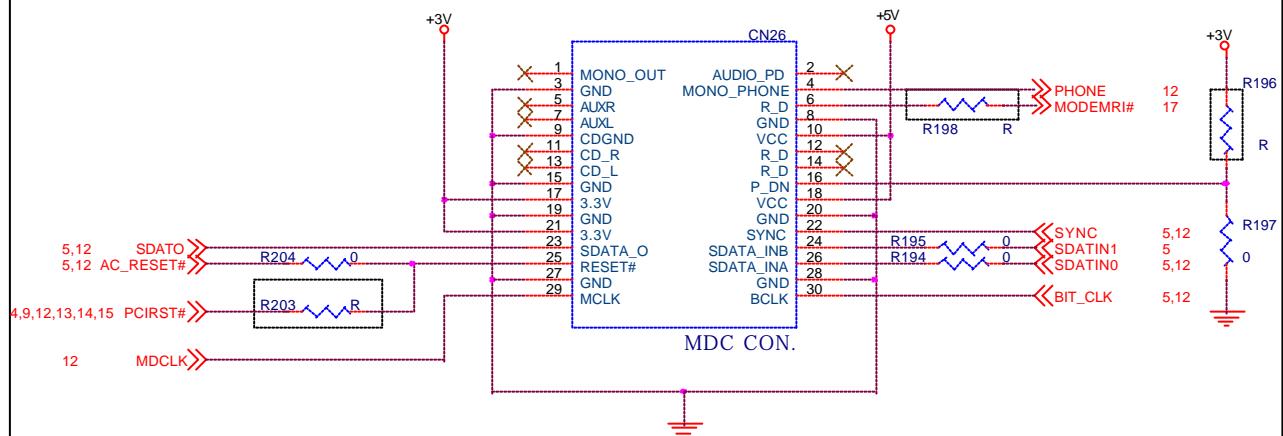
2.1.8 RJ11 (CN16)

Pin	Description
1	HRTXRXN
2	HRTXRXP

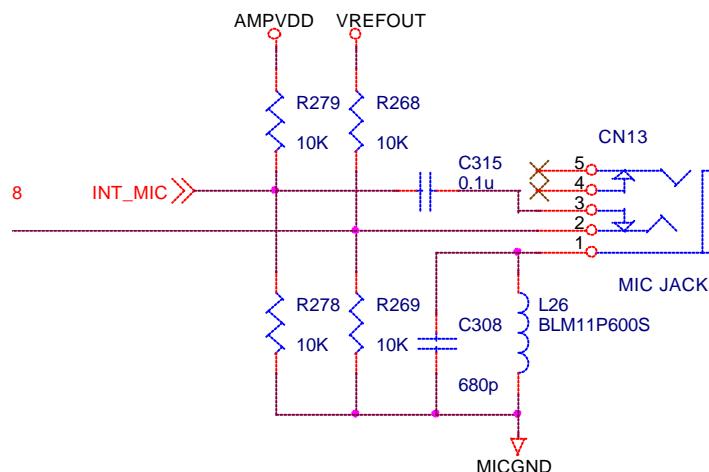
2.1.9 Modem Phone (CN17) and Modem Connector (CN23)



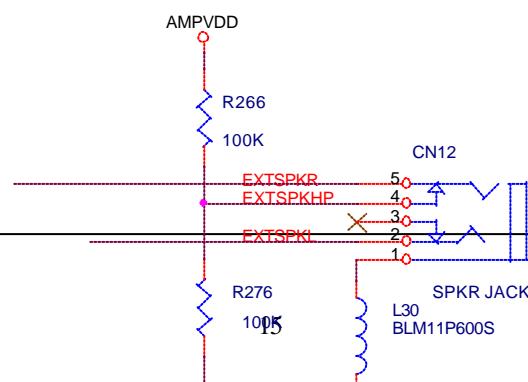
2.1.10 MDC Connector (CN26)



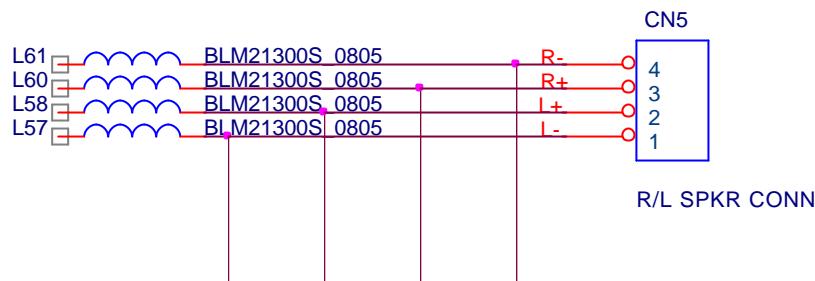
2.1.11 MIC Jack (CN13)



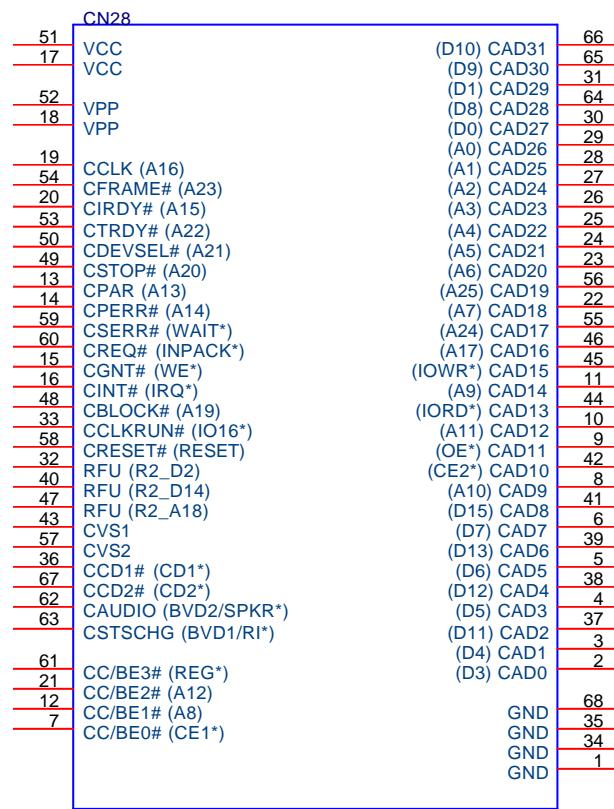
2.1.12 Speaker Jack (CN12)



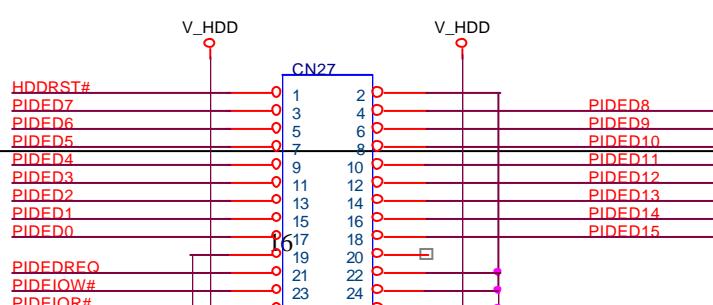
2.1.13 R/L Speaker Connector (CN5)



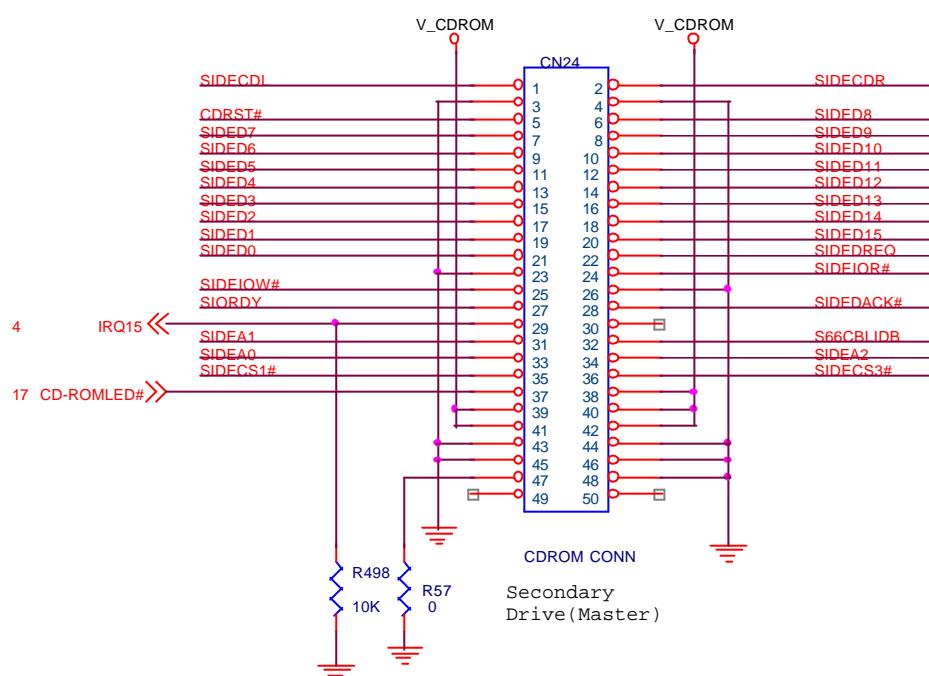
2.1.14 PCMCIA Connector (CN28)



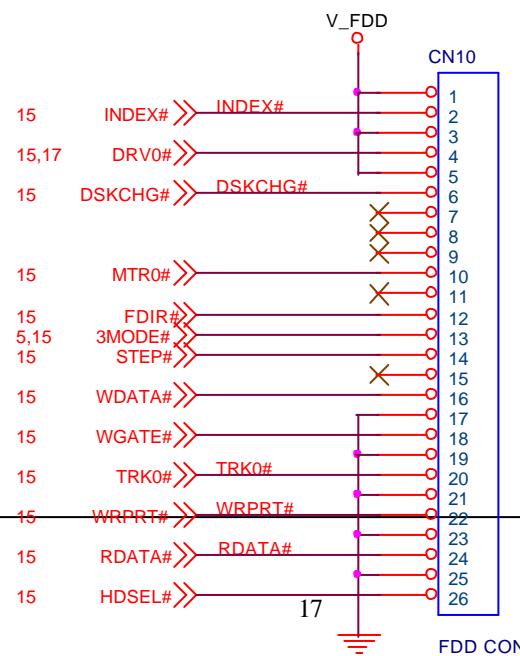
2.1.15 HDD Connector (CN27)



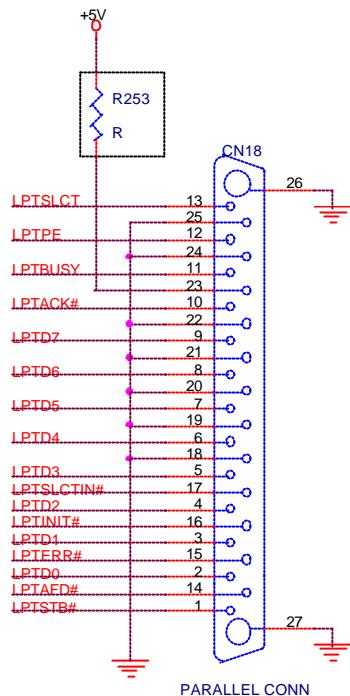
2.1.16 CDROM Connector



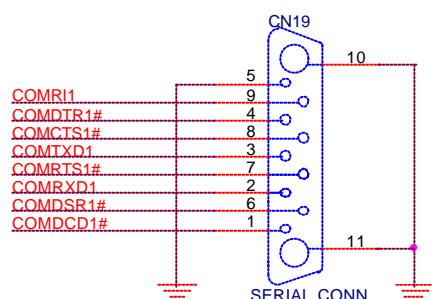
2.1.17 FDD Connector (CN10)



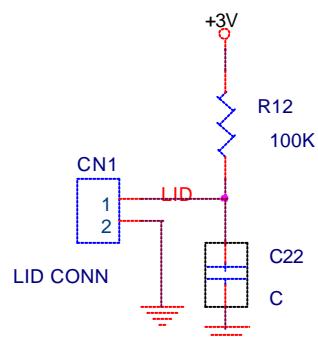
2.1.18 Parallel Connector (CN18)



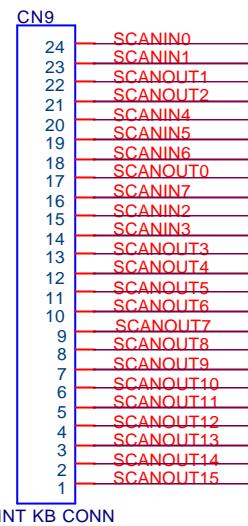
2.1.19 Serial Connector (CN19)



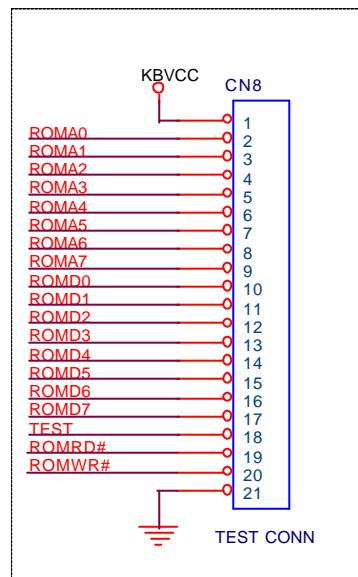
2.1.20 LID Connector (CN1)



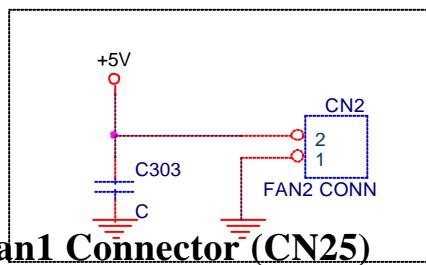
2.1.21 Internal KB Connector (CN9)



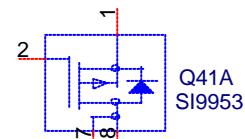
2.1.22 Test Connector (CN8)



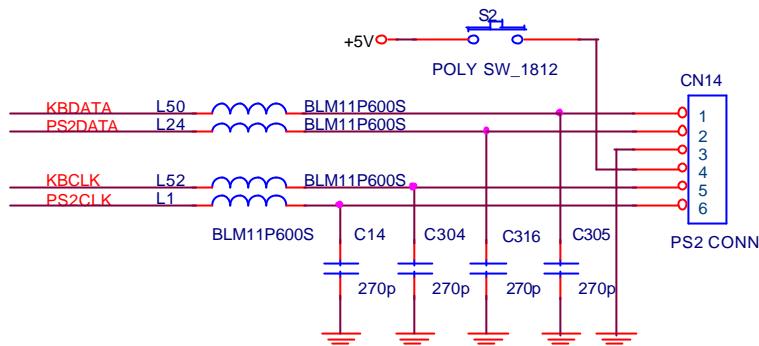
2.1.23 Fan2 Connector (CN2)



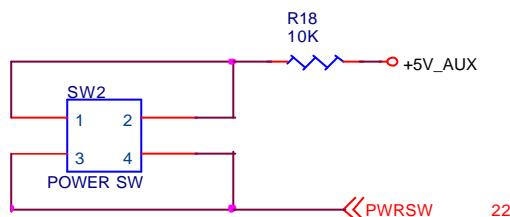
2.1.24 Fan1 Connector (CN25)



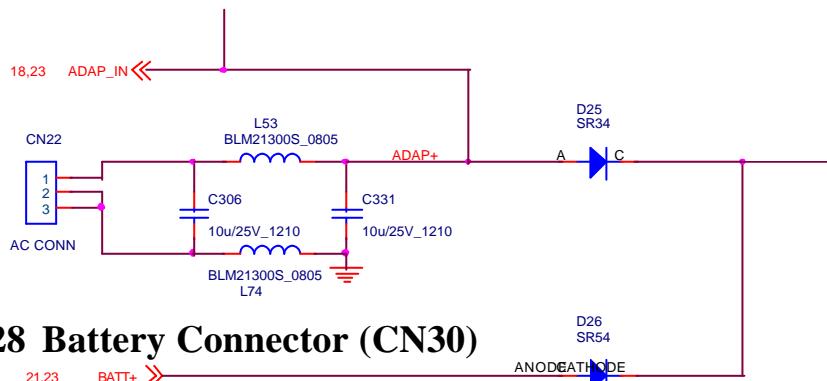
2.1.25 PS2 Connector (CN14)



2.1.26 Power Switch (SW2)



2.1.27 AC Connector (CN22)



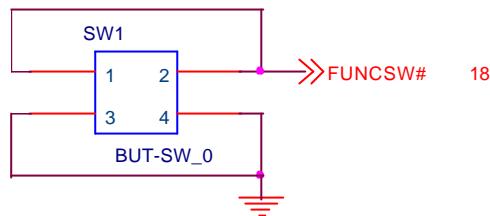
2.1.28 Battery Connector (CN30)

Pin No.	Pin Name
1	BATT+
2	SMBCLK
3	SMBDATA
4	TEMP
5	+5V_AUX
6	GND
7	NC
8	NC

2.1.29 Touch Pad Connector (CN11)

Pin No.	Pin Name
1	PSCLK3
2	PSDAT3
3	GND
4	NC
5	+5V
6	NC

2.1.30 But_SW_0 (SW1)



2.2 Mechanical Buttons and Switch Definition

2.2.1 Power on/off button

1. If the system is in S0, S1 or S2 state, pressing the power button will transit the system to S4 (Suspend to Disk), S5 (Soft-off) state depending on the “Power button function” setting in the BIOS Setup menu.
2. If the system is in S4 or S5 state, pressing the power button will awaken the system into S0 state.
3. If the power button is pressed for more than four seconds, a power button over-ride event is generated and the system will be put into S5 (Soft-off) state.

2.2.2 Cover (Lid) Switch

When LCD cover is closed, this Lid switch is triggered and an SMI/SCI is generated to put the system into ‘Suspend to RAM’ or ‘Suspend to Disk’ mode depending on the “Cover Switch” setting in the BIOS Setup menu.

2.2.3 WWW function button

When this button is pressed, the system will launch Microsoft Internet Explorer and connect to default setting of Internet Explorer.

2.2.4 CPU DIP Switch Settings (SW7 – near CPU socket)

SW7 (For Celeron and Pentium III)					
1	2	3	4	CPU	SDRAM
ON	OFF	OFF	OFF	66M	66M
OFF	OFF	OFF	OFF	66M	100M
OFF	OFF	OFF	ON	100M	100M

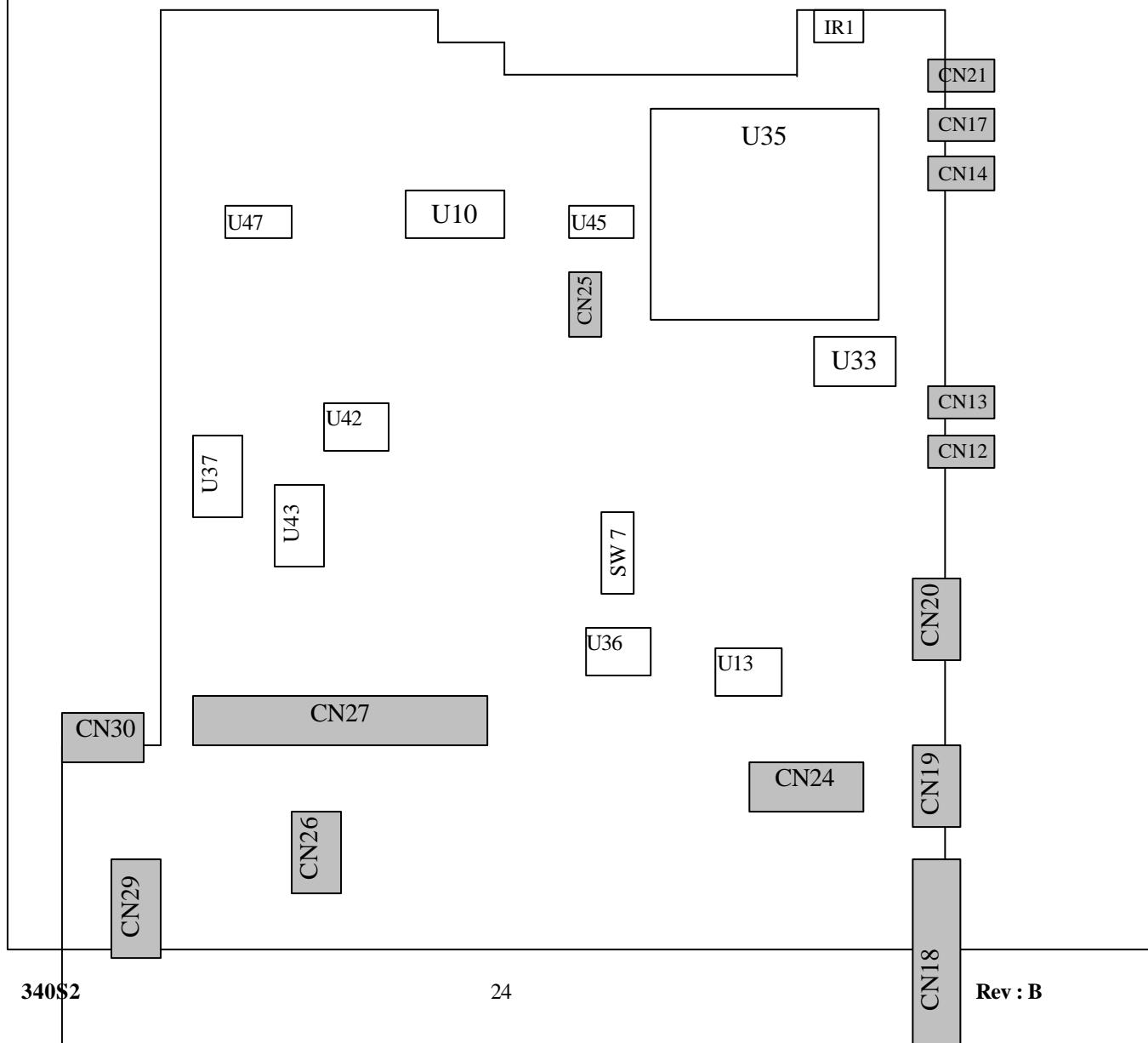
Note: SW7-5, 6, 7, 8: Always OFF

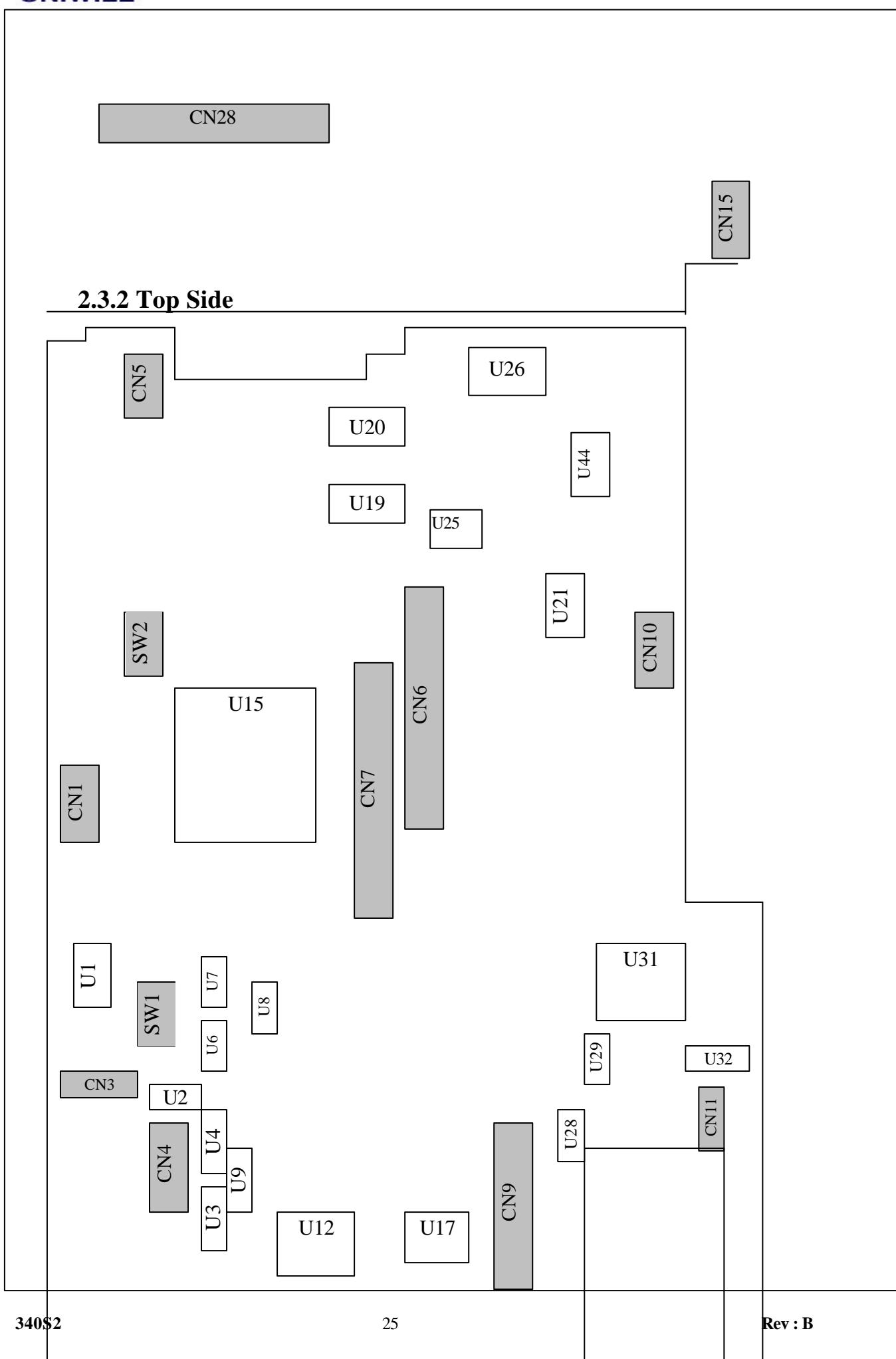
Celeron		
Processor	System Bus Frequency(MHz)	L2 Cache Size(Kbytes)
500	66	128
533	66	128
566	66	128
600	66	128

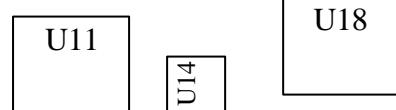
Pentium III		
Processor	System Bus Frequency(MHz)	L2 Cache Size(Kbytes)
500	100	256
550E	100	256
600E	100	256
650	100	256
700	100	256
750	100	256
800	100	256
850	100	256

2.3. Major Components and Connectors Location

2.3.1 Bottom Side







Notebook PC Service Manual

Model : 340S2

Chapter 3 ***Major Components***

UNIWILL COMPUTER CORP.

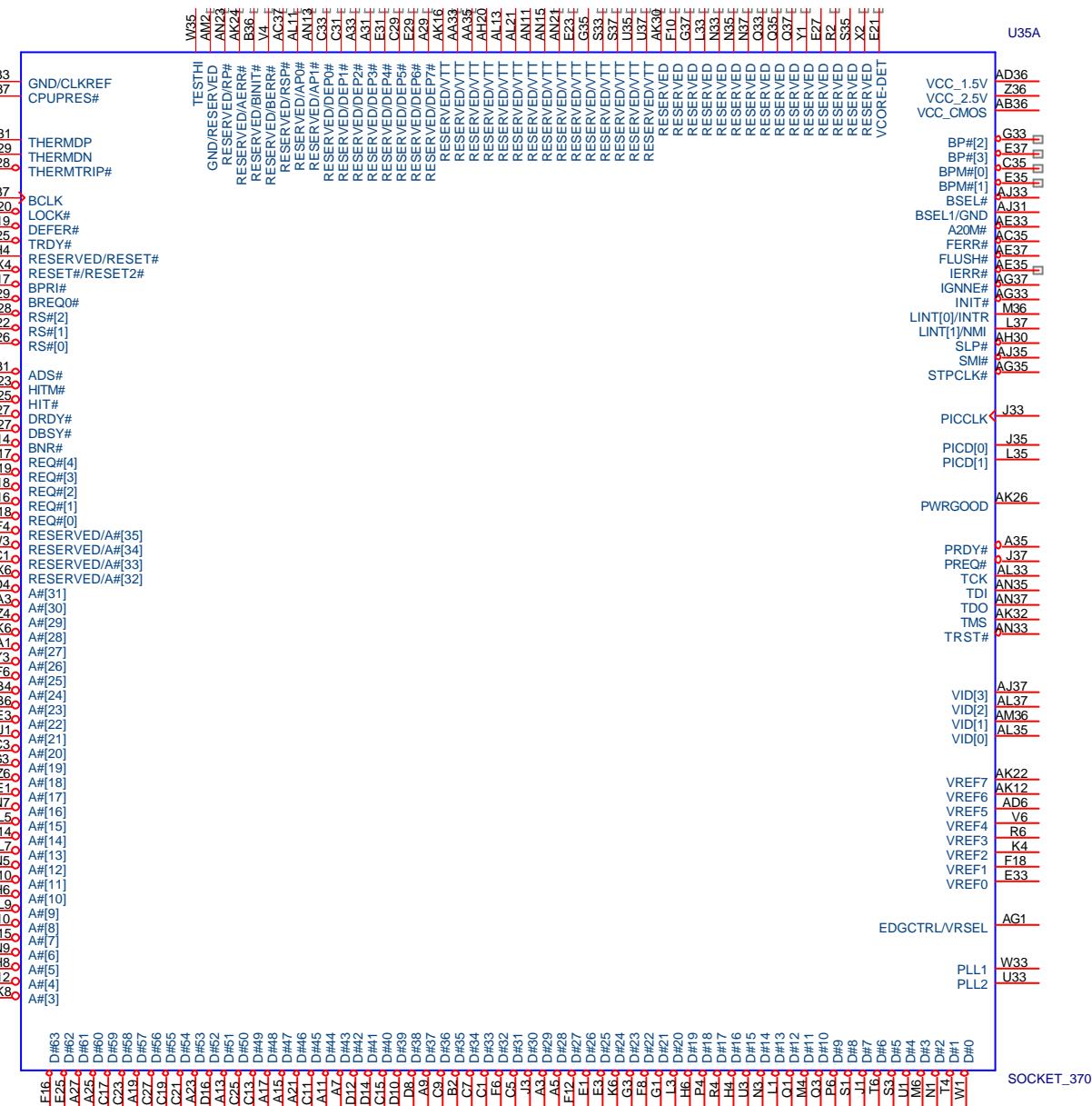
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FAX: 886-3-461-6317
URL: [http:// www.uniwill.com.tw/](http://www.uniwill.com.tw/)

3.1 Major Component List

Reference	Description	Vendor	Component Name
U1	RS-232 TRANSCEIVER	ANALOG	ADM213
U2	P-MOSFET FOR LCD VCC	CET	9424 SO-8
U3	1MX16 VRAM	-	NT56V1616A0T
U4	LVDS PANEL TRANSMITTER	TI	SN75LVDS84
U6	NOT GATE	TI	74LVC14
U7	AND GATE	PHILIPS	74LVC08
U8	OR GATE	-	74LVC32
U9	4MX16 VRAM	HYUNDAI	M12L1616A_7T
U10	CLOCK GENERATOR	WINBOND	ICS9248-126
U11	SUPER I/O CONTROLLER	NS	PC87393
U12	DSTM CONTROLLER	NS	CS9211
U13	SERIAL ROM FOR LAN	ATMEL	93C46
U14	SWITCH	TI	74LVC373
U15	CORE LOGIC	SIS	SIS630
U17	BIOS EEPROM SOCKET	UNICORN	29LV020(PLCC-32)
U18	KB CONTROLLER	NS	PC87570
U19	PWM CONTROL	TI	TL594-SOP16
U20	STEP DOWN DC-DC CONVERTER	TOYOTA	SB3060P-SSOP24
U21	LOW DROPOUT REGULATOR	ALPHA	AS2951
U24	ZENER SHUNT REGULATOR	ZETEX	ZR431
U25	AC'97 AUDIO CODEC	AVANCE	AVANCE_ALC100
U26	AUDIO AMPLIFIER	NS	LM4835
U28	RAM SWITCH	PHILIPS	74HCT4066
U29	PCMCIA POWER CONTROLLER	MICREL	MIC2562A
U31	PCMCIA CONTROLLER	O2Micro	OZ6812
U32	OP AMP.	NS	LM358
U33	TEMPERATURE SENSOR	AD	ADM1021
U35	PPGA CPU SOCKET	SKT	SOCKET 370
U36	OCTAL BUFFER	PHILIPS	74VLC244
U37	PWM CONTROL	TI	TL594
U42	LINEAR REGULATOR	NS	78L12
U43	STEP DOWN DC-DC CONVERTER	SMD	SB3052P
U44	PWM CONTROL	TI	TL594
U45	LOW DROPOUT REGULATOR	OMA	AME8800DEFT
U47	LOW DROPOUT REGULATOR	OMA	AME8800AEFT
IR1	IR TRANSCEIVER MODULE	STANLEY	HRM230S

3.2 Major Components Pin Assignment

1.1.1.1 SOCKET 370_A

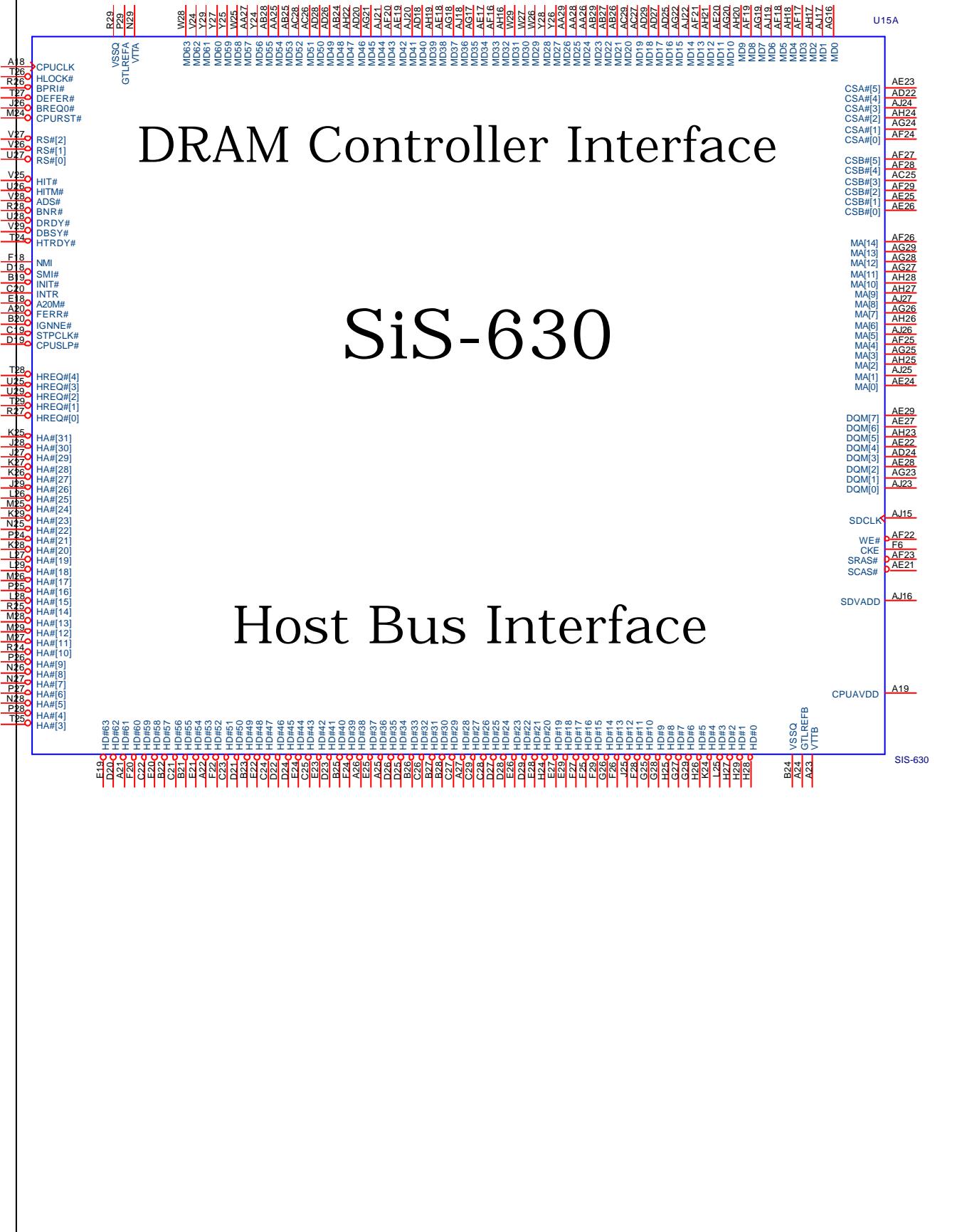


1.1.1.2. SOCKET 370 B

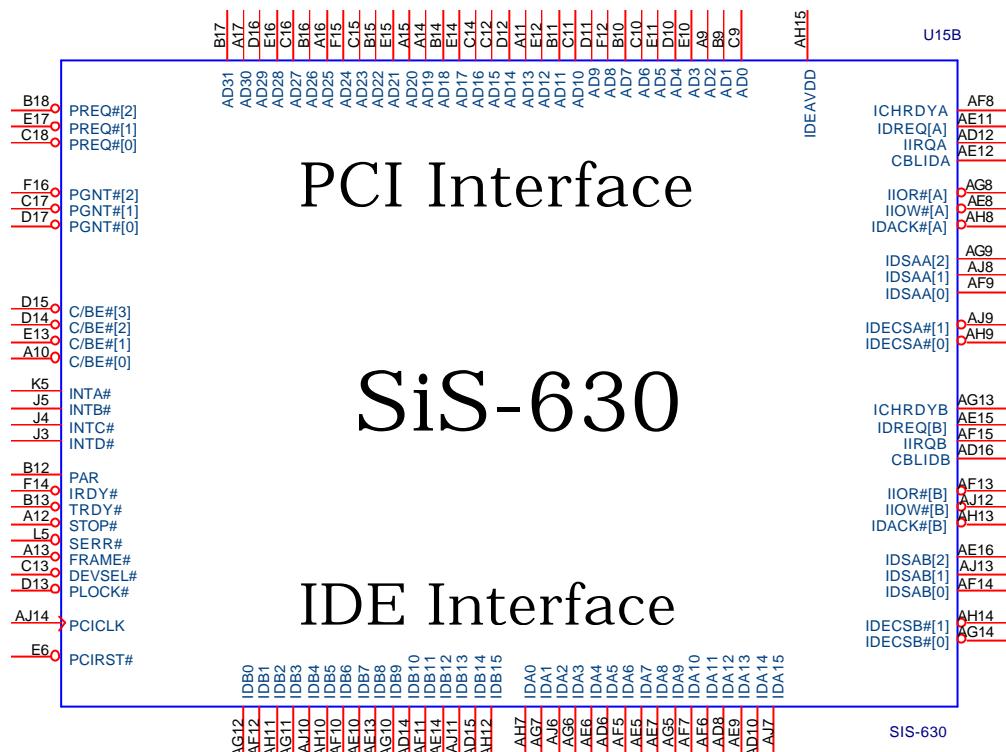
		U35B
AA37	VCC_CORE	GND A37
AA5	VCC_CORE	GND AB32
AB2	VCC_CORE	GND AC33
AB34	VCC_CORE	GND AC5
AD32	VCC_CORE	GND AD2
AE5	VCC_CORE	GND AD34
AF2	VCC_CORE	GND AF32
AF34	VCC_CORE	GND AF36
AH24	VCC_CORE	GND AG5
AH32	VCC_CORE	GND AH2
AH36	VCC_CORE	GND AH34
AJ12	VCC_CORE	GND AJ11
AJ13	VCC_CORE	GND AJ15
AJ17	VCC_CORE	GND AJ19
AJ21	VCC_CORE	GND AJ23
AJ25	VCC_CORE	GND AJ27
AJ29	VCC_CORE	GND AJ3
AJ5	VCC_CORE	GND AJ9
AJ9	VCC_CORE	GND AK2
AK2	VCC_CORE	GND AK36
AK34	VCC_CORE	GND AK4
AM12	VCC_CORE	GND AL1
AM16	VCC_CORE	GND AL3
AM20	VCC_CORE	GND AM10
AM24	VCC_CORE	GND AM14
AM28	VCC_CORE	GND AM18
AM32	VCC_CORE	GND
AM4	VCC_CORE	GND AM22
AM8	VCC_CORE	GND AM26
B10	VCC_CORE	GND AM30
B14	VCC_CORE	GND AM34
B18	VCC_CORE	GND AM6
B22	VCC_CORE	GND AN3
B26	VCC_CORE	GND B12
B30	VCC_CORE	GND B16
B34	VCC_CORE	GND B20
B6	VCC_CORE	GND B24
C3	VCC_CORE	GND B28
D20	VCC_CORE	GND B32
D24	VCC_CORE	GND B4
D28	VCC_CORE	GND B8
D32	VCC_CORE	GND D18
D36	VCC_CORE	GND D2
D6	VCC_CORE	GND D22
E13	VCC_CORE	GND D26
E17	VCC_CORE	GND D30
E5	VCC_CORE	GND D34
E9	VCC_CORE	GND D4
F14	VCC_CORE	GND E11
F2	VCC_CORE	GND E15
F22	VCC_CORE	GND E19
F26	VCC_CORE	GND E7
F30	VCC_CORE	GND F20
F34	VCC_CORE	GND F24
F4	VCC_CORE	GND F28
H32	VCC_CORE	GND F32
H36	VCC_CORE	GND F36
J5	VCC_CORE	GND G5
K2	VCC_CORE	GND H2
K32	VCC_CORE	GND H34
K34	VCC_CORE	GND K36
M32	VCC_CORE	GND L5
N5	VCC_CORE	GND M2
P2	VCC_CORE	GND M34
P34	VCC_CORE	GND P32
R32	VCC_CORE	GND P36
R36	VCC_CORE	GND Q5
S5	VCC_CORE	GND R34
T2	VCC_CORE	GND T32
T34	VCC_CORE	GND T36
V32	VCC_CORE	GND U5
V36	VCC_CORE	GND V2
W5	VCC_CORE	GND V34
X34	VCC_CORE	GND X32
Y35	VCC_CORE	GND X36
Z32	VCC_CORE	GND Y37
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	VCC_CORE	GND Z34
	VCC_CORE	GND

SOCKET_370

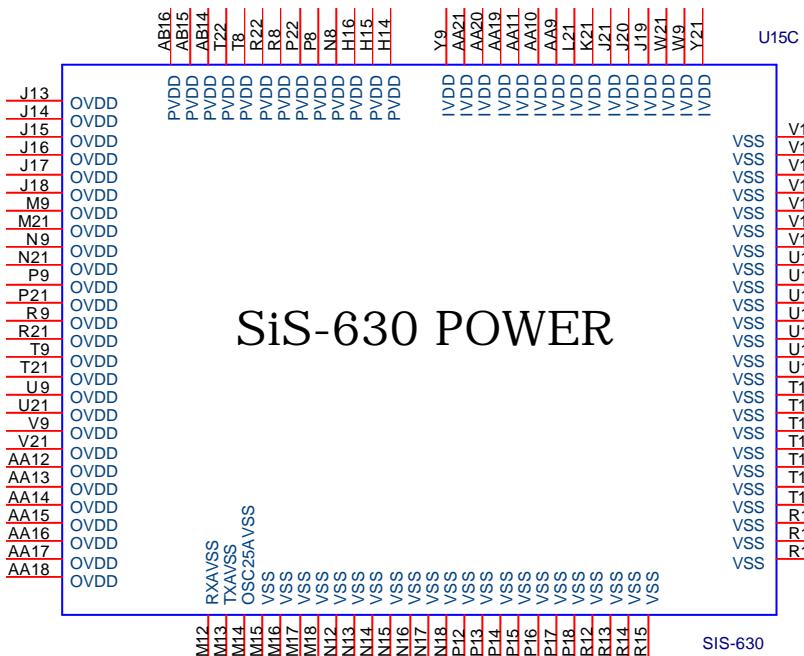
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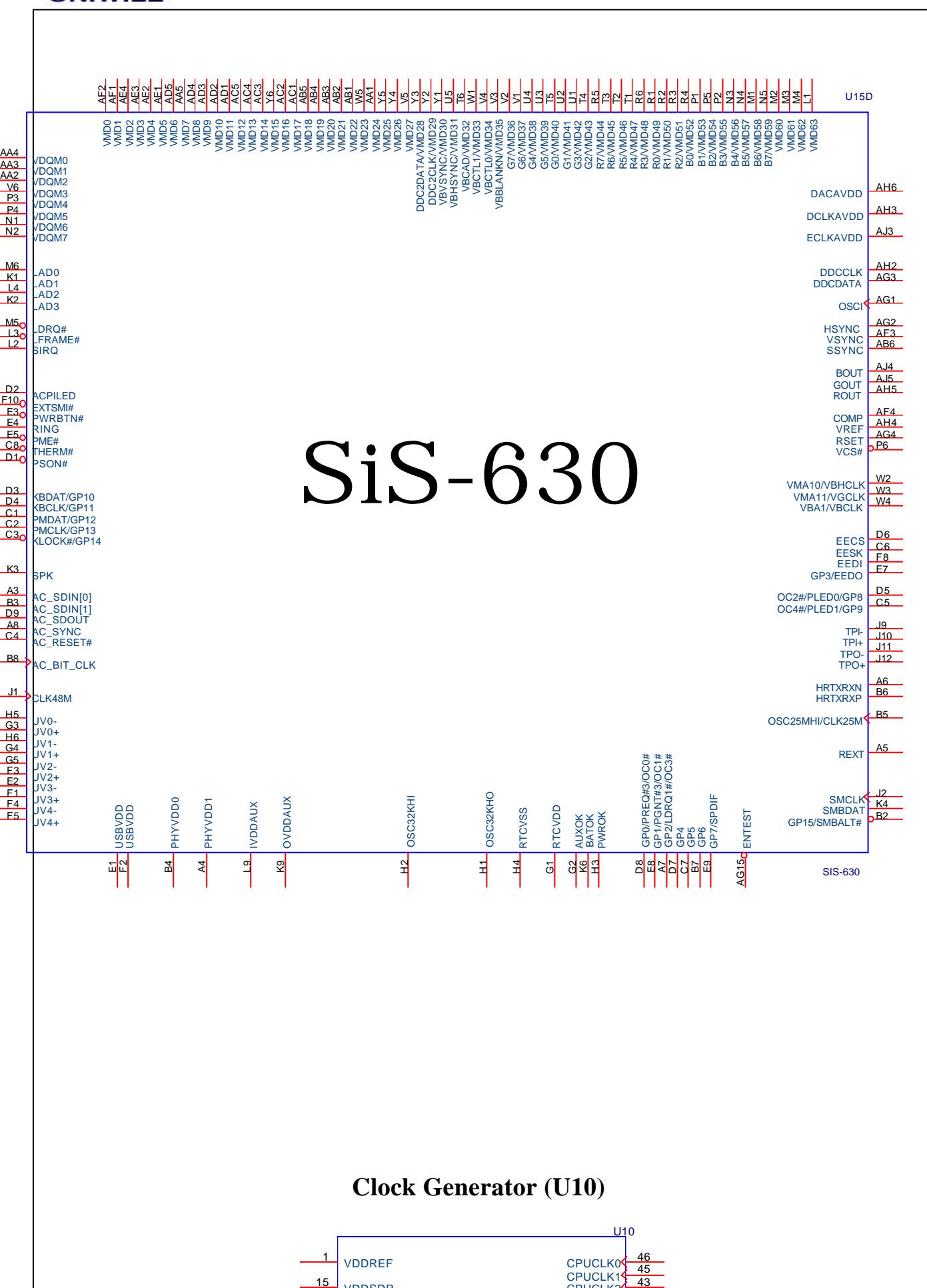
SIS 630 PCI and IDE



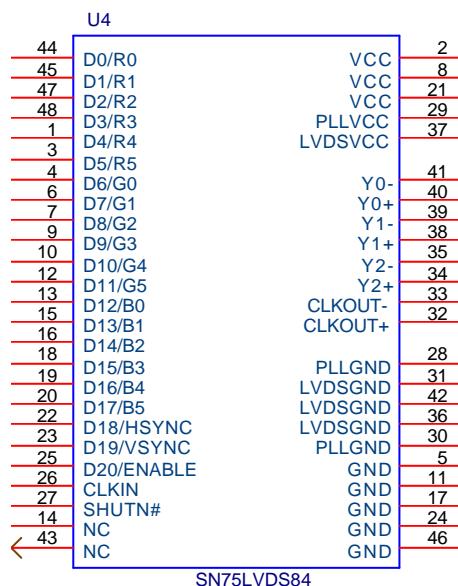
SIS 630 Power Interface



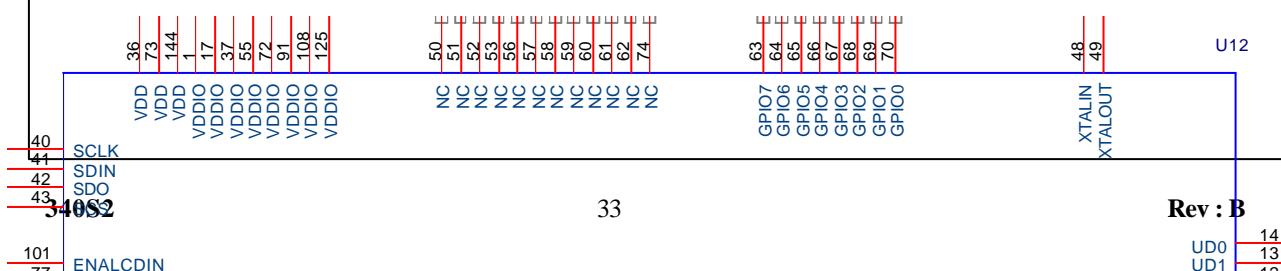
SIS 630 VGA/South Bridge



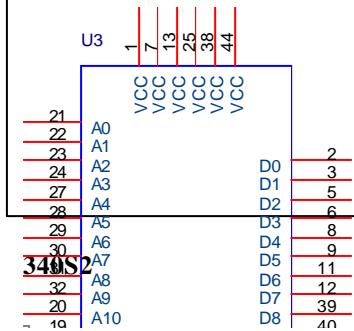
SN75LVDS84



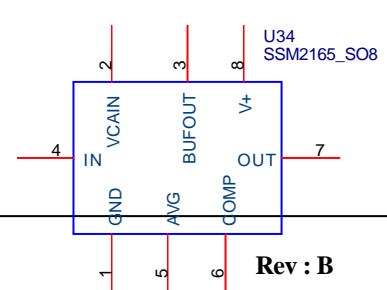
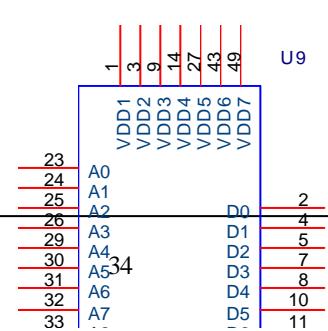
CS9211 (U12)



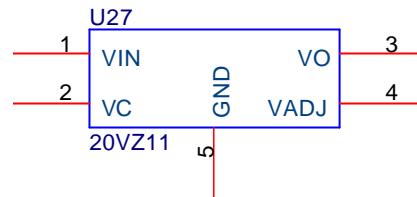
**NT56V1616A0T
SSM2165_SO8**



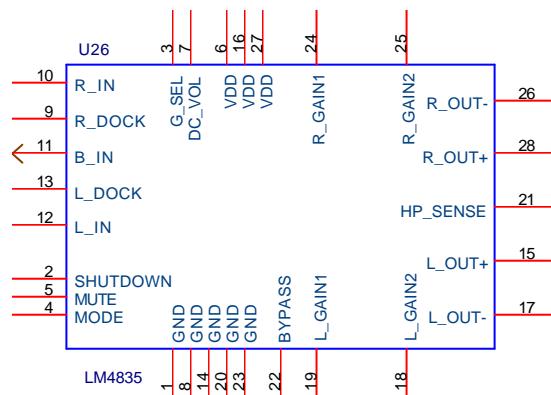
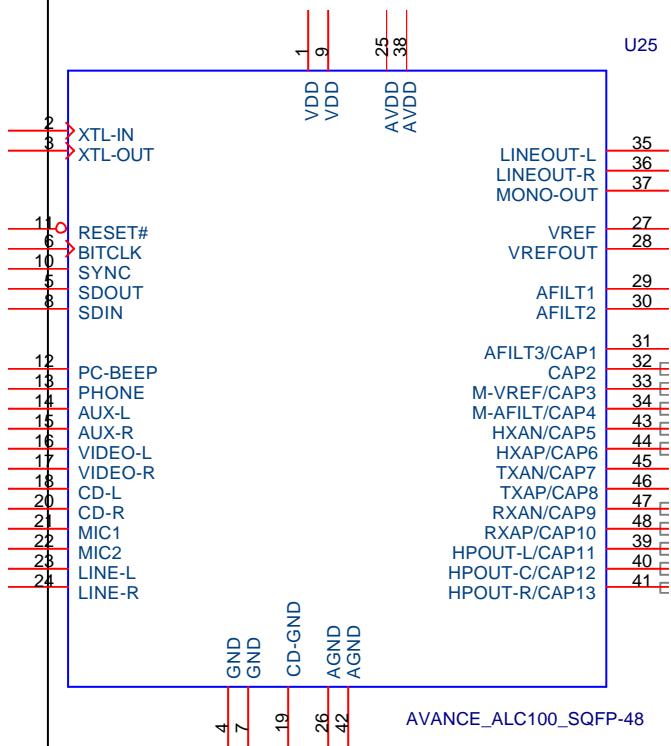
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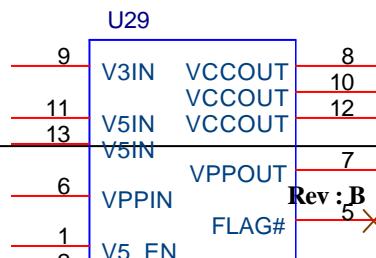
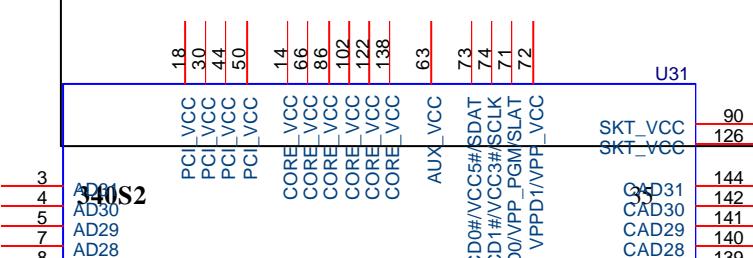
20VZ11 (U27)

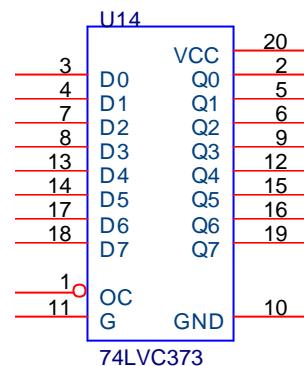


CODEC (U25) LM4835 (U26)

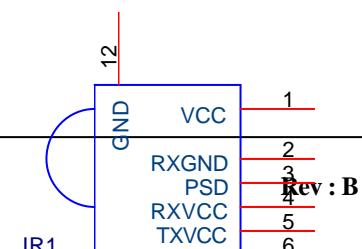
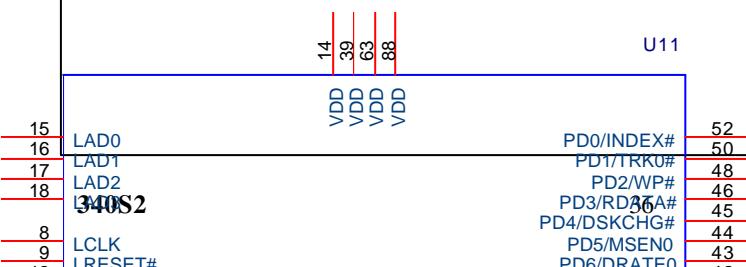


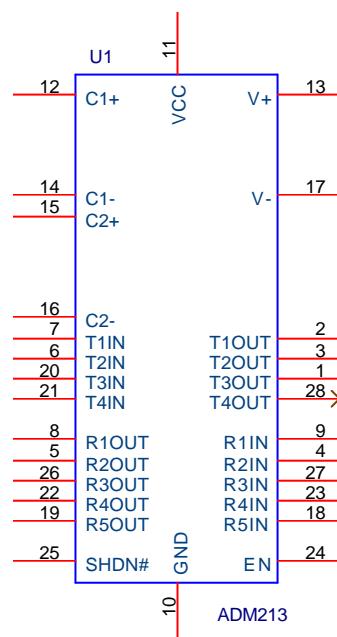
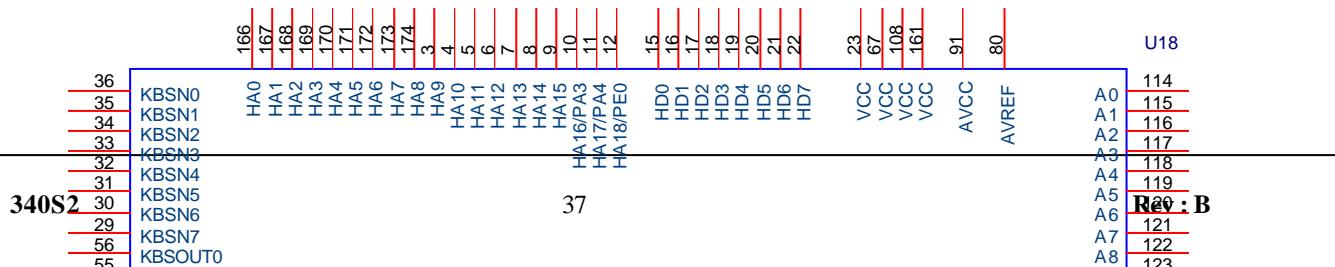
PCMCIA Controller O2Micro OZ6812 MIC2562A (U29)



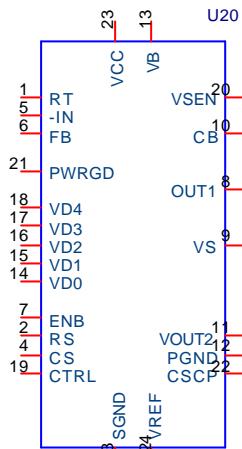
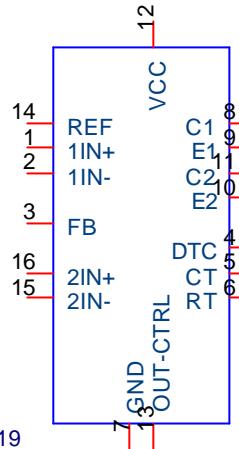
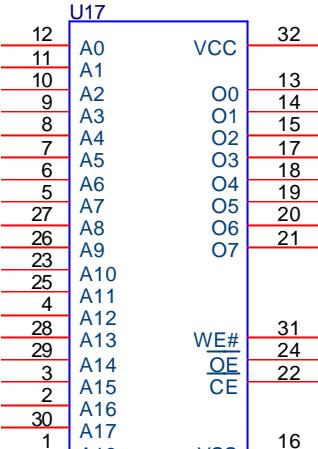
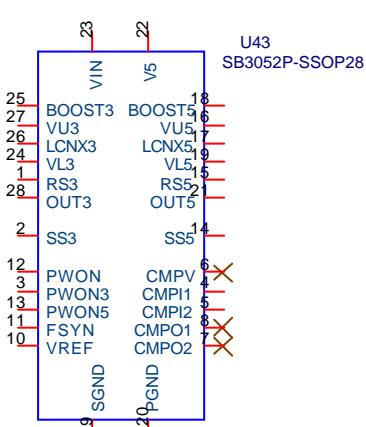
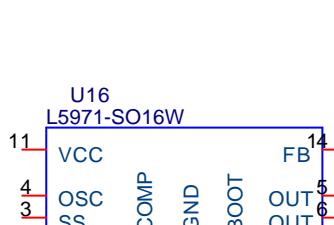
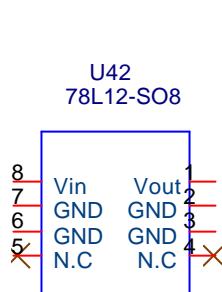
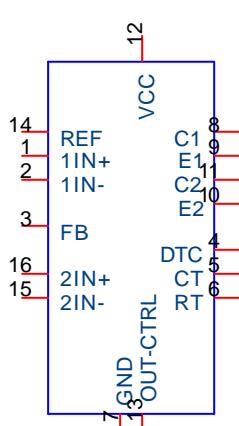
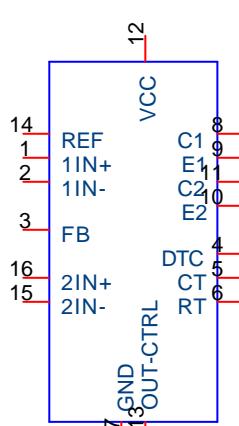
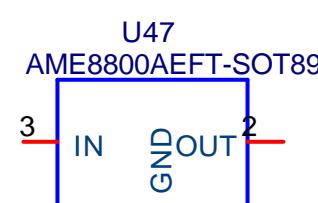
74LVC373 (U14)**Super I/O Controller (PC87393)
(HRM230S)**

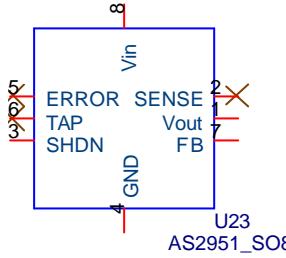
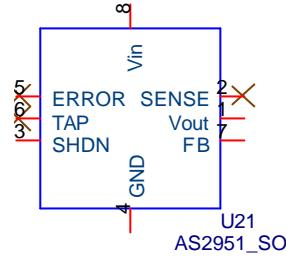
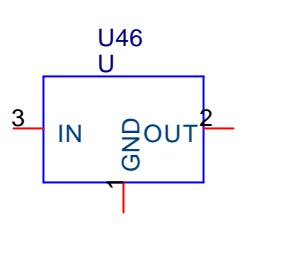
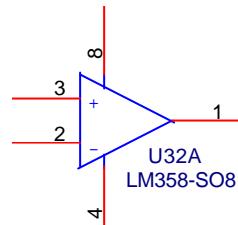
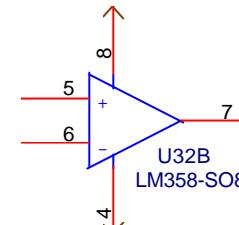
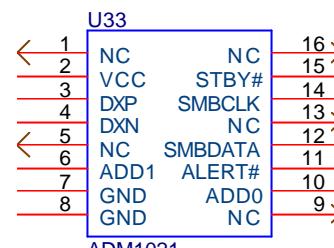
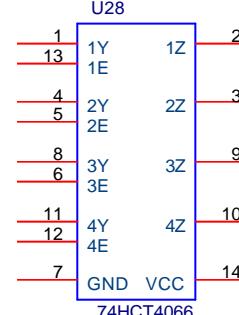
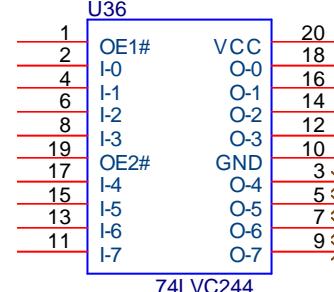
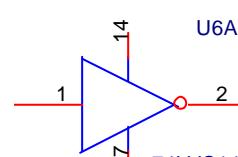
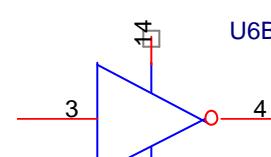
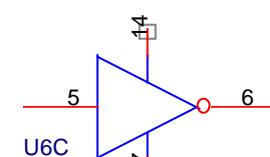
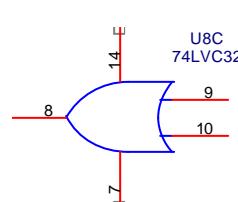
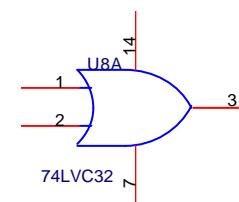
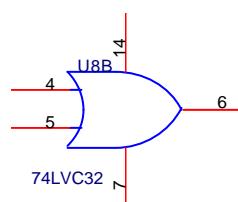
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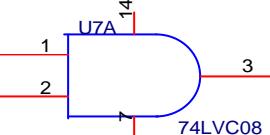
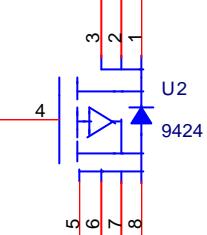
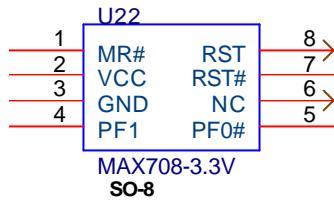
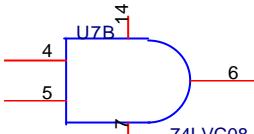
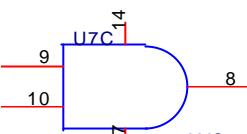
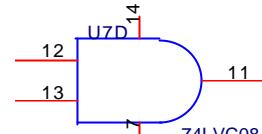
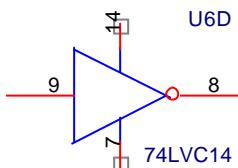
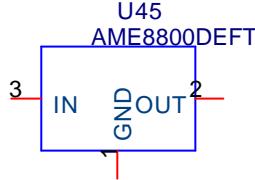


ADM213 (U1)**Keyboard Controller PC87570**

SB3052P	TL594	29LV020
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SB3052P	L5971	78L12
		
TL594 (U37)	TL594 (U44)	AME8800AEFT
		
AS2951 (U23)	AS2951 (U21)	U46

		
LM358	LM358	ADM1021
		
93C46	74HCT4066	74LVC244
		
74LVC14	74LVC14	74LVC14
		
74LVC32	74LVC32	74LVC32
		
74LVC08	9424	MAX708

		
74LVC08	74LVC08	74LVC08
		
74LVC14	AME8800DEFT	
		

Notebook PC Service Manual

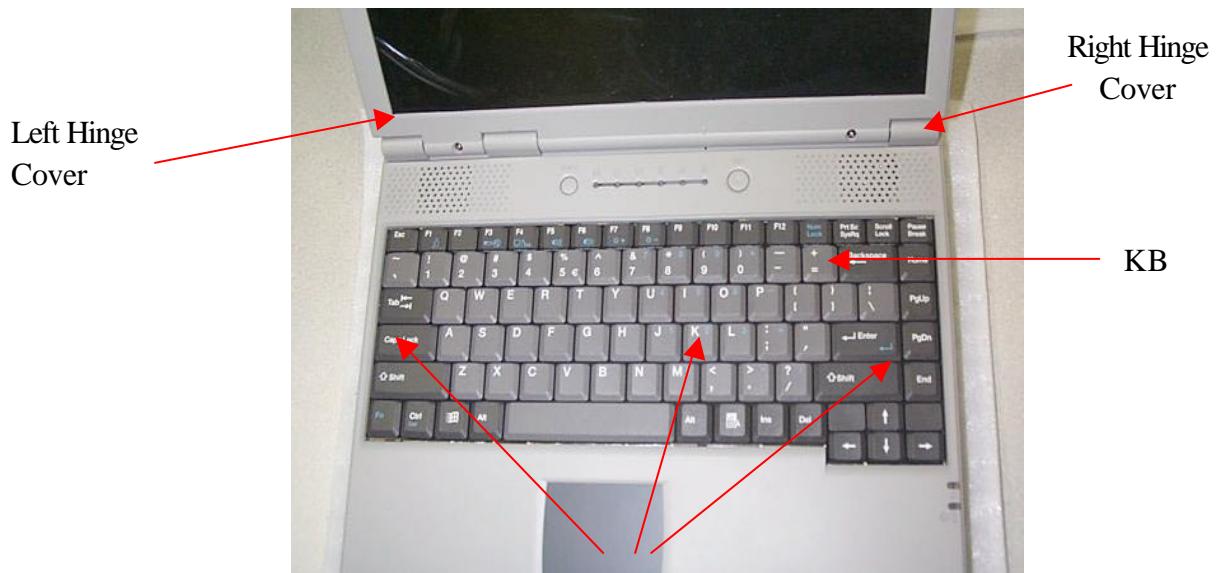
Model : 340S2

Chapter 4
System Disassembly

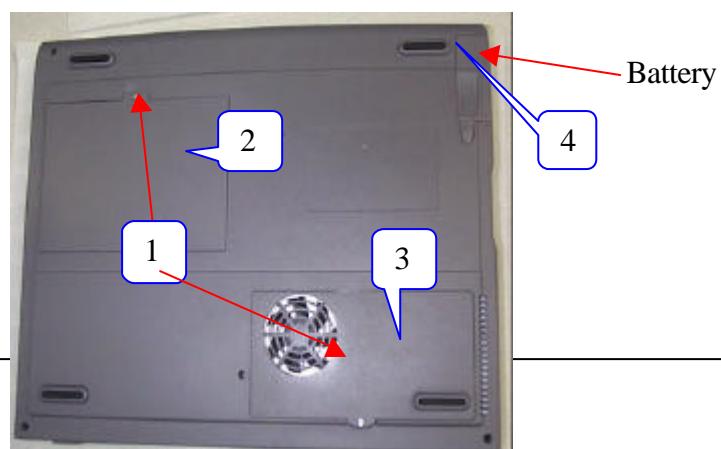
UNIWILL COMPUTER CORP.
No. 24., Pei Yuan Road,
Chung Li Industrial Park, Chung Li City
Taiwan, R.O.C.
TEL: 886-3-461-6000
FAX: 886-3-461-8000
URL: <http://uniwill.com.tw/>

System Disassembly

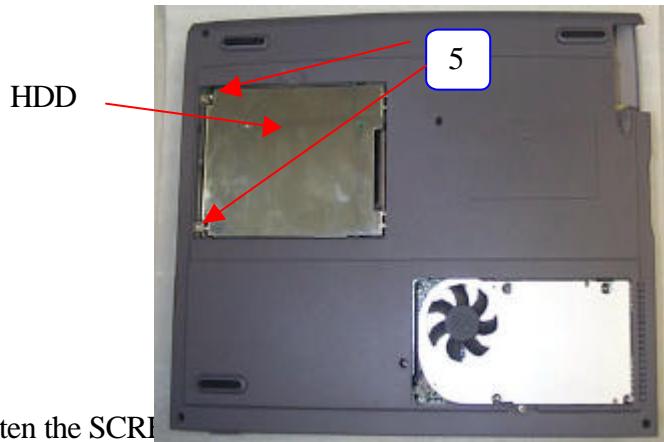
1. Remove LEFT HINGE and RIGHT HINGE COVERS.
2. To remove K/B, unlock the latches of the K/B.



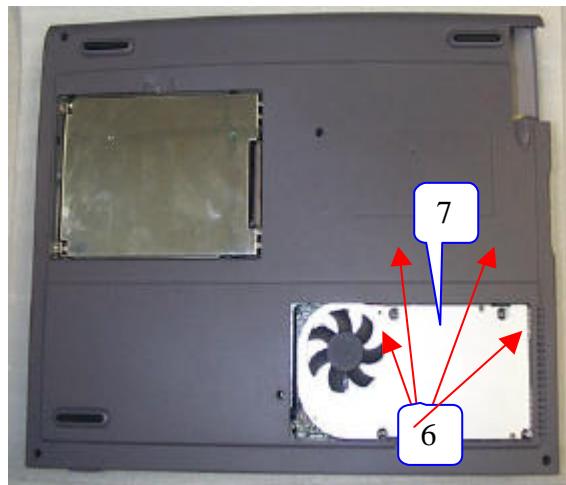
3. Remove SCREW (#1) of HDD COVER (#2) and CPU DOOR (#3).
4. Disassemble BATTERY by unlocking the BATTERY KNOB (#4)



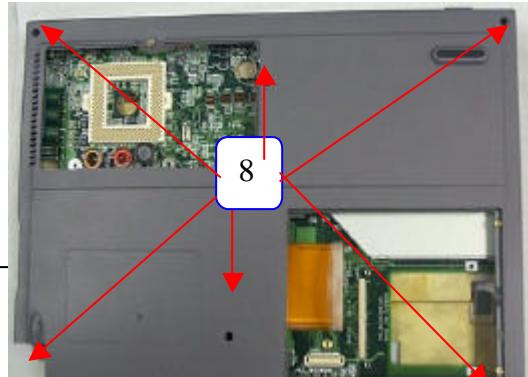
5. Unfasten SCREWS (#5) of HDD and remove HDD.



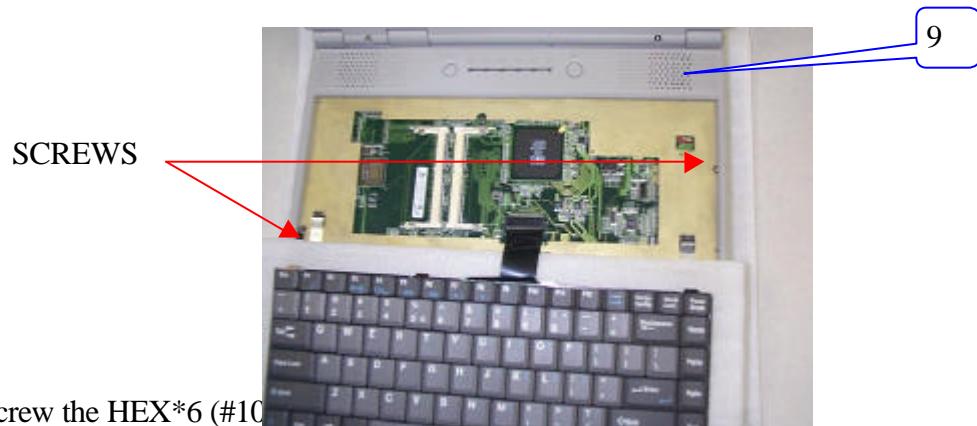
6. Unfasten the SCREWS (#6) of FAN MODULE (#7)



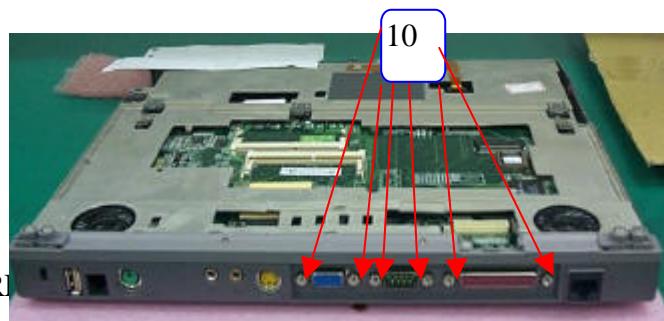
7. Unscrew the SCREWS *5 (#8) of the bottom cabinet.



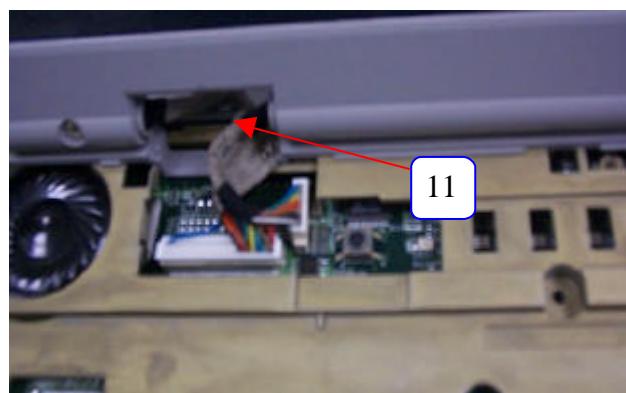
8. Remove SCREWS and disassemble TOP Cabinet Assembly (#9).



9. Unscrew the HEX*6 (#10)

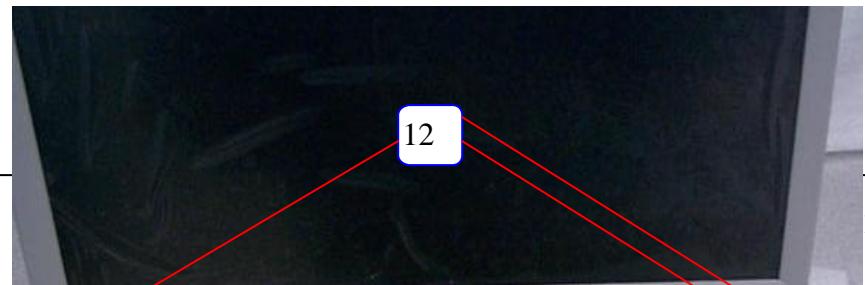


10. Unscrew SCREWS (#11)



11. Disconnect LCD CABLE and INVERTER CABLE.

12. Unfasten SCREWS*4 (#12) of the HINGES and disassemble LCD MODULE.

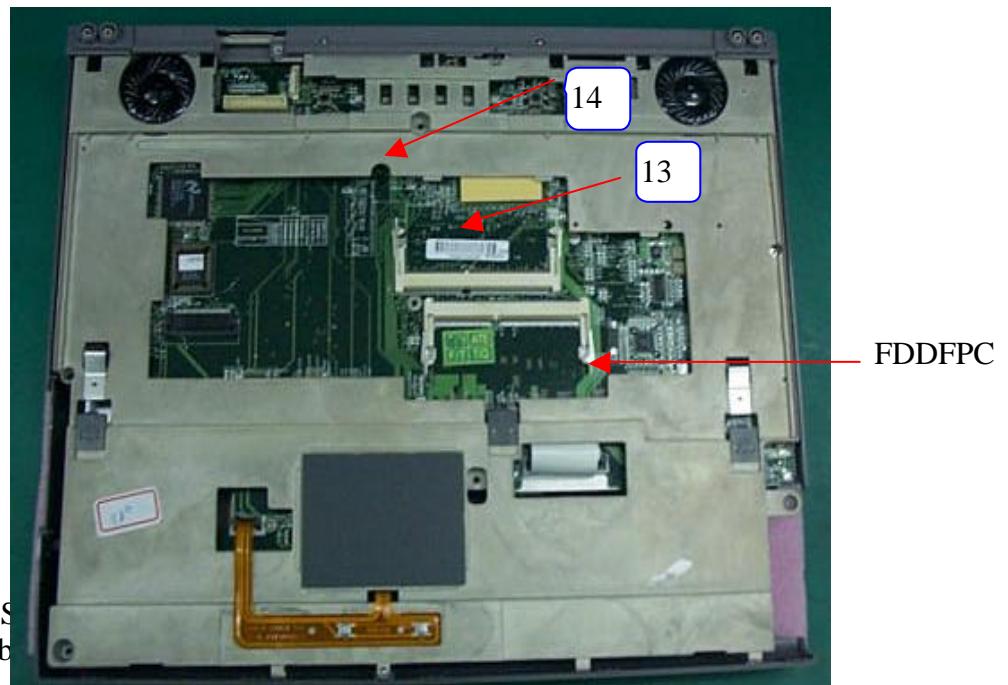


LCD Cable
Inverter Cable

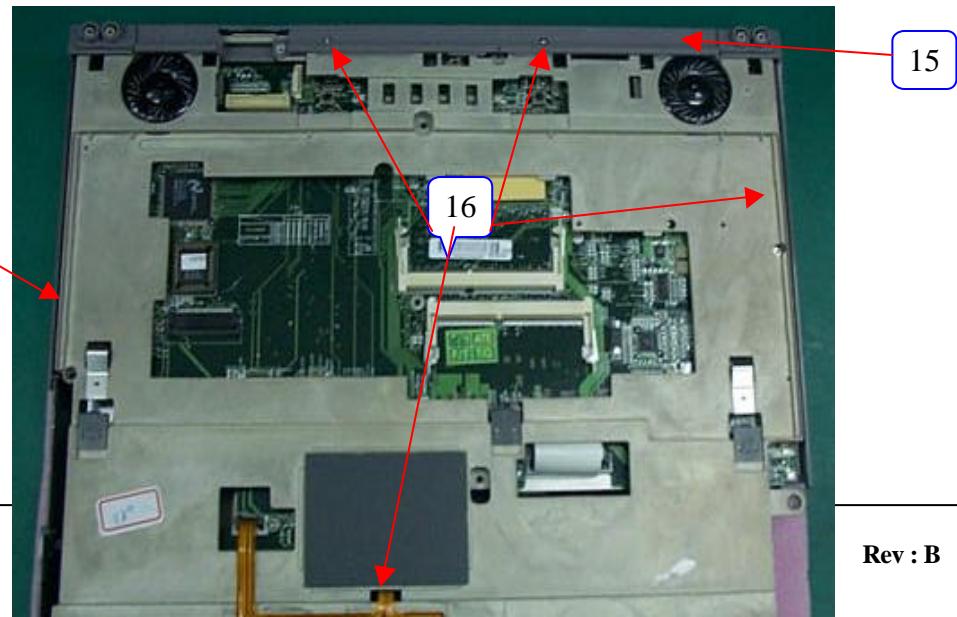
13. Disassemble the RAM Module from the RAM socket (#13)

14. Disconnect the FDD FPC from the M/B.

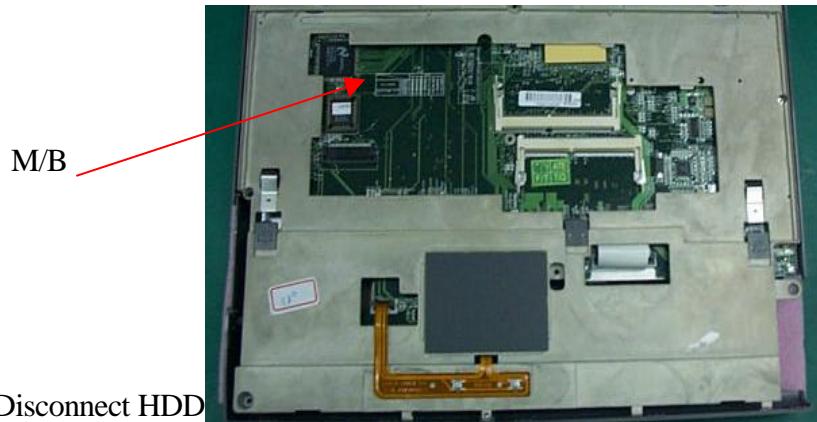
15. Disassemble the CDROM after removing the SCREW (#14)



16. Unscrew S
17. Disassemb

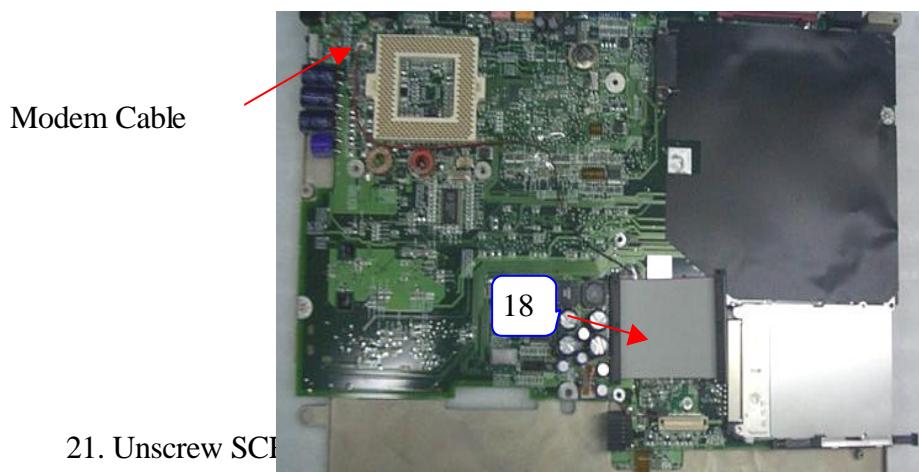


18. Disassemble the M/B assembly from the bottom cabinet.



19. Disconnect HDD

20. Disconnect MODEM CABLE.

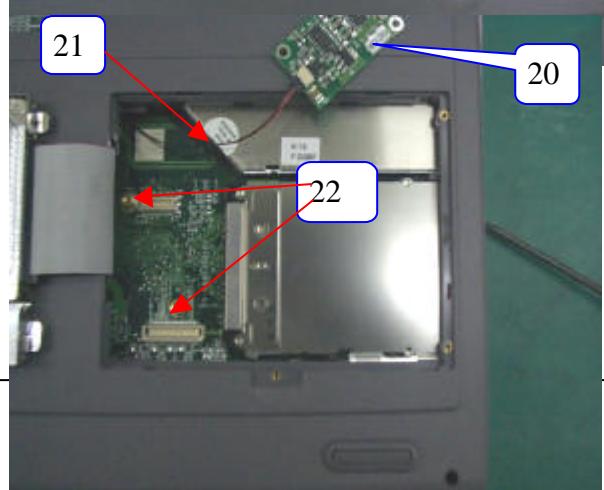


21. Unscrew SC

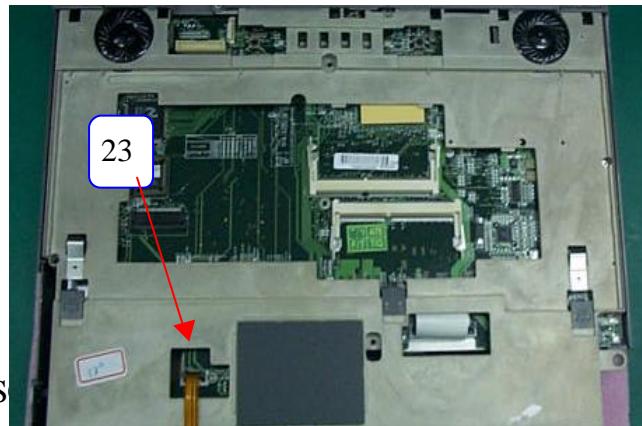


22. Disassemble MO

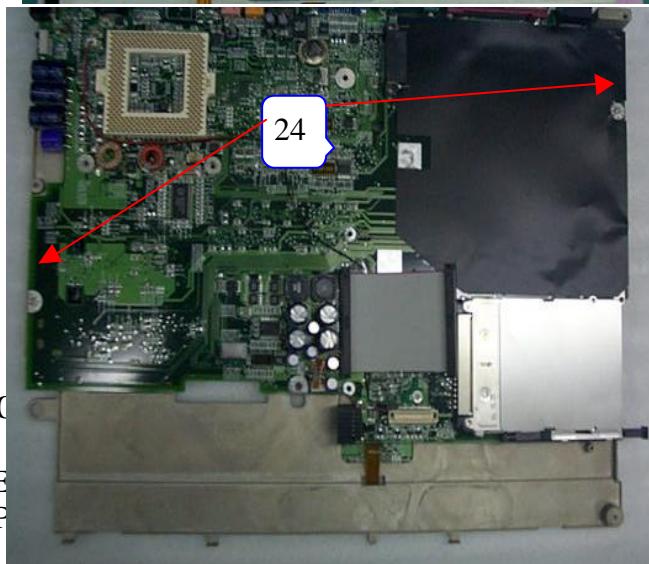
23. Unscrew HEX*2



24. Disconnect T/P FPC (#23) from the M/B.

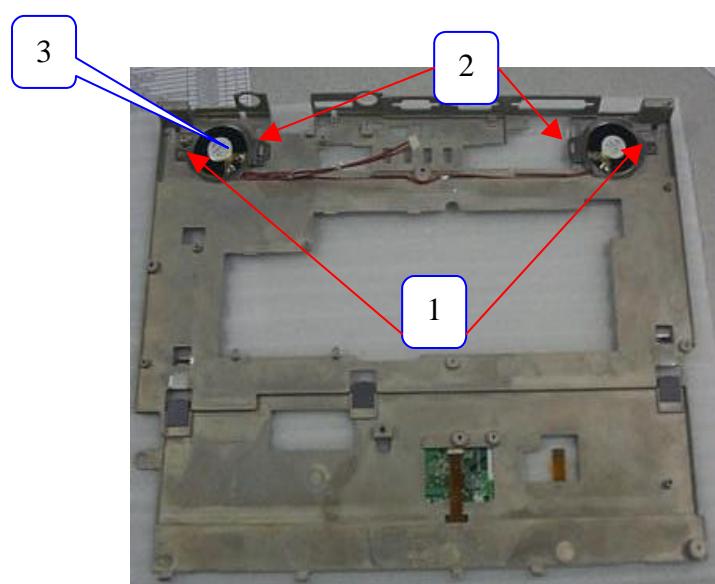


25. Unfasten the S

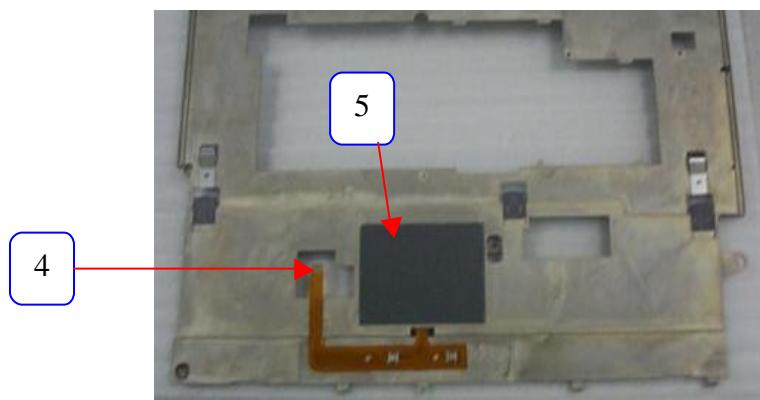


TOP HOUSING

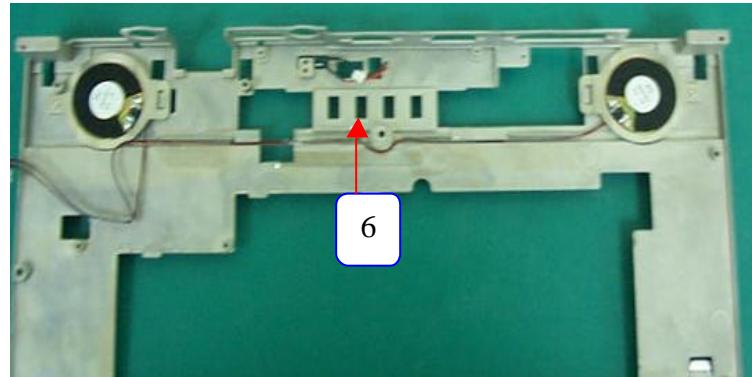
1. Unscrew SCRE
2. Disassemble SP



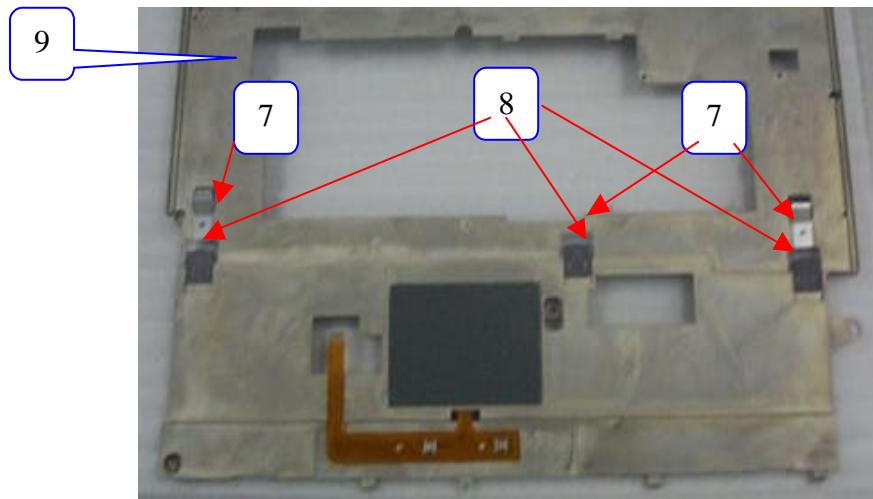
3. Disassemble FPC (#4) from the TOUCH PAD (#5).



4. Unscrew and disassemble SWITCH CABLE (#6).



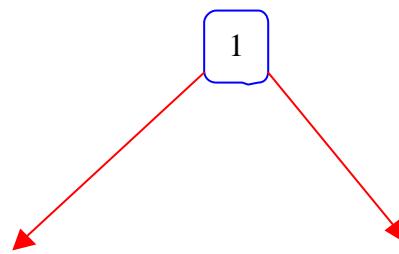
5. Disassemble K/B SPRING (#7)
6. Disassemble LATCH and SPRING (#8) from the TOP HOUSING (#9).



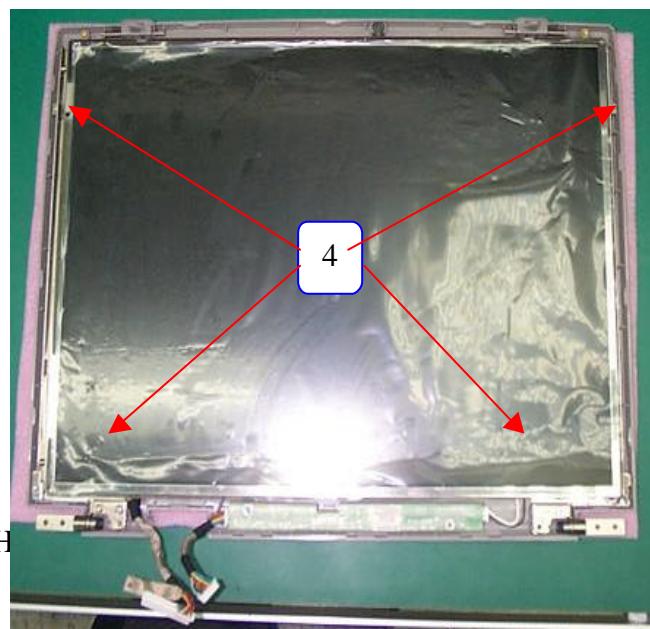
LCD PANEL DISASSEMBLY (14" CHIMEI)

1. Unfasten SCREWS*4 (#1, #2) of the FRONT CABINET (#3).
2. Disassemble FRONT CABINET.

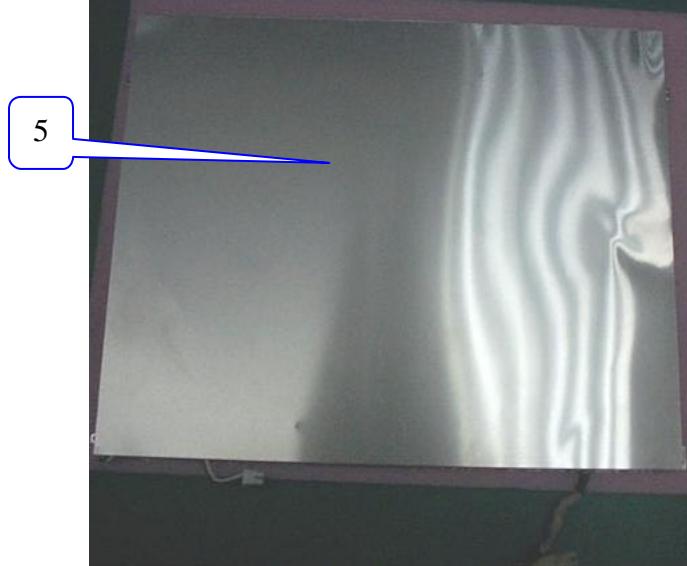




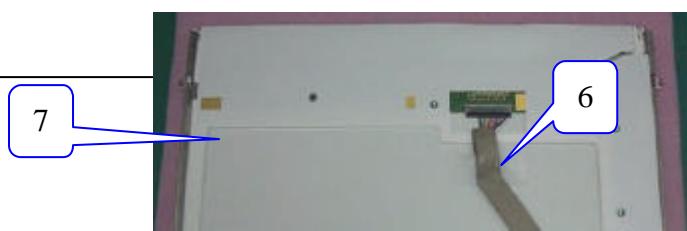
3. Unscrew SCREWS*4 (#4) from the BACK CABINET.



4. Remove SH



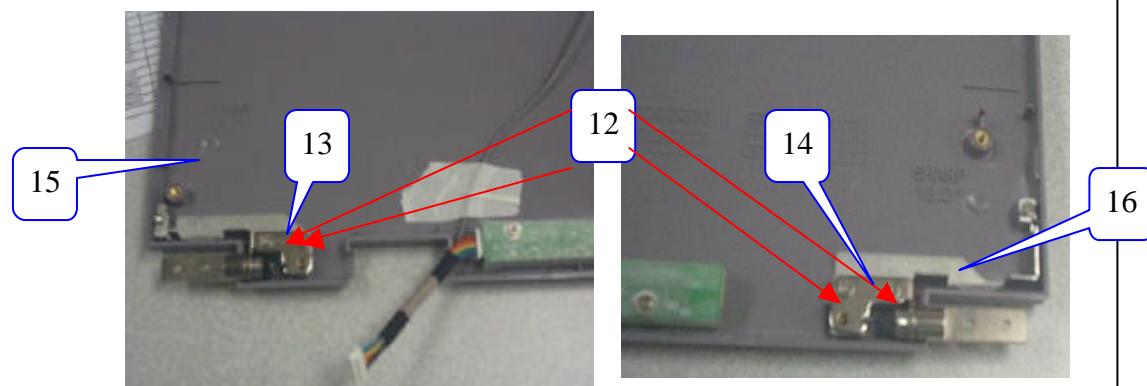
5. Disconnect LCD CABLE (#6) from the LCD (#7)



6. Unscrew SCREW*2 (#8) and disassemble BRACKET_R(#9)
7. Unscrew SCREW*2 (#10) and disassemble BRACKET_L (#11).

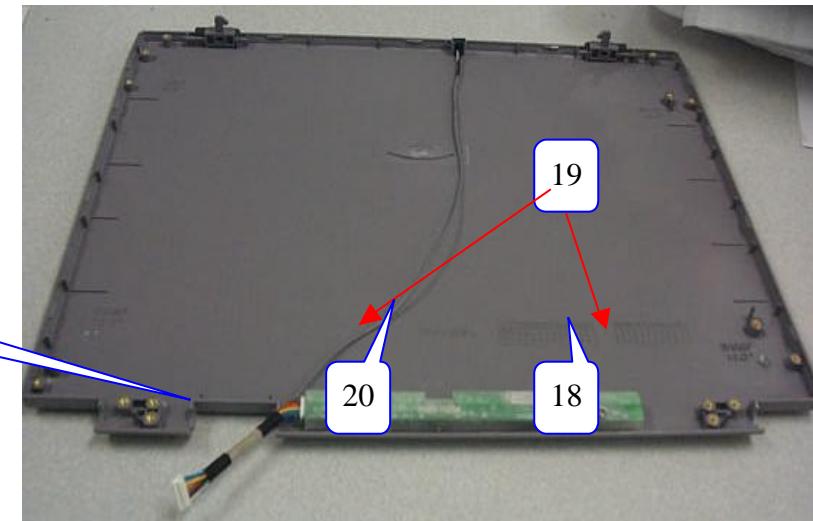


8. Unfasten SCREWS (#12) from the HINGE.
9. Disassemble HINGE_L (#13) and HINGE_R(#14).
10. Disassemble HINGE BRACKET_L (#15) and HINGE BRACKET_R (#16).

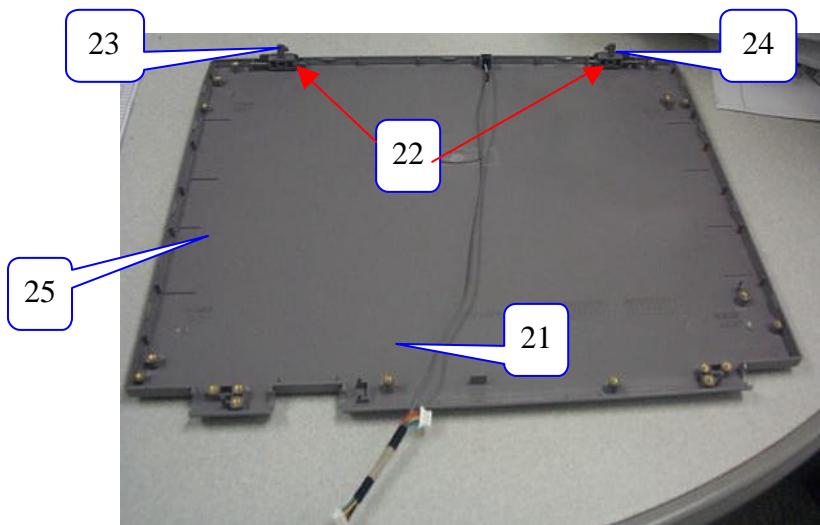


11. Disconnect INVERTER-CABLE (#17) from the INVERTER (#18).

12. Unfasten SCREWS*2 (#19) of the INVERTER.
13. Remove INVERTER MYLAR (#20)



14. Disassemble MIC (INVERTER CABLE) (#21).
15. Disassemble KNOB (#22).
16. Disassemble HOOK_L(#23) and HOOK_R(#24) and SPRING from the BACK CABINET (#25).



Notebook PC Service Manual

Model: 340S2

Chapter 5

Trouble Shooting

UNIWILL COMPUTER CORP.

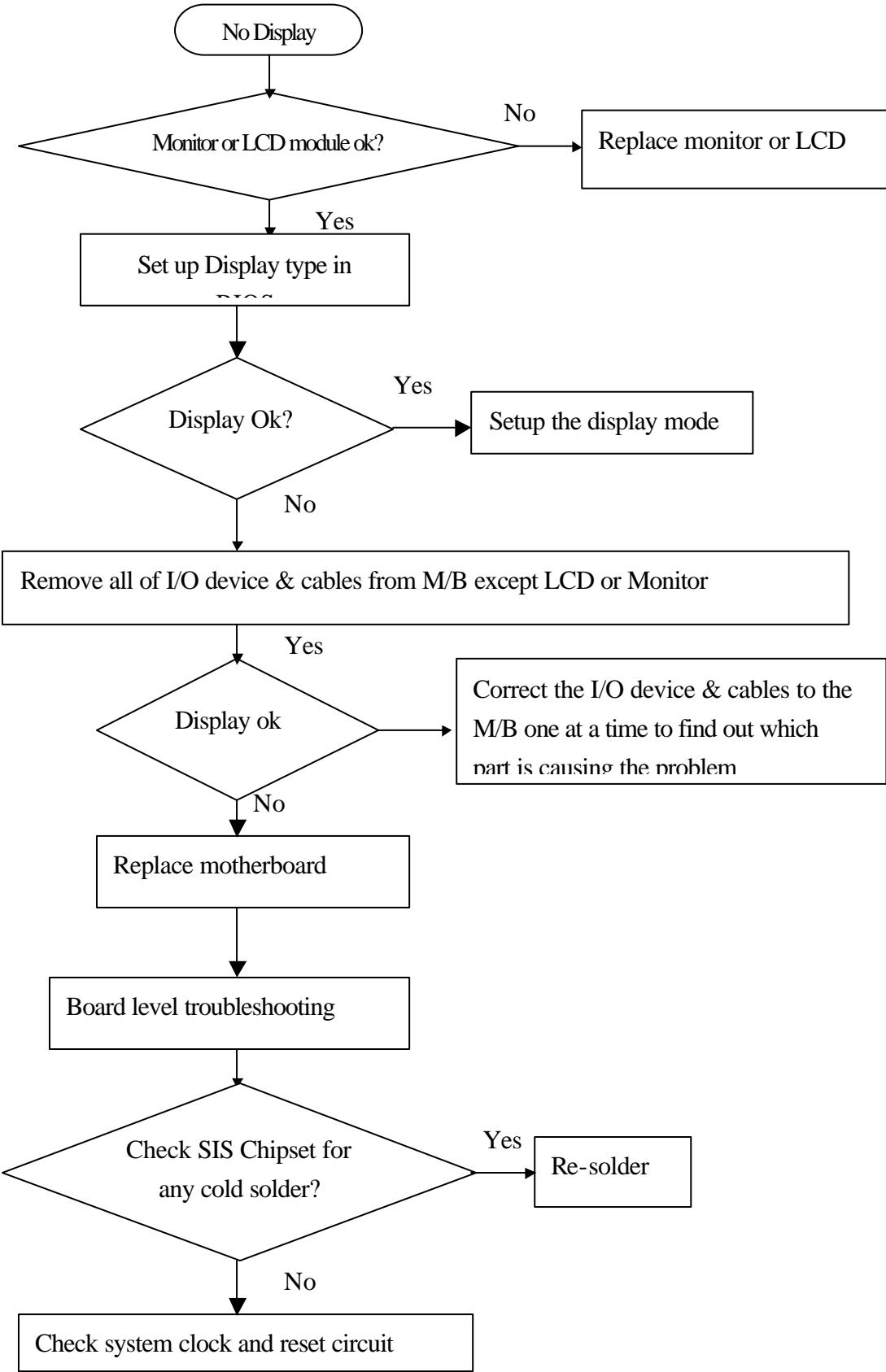
No. 24 Pei Yuan Road
Chung Li Industrial Park, Chung Li City
Tao Yuan Hsien, Taiwan
R.O.C.
TEL: 886-3-461-6000
FAX: 886-3-461-6317
URL: <http://www.uniwill.com.tw/>

Trouble Shooting List

- 5.1 No display**
- 5.2 VGA controller failure**
- 5.3 LCD no display / Invalid picture**
- 5.4 External monitor has no display or color incorrect**
- 5.5 Memory test error**
- 5.6 Keyboard test error**
- 5.7 Touch pad test error**
- 5.8 Diskette drive test error**
- 5.9 Hard disk drive test error**
- 5.10 CMOS test error**
- 5.11 SIO port test error**
- 5.12 PIO port test error**
- 5.13 Audio failure**
- 5.14 No power symptom**
- 5.15 CDROM drive test error**
- 5.16 Stopping in LCD screen while booting**
- 5.17 PCMCIA Card Bus failure**
- 5.18 IR Port cannot transfer data**
- 5.19 Modem Failure**

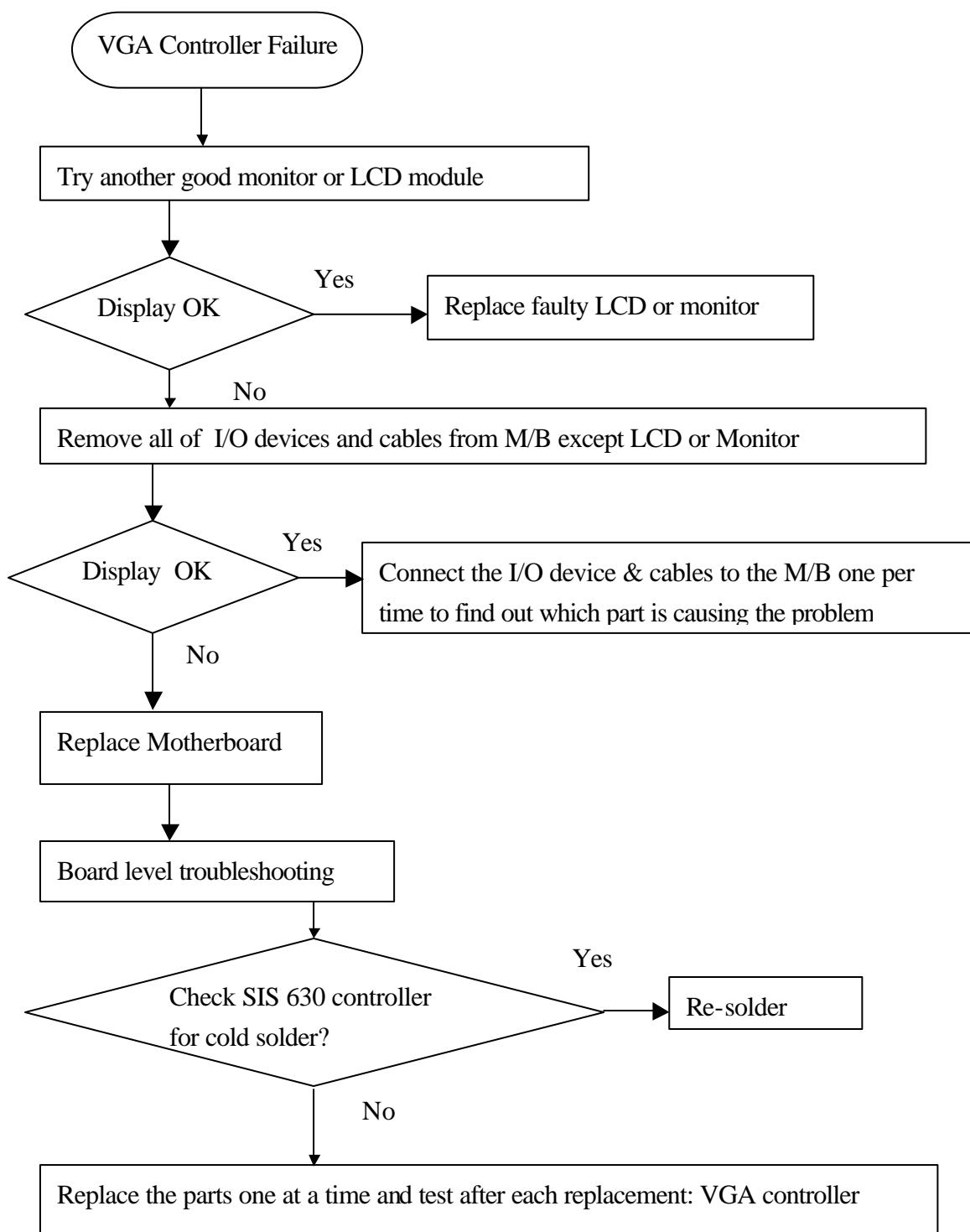
5.1 No display (system failure)

Symptom: There is no display on both LCD and Monitor after power on although the LCD and Monitor are known-good.



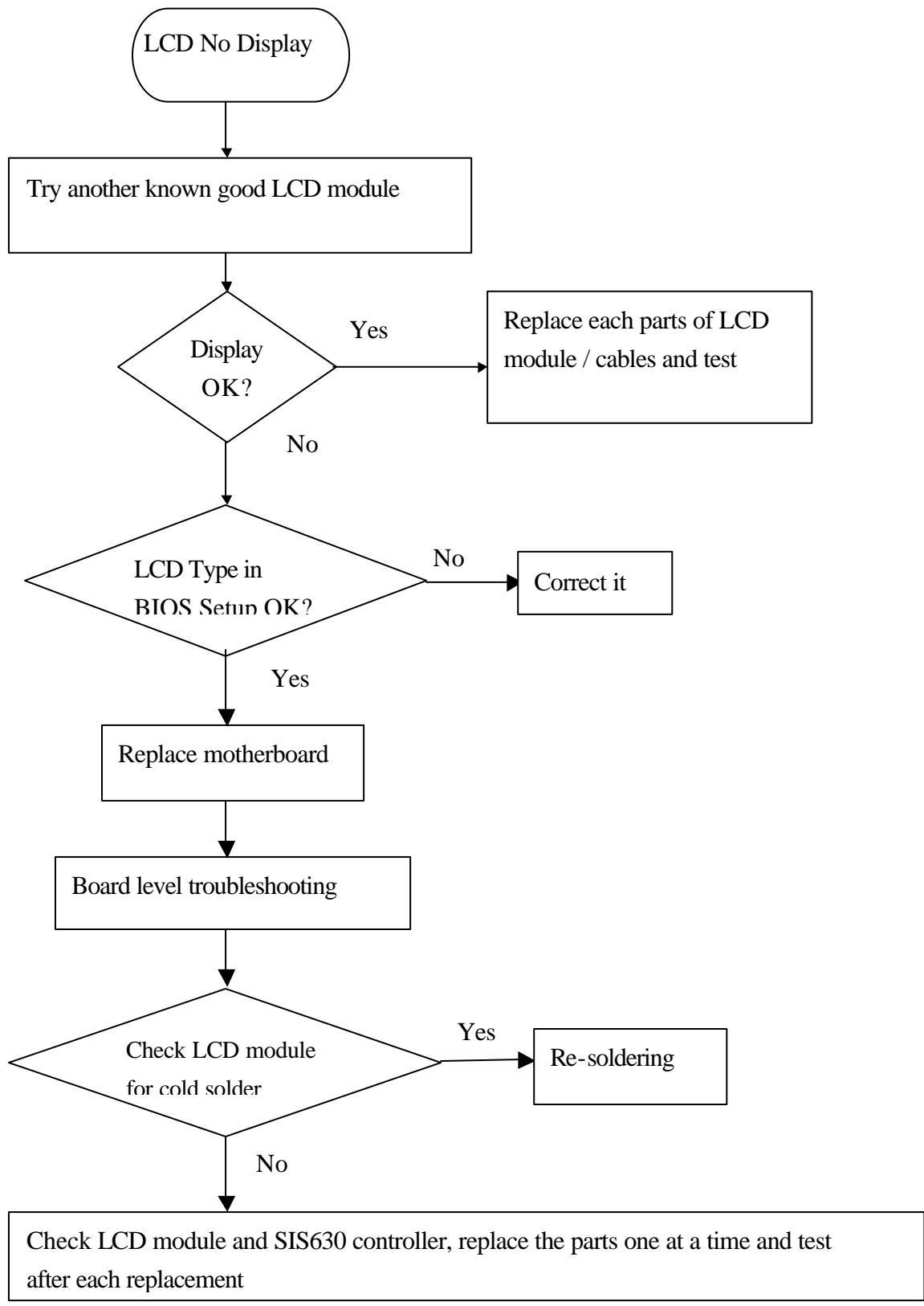
5.2 VGA controller failure

Symptom: There is no display on both LCD and Monitor although Power-On-Self-Test is passed



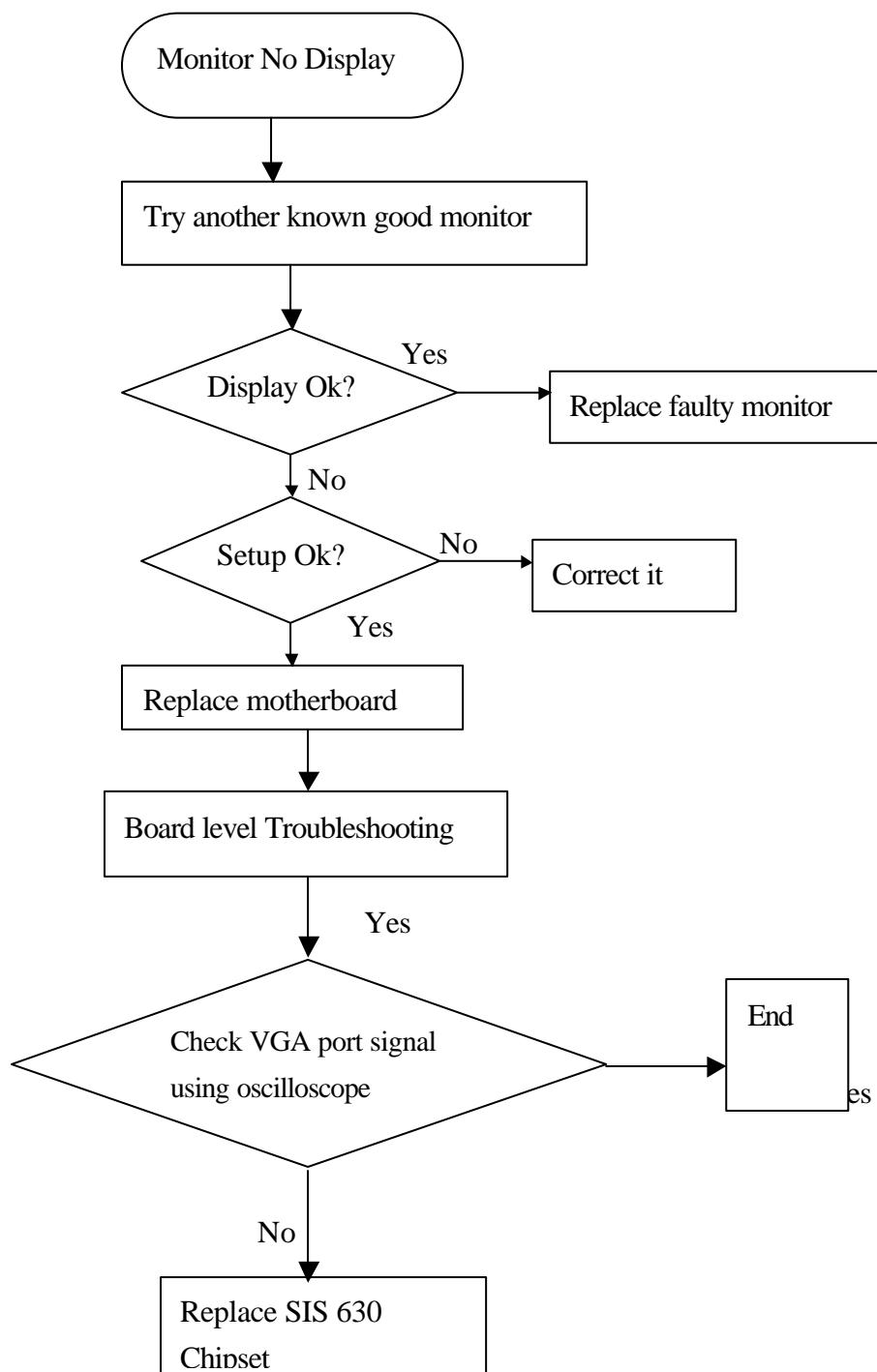
5.3 LCD no display or Invalid Picture

Symptom: The LCD shows nothing or abnormal picture, but it is ok for external monitor.

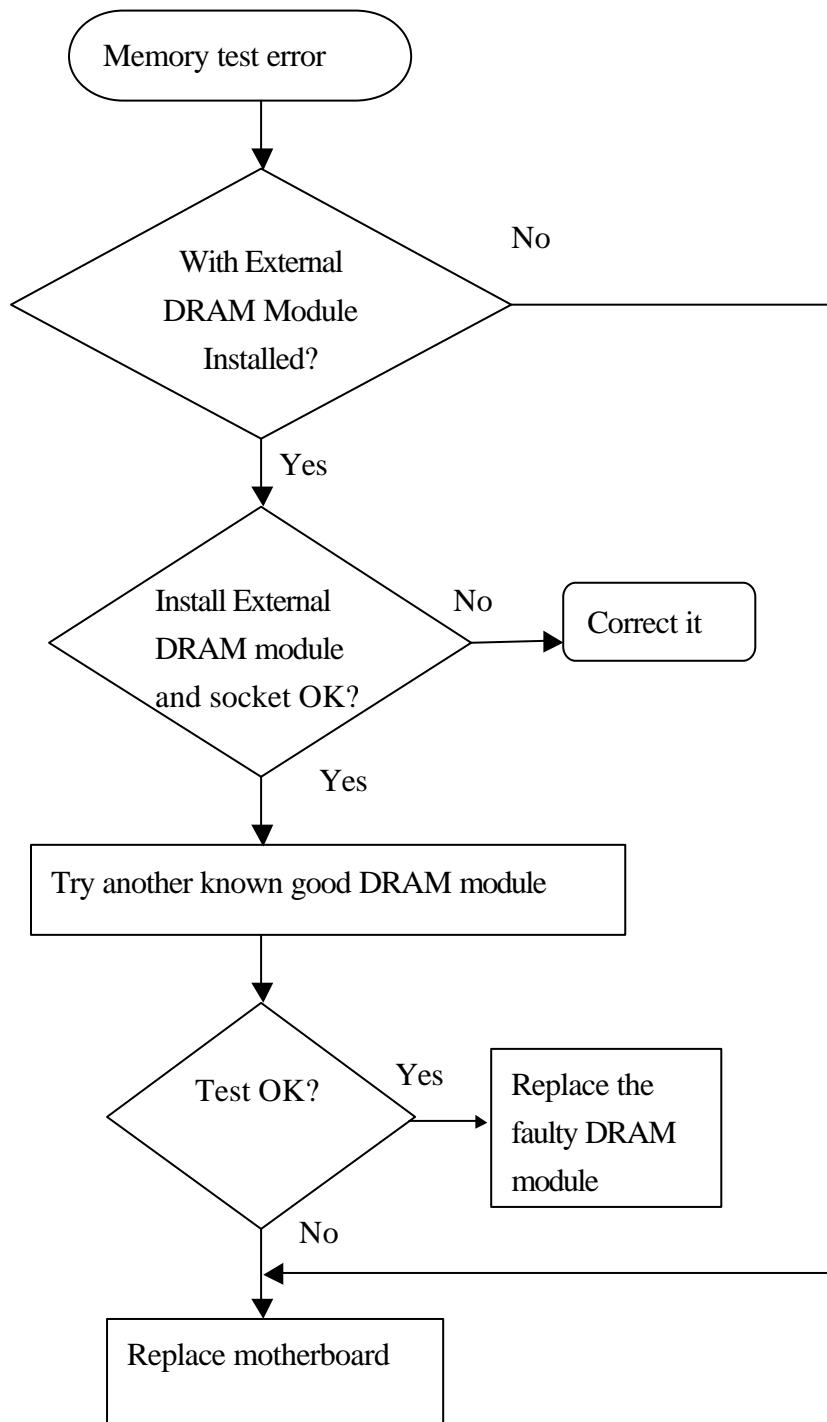


5.4 External monitor has no display or color abnormal

Symptom: The CRT monitor shows nothing or abnormal color, but it is ok for LCD

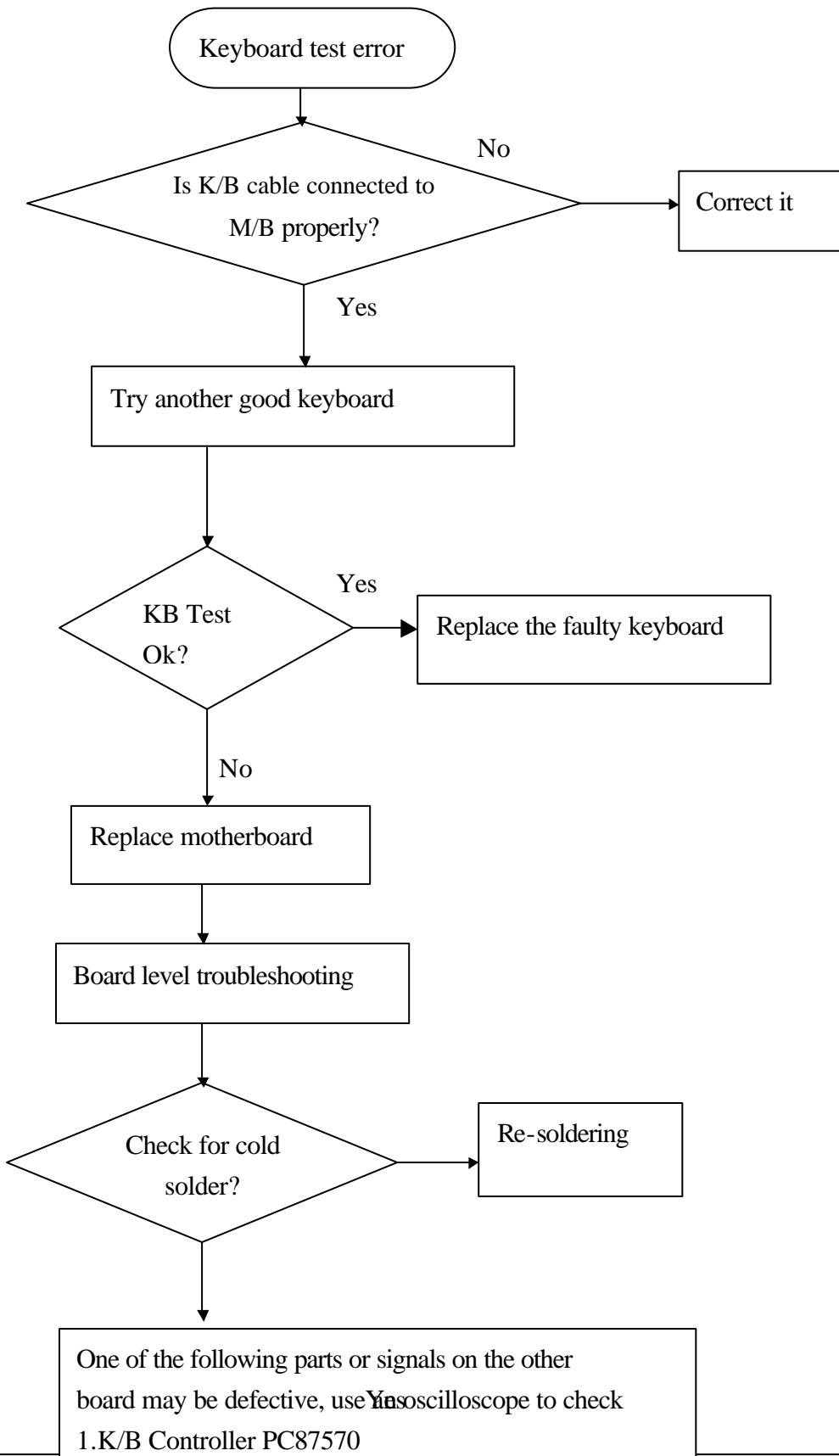


5.5 Memory test error



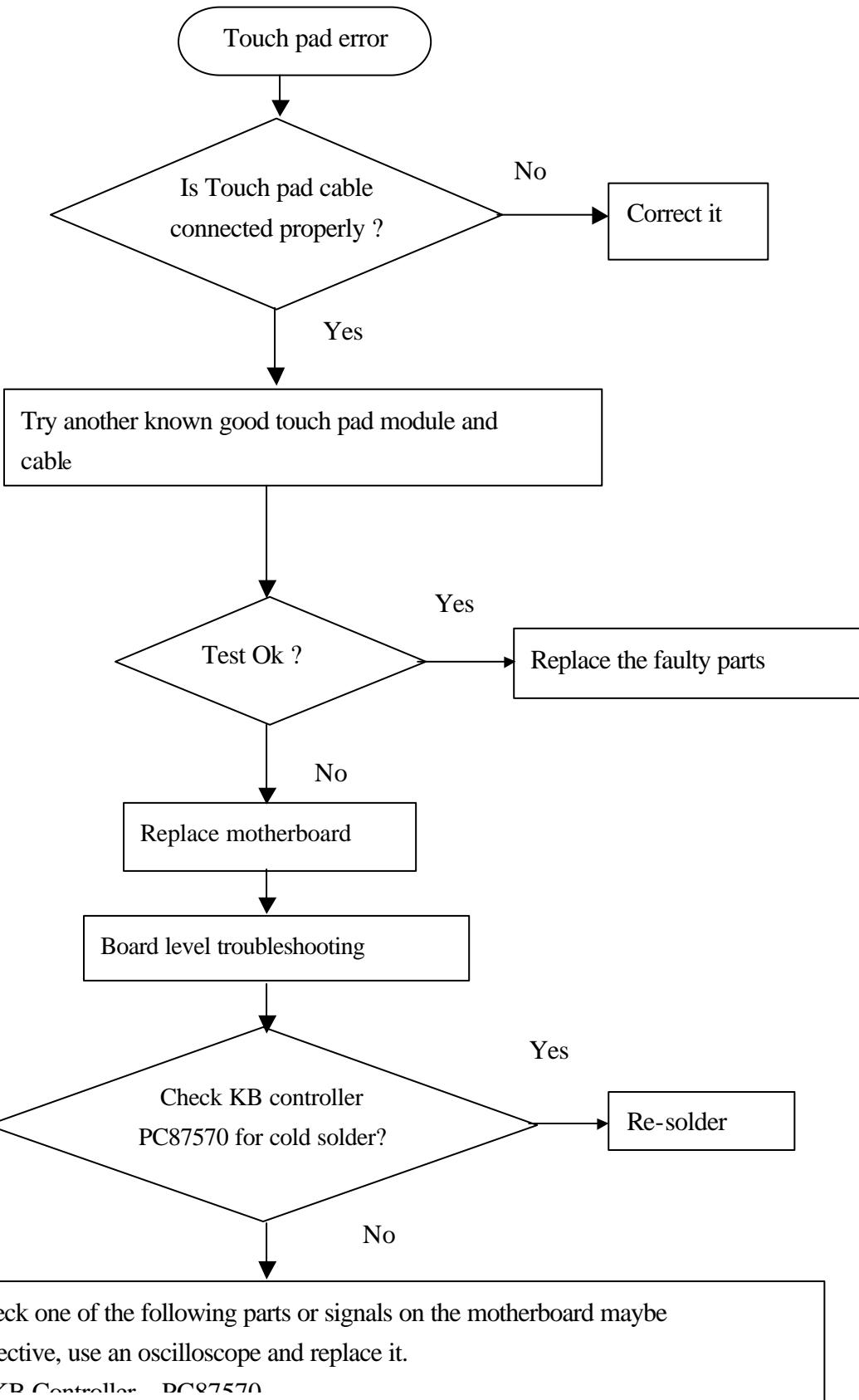
5.6 Keyboard test error (including external K/B & PS/2 mouse)

Symptom: error message of keyboard failure is shown or any key doesn't work



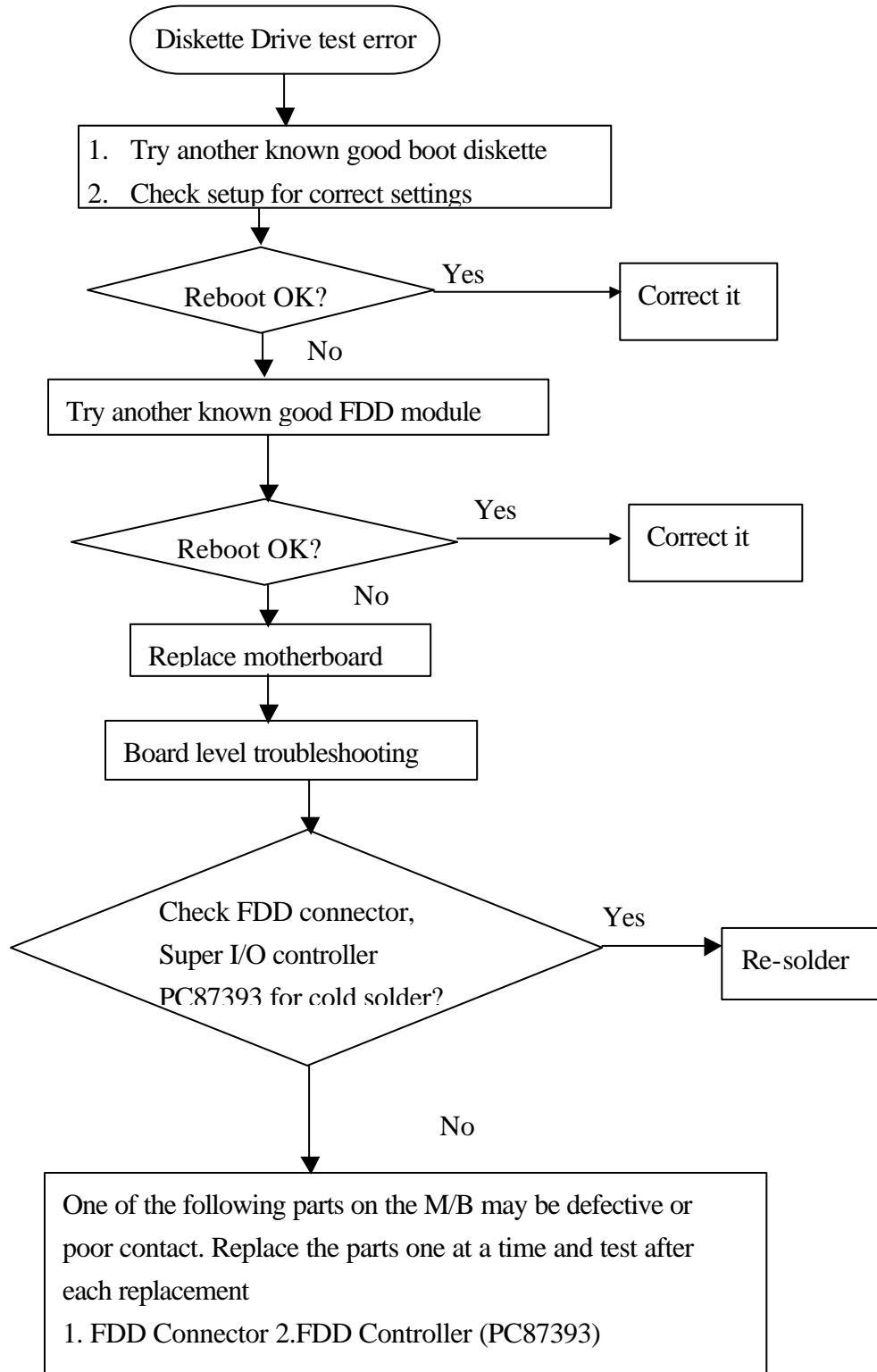
5.7 Touch Pad test error

Symptom: An error message is shown when the Touch Pad point is enabled



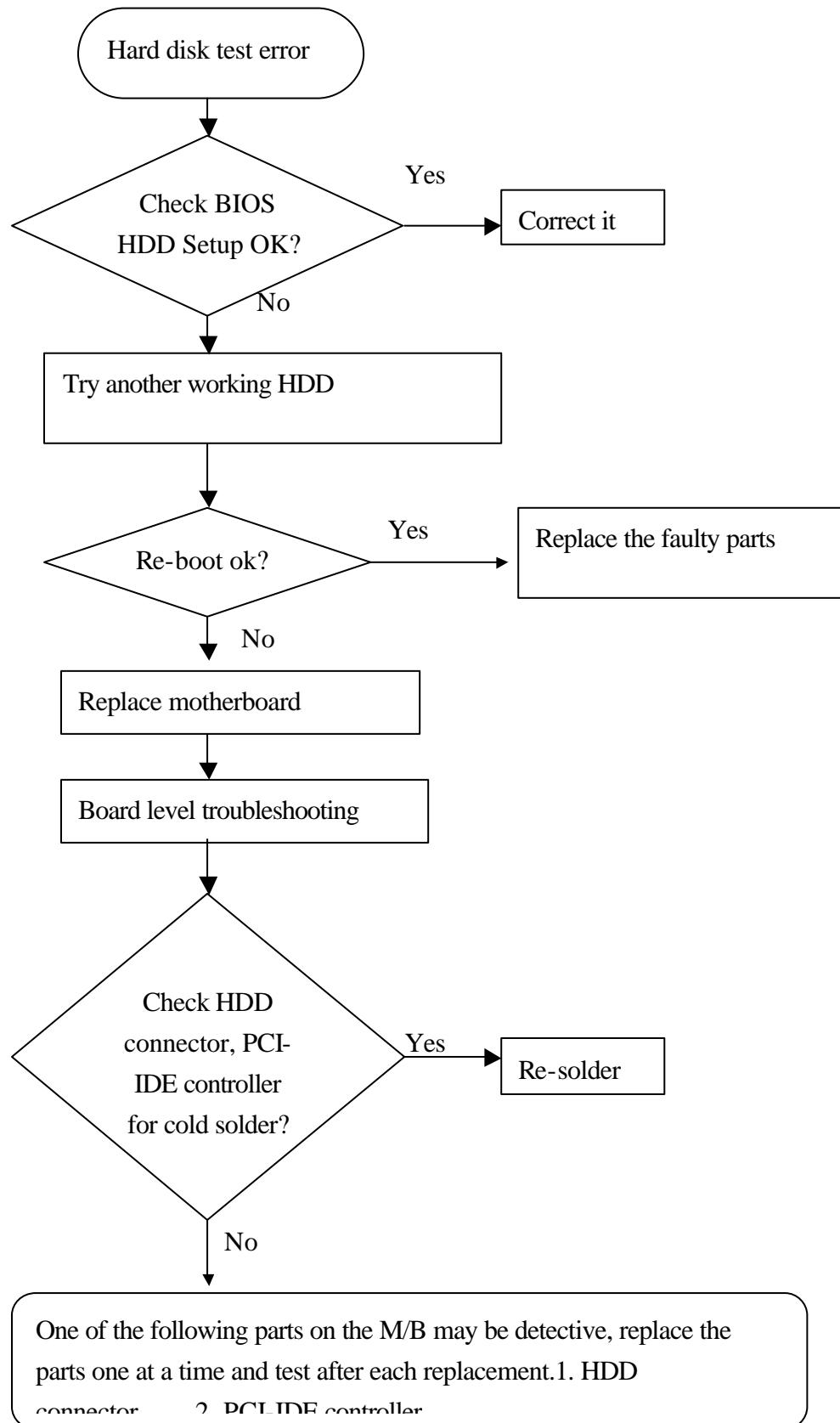
5.8 Diskette drive test error

Symptom: An error message is shown while loading data from FDD to system



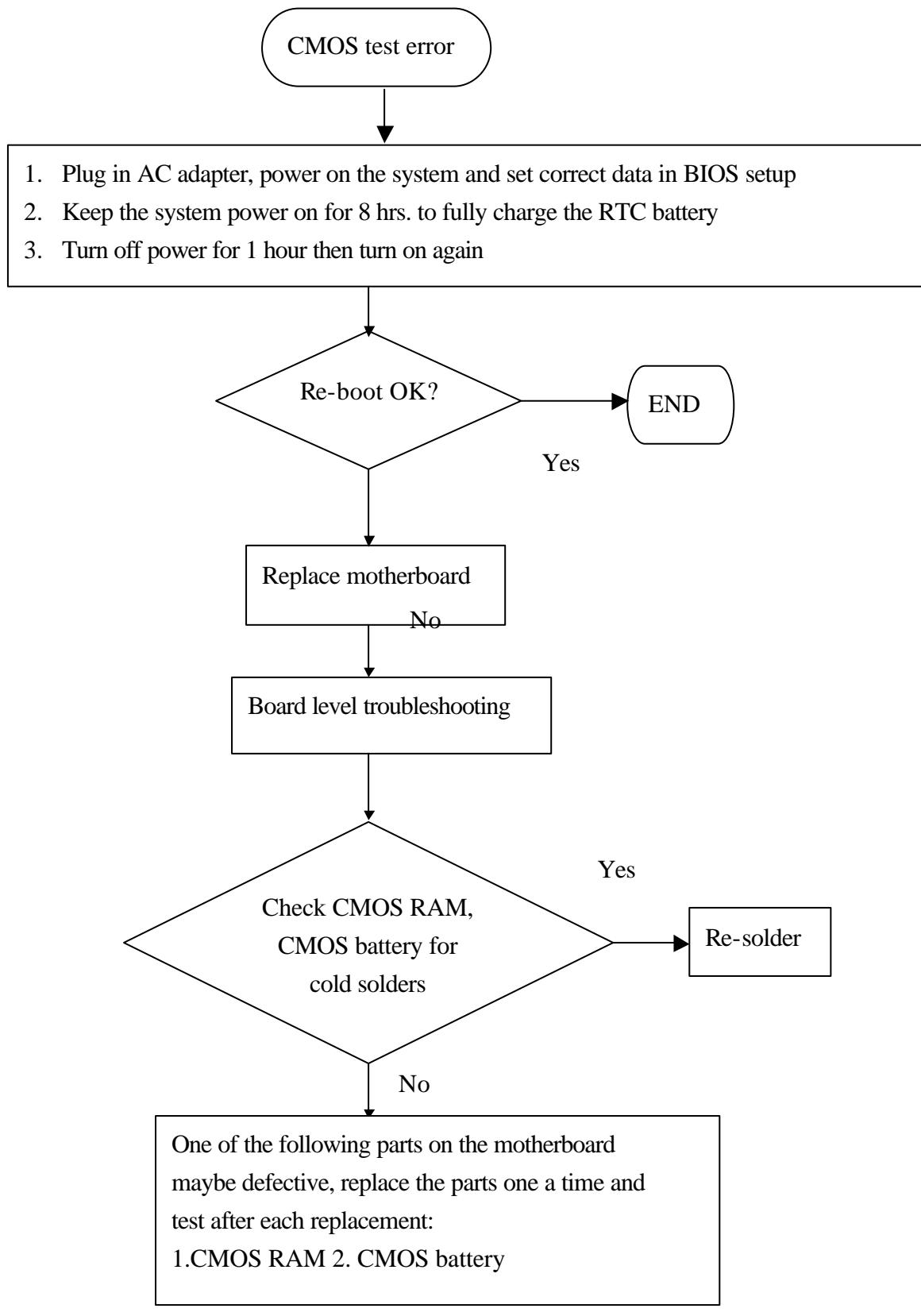
5.9 Hard disk drive test error

Symptom: Either an error message is shown, or the drive motor spins non-stop, while reading data from or writing data to Hard disk



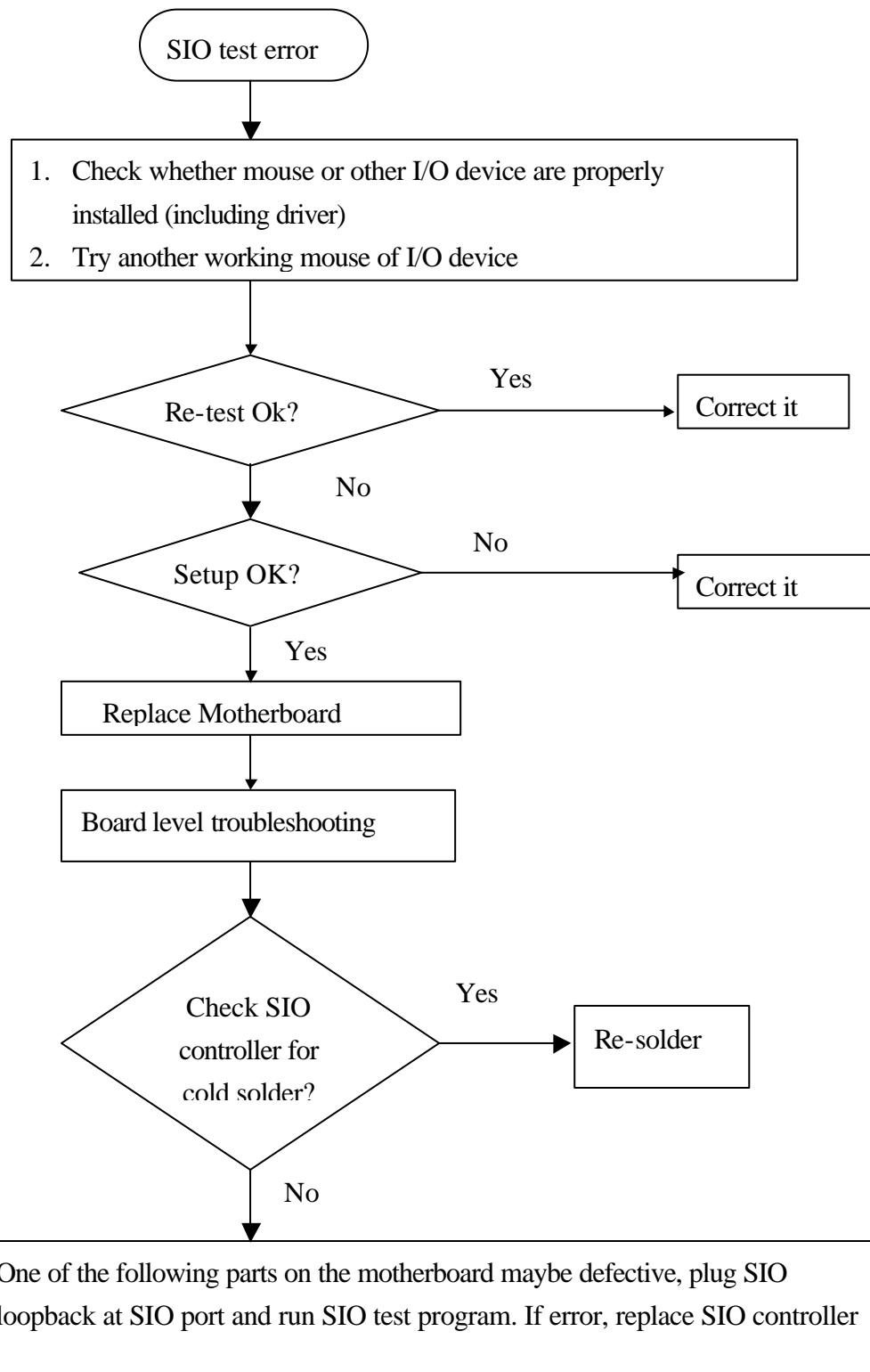
5.10 CMOS test error

1. CMOS data lost, or inaccurate system time & data



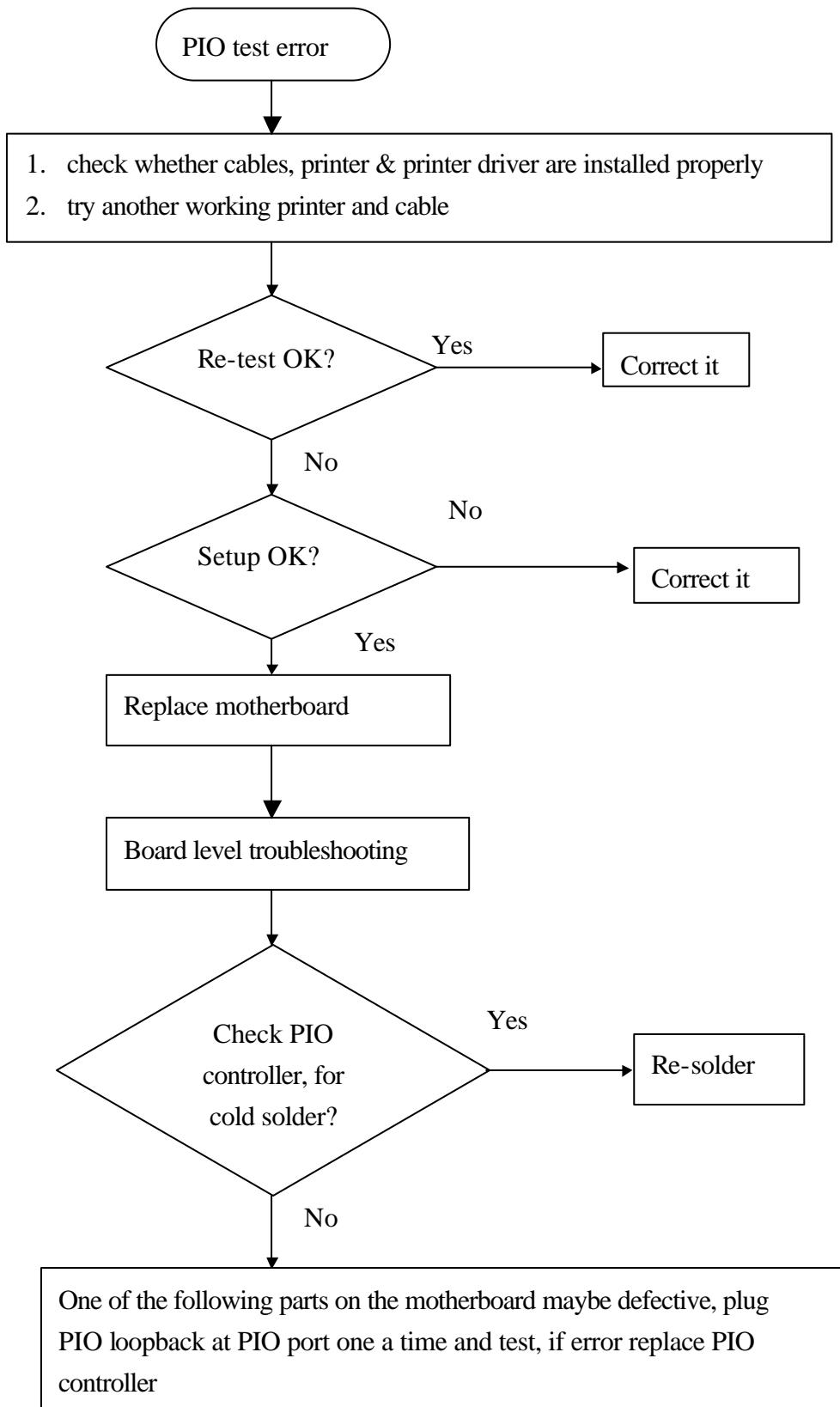
5.11 SIO port test error

Symptom: An error display occurs when a mouse or other I/O device is installed



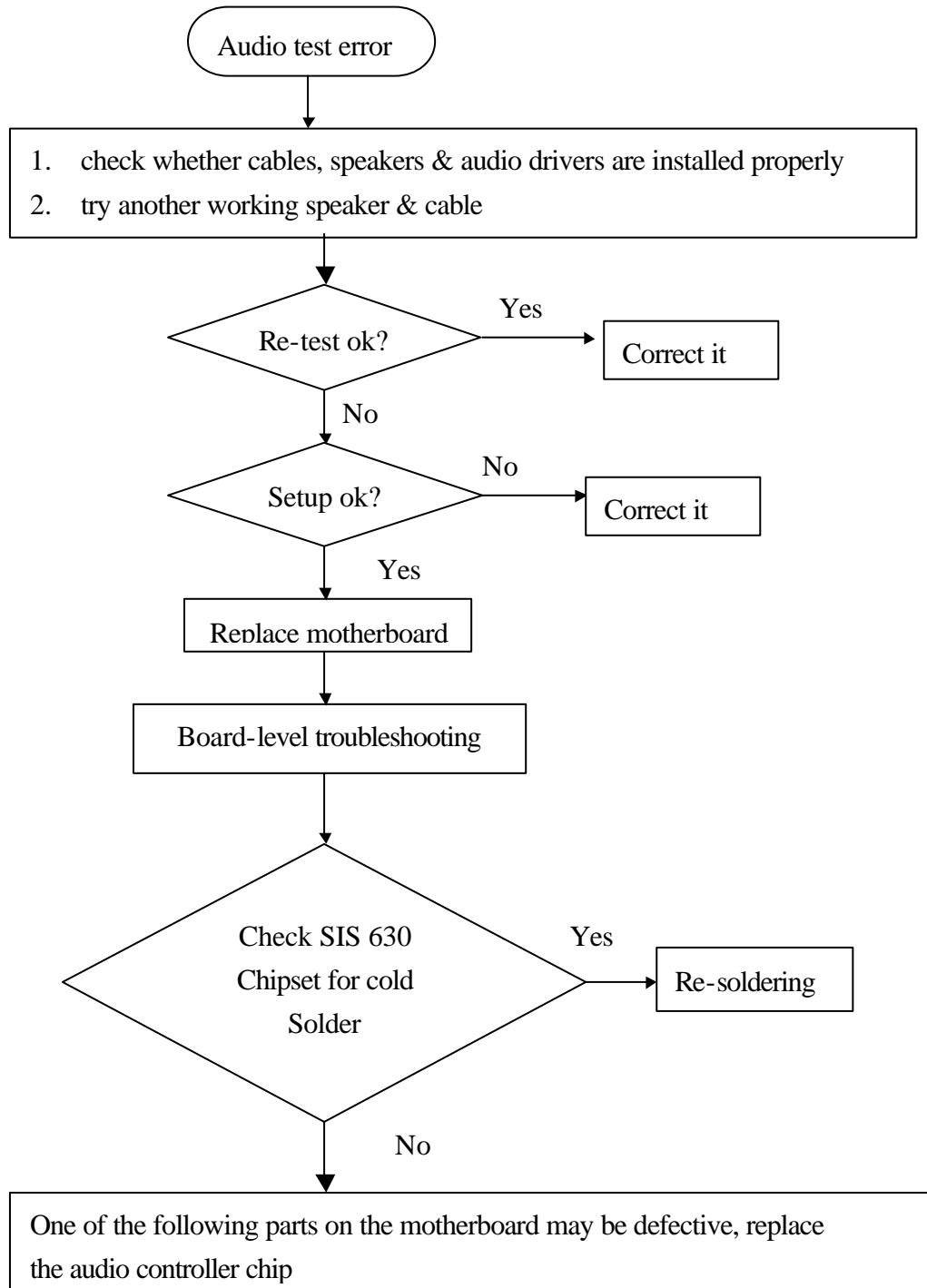
5.12 PIO port test error

Symptom: When a print command is issued, printer prints nothing or garbage.



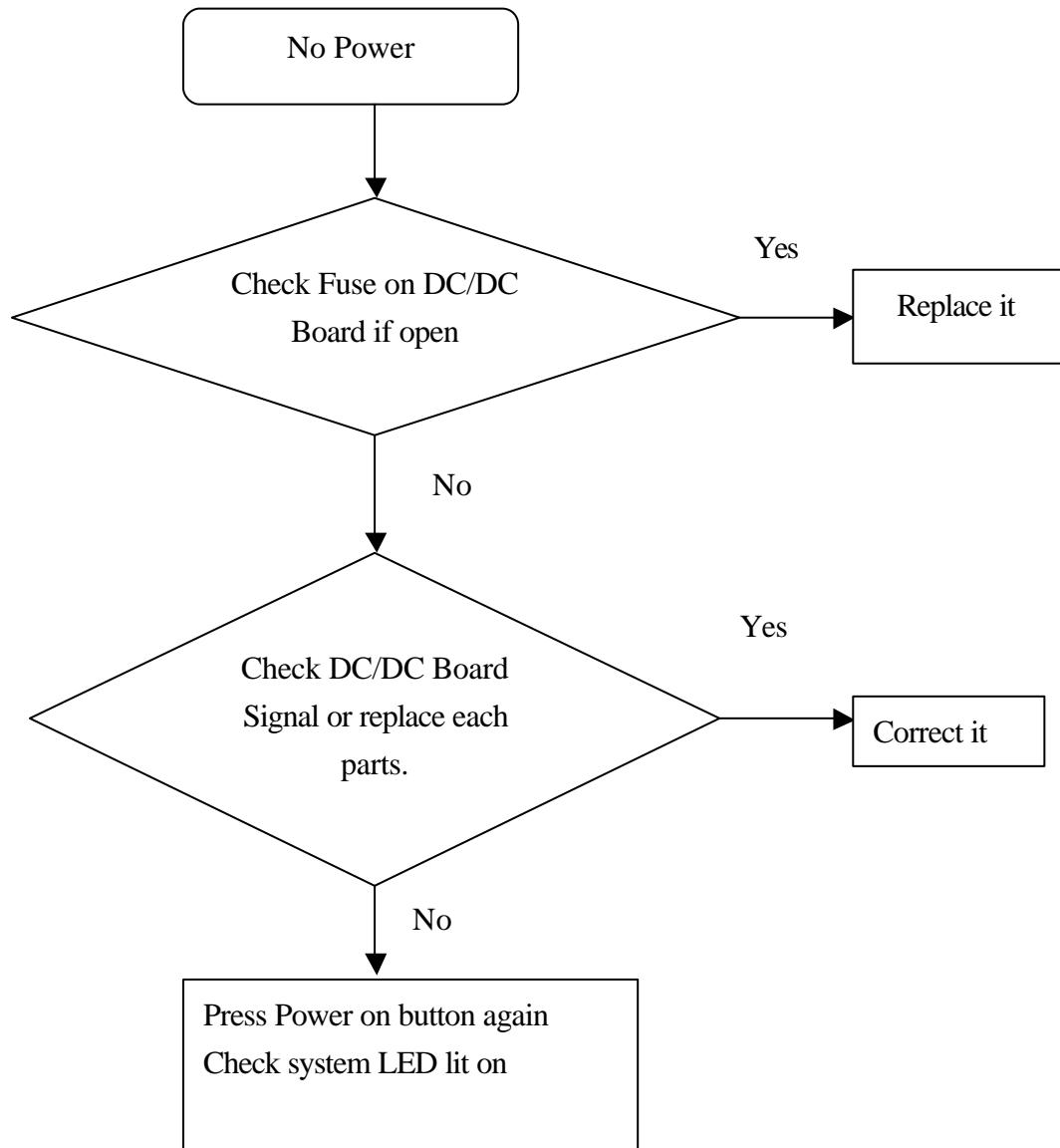
5.13 Audio failure

Symptom: No sound from speaker after audio drive is installed.



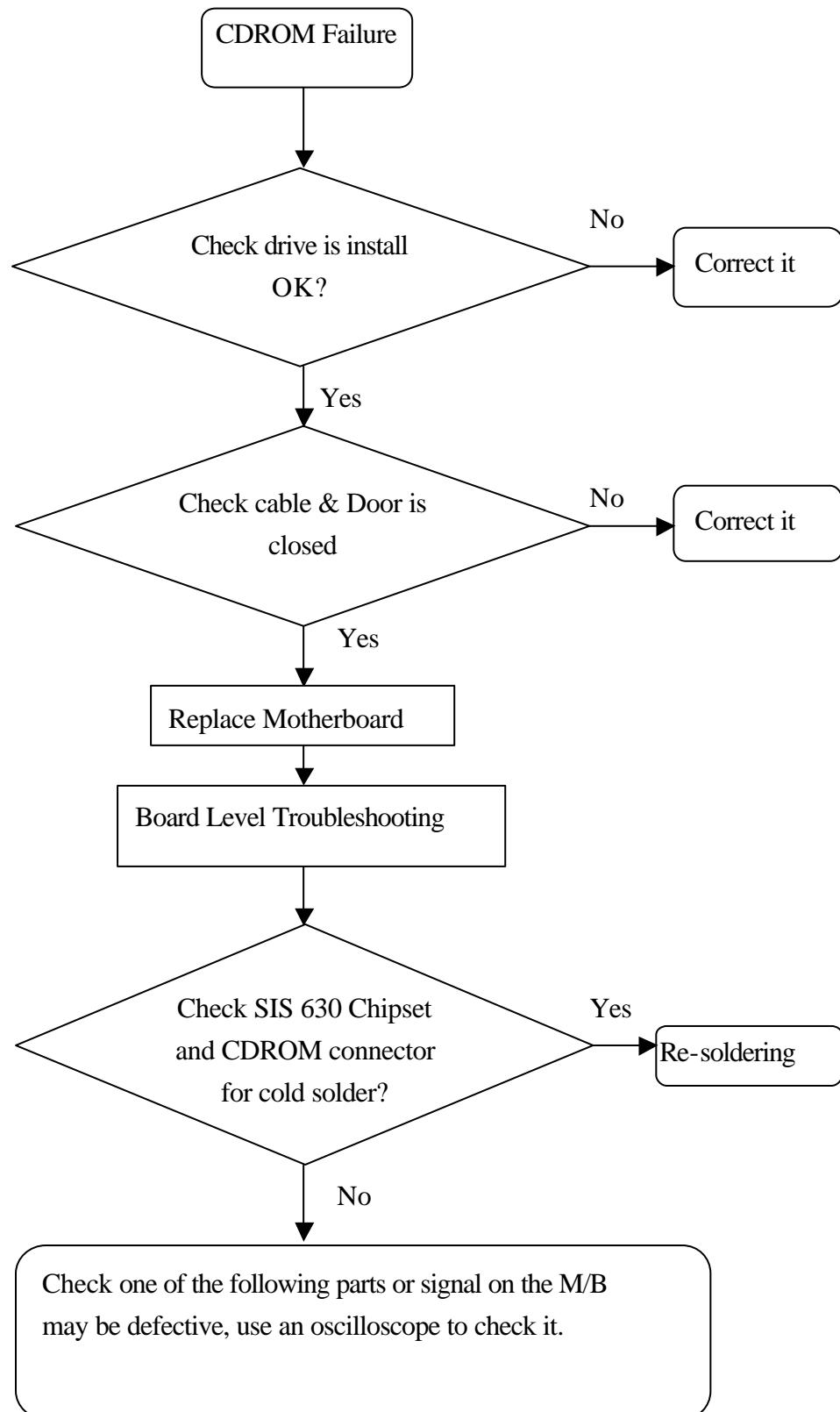
5.14 No power symptom:

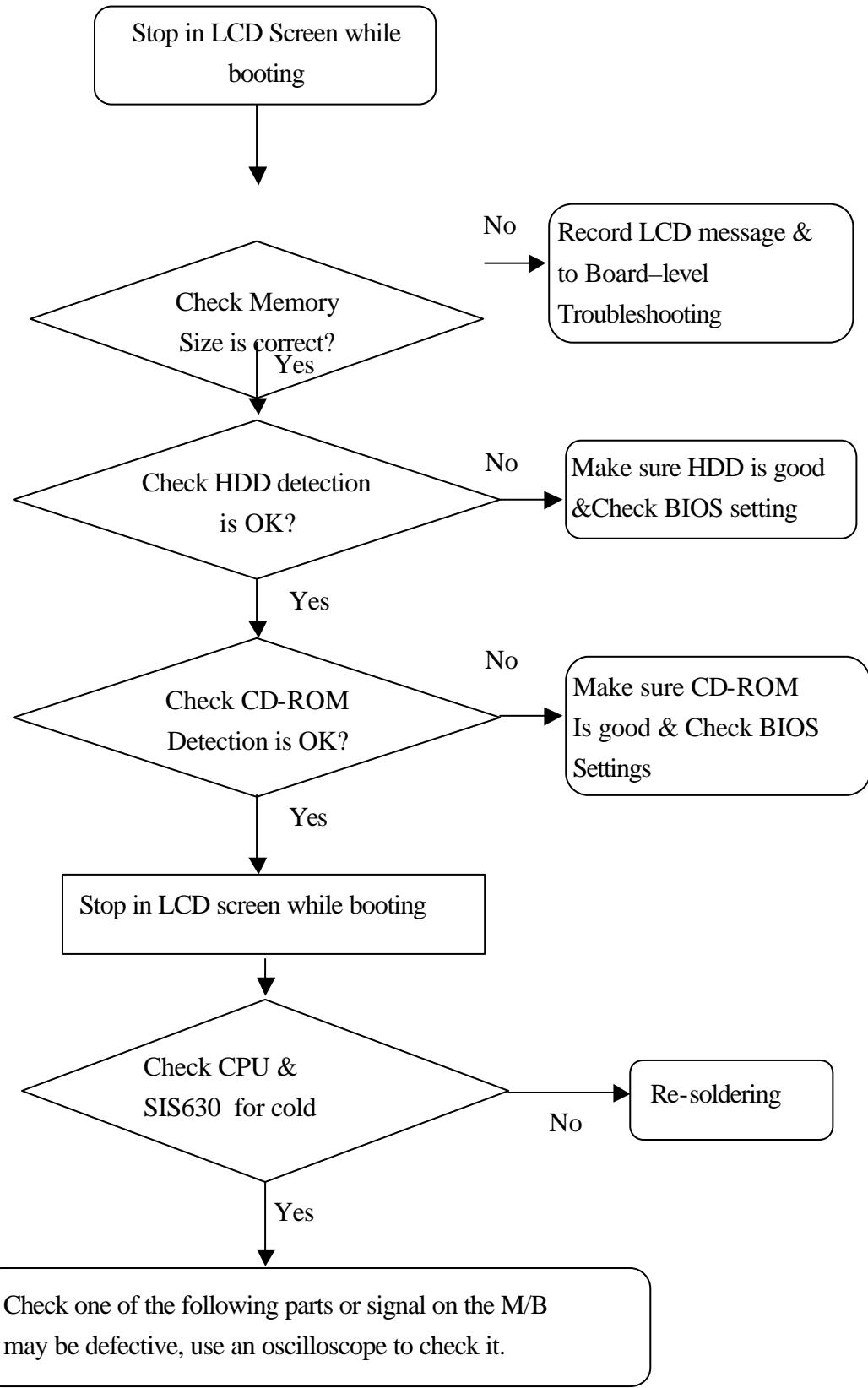
Symptom: When the power button is pressed, nothing happens, power indicator is not light up.



5.15 CD-ROM drive test error

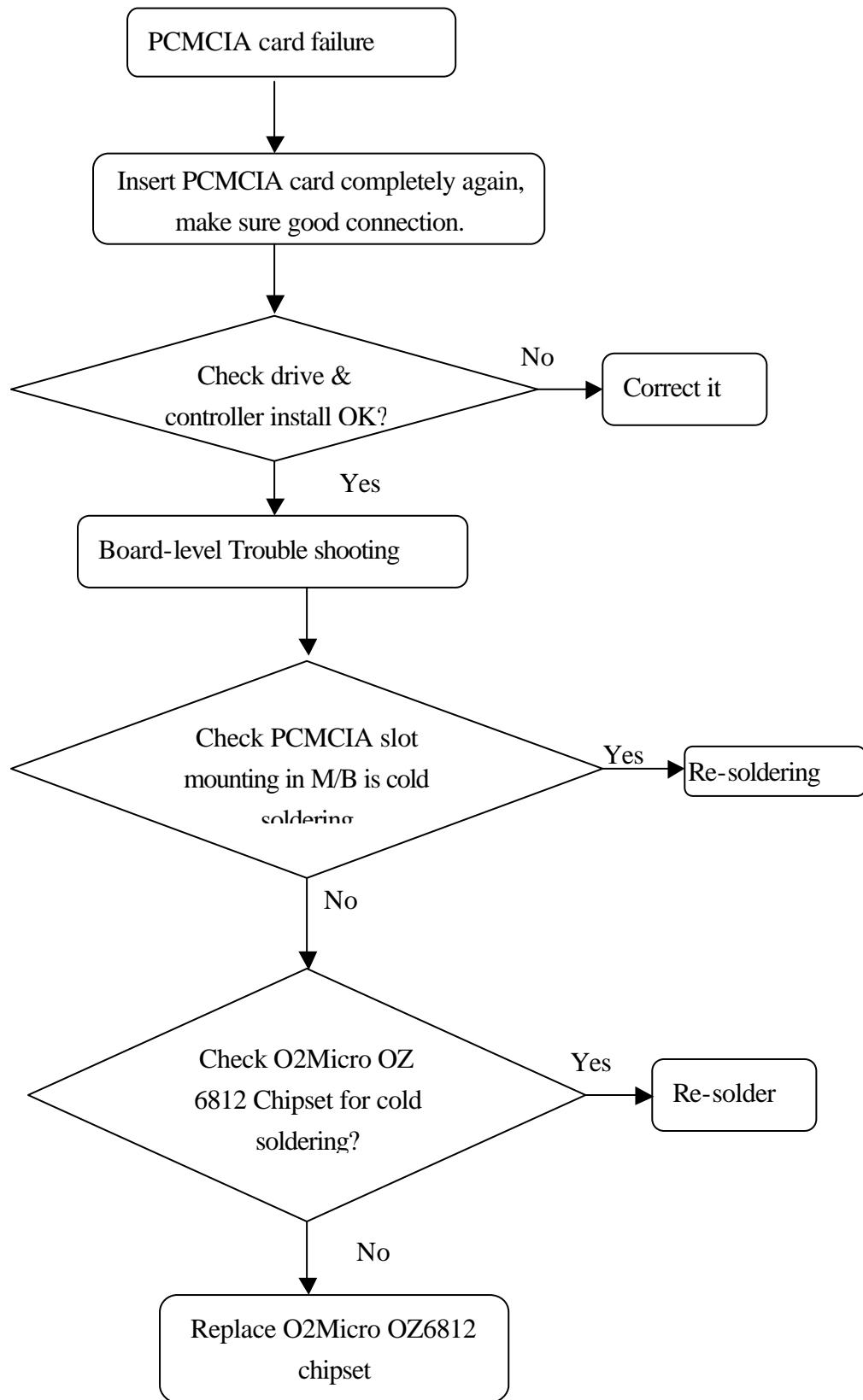
An error message is shown when reading data from CD-ROM drive

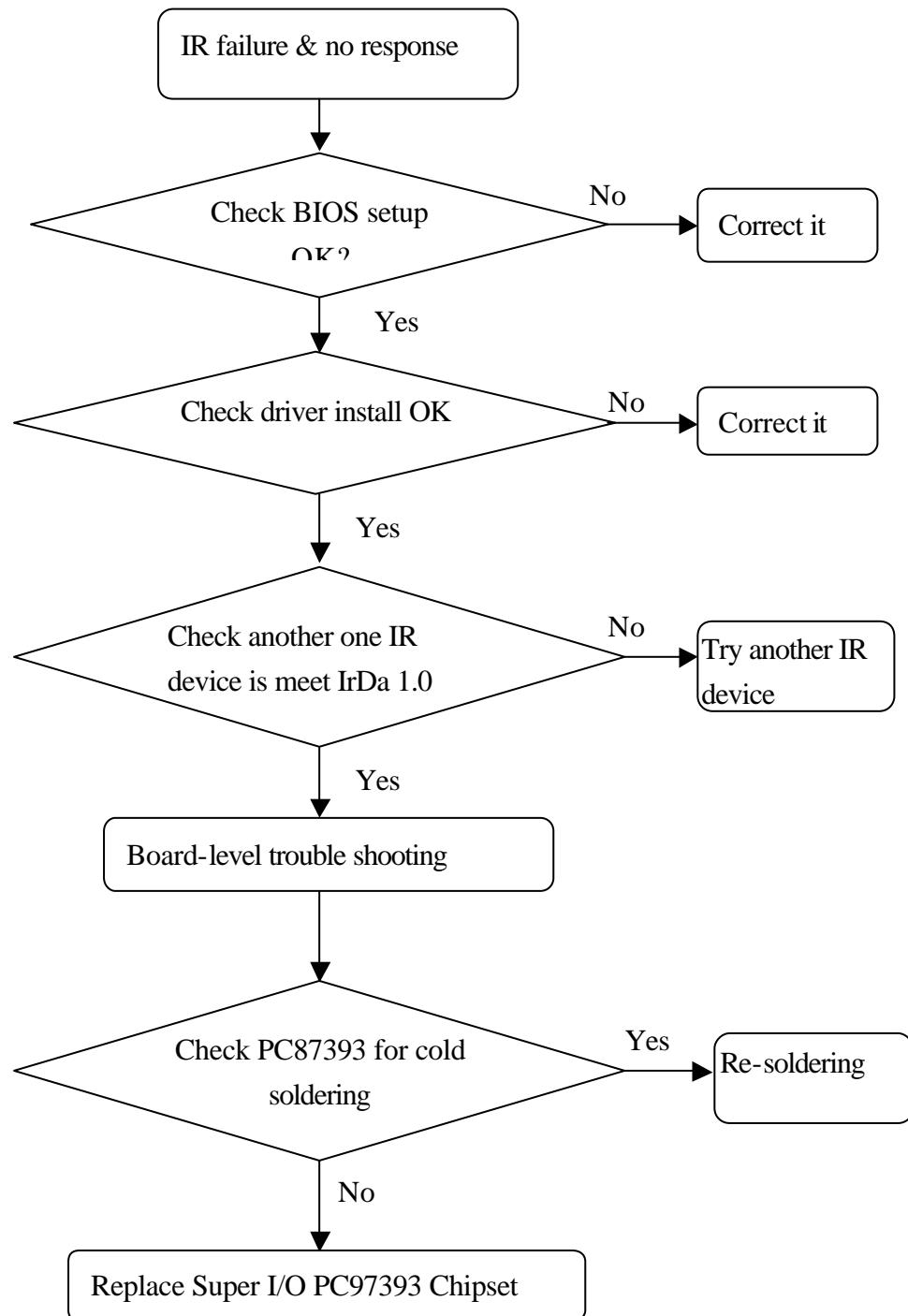


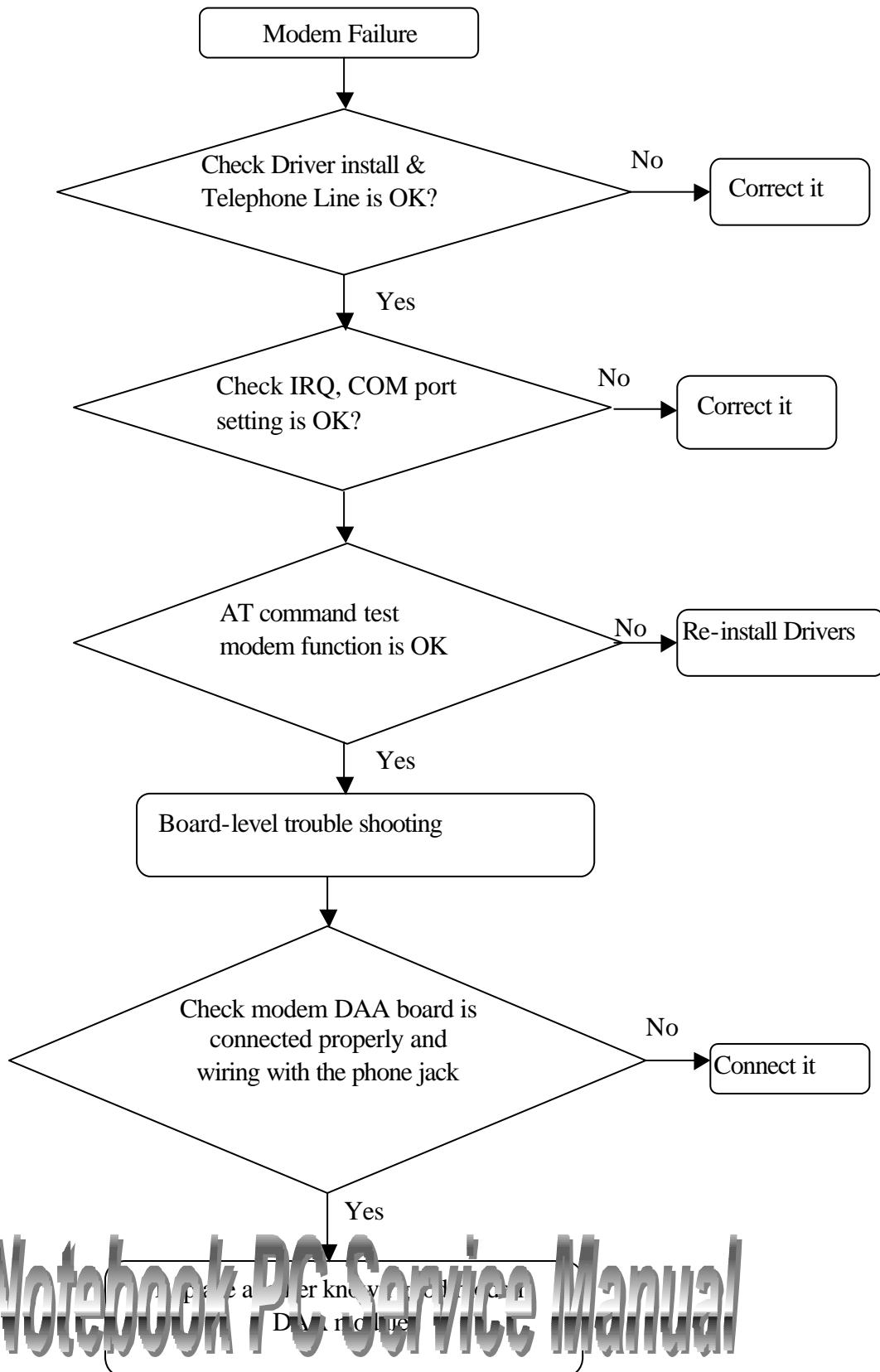
5.16 Stopping in LCD screen while booting

5.17 PCMCIA CardBus failure

Symptom : when insert PCMCIA card to PCMCIA slot, but system can't detect.



5.18 IR Port can't transfer data.

5.19 Modem failure

Model: 340S2

Chapter 6 Peripheral Devices

UNIWILL COMPUTER CORP.

No. 24 Pei Yuan Road
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FAX: 886-3-461-6317
URL: [http:// www.uniwill.com.tw/](http://www.uniwill.com.tw/)

6.1 LCD

- I. 14.1" TFT, XGA - Vendor – HYUNDAI, CHI MEI, CPY
- II. 12.1" DSTN, SVGA – Vendor – SHARP
- III. 13.3" TFT, XGA – Vendor – ACER, IMES
- IV. 12.1" TFT SVGA – Vendor - Sanyo

6.2 FDD

External / Swappable FDD: 3.5" format
Capacity : 720KB / 1.44MB / 1.2MB (3 mode)

6.3 HDD

Dimension : 2.5", 8.5 / 9.5 mm height
Vendor : Toshiba and Fujitsu

6.4 CD-ROM

Vendor : QMATE, TEAC
Dimension : 12.7-mm height, 12/8 cm CD-ROM disc
PIO Mode 4, 24X
Average 3.1W, Sleep 0.05W
ATAPI Interface

DVD

Vendor : TORISAN, TOSHIBA
Dimension : 12.7mm height, 12/8cm CD-ROM disc
PIO Mode 4
Average 3.1W, Sleep 0.05W
ATAPI Interface

6.5 BATTERY:

Li-ION

Vendor : PANASONIC , GS
Battery type : Li-Ion, 8 cells (4S2P)
Battery capacity : 14.8V, 3200mAH, (47.36Whrs)

1.1.2. Charge Voltage : 16.8V +2.5% -1.0%

Charge temperature : 0~45°C
Discharge temperature : -20~60°C
End of Discharge : 11V
Cycle life= 500 times
Overcharge protection : when battery voltage reach 17.2 ±0.2V
Over-discharge protection : when battery voltage decrease to 10 ± 1V
Pre-charge current: 0.2A
Charge current : When system is power off : 2A
When system is powered ON : 1A

Ni-MH

Vendor : PANASONIC, TOSHIBA
Battery Type : Ni-MH, 10 cells (10S)
Battery Capacity : 12.0V, 4500mAh (54.0 watts)
Charge voltage : 16.8V +2.5% -1.0%
Charge temperature : 0~45°C

Discharge temperature : -20~60°C
End of Discharge : 10V
Cycle life= 500 times
Pre-charge current: 0.2A
Charge current : When system is power off : 2A
When system is powered ON : 1A

6.6 TOUCH PAD

Synaptic
Capacitor sensor
Support edge motion
Support virtual scroll bar
Support 2 or 3 button mode
ESD withstand: 15KV
Power Consumption: 2.75mA / 5V
X/Y resolution: 500 points/inch
Interface: PS/2

6.7 KEYBOARD

Supplier : KC Matrix-290
Travel : 3.0 ±0.2mm
Support : 3 window keys
Key pitch : 19mm
Dimension : 249mm x 100.85mm x 7.8 mm

6.8 MODEM/FAX MODULE

Modem chip : LUCENT DSP1645 + CSP1034AH + CSP1027

Meet PC99 Window modem requirement

Support :

3.3V PCI bus / V.80 (for H.324) / DSVD(V.70) / half duplex speaker phone
V.34bis / AT command set / V.42 (LAPM) and MNP error correction
V.42bis and MNP5 data compression / 56Kflex protocol / V.17, V.29, V.27ter, V.21ch2
/ VI Group III fax / telephony answering machine / DTMF generation and
detection / V11. Local handset, telephone and microphone record / telephone
line and headset or VIII. Peaked playback / voice view / caller ID / host base
DSVD

Power : active=450mW idle=160mW sleep=10mW

Notebook PC Service Manual

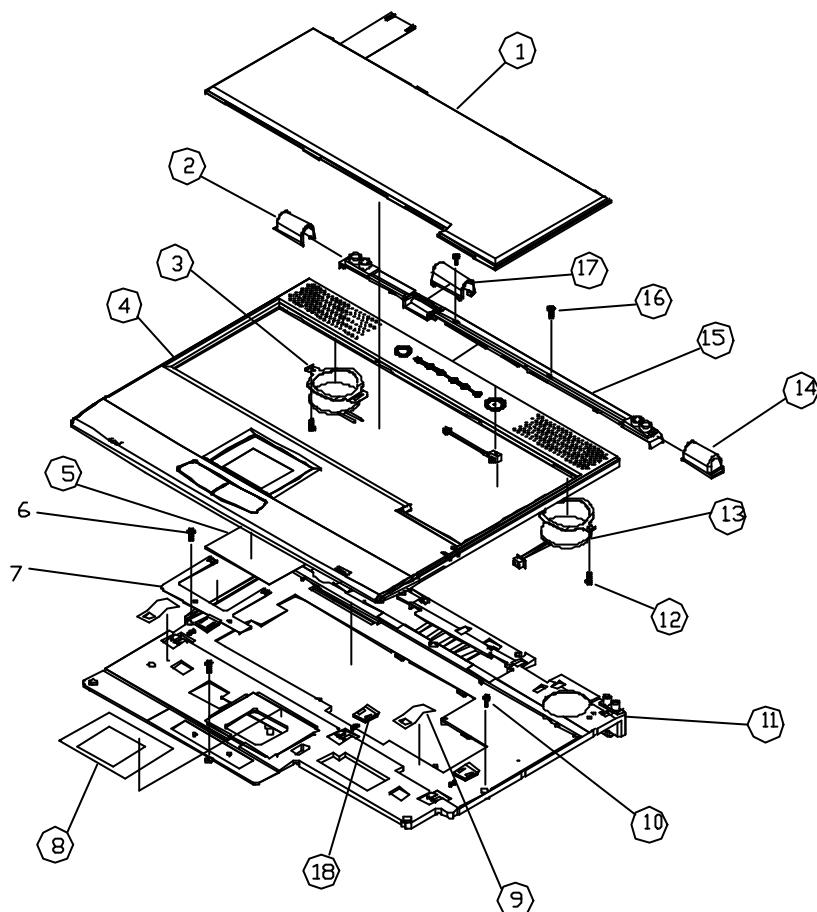
Model : 340S2

Chapter 7 Explosion Diagram

UNIWILL COMPUTER CORP.

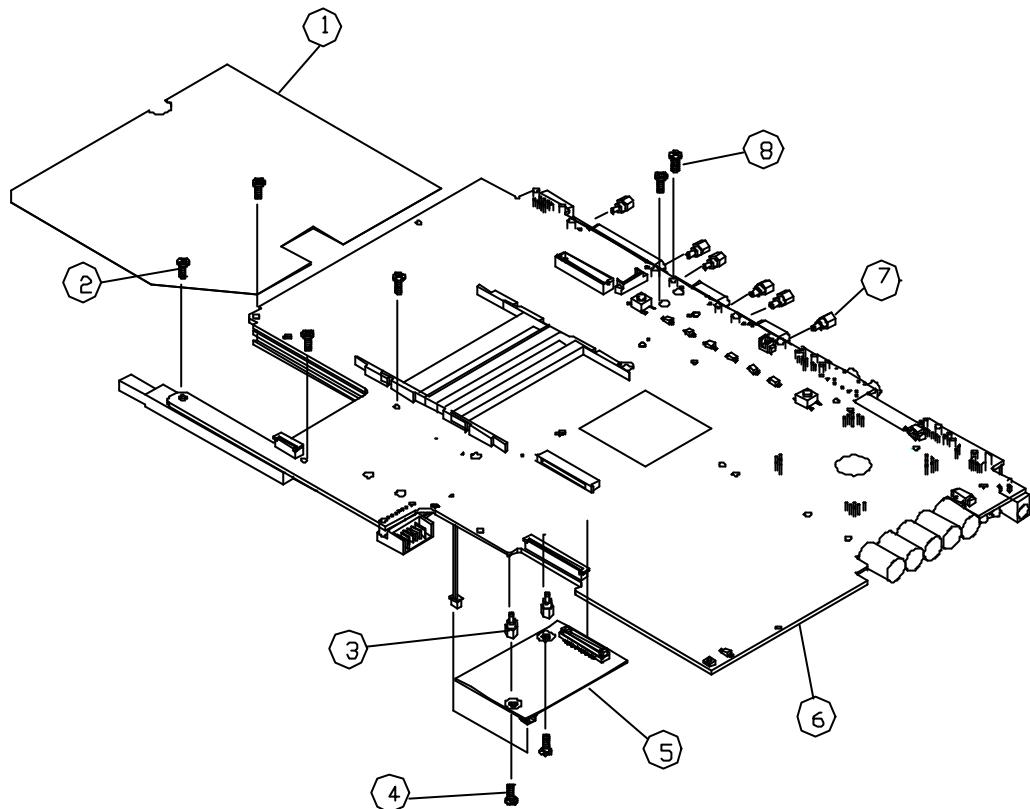
No. 24 Pei Yuan Road
Chung Li Industrial Park, Chung Li City
Tao Yuan Hsien, Taiwan
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TEL: 886-3-461-6000
FAX: 886-3-461-6317
URL: <http://www.uniwill.com.tw/>

7.1 TOP CABINET ASSEMBLY



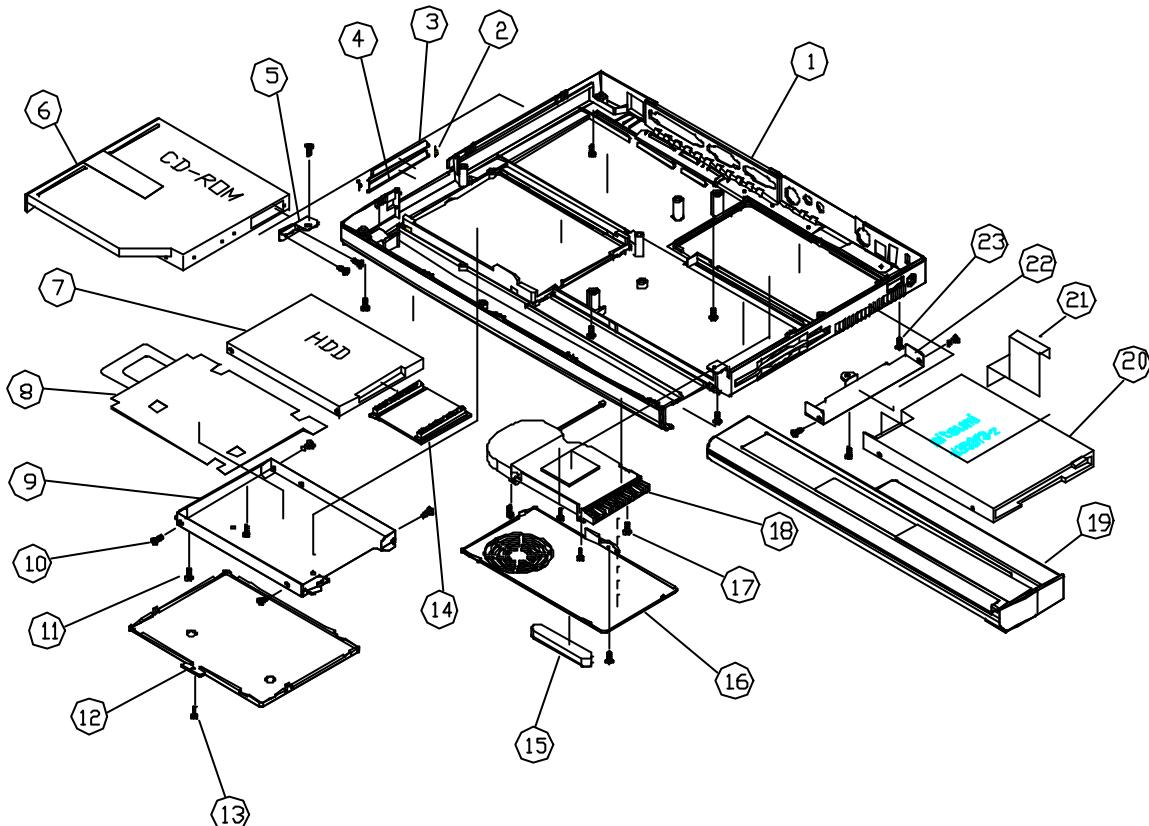
NO.	PART NUMBER	DESCRIPTION
1	71-002901-00	K/B US
2	50-352924-00	COVER HINGE (L) 340
3	40-102902-00	SPRING SPK 340
4	50-312927-00	TOP CAB. ASSY – ID2
5	74-08U204-00	T/P
6	41-720120-06	M2.0*6
7	7915034020	FPC T/P PAD
8	50-212904-00	ADHESIVE TAPE
9	40-102901-00	SPRING FOR K/B 340
10	41-720120-04	M2.0*4
11	50-312903-00	TOP HOUSING (MG) 340
12	41-720120-03	M2.0*3
13	22-300513-00	SPEAKER FG-36N081
14	50-352922-00	COVER HINGE (R) 340
15	50-352921-00	COVER HINGE FRAME
16	41-720120-03	M2.0*3
17	50-352924-00	COVER CABLE FOR 340
18	50-432911-00	LATCH K/B FOR (BLACK)

7.2 PCB (MOTHERBOARD) ASSEMBLY



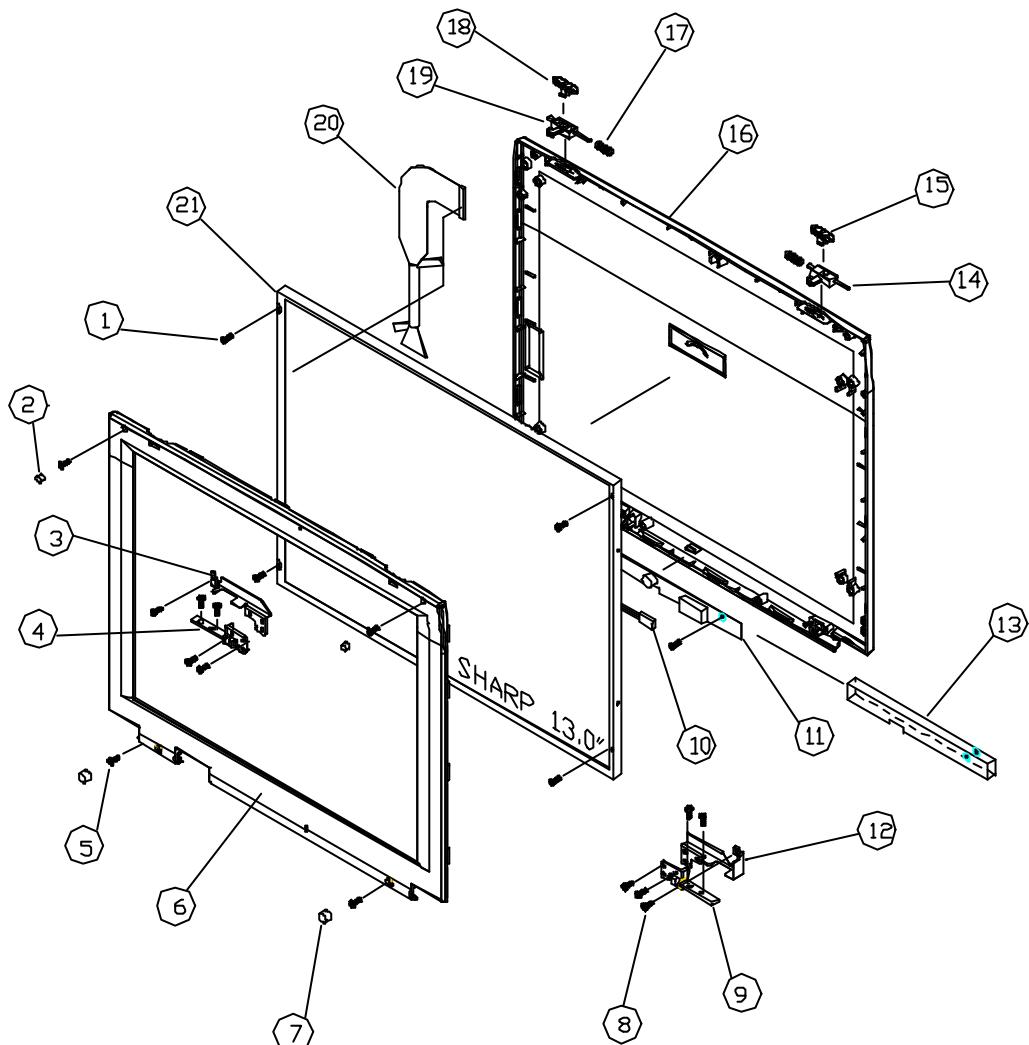
NO.	PART NUMBER	DESCRIPTION
1	7914129030	MYLAR CD-ROM 340
2	41-720120-08	SCREW M2.0*8
3	41-300002-04	HEX M2.0*3(HEX*3)CU
4	41-720120-04	M2.0*4
5	76-0U0137-00	MODEM CARD
6	581510385AP	M/B ASSY
7	41-300002-21	HEX D4.8*10.2L
8	41-720120-06	SCREW M2.0*6

7.3 BASE CABINET ASSEMBLY



NO.	PART NUMBER	DESCRIPTION
1	50-322903-00	BOTTOM CAB ASSY W/OUT TV OUT
2	40-102904-00	SPRING PCMCIA DOOR
3	50-202907-00	DOOR PCMCIA (U) 340
4	50-202908-00	DOOR PCMCIA (L) 340
5	40-302913-00	BRACKET CDROM 340
6	5810503401P	CD-ROM ASSY 24X QUANTA
7		HDD
8	50-212902-00	MYLAR HDD 340
9	50-502902-00	PLATE HDD 340
10	41-760230-03	SCREW M3.0*3
11	41-720120-04	SCREW M2.0*4
12	50-202906-00	DOOR HDD 340
13	41-720120-04	SCREW M2.0*4
14	29-102907-00	CABLE HDD 340
15	52-002901-00	RUBBER FOOT 340
16	50-202905-00	DOOR CPU 340
17	791C250452	SCREW M2.5*4.5 PAN
18	27-322911-00	THERMAL MODULE FOR 340S2
19	23-523200-21	BATTERY Li-Ion 3200mAH PAN.
20	5810603401P	FDD ASSY MITSUMI
	5810603402P	FDD ASSY TEAC
21	29-163403-00	FFC FDD
22	40-302914-00	BRACKET FDD 340
23	41-720725-08	SCREW M2X0.45X8

7.4 LCD ASSEMBLY



NO.	PART NUMBER	DESCRIPTION
1	41-720525-06	SCREW M2.5*6
2	52-012919-00	RUBBER FOR DISPLAY (T) 340
3	40-302905-00	BRACKET (L) FOR LCD
4	40-152907-00	HINGE (L) A-TYPE 340
5	41-720525-06	SCREW M2.5*6
6	50-332921-00	FRONT CAB 14.1
7	52-012911-00	RUBBER FOR DISPLAY (B)
8	41-720120-04	SCREW M2.0*4
9	40-152909-00	HINGE (R) A-TYPE 340
10	29-102901-00	CABLE FOR LCD INVERTER 14.1
11	76-030533-00	INVERTER FOR 14.1"
12	40-302906-00	BRACKET (R) FOR LCD
NO.	PART NUMBER	DESCRIPTION
13	50-212900-00	MYLAR FOR INVERTER 340
14	50-242910-00	HOOK LCD (R) 340
15	50-412906-00	KNOB LCD (340)

16	50-342961-00	BACK CABINET
17	40-101603-00	SPRING LCD GE-6200
18	50-412906-00	KNOB LCD 340
19	50-242910-00	HOOK LCD (L) 340
20	29-012900-30	CABLE FOR LCD
21	58103A55D1P	LCD 14.1" T CHI

Notebook PC Service Manual

Model : 340S2

Chapter 8 Global Support

UNIWILL COMPUTER CORP.

No. 24 Pei Yuan Road
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FAX: 886-3-461-6317
URL: <http://www.uniwill.com.tw/>

Global Support

UNIWILL COMPUTER CORP.

Taiwan:

24, Pei-Yuan Rd., Chungli Industrial Park, Tao-Yuan Hsien, TAIWAN, R.O.C.

Tel: 886-3-4616000 Ext. 1542, Fax: 886-3-4616317

UNIWILL COMPUTER (EURO) B.V.

NetherLands:

Tarweweg 5, 6534 AM Nijmegen, The Netherlands

Tel: 31-24-388-3255, Fax: 31-24-356-5343

UNIWILL COMPUTER (US):

46716 Lakeview Blvd., Fremont, CA94538, USA

Tel: 1-510-580-6888, Fax: 1-510-580-5666

RMA Number Request Form									
UNIWILL									
CUSTOMER :			TEL :		DATE (YY/MM/DD) :				
REQUESTOR :			FAX :		PAGE : <u> </u> OF <u> </u>				
ADDRESS :			EMAIL :						
ITEM	SERIAL NUMBER	MODEL / PART NAME	FAILURE SYMPTOM		QTY.	RAM SIZE	CPU	OUT-WARRANTY	IN-WARRANTY
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
UNIWILL Customer Service Division			TEL: 886-3-4616000				FAX : 886-3-461-6384		
ADDRESS : 24, PEI YUAN RD., CHUNGLI INDUSTRIAL PARK, TAO YUAN, TAIWAN, ROC							EMAIL : cs_chl@uniwill.com.tw		
CUSTOMER Signature :			UNIWILL Approval:		Issued By :			Date :	
			RMA Number:		Received By:			Date :	
Request Date :					Approved By :			Date :	

ST2S-01B

Remark: Any pertinent information you can provide us to expedite our response will be greatly appreciated. When filling up information in the "failure symptoms" space, please note the following: 1. Possibility of duplicating the problem for our study purposes. 2. Frequency of problem occurrence 3. Any results from regenerating the problem on the other types of system (e.g., IBM products, any other models of Uniwill machines, etc.) 4. Circumstances that may cause this problem (e.g. making alterations in the system configuration such as installing a video adapter, etc.)

Notebook PC Service Manual

Model : 340S2

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UNIWILL COMPUTER CORP.

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FAX: 886-3-461-6317
URL: <http://www.uniwill.com.tw/>

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