



NB_MB Level 1 Training Materials



Overview

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- Chapter 2. Customer Induced Damage (CID) criteria
.....P6~P28
- Chapter 3. ASUS pretest kit package contents...P29~P34
- Chapter 4. Pretest operate descriptionP35~P108

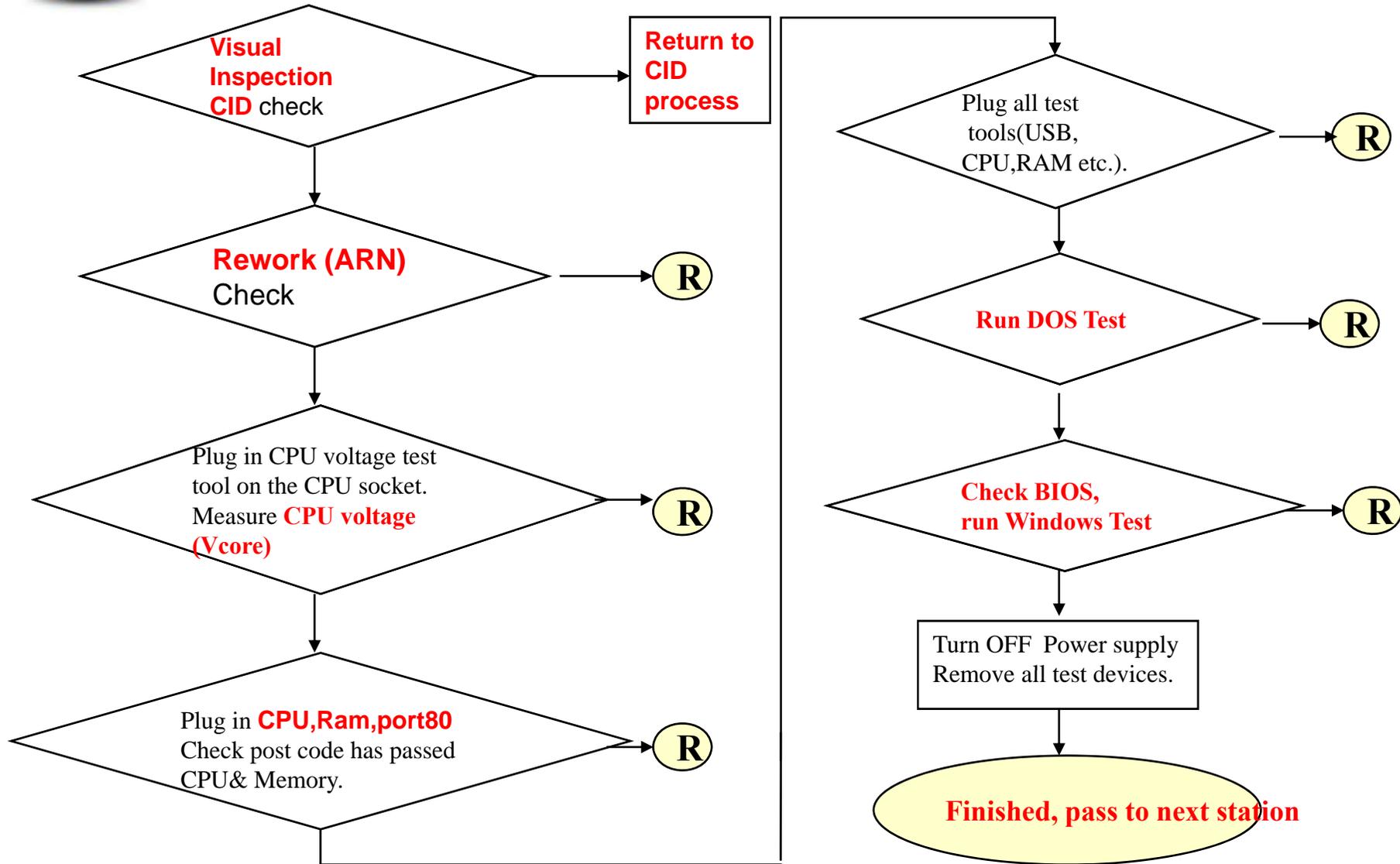


Chapter 1

Testing Flow Chart



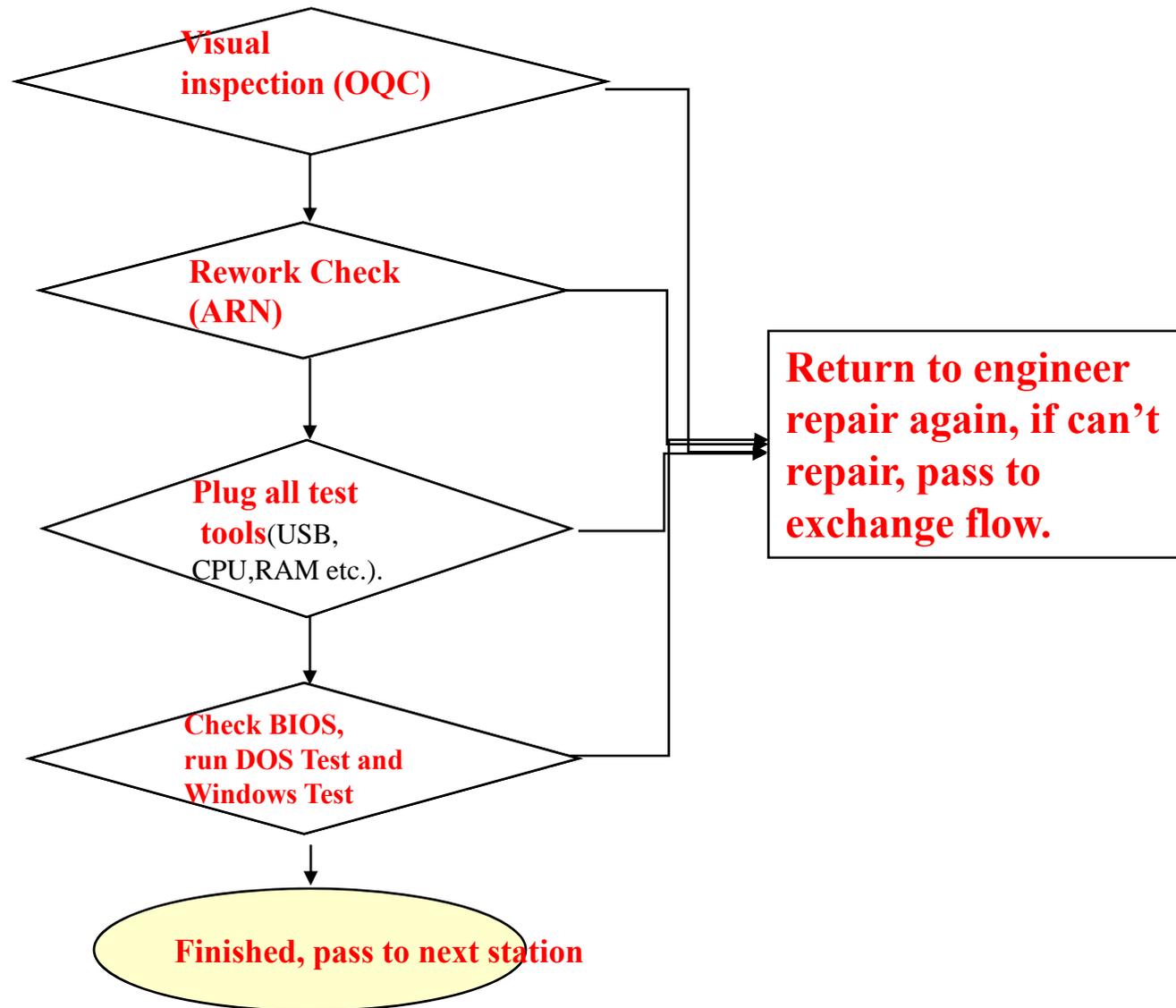
1. Pretest Flow Chart



Means Return to RMA or Pass to Repair Engineer.



2. Final Test Flow Chart





Chapter 2

Customer Induced Damage (CID) criteria

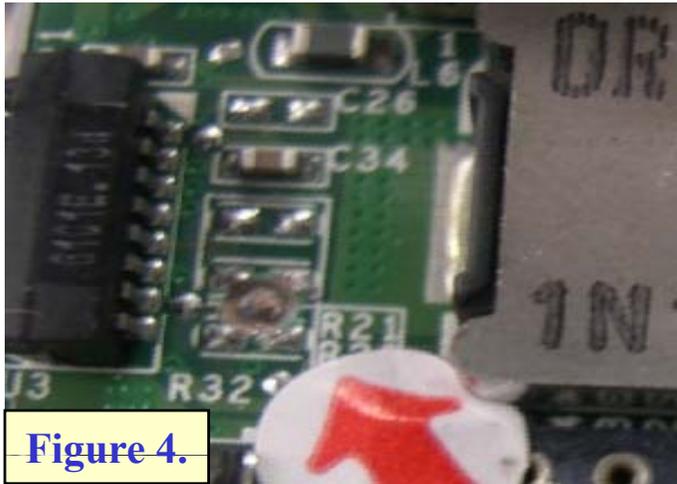
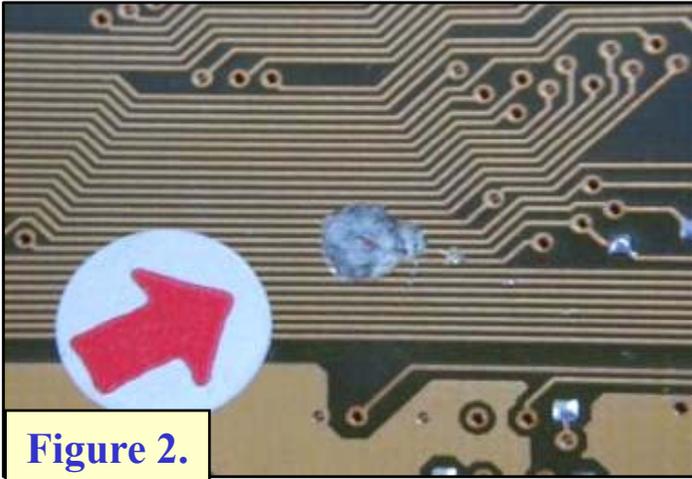
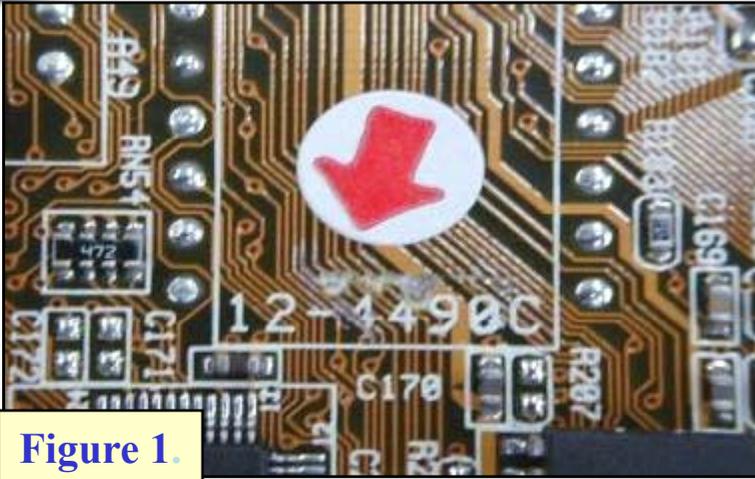


CID Outline

- 1. PCB Trace Scratched*
- 2. PCB Broken*
- 3. Damaged capacitors, resistors, inductors, small passive components, socket, etc.*
- 4. PCB & Component Oxidation*
- 5. PCB Burned*
- 6. Component Burned*
- 7. Missing Component*
- 8. S/N Damage*
- 9. Dirt*
- 10. CID & O.O.W. service process flow chart*



1-1 PCB Trace Scratched





1-2 PCB Trace Scratched

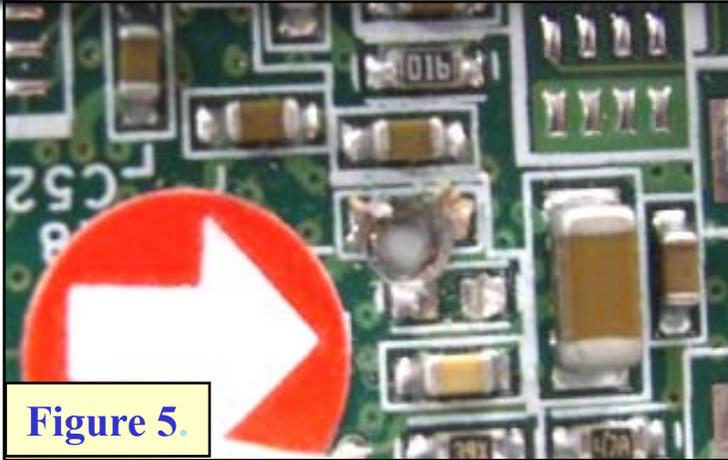


Figure 5.

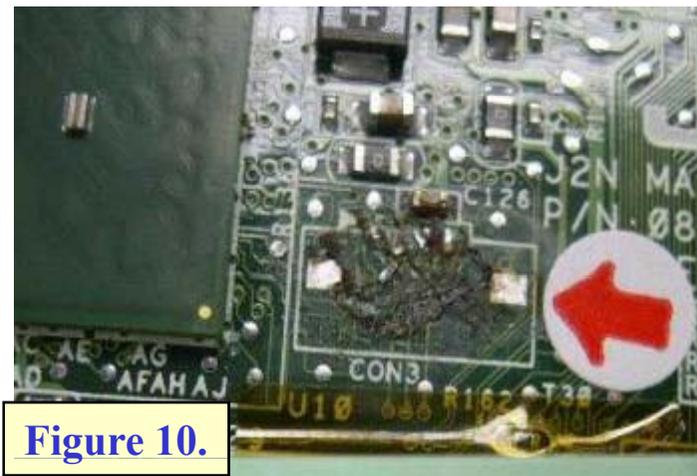
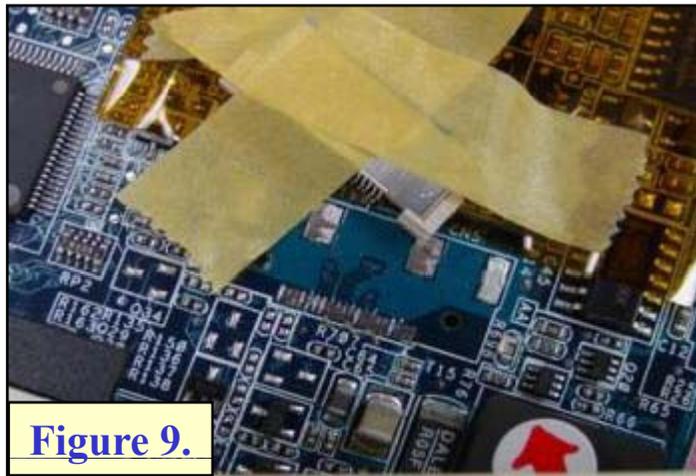
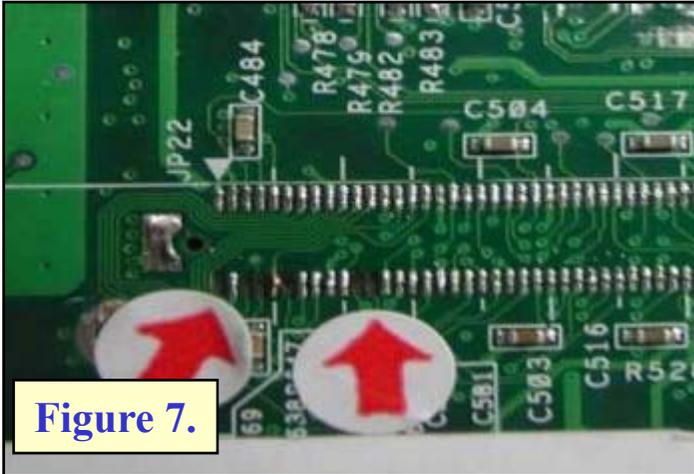


Figure 6.

Damage	Comments	Repair	Exchange	In-Warranty	Out-Warranty
PCB Trace Scratched [Figure 1~6]	PCB Trace Scratched and PCB broken inside	Rejected	-	-	-
	PCB Trace Scratched and PCB no broken inside under 1 lines trace (If customer request)	Accepted	-	Charge	Charge



1-3 PCB Trace Scratched





1-4 PCB Trace Scratched

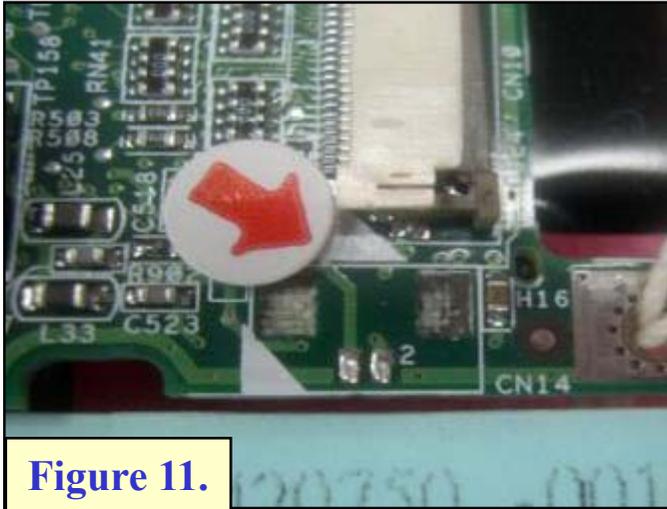


Figure 11.

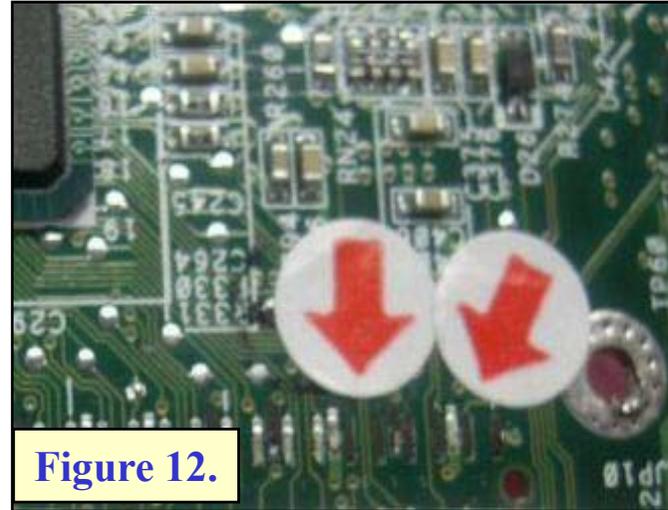


Figure 12.

Damage	Comments	Repair	Exchange	In-Warranty	Out-Warranty
PCB Trace Scratched [Figure 7~12]	PCB PAD Broken	Rejected	-	-	-
	PCB PAD Broken Under 2pcs PAD and the same PCB side (If customer request)	Accepted	-	Charge	Charge



2-1 PCB Broken

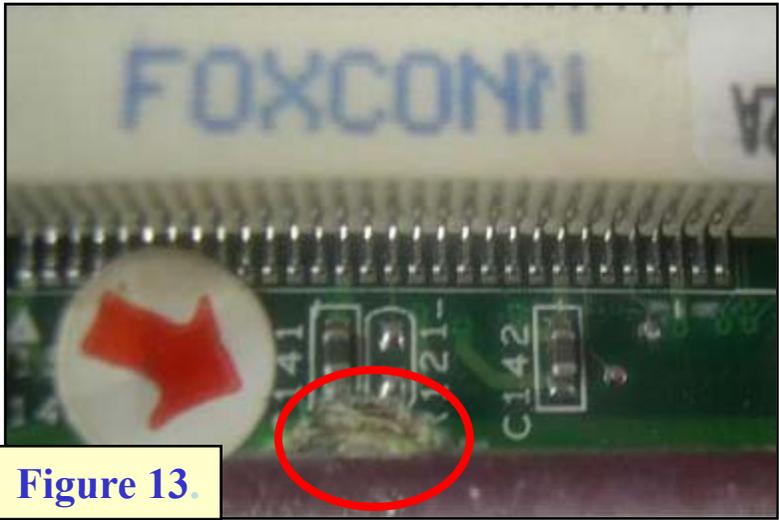


Figure 13.

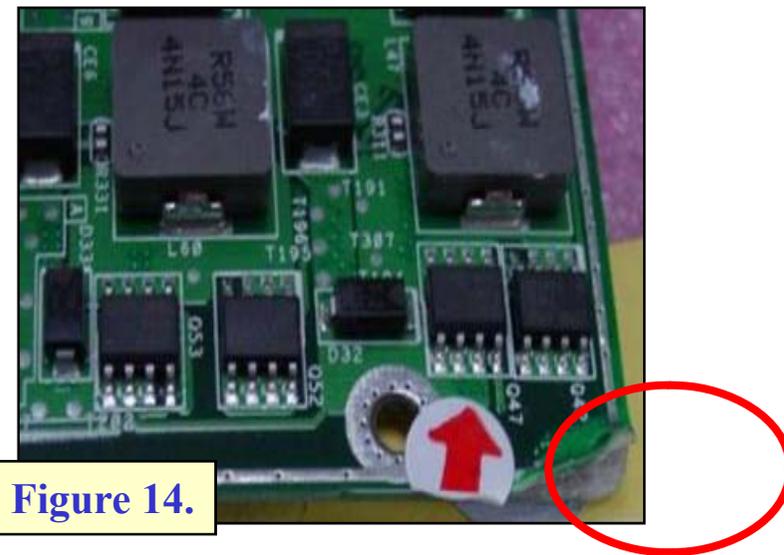


Figure 14.

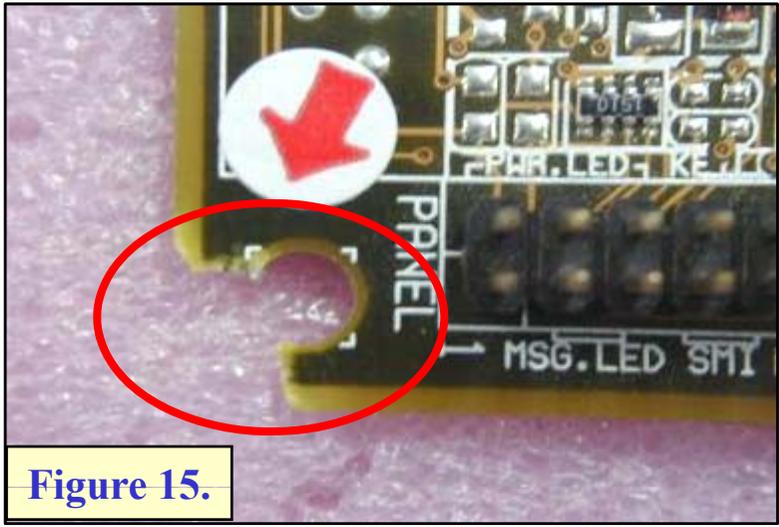


Figure 15.



2-2 PCB Broken

Damage	Comments	Repair	Exchange	In-Warranty	Out-Warranty
PCB Broken [Figure 13~15]	The broken part already destroy PCB	Rejected	-	-	-



3-1 Damaged capacitors, resistors, inductors, small passive components, socket, etc.

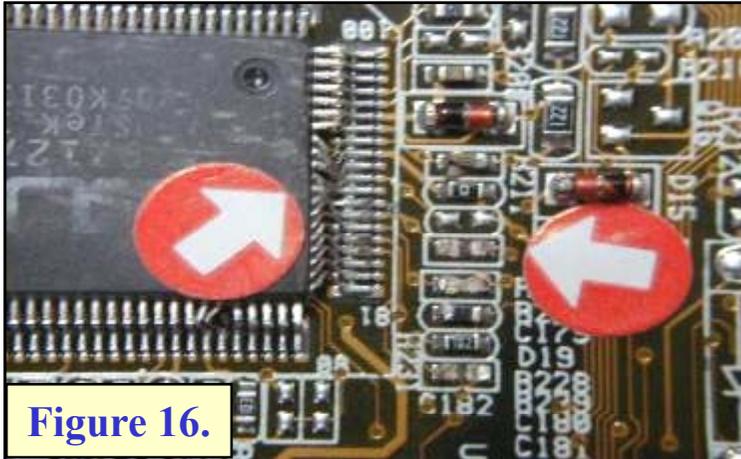


Figure 16.



Figure 17.

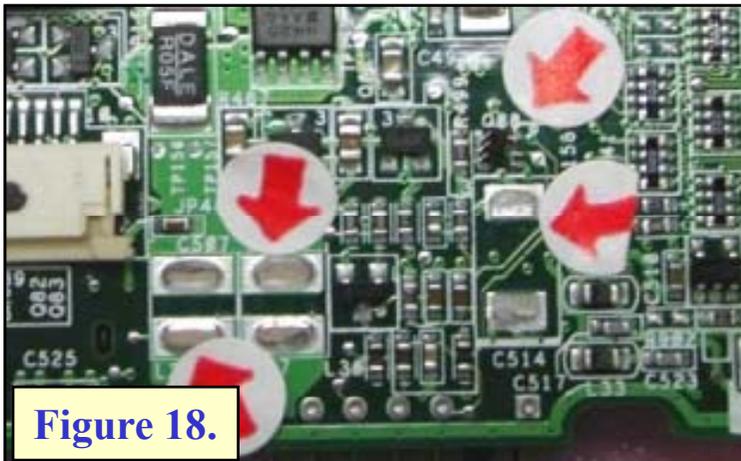


Figure 18.

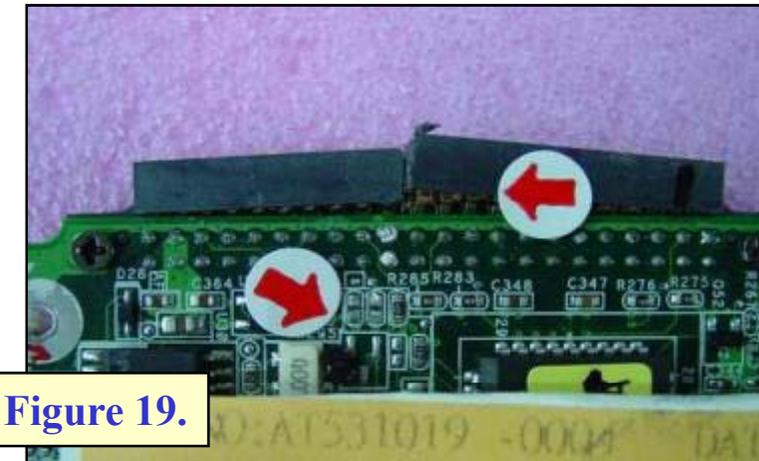


Figure 19.



3-2 Damaged capacitors, resistors, inductors, small passive components, socket, etc.

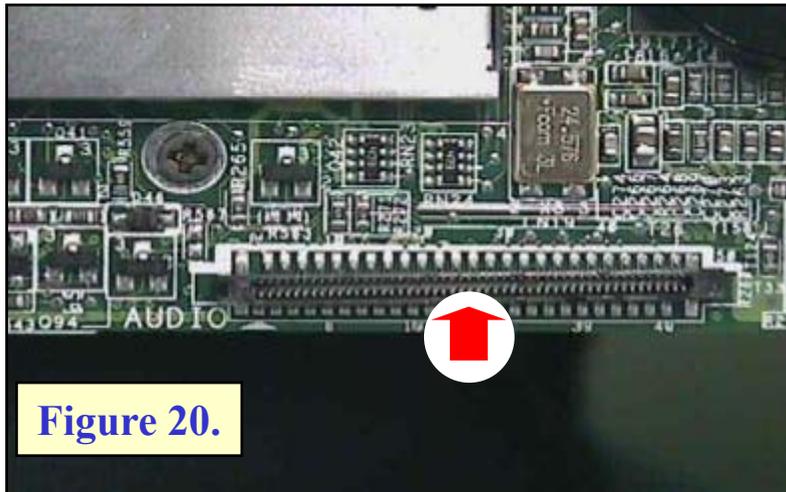


Figure 20.

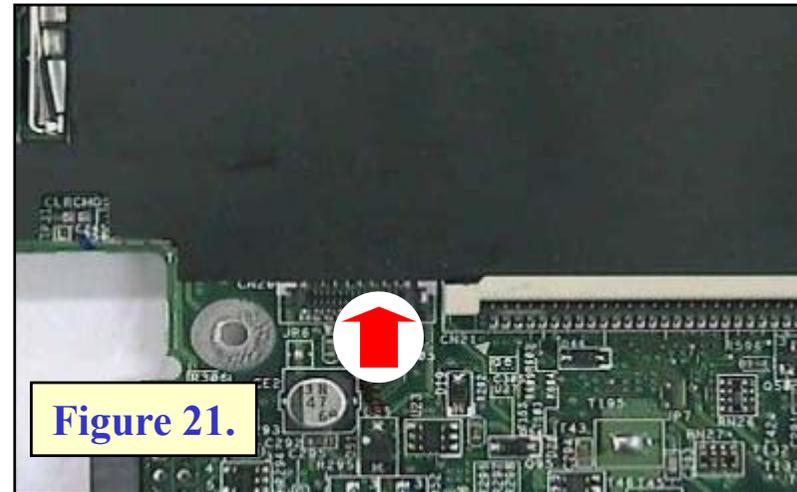
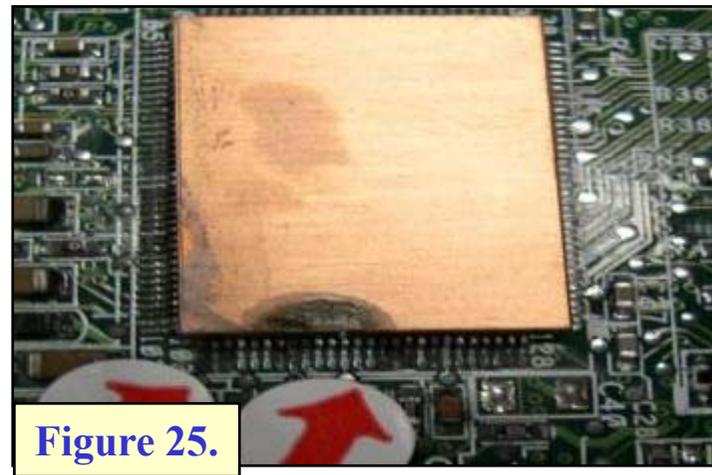
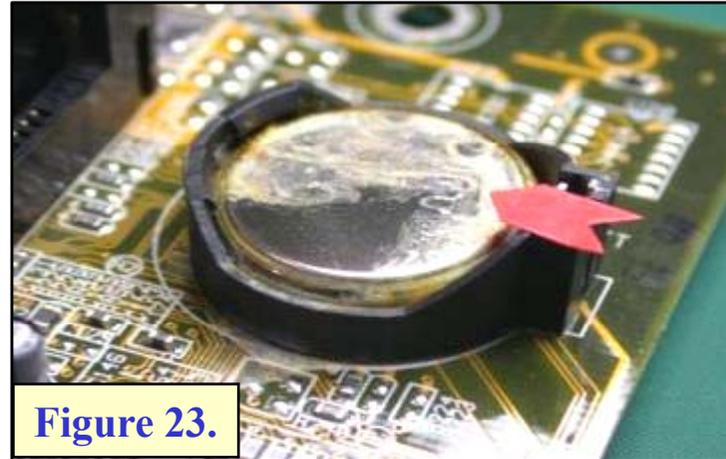
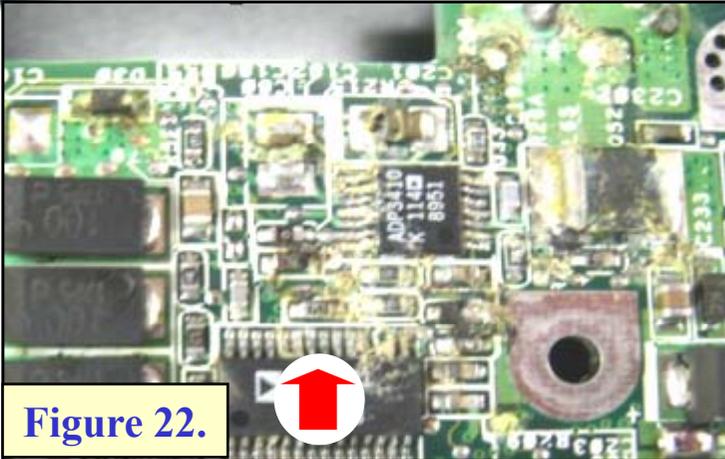


Figure 21.

Damage	Comments	Repair	Exchange	In-Warranty	Out-Warranty
Damaged Component [Figure 16~21]	If under 3pcs impacted broken components slightly and PCB is ok without any broken	Accepted	-	Charge	Charge
	If it's serious impacted or PCB broken more than 3 lines	Rejected	-	-	-



4-1 PCB & Component Oxidation





4-2 PCB & Component Oxidation



Figure 26.

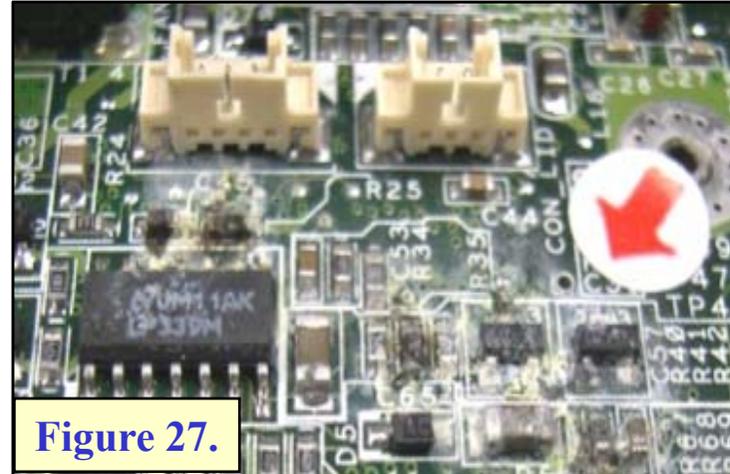


Figure 27.



Figure 28.

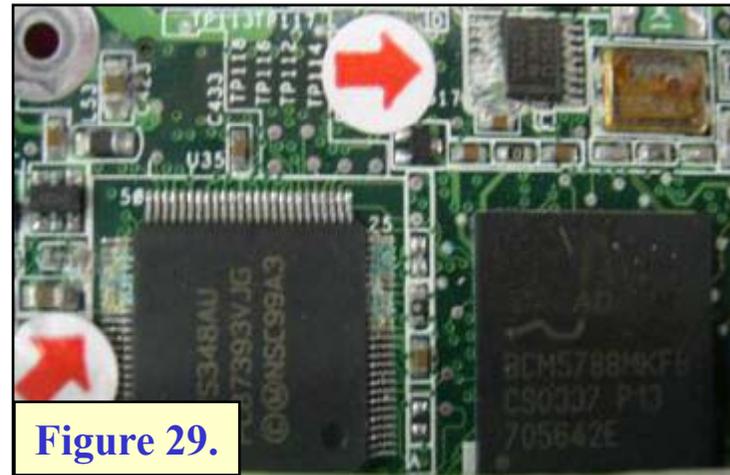


Figure 29.



4-3 PCB & Component Oxidation

Damage	Comments	Repair	Exchange	In-Warranty	Out-Warranty
Component and PCB Oxidation [Figure 22~29]	Component or PCB Oxidation	Rejected	-	-	-



5-1 PCB Burned

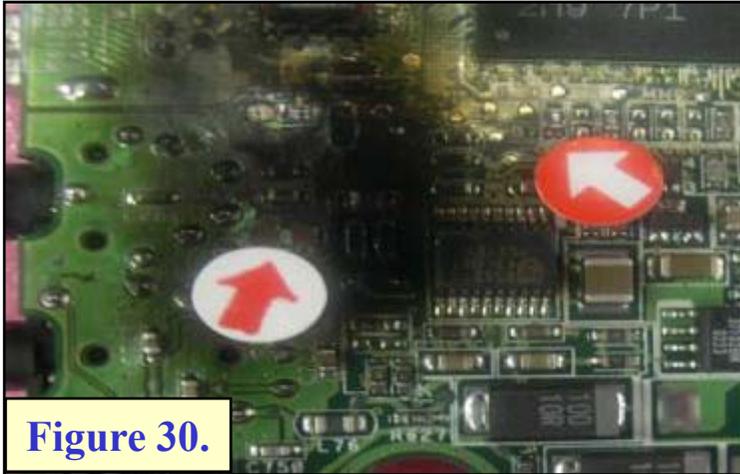


Figure 30.



Figure 31.

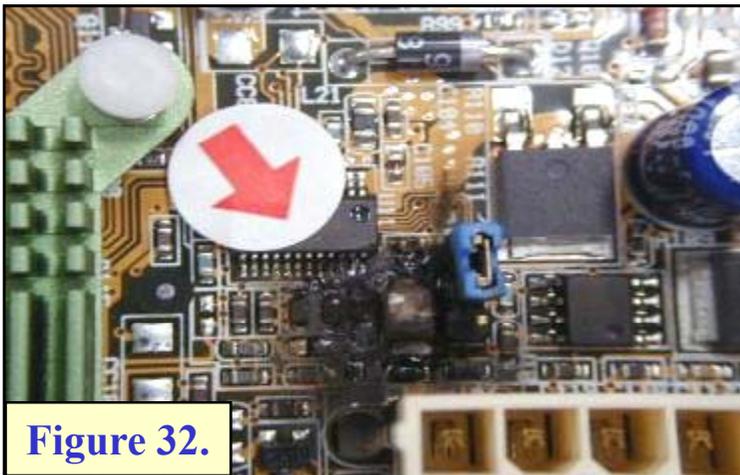


Figure 32.

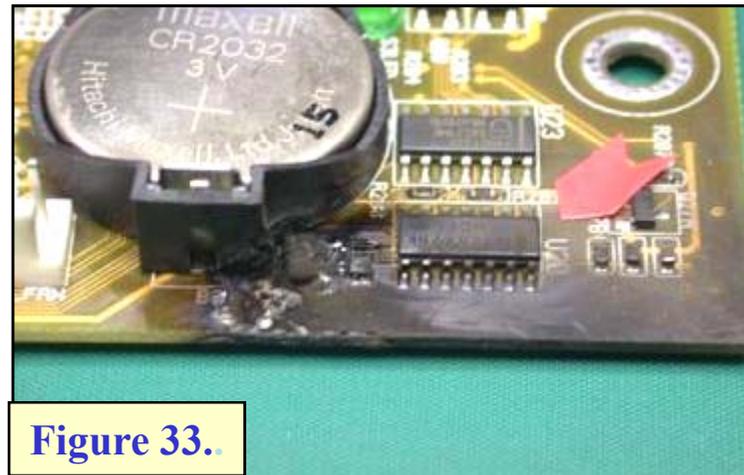


Figure 33.



5-2 PCB Burned

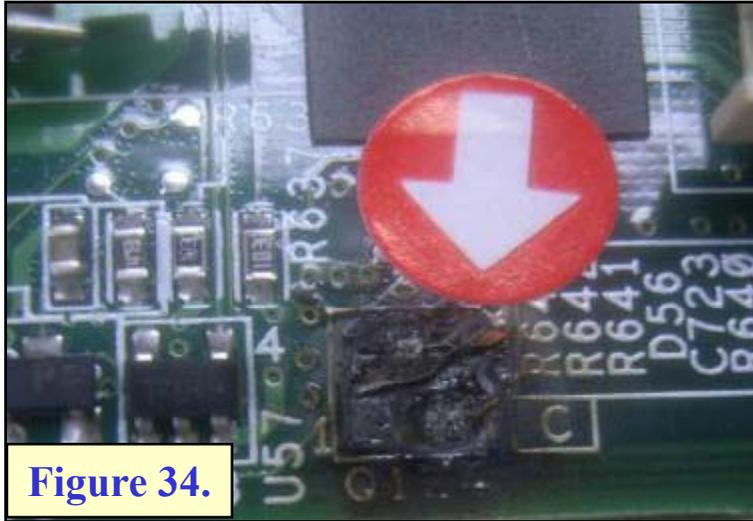


Figure 34.

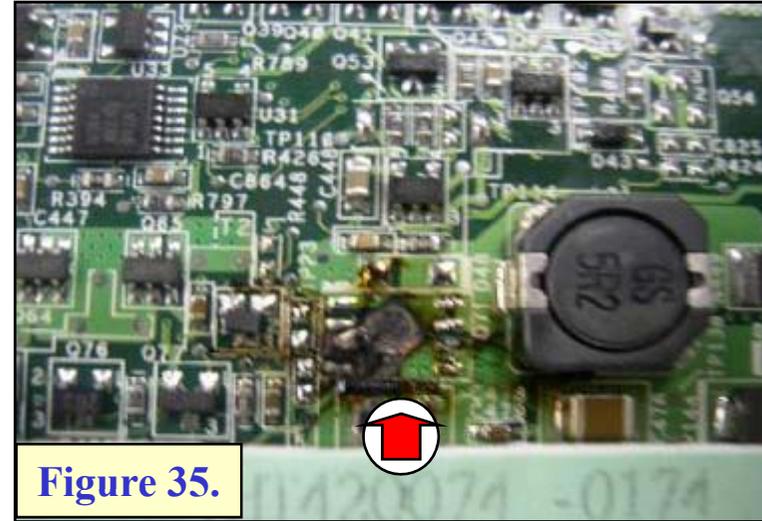


Figure 35.

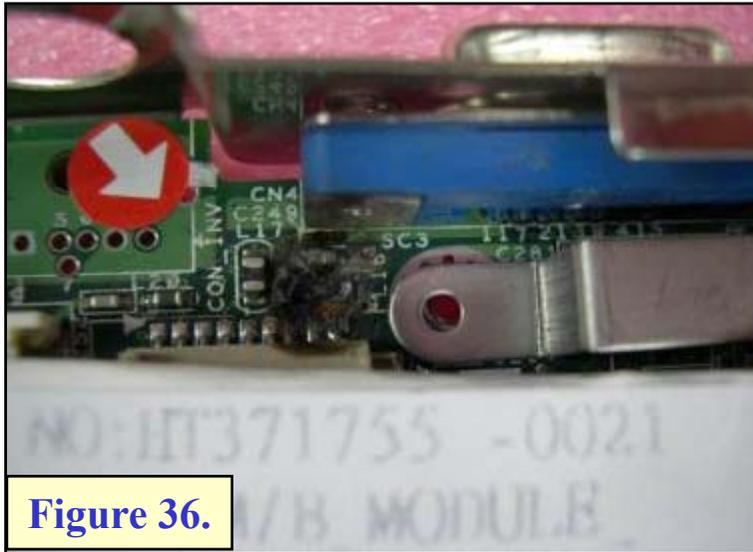


Figure 36.

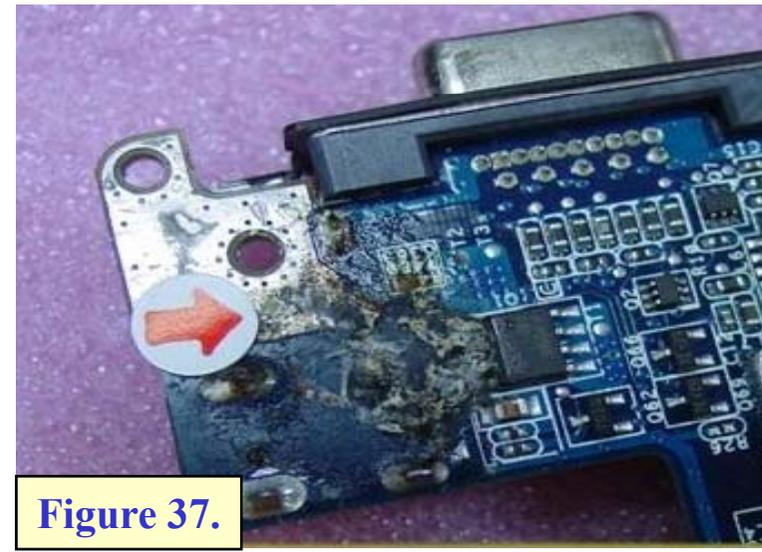


Figure 37.



5-3 PCB Burned

Damage	Comments	Repair	Exchange	In-Warranty	Out-Warranty
PCB Burned [Figure 30~37]	If M/B PCB is burned.	Rejected	-	-	-



6-1 Component Burned



Figure 38.

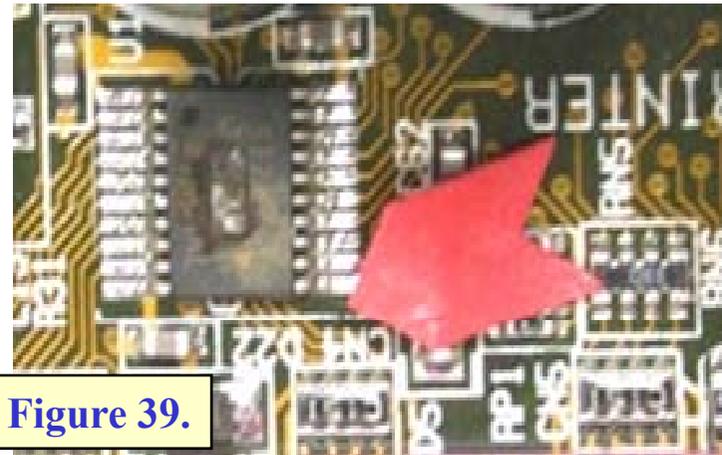


Figure 39.

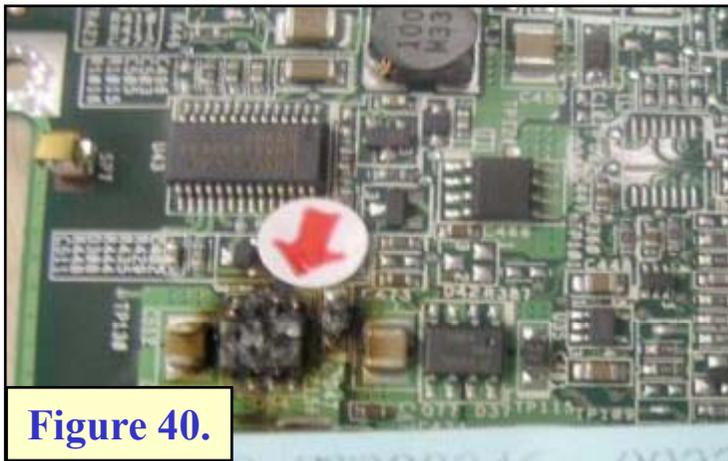


Figure 40.



Figure 41.



6-2 Component Burned

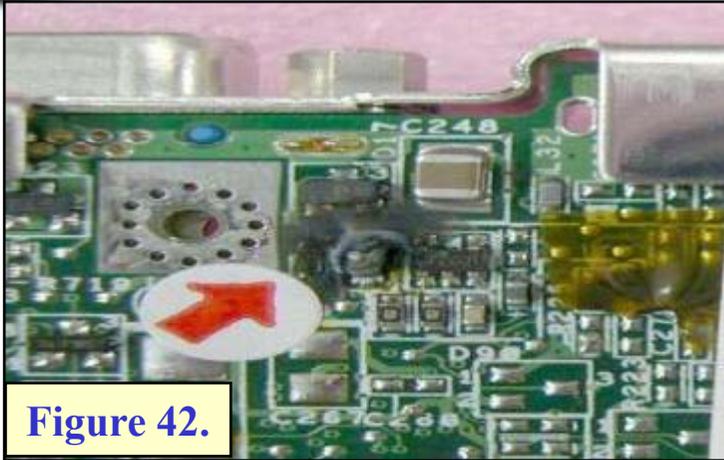


Figure 42.

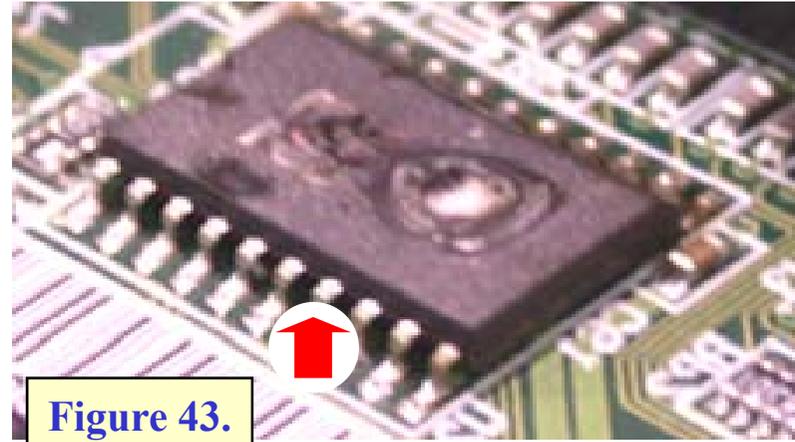


Figure 43.

Damage	Comments	Repair	Exchange	In-Warranty	Out-Warranty
Component Burned [Figure 38~43]	For general	Accepted	-	Free	Charge
	If it's very obvious as user's faulty	Rejected	-	-	-



7-1 Missing Component



Figure 44.

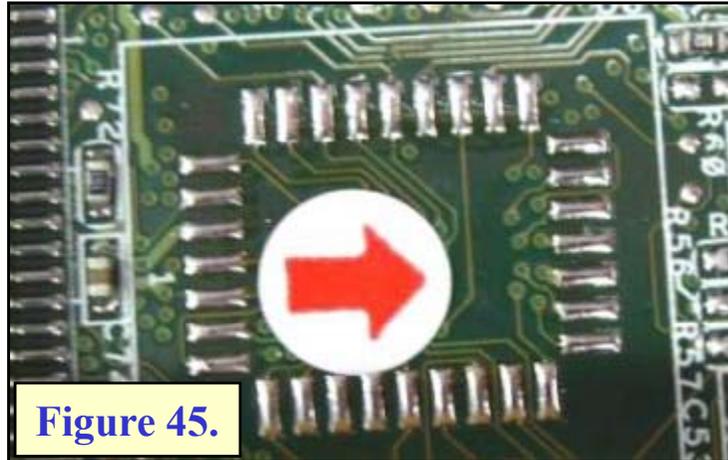


Figure 45.

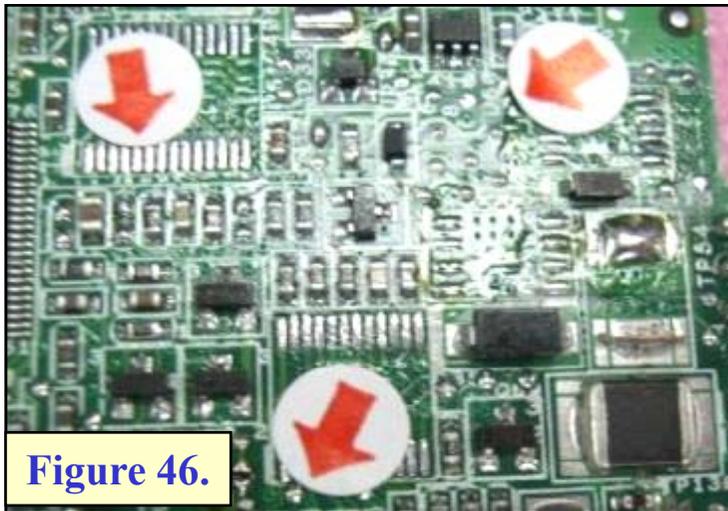


Figure 46.



Figure 47.



7-2 Missing Component

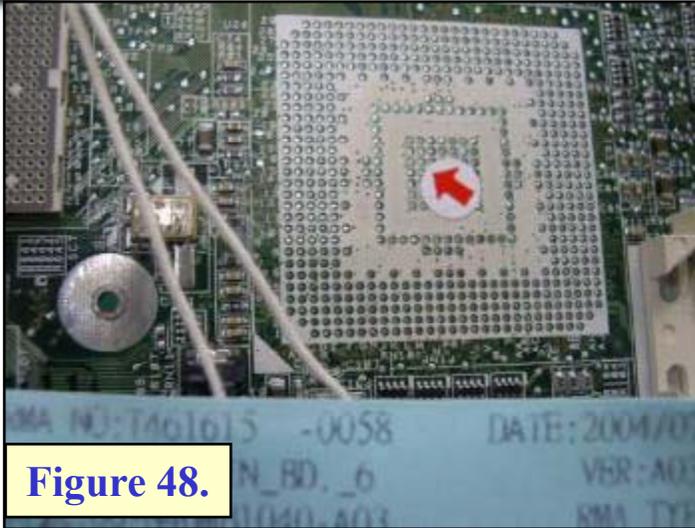


Figure 48.



Figure 49.

Damage	Comments	Repair	Exchange	In-Warranty	Out-Warranty
Missing Component [Figure 44~49]	if missing components by user	Rejected	-	-	-
	Missing components by user (under 2pcs not include BGA) (If customer request)	Accepted	-	Charge	Charge



8-1 S/N Damage



Figure 50.



Figure 51.

Damage	Comments	Repair	Exchange	In-Warranty	Out-Warranty
S/N Damaged [Figure 50]	No S/N or the S/N can't be seen clearly whether it is in warranty.	Rejected	-	-	-
S/N Damaged [Figure 51]	S/N was damaged, but recognize it is in warranty. If can't be repaired, it would be Returned to Customer.	Accepted	-	free	-



9-1 Dirt

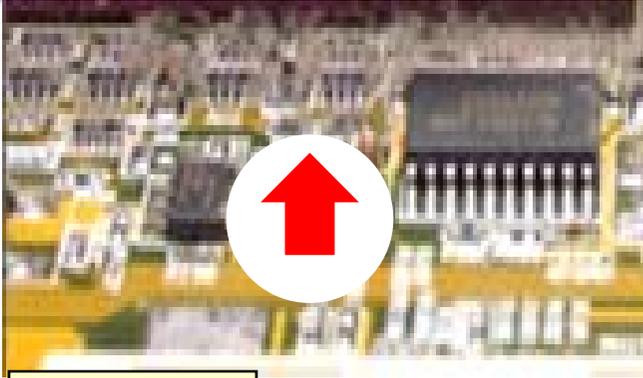


Figure 52.

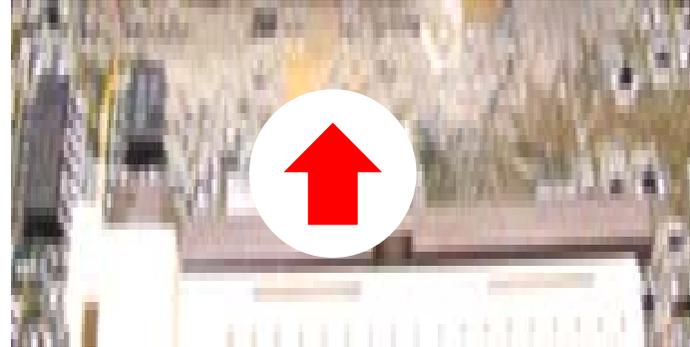
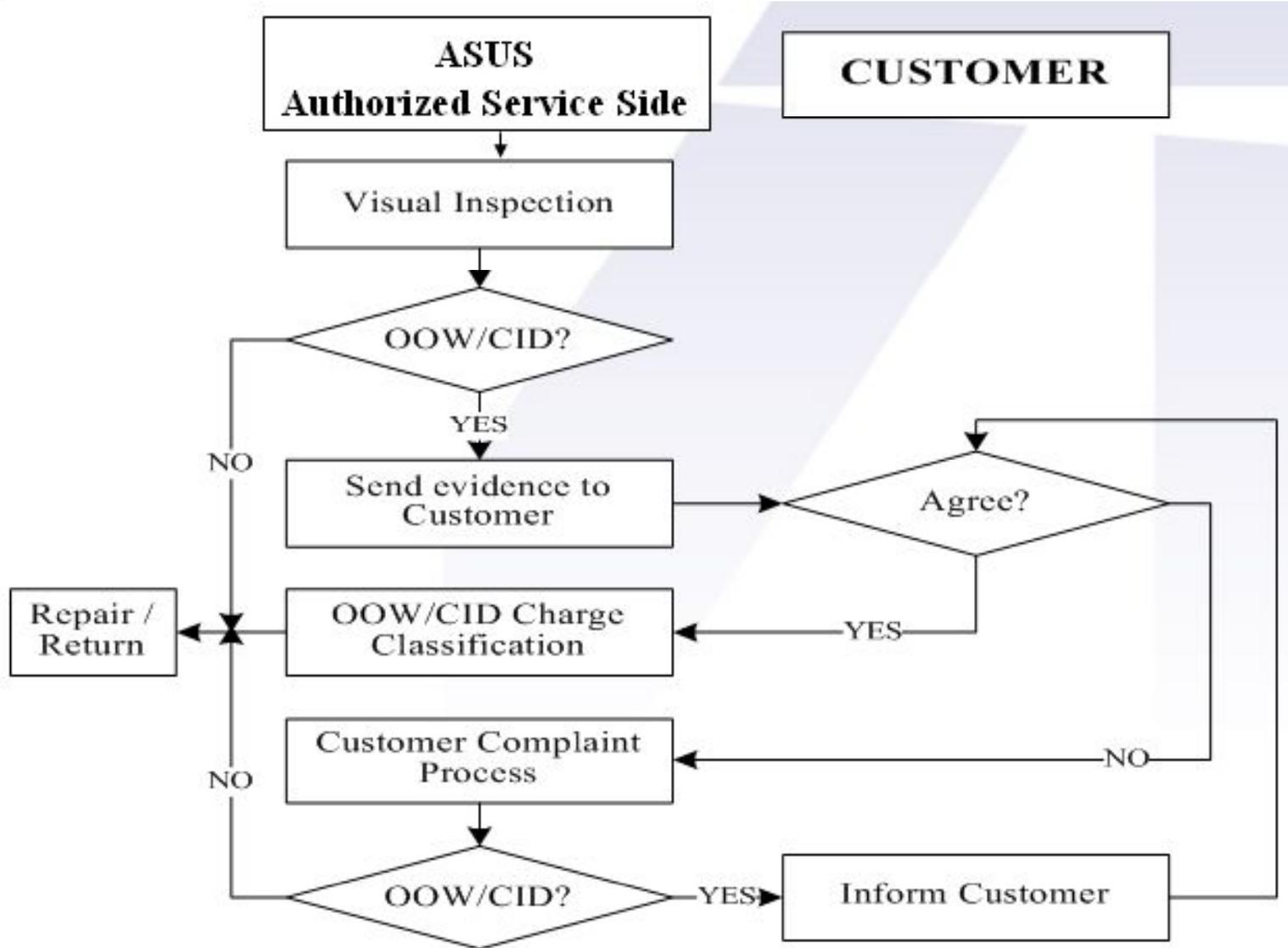


Figure 53.

Damage	Comments	Repair	Exchange	In-Warranty	Out-Warranty
Dirt [Figure 52~53]	For general, if the board is dirt and doesn't influence function. We will clean it.	Accepted	-	-	-



10-1 CID&O.O.W service process flow chart



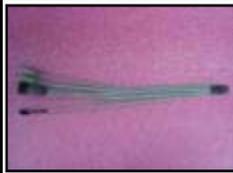


Chapter 3

ASUS Pretest Fixture Package



ASUS Pretest Fixture Package Contents

PART NUMBER	FIXTURE NAME	AMOUNT	PHOTO
22-060001280	AUDIO TEST FIXTURE	1	
60R-R00LA1000	LAN LOOP BACK	1	
80-C1G740-0A01	SWBIOS	1	
80-C1G036-0301	ENG_EZUSB BOARD v2.0	4	
22-060000050	USB CABLE	4	

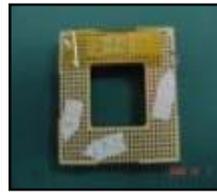


ASUS Pretest Fixture Package Contents

PART NUMBER	FIXTURE NAME	AMOUNT	PHOTO
16-000500007	TOOLS PACKAGE	1	
14-011000040	IEEE 1394 CABLE	1	
14-000500500	MINI USB CABLE	1	
04-267001510	ADAPTER 10W AD620(US/JPN/TWN)	1	
20-521055550	CD-ROM TESTING CD	1	



ASUS Pretest Fixture Package Contents

PART NUMBER	FIXTURE NAME	AMOUNT	PHOTO
	SOCKET479 VOLTAGE TOOL	1	
60R-R0000070	SOCKET478 VOLTAGE TOOL	1	
60R-R0000250	SOCKET 754 VOLTAGE TOOL	1	
80-C1TAK0-0300	PORT80_MINIPCI R3.00	1	
60-N61DB1000-A01P	L2D LPC_DEBUG BD	1	



ASUS Pretest Fixture Package Contents

PART NUMBER	FIXTURE NAME	AMOUNT	PHOTO
60-2N61013136	EC JIG BOARD (FLASH BIOS TOOL)	1	A green printed circuit board (PCB) with various electronic components, including a central chip and several connectors.
14G122300280	28 pin FFC Cable	1	A flat, green flexible printed circuit (FFC) cable with 28 pins.
14G122300240	24 pin FFC Cable	1	A flat, green flexible printed circuit (FFC) cable with 24 pins.
20-T00581702	EGE5000 GIGABIT ETHERNET (NEW CARD TEST TOOL)	1	A small, rectangular network card with a blue Ethernet port and a gold-plated PCI edge connector.
60-NDDDB1000-B01P	PCI-Express Debug Card (type 34)	1	A green PCB with a PCI-Express connector and various test points and components.



ASUS Pretest Fixture Package Contents

PART NUMBER	FIXTURE NAME	AMOUNT	PHOTO
20-521042381	Memory Stick Card	1	
20-TT2600048	SCANDISK SD MEMORY CARD	1	



Chapter 4

Pretest operate description



Pretest operate description-1



1-1

Visual inspection:
Inspect NB_MB have broken, oxidized.....
(Please refer Visual inspection Description)
Customer induce or not.
(Please refer Customer Induce Description)
If any M/B components failed to work after inspection, Please paste the arrow sticker and write on Diagnostic Card



1-2

Check ARN (rework) Notice to know if the model in your hand needs to do any rework



Pretest operate description-2



Before testing,
Please check M/B this signal of
AC_BAT_SYS (19V) must be NO
ground.

2-1

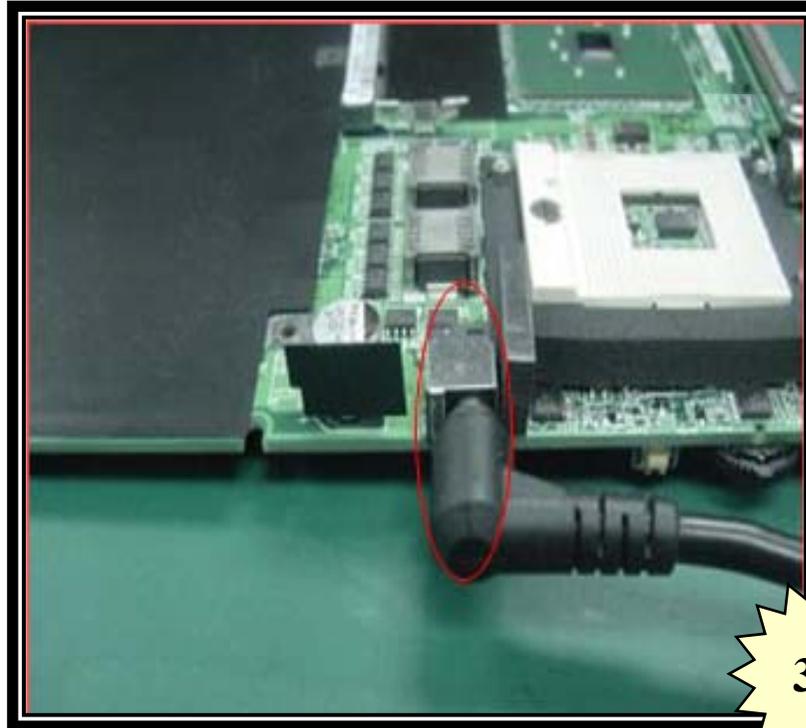


Use Multi-Meter or Oscilloscope to
Measure RTC Voltage.
The range must be between 3.3V~3V.

2-2



Pretest operate description-3



**If Visual inspection is OK.
Please plug AC adapter power
into DC-Jack power connector
on Motherboard.**

3-1



Pretest operate description-4



1.Plug CPU Voltage tool into CPU socket

2.And press Power switch button to turn on.

4-1



Use Multi-Meter or Oscilloscope to Measure CPU Voltage (VCORE) on CPU Voltage tool (+10% voltage to permit)

4-2



Pretest operate description-5



5-1

1. Turn off power and Remove CPU voltage tool.

**2. Plug CPU into CPU socket.
(Dothan\ Yonah\ Merom\ Penryn....etc)**



5-2

**Plug Memory Module
(DDR or DDR2 or DDR3 base on
model request) into Memory
DIMM Slot.**

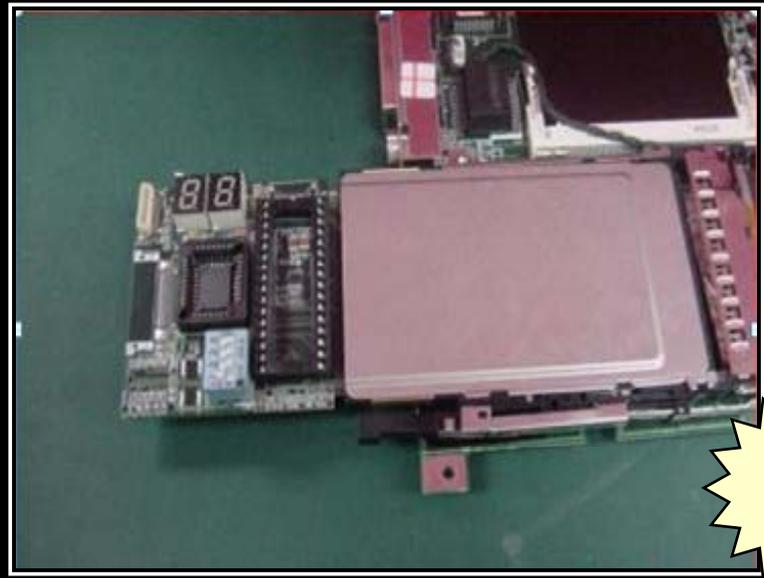


Pretest operate description-6



6-1

Plug PORT80_MINIPCI Debug Card into M/B MINIPCI Slot.

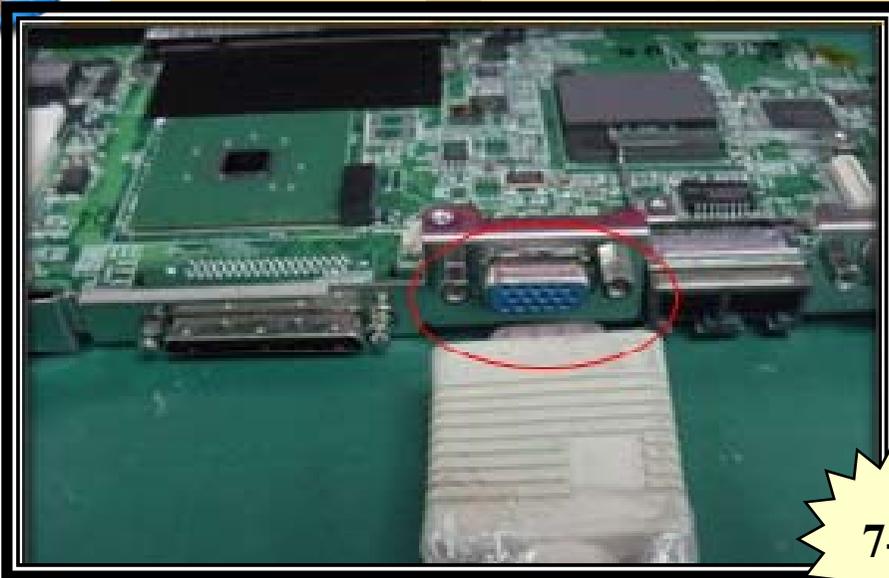


6-2

Note:
Some model NB not supported
MINIPCI Debug Card,
Please use PCMCIA Debug Card to
debug.

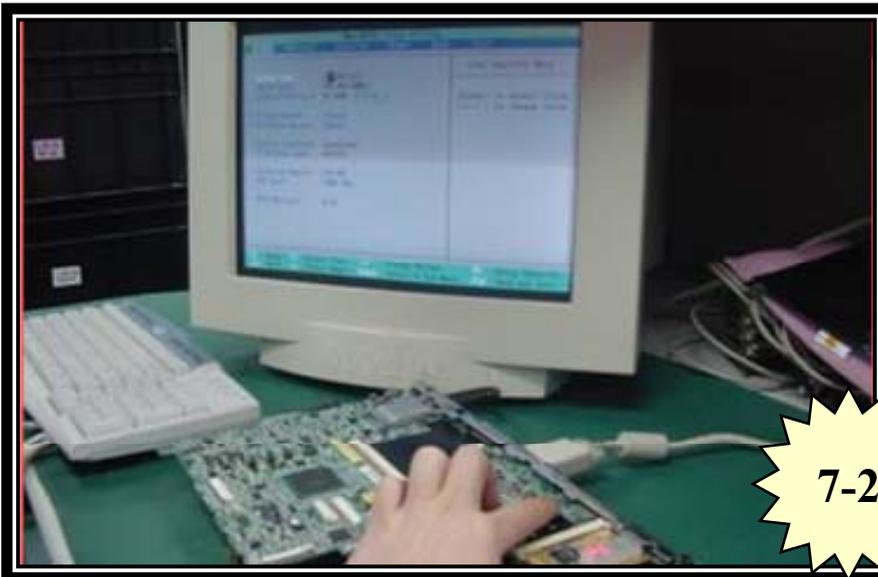


Pretest operate description-7



7-1

**Plug VGA Monitor Cable into
M/B VGA port connector.**



7-2

**Press Power switch button to
booting up,
Check System is boot or NO ?**

**If you find no display on the
monitor, please pass it to engineer
for repair.**



Pretest operate description-8



Plug LAN loop back TEST Fixture into LAN connector(RJ-45).

8-1



Plug USB TEST Fixture into USB connector(RJ-45).

8-2

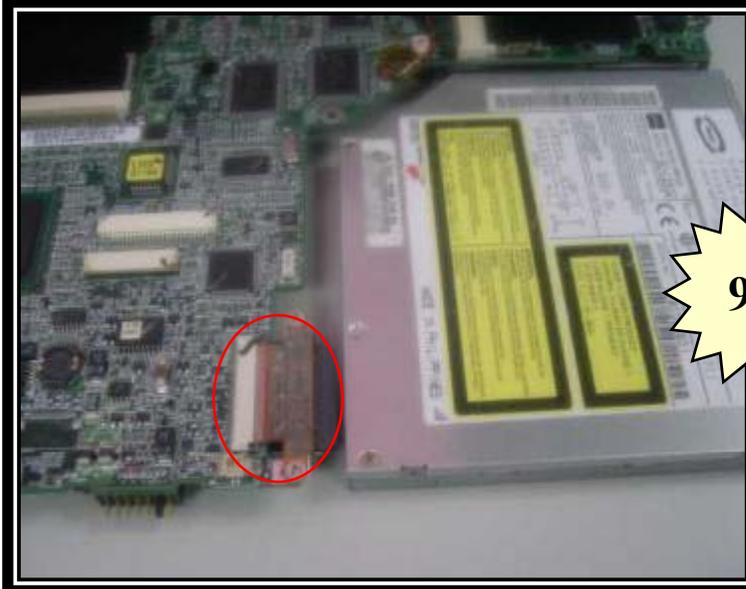


Pretest operate description-9



9-1

Plug TEST Hard disk into HDD connector.

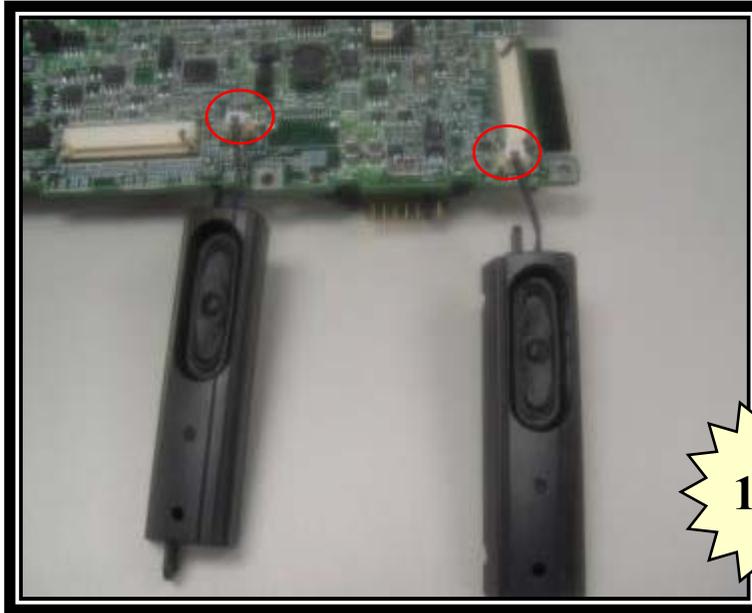


9-2

Plug DVD-ROM drive into DVD-ROM connector.



Pretest operate description-10

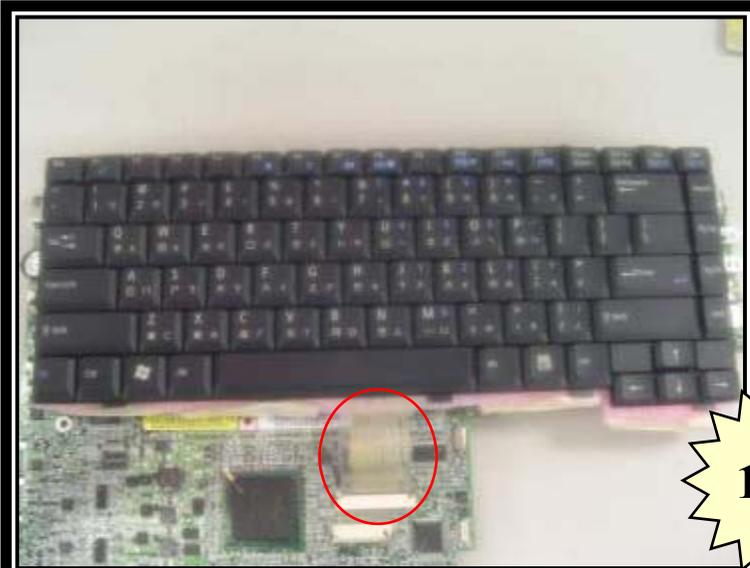


**Plug Internal Speaker into
Speaker connector.**

10-1

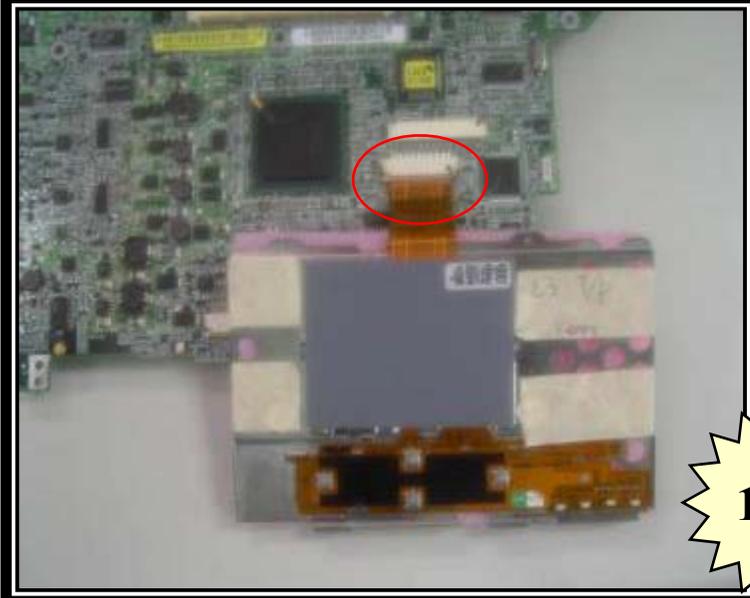


Pretest operate description-11



11-1

Plug Internal Keyboard into K/B connector.



11-2

Plug Touch Pad Module device into T/P connector.



Pretest operate description-12



12-1

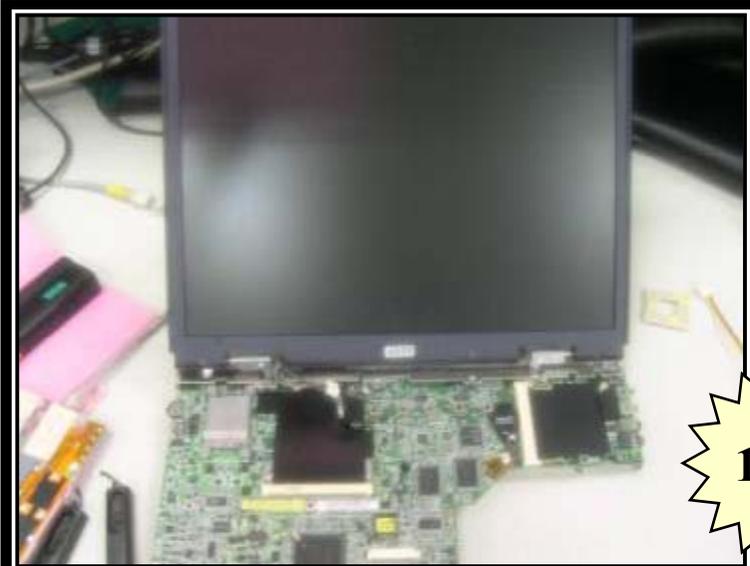


12-2

Plug SD card into card reader.

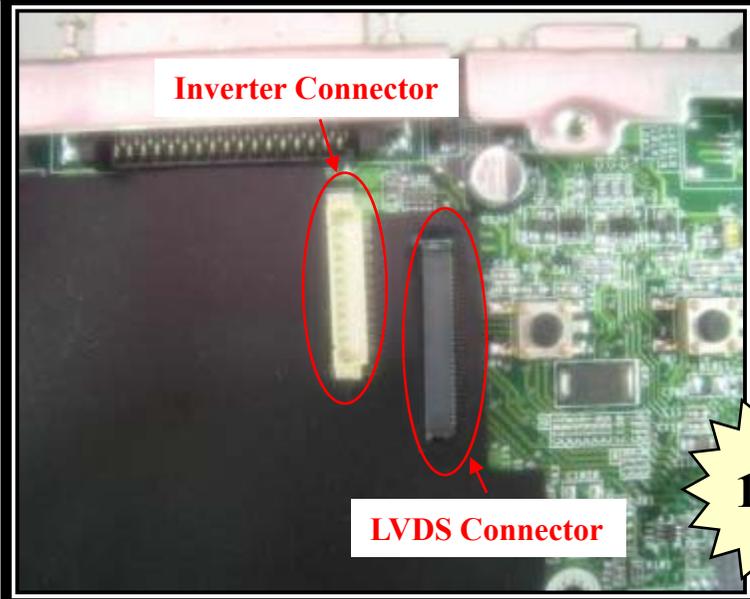


Pretest operate description-13



13-1

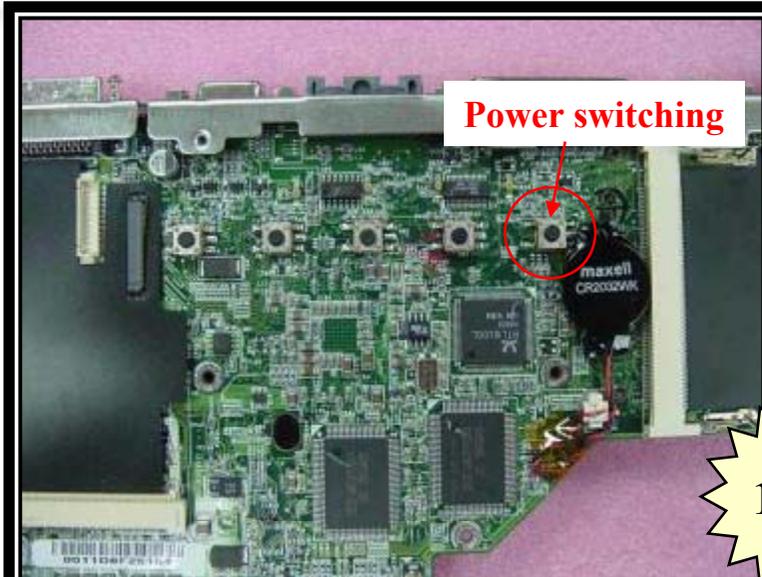
Plug LCD Module into LVDS & Inverter connector.



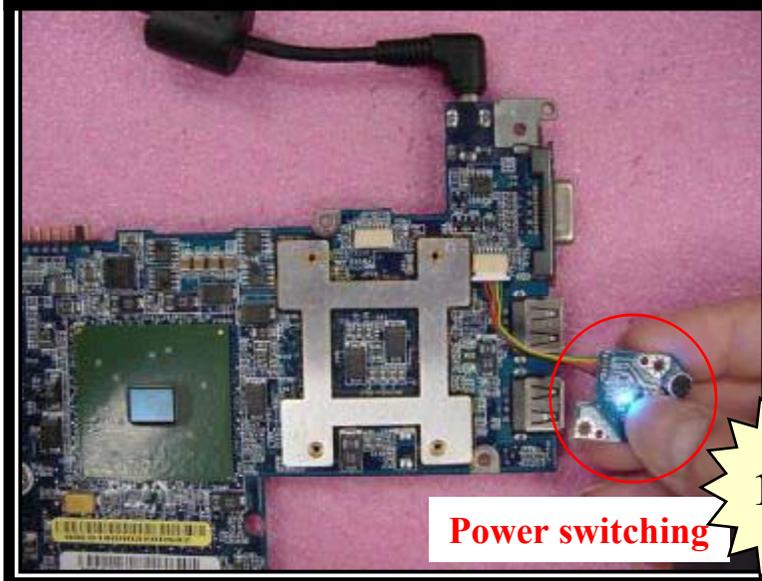
13-2



Pretest operate description-14



**Push the power switching button once,
And will switching on the system and
start to test Motherboard function.**



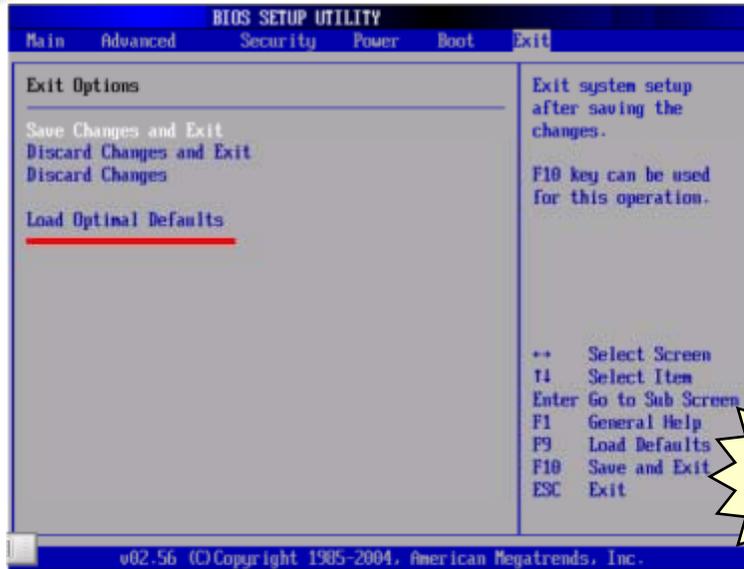
NOTE:

All power switching button design is different.

**Ex: picture 16-1 ,(L3C) The power switch
button is on the motherboard,
And picture 16-2 ,(M5N) the power switch
button is another board.**

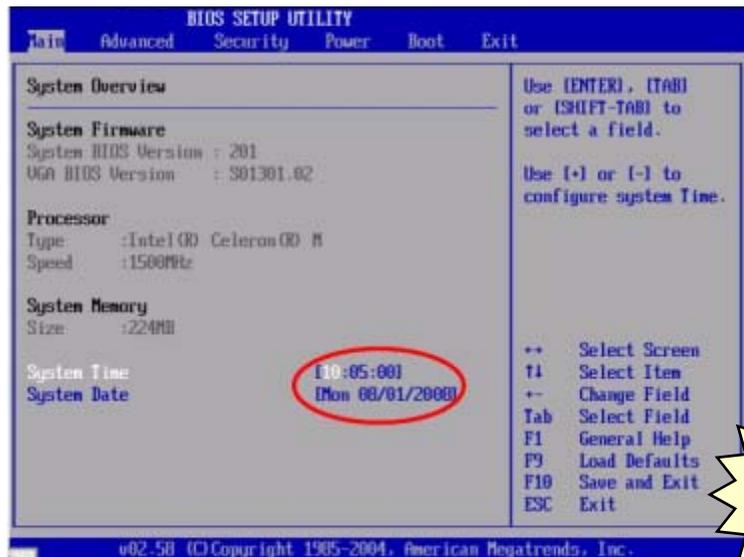


Pretest operate description-15



**When system is booting,
Entering BIOS setup Utility, and
Load setup Defaults**

15-1



**Entering main menu:
Make sure system clock is correct, if
not please adjust to local time.**

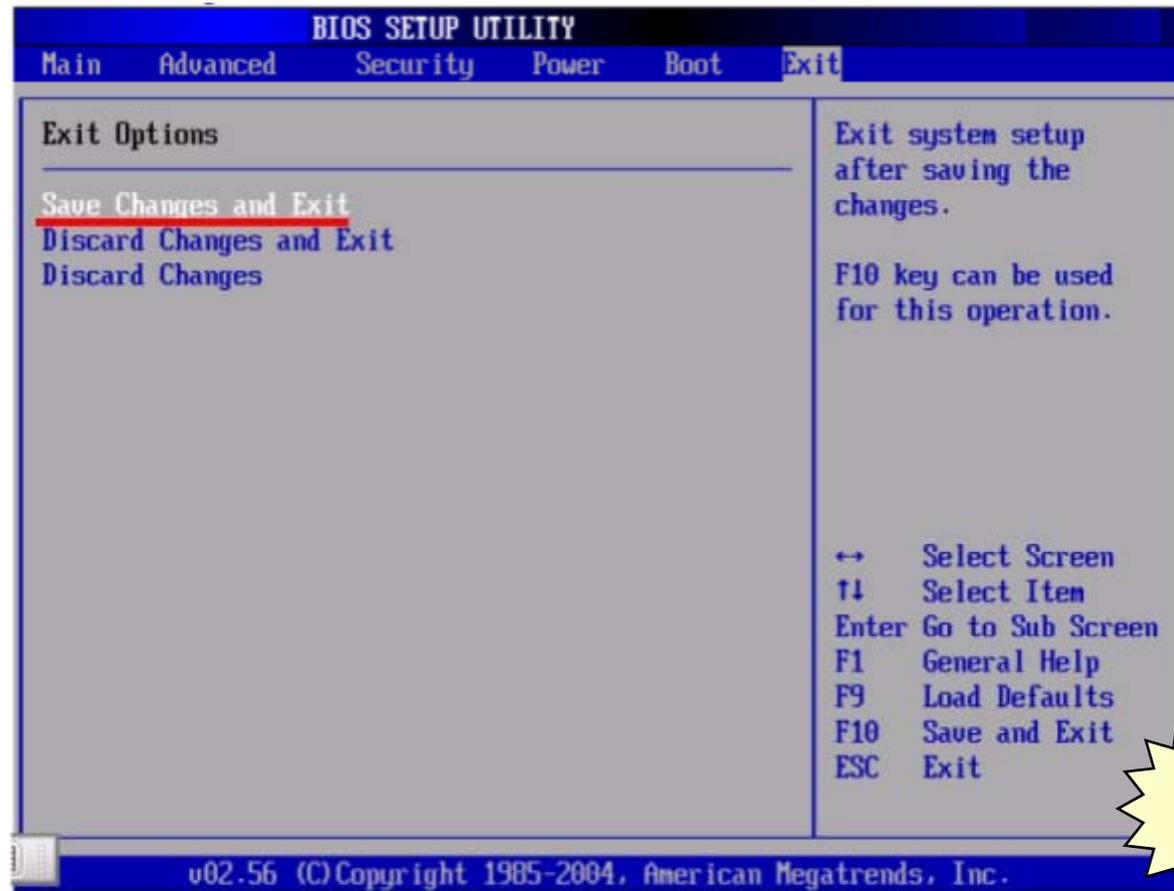
15-2



Pretest operate description-16

After Load setup Defaults & setup system clock,

Save configuration changes and exit.



16



Free DOS Test Program Introduction

➤ Download

Access SIP-> Public Folder->GTC->ASUS NB, open ASUS NB Index, click [Program PackageY08W01.rar](#) to download the program.



ACTRE	ARN Info	Main Program	EOL Model	USB Boot	L2.5 Order	Key-Partys Program
Aging Program	Clean CMOS	DOS Stress	MB Repair KB	Weekly Package	Equipment List	

Mode	File Name	Model	Update date
FreeDOS	Program PackageY08W01.rar	182	2008.1.4
Windows	Windows Main Program		2008.9.22

Serial	Model Number	PartNumber (TSICT)	BIOS	Test Program		TCD	S.O.P	Repair Guide (RG)	Troubleshooting Guide(TSG)		Update Date	Remark
				DOS	Windows				EN	CN		
	A3Ac	NFN	212	A3Ac.rar		TCD	Assemble	Repair Guide				



Free DOS Test Program Introduction

➤ Add model

Access SIP → web.

ASUS Service Information Portal
Rock Solid · Heart Touching

Welcome to ASUS-SIP
michael1_zheng(張晉民)

Technical Support
Product Repair
Learning
Project
Customer Satisfaction
Document
Admin
Profile

一招走天下 全民Learn動
絕不放過【現地現物，數據驅動】 任何不確實【明確，浪費，遲緩】
盡心發揮人性【動腦筋】
絕不放棄【不抽棒】，徹底打通流程【雙主的最終責任感】 一線走天下
迅速不斷地改善創新【客戶的最大價值】
1 RECIPE FOR ALL

Announcement My Favorites IT Request Share & Study

Type	Document Name	Date	Owner
	TAT Report for DB maintenance between 5/27 till 5/28.	2008.05.27	pinky_lee
	ESMain server shutdown for O/S maintenance at 2008/05/22	2008.05.22	pinky_lee
	SIP Document Client (For resuming broken download) Release Announcement - 2008/05/16	2008.05.16	pinky_lee
	ESMain server shutdown for O/S maintenance at 6pm on May 15th	2008.05.14	pinky_lee
	Revize Procedure for Applying SIP Account	2008.05.02	pinky_lee
	Happy Chinese New Year from ASUS CSC GIT (including contact info of CSC Systems during holiday period)	2008.02.05	pinky_lee
	2007 10-11 一招走天下Reward	2007.11.20	max_xu_huang

Public Information

- SIP User Guide & FAQ
- Survey matrix report
- Order Book
- Motherboard Technical Info.
- Notebook Technical Info.
- PND Technical Info.
- PDA Technical Info.
- Mobile Phone Technical Info.
- Comm. Tech. Info
- CSC ARN Info (File)
- EMC safety certificates
- Server Tech. Info
- Sales Info.
- LCD Tech. Info
- IT Schedule Info
- RMA Tech. Info.
- Eee PC Info.
- Document Quickly Search

IT Contact Window
IT System Map & Help
User Guide

ARN
Welcome to CSC-ARN (Abnormal issue Request & Notice) System.

TC Web
Technical Center provide all the information you need.

Integration Search
Integration Search provides an easy way to search document/ARN/EC.



Free DOS Test Program Introduction

Click ASUS NB

http://www.asus.com/index.aspx?ReturnUrl=document%2FDisplayDocumentContent.aspx?Doc_id=0077

ASUS Service Information Portal
Rock Solid - Never Touching

Support Repair Learning Project Survey Document Admin Profile

Product Information

You may find all the Test Program, BIOS, Test SOP, etc. here.

Barebone PCs

Motherboards

Graphice Cards

Servers

Laptops

Wireless

Networking

Broadband

Optical Storage

Mobile Phones

PDAs

LCO Monitors

STB

Networking Storage

HDTV

Digital Home

HSDPA Cards

PNDs

Eee PC

Desktop



Free DOS Test Program Introduction

Download the [Program PackageY08W01.rar](#) about which model you need.

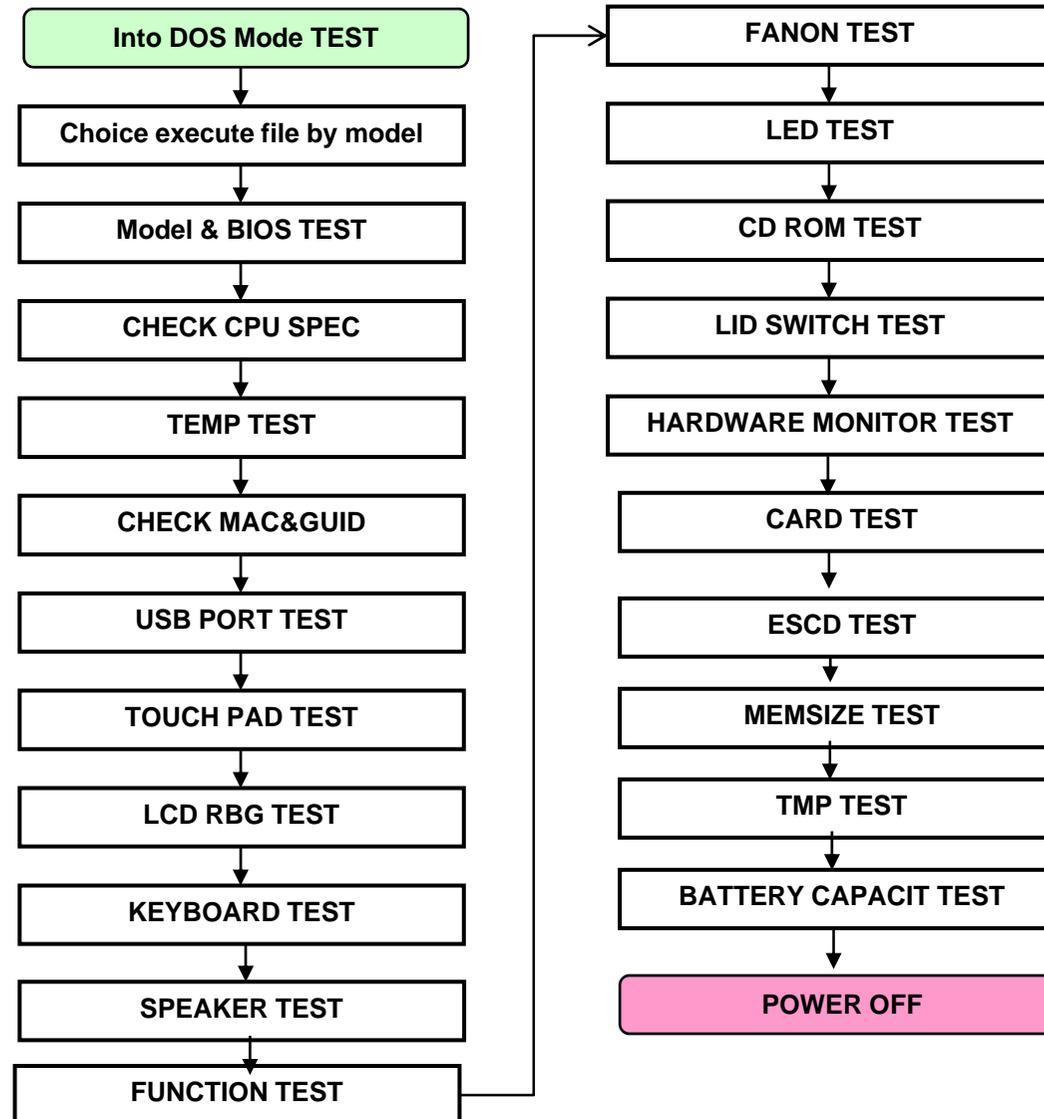
ASUS® Service Information Portal
Rock Solid • Heart Touching

Support Repair Learning Project Survey Document Admin Profile ITRS

Serial	Model Number	Part Number (TSICT)	BIOS	Test Program		TCD	S.O.P		Repair Guide (RG)	Troubleshooting Guide(TSG)		Update Date	Remark	
				DOS	Windows		EN	CN						
A3	A3Ac	NFN	212	A3Ac.rar		TCD		Assemble	Repair Guide					
	A3Fp	NIF		A3Fp.rar		TCD	Test SOP	Assemble	Repair Guide					
	A3H	NFM	212	A3H.rar		TCD	Test SOP	Assemble	Repair Guide					
	A3Vp	NFK	206	A3Vp.rar		TCD	Test SOP	Assemble	Repair Guide					
	A3Vc	NFL		A3Vc.rar		TCD		Assemble	Repair Guide					
A6	A6F	NIK	222	A6F.rar		TCD	Test SOP	Assemble	Troubleshooting Guide					
	A6Ja	NFJ		A6Ja.rar		TCD	Test SOP	Assemble	Repair Guide					
	A6Jm	NH6	220	A6Jm.rar		TCD	Test SOP	Assemble	Troubleshooting Guide					
	A6Km	NDP	300	A6Km.rar		TCD	Test SOP	Assemble	Repair Guide					
	A6Kt	NFI	207	A6Kt.rar		TCD	Test SOP	Assemble	Repair Guide					
	A6M	NH9	912	A6M.rar		TCD	Test SOP	Assemble						
	A6R	NFF	215	A6R.rar		TCD		Assemble	Repair Guide					



Free DOS Test Program Flow





Choice Model & Running Test Program

Choice Model name and running test program.

When system standby (like this picture)

Choice **TC** → **NB** → **XX_SER** (Ex.**A8_SER**) → **YYYY** (Ex.**A8Ja**)

Execute the BAT file.

```
C:\>
  Name      Size      Date      Time
  ----      -
  ATI623    >SUB-DIR<  1-01-02   1:18a
  EXE       >SUB-DIR<  1-01-02   1:18a
  FDS       >SUB-DIR<  10-17-04  10:50p
  MBAT      >SUB-DIR<  1-12-06   5:34p
  PSMT-R    >SUB-DIR<  2-23-06   1:44p
  RECYCLED  >SUB-DIR<  12-28-05  5:46p
  SE        >SUB-DIR<  12-27-05  10:29a
  T         >SUB-DIR<  1-11-06   2:52p
  TC        >SUB-DIR<  1-01-02   1:18a
  TEMP     >SUB-DIR<  3-14-06  10:45a
  TOOLS     >SUB-DIR<  1-01-02   1:18a
  I         bat        444       12-28-05  2:34p
  autoexec bat        115       3-13-06   4:52p
  freedon  bat        512       10-17-04  10:50p
  command  con       95954     10-17-04  10:51p
  E3a7d    exe       4099600   3-14-06   5:10p
  E3a7g    exe       4099432   3-14-06   5:11p
  E3a7va   exe       5305471   3-14-06   5:05p
  TC       >SUB-DIR<  1-01-02   1:18a

C:\>
```

```
Do you want program MAC/GUID/SF15 CV.N1?
Control-Break pressed.
Terminate batch file "C:\TC\NB\A8_SER\A8Ja".

  Name      None      Name
  ----      -
  PRN:
  TEMP
  A8Ja     bat

C:\TC\NB\A8_SER\A8Ja>
  Name      None      Name
  ----      -
  A8Ja.bat  2096     3-23-06   3:33p

C:\TC\NB\A8_SER\A8Ja>
```



Model & BIOS Test

Model and BIOS Test

Check Product type

Check BIOS Version

```
DMI Utility Rev 1.26          Built Date:06/06/2003
-----
SMBIOS Structure Table Address:F000:94A0
Entry Point:F000:94C0
DMI Revision:2.3
Structure Numbers:38

M/B Manufacturer  : ASUSTeK Computer Inc.
M/B Product       : A3V
M/B Version       : 1.0
BIOS Vendor       : American Megatrends Inc.
BIOS Version      : 201
BIOS Release Date : 08/15/2005
System Manufact.  : ASUSTeK Computer Inc.
System Product    : A3V
System Version    : 1.0
UUID              : 782A1200-5109-1880-BF5A-0013D4284746

Please check the Produce,
UUID and BIOS Version.
I.C.

Return Code - 1

Press any key to continue . . .
```



Check CPU SPEC

Confirm the CPU spec

Check CPU spec same with your fixture

Check Front side bus speed is real (The speed does match that of BIOS setup)

```
DMI Utility Rev 1.26                Built Date:06/06/2003
-----
SMBIOS Structure Table Address:F000:94A0
Entry Point:F000:94C0
DMI Revision:2.3
Structure Numbers:38

Socket Type       : Socket 478
Manufacturer      : Intel
Version           : Intel(R) Pentium(R) M processor 1.73GHz
Max./Cur./Ext.(MHz) : 1733/1733/133

Return Code = 1

Please confirm the CPU Spec.
I.C.

Press any key to continue . . .
```



Temperature Test

Temperature Test

```
Build DATE:2005-11-02
華碩電腦 Hardware Monitor Test Program, Copyright by ASUS Rev2.32 技研中心
=====
Total test item =1
H_Limit= 70.00 L_Limit= 15.00 Result=
Press any key to continue . . . Return_Code=0
```

Test fail will show this PIC



```
*****
**** Temperature TEST FAIL ****
**** NB SPEAKER FAIL.Problem code= N0FF02 ****
*****
Press any key to continue . . .
```



Check MAC

Check MAC

```
Build DATE:2007-02-14
ASUS BIOS Tool, Copyright by ASUS Rev2.06 Diags
=====
CNFG block size= 0100
Read Offset D7 ~ DC, Data= 123456789012

MAC Address=123456789012

[ Please check the MACQ with ?
  label of board.
  T.C. ]

Return_Code=-1
```



Input MAC address

**Make sure MAC address is correct, if not please type the right MAC address.
Then save this file!**

```
program mac/1394
1. program mac
2. program 1394
Q. Exit

Please Enter Your Choice --> [1,2,Q]?
```



USB Test

USB Test

```
ST_Test_J Build DATE:2005-10-07 260304
華碩電腦 USB Utility, Copyright by ASUS Rev6.16 技研中心
=====EHCI_UHCI=====
Vendor HC HUB PORT | FW_Ver | CON BUK INT ISO MISC | PWR D+ D- | HI PM IS
-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
INTEL 0 . 0 | 6.0902 | V V V V . | 4830 2849 0 |
INTEL 0 . 1 | 6.0902 | V V V V . | 4839 2863 0 |
INTEL 1 . 0 | 6.0902 | V V V V . | 4898 2827 0 |
INTEL 1 . 1 | 6.0902 | V V V V . | 4885 2827 0 |
```

Test fail will show this PIC



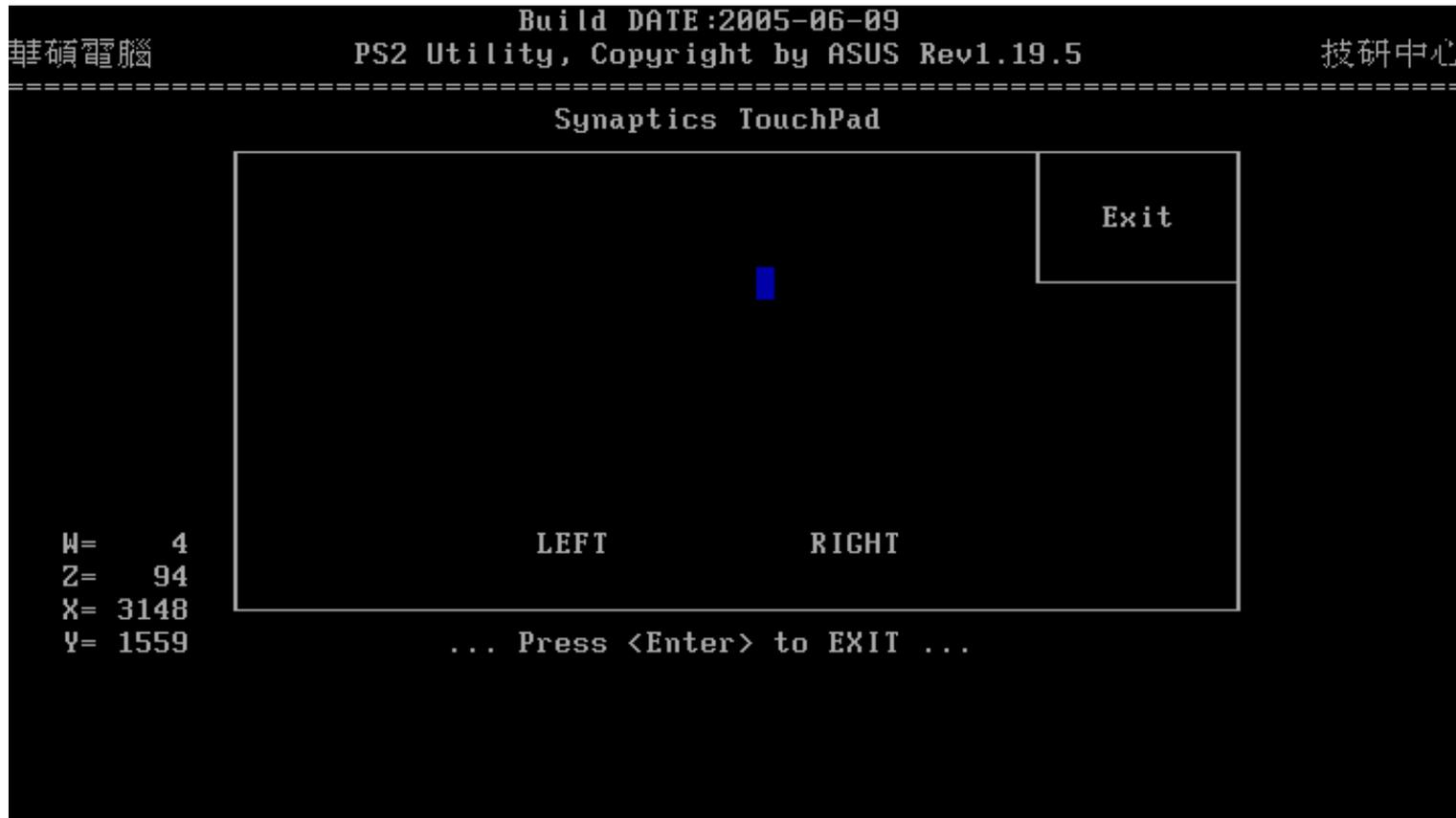


Touchpad Test

PAD Test

When your finger touch the pad and move one direction, the blue sign move the same direction with your finger.

EXIT : Move the blue sign to EXIT area, and press the LEFT + RIGHT button

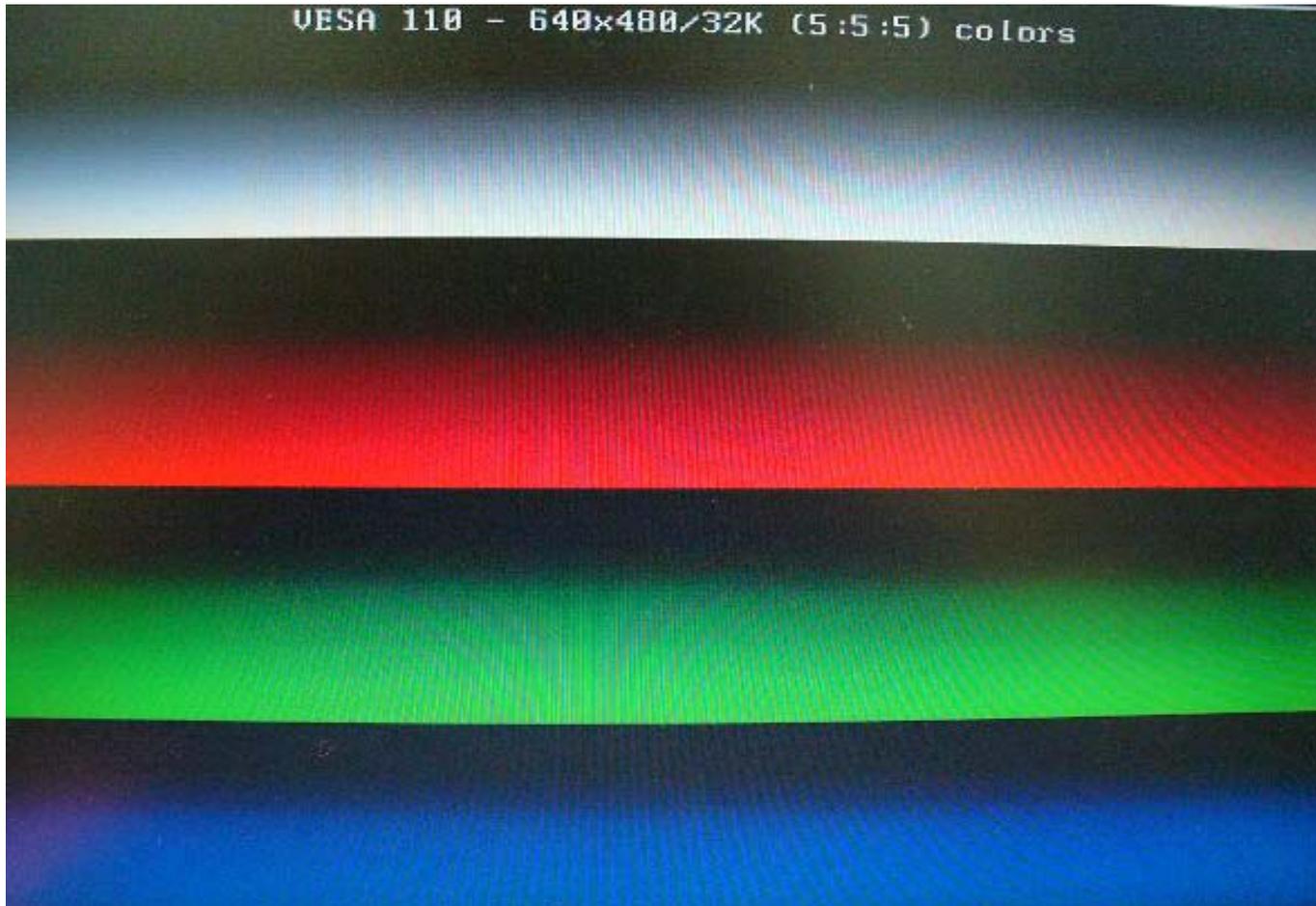




LCD RGB Test

LCD RGB Test

If you find the vertical wave and horizontal wave between the LCD RGB Test, It has problem.





Instant Setup

Press the instant key button 3 seconds ,
the grids change to green color.

===Model_Name===
AGRP

POWER4	E-MAIL	INTERNET	TOUCHPAD
1	2	3	4

Please testing by the screen indicate.
If Press the KEY over 3 second ,and screen map no any change.
Error code = N0FK04 = Instant key test error.



Keyboard Test

KEYBOARD Test

```

A3VC Keyboard test:
0. English Int. Keyboard
1. Japanese Int. Keyboard
2. Europe Int. Keyboard

Q. QUIT
Please Enter Your Choice --> [0,1

```

Choice one language for the Keyboard, and then into next screen.



```

Build DATE:2003-02-20
Keyboard Tester for NoteBook, Copyright by ASUS Rev1.09
-----
...Press Key to Test...

```

ESC	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11	F12	BK	PRTS	Ins	Del
`	! 1	@ 2	# 3	\$ 4	% 5	^ 6	& 7	* 8	(9) 0	_ -	+ =	Backspace		Home	
Tab	Q	W	E	R	T	Y	U	I	O	P	{ [}]	\	PgUp	
Caps Lock	A	S	D	F	G	H	J	K	L	:	;	" '	Enter		PgDn	
Shift	Z	X	C	V	B	N	M	<	,	>	.	? /	Shift		↑	End
Fn	Ctrl	LWin	Alt	Space				Alt	Menu	Ctrl	<-	↓	->			

```

↑
Press Fn+Del Key to Test...
Press any key to continue . . .

```

Please check the keyboard function. Press all the key at the keyboard. then the program can exit and continue.



If any key isn't change to Blue colour, it's means the test program is fail.



Speaker Test

Speaker Test

```
Build DATE:2001-06-07
華碩電腦 PC BUZZER TEST, Copyright by ASUS Rev 1.01 工程開發組
=====
Frequency = 1000 Hz
Time = 1000 ms

PCBeep L-ch test, Please select (PASS=1,Fail=3):[1,3]

Return_Code=0
```

Test fail will show this PIC



```
*****
****   SPEAKER TEST FAIL   ****
**** NB SPEAKER FAIL.Problem code=NOFNOFA03 ****
*****
Press any key to continue . . .
```



Function Test

Function Test

```
Build DATE:2004-05-04
華碩電腦      FuncTest.exe, Copyright by ASUS Rev1.04      技研中心
-----
Setting Clock... OK!
Testing DMA Controller: P8237A-5 #1, P8237A-5 #2, Page Register OK!
Testing Interrupt Controller ... OK!
Testing Protect Mode... OK!
Testing Coprocessor... OK!
Testing Clock... OK!
Testing Calendar... OK!

Return_Code=0
C:\TC\MAIN\FNTEST\1.04>
```

Test fail will show this PIC



```

*****
*****          FUNCTION TEST FAIL          *****
*****NB FUNCTION TEST FAIL.Problen code=NOFF03 *****
*****
Press any key to continue . . .
```



FAN Test

FAN Test

Unable to wheel or Speed Error on FAN

Test fail will show this PIC



```
=====U6U=====
... Enable the fan ...

Return_Code=0
... Delay Function, Build DATE:1998-09-01, Copywrite by ASU
... Delay 3000 milliseconds ... Press ESC to exit ...
2817/3000
```

```
*****
****          FAN TEST FAIL          ****
****NB FUNCTION TEST FAIL.Problen code-NOFF02 ****
*****
Press any key to continue . . .
```



LEDALL Test

LEDALL Test

Check the light of LEDS,If the notebook's LEDS are different to screen display, that's fail.

```
Please check the LED of NOTEBOOK!

          [Power] [Charge]          [Power]
Check  --                               ON

          [Power] [Charge] [HDD] [Wireless] [CAPS] [BT] [T/P]
Check  --  ON      ON      OFF      ON      OFF      OFF      OFF

Check ON/OFF LED status:
Press anykey to check next LED ...
If LED test error,Error code:
NOFM01 = Power LED error
NOFM02 = Battery Charge LED error
NOFM03 = HDD LED error
NOFM04 = Caps Lock LED error
NOFM05 = Num Lock LED error
NOFM07 = E-mail LED error
NOFM08 = Scr Lock LED error
NOFM09 = Wireless LED error
```



CD ROM Test

CD ROM Test

```
Build DATE:1997-11-04
Compare File, Copyright by ASUS Rev1.0
-----
... Compare T:\asus256.bmp & C:\asus256.bmp ...
... File Compare OK ...
Press any key to continue . . .
```

Test fail will show this PIC



```
*****
****          CD/DVD TEST FAIL          ****
**** NB SPEAKER FAIL.Problem code=  NB2C00 ****
*****
Press any key to continue . . .
```



LID Switch Test

LID Switch Test

Please run test according to the words in below picture

Lid switch test

1. Please close LCD panel ,to suspend LCD.
2. Close LCD panel ,LCD backlight should be OFF.
Close LCD panel to test ...
3. Open LCD panel ,then pause any key
4. LCD backlight should be ON.
5. PASS=press 1 , FAIL=press 3 [1,3]?



HDD Test

HDD Test

```
Build DATE:2007-04-03
ASUS HardDisk Utility, Copyright by ASUS Rev1.29 Diags
=====
... Read Write & Compare Test ...
```

Num	Type	Device Model	LBA Size	HDD Size	Buffer Size(Sector) = 7F			
					R	W	B	C
00	ATA	Hitachi HTS542512K9S DF94BB0	120.03GB	OK	OK	OK	OK	
Start Time	End Time	Test LBA Sector	Error LBA Sector	Test Timer				
13:47:44		12DA		0				



CARD Test

CARD Test

1. please insert the MS-card into card-Reader(Picture1)
2. please change MS-card to SD-card(Picture2)



Test fail will show this PIC



ESCD Test

ESCD Test

```
Build DATE:2004-05-04
华硕電腦 PnPBIOS Program, Copywrite by ASUS Rev1.14 技研中心
=====
$PnP Signature found in F000:59C0
Signature=506E5024
Version=10
Length=21
Checksum=BB
Real Mode 16-bit offset to entry point=6C72
Real Mode 16-bit code segment address=F000
16-Bit Protected Mode offset to entry point=6C9A
16-Bit Protected Mode code segment base address=000F0000
DEM Device Identifier=00000000
Real Mode 16-bit data segment address=F000
16-Bit Protected Mode data segment Base Address=000F0000
-----
MinESCDWriteSize=8000
ESCDSize=0EB0
NVStorageBase=FFFDC000
Read source ESCD...OK
Header Size=000E
ESCD Quick Test...OK

Return_Code=0
```

ESCD test PASS!!
-I.C.-



MEMSIZE Test

MEMSIZE Test

```
Build DATE:2007-01-10
ASUS Memory Utility, Copyright by ASUS Rev1.12 Diags
=====
Memory Module Information:
  DIMM0 = 2048 MB, Type:SDRAM, Synchronous, Speed=0 MHz
  DIMM1 = 2048 MB, Type:SDRAM, Synchronous, Speed=0 MHz
  Total Memory Size = 4096 MB

4096 MB

Please confirm the memsize.
I.C.

Return_Code=-1

Press any key to continue . . .
```



TPM Test

TPM Test

```
----- Test 1 -----  
Vendor: Intel   Device ID: 2815  
Looking for Infineon TPM device at the LPC bus  
Infineon TPM found at 254 config address space  
Chip ID: 0B , TPM 1.2 Found.  
ICH Configuration By Pass Mode on.  
Using ConfigAdr: 254 and IOBaseAdr: 4700  
Activate the TPM  
TPM_CMD_Reg_Access: Failure: bTmpCmd2 = FF !!!  
TPM could not be activated, check your Hardware!  
Log file 'tool4tpm.log' saved.
```

TPM test PASS



Battery Test

BATTERY Test

```
Build DATE:2005-01-10
華碩電腦 SMBus NB, Copyright by ASUS Rev2.20 技研中心
-----
Capacity: 13 % OKTi
Press any key to continue . . . Return_Code=0
```

Test fail will show this PIC



```
*****
***      Battery check error      ***
*** NB Battery error. Problem code=N0ZB00 ***
*****
Press any key to continue . . .
```



Windows Test Program Introduction

➤ Download

Access SIP-> Public Folder->TC->ASUS NB, open ASUS NB Index, click [Windows Main Program](#) to download the program.

ASUS NOTEBOOK

ACTRE	ARN Info	Main Program	EOL Model	USB Boot	L2.5 Order
Aging Program	Clean CMOS	DOS Stress	MB Repair KB	Weekly Package	Equipment List

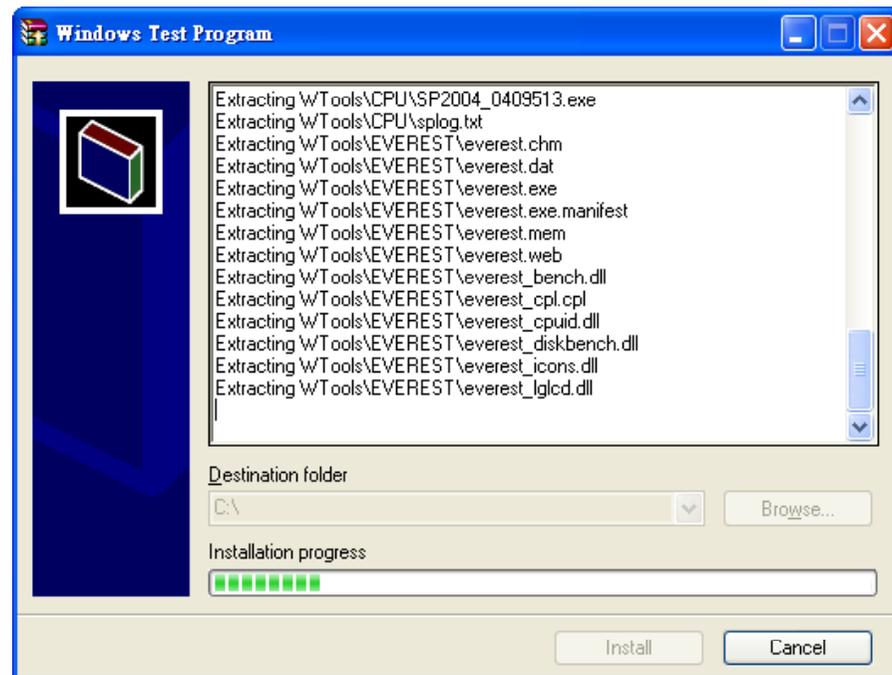
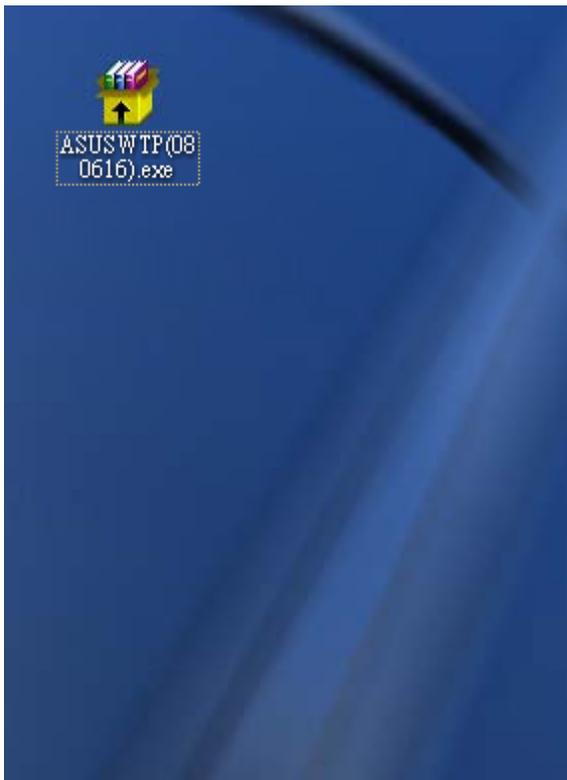
Mode	File Name	Model	Update date
FreeDOS	Program PackageY08W01.rar	182	2008.1.4
Windows	Windows Main Program		2008.6.16



Windows Test Program Introduction

➤ Installation

Operate the program which called “WTP.EXE”, and it will automatically extract into C:\.

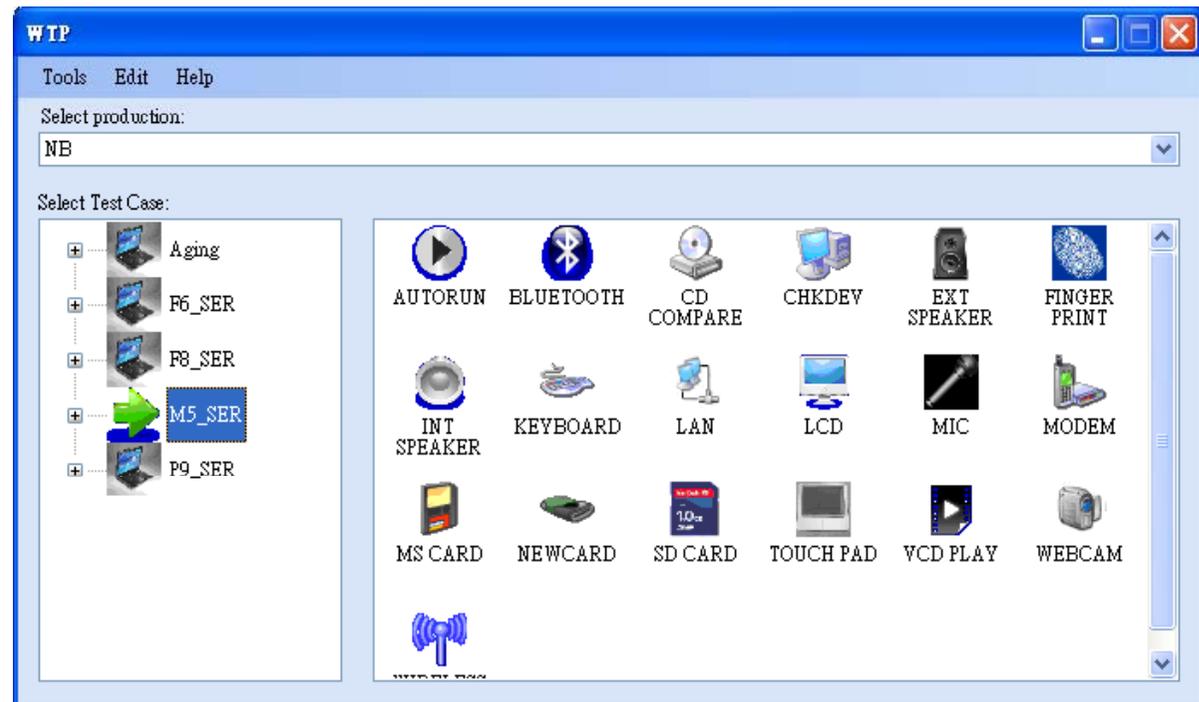
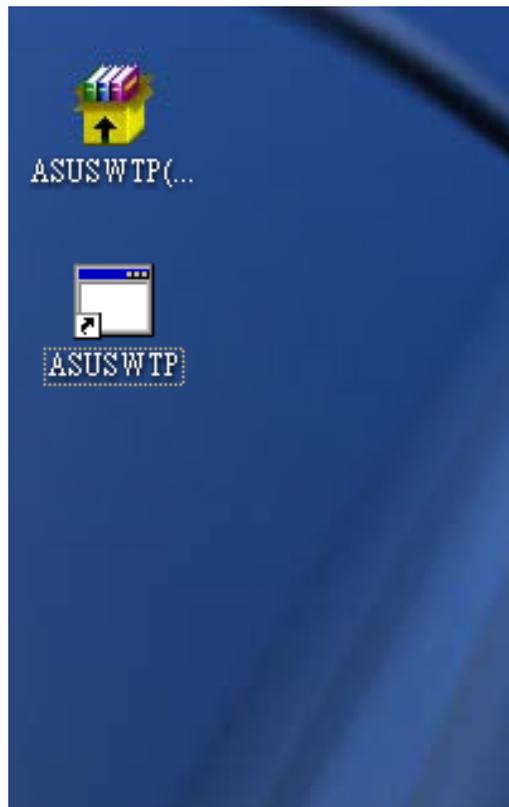




Windows Test Program Introduction

➤ Installation

Program will extract into C:\folder WTC and create a shortcut which is called “ASUS WTP” on the desktop.





Windows Test Program Introduction

➤ Add model

Access SIP → web.

ASUS Service Information Portal
Rock Solid • Heart Touching

Welcome to ASUS-SIP
michael1_zheng(張晉民)

Technical Support
Product Repair
Learning
Project
Customer Satisfaction
Document
Admin
Profile

一招走天下 全民Leaer動
絕不放過【現地視物，數據驅動】任何不確實【明確，浪費，遲緩】
盡心發揮人性【斷腦筋】
絕不放棄【不抽棒】，徹底打通流程【營主的最終責任感】
迅速不斷地改善創新【客戶的最大價值】

1 RECIPE FOR ALL

Announcement My Favorites IT Request Share & Study

Type	Document Name	Date	Owner
	TAT Report for DB maintenance between 5/27 till 5/28.	2008.05.27	pinky_lee
	ESMain server shutdown for O/S maintenance at 2008/05/22	2008.05.22	pinky_lee
	SIP Document Client (For resuming broken download) Release Announcement - 2008/05/16	2008.05.16	pinky_lee
	ESMain server shutdown for O/S maintenance at 6pm on May 15th	2008.05.14	pinky_lee
	Revize Procedure for Applying SIP Account	2008.05.02	pinky_lee
	Happy Chinese New Year from ASUS CSC GIT (including contact info of CSC Systems during holiday period)	2008.02.05	pinky_lee
	2007 10-11 一招走天下Reward	2007.11.20	max_xu_huang

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- Server Tech. Info
- Sales Info.
- LCD Tech. Info
- IT Schedule Info
- RMA Tech. Info.
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IT System Map & Help
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ARN
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(Abnormal issue Request & Notice) System.

TC Web
Technical Center provide all the information you need.

Integration Search
Integration Search provides an easy way to search document/ARN/EC.



Windows Test Program Introduction

Click ASUS NB

The screenshot shows the ASUS Service Information Portal. The browser address bar displays the URL: <http://www.asus.com/index.aspx?Itemid=1&docname=22&DisplayDocumentContent.aspx?DocID=1007>. The page header includes the ASUS logo, 'Service Information Portal', and the tagline 'Rock Solid - Never Tearing'. A navigation menu contains: Support, Repair, Learning, Project, Survey, Document, Admin, Profile. The main content area is titled 'Product Information' and features a grid of product categories. A note at the top right states: 'You may find all the Test Program, BIOS, Test SOP web here.' The categories and their associated buttons are as follows:

Category	Buttons
Barebone PCs	BIOS, SOP
Motherboards	BIOS, SOP, Test Program, BIOS, Test Program, BIOS, Test Program
Graphics Cards	BIOS, SOP, Test Program, BIOS, Test Program, BIOS, Test Program
Servers	BIOS, SOP, BIOS, Test Program
Laptops	BIOS, SOP, Test Program, BIOS, Test Program, BIOS, Test Program
Windows	BIOS, SOP
Networking	BIOS, SOP, BIOS, Test Program, BIOS, Test Program
Broadband	BIOS, SOP, BIOS, Test Program, BIOS, Test Program
Optical Storage	BIOS
Mobile Phones	BIOS
PDAs	BIOS, SOP, BIOS, Test Program
LCD Monitors	BIOS
STB	BIOS, SOP
Networking Storage	BIOS, SOP
HDTV	BIOS, SOP
Digital Home	BIOS, SOP
HSDPA Cards	BIOS
PNDs	BIOS
Net PC	BIOS, SOP
Desktop	BIOS



Windows Test Program Introduction

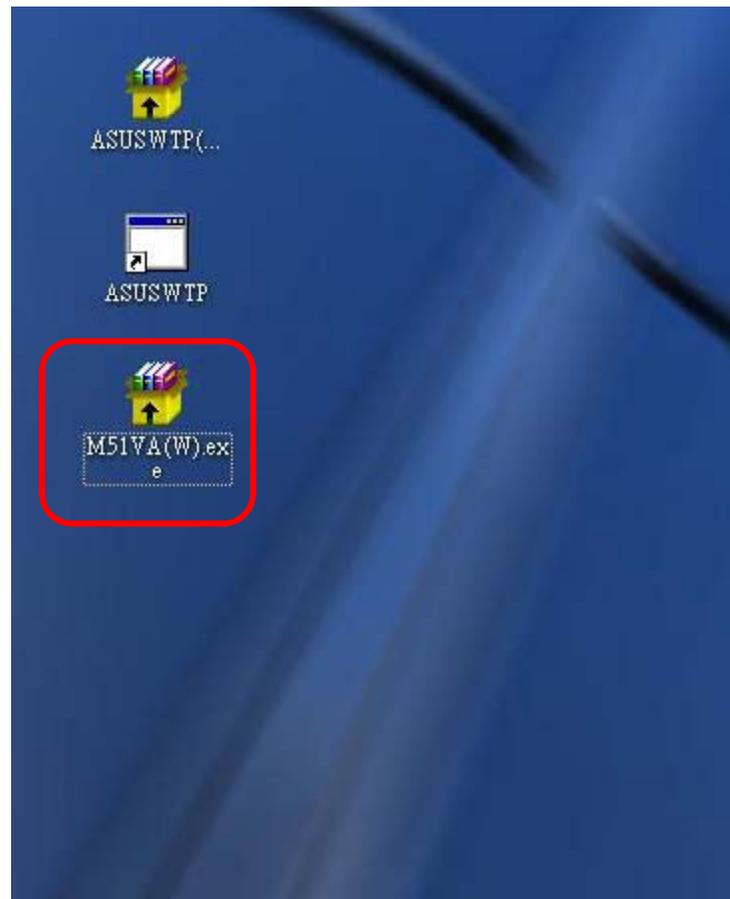
Download the windows test program about which model you need.

	G2Sg	NGP			G2Sg.rar		Test SOP		Troubleshooting Guide
G7	G70S	NKT			G70S.rar	G70S(W).RAR	Test SOP		
	M51KR	NN9			M51KR.RAR	M51KR(W).RAR	Test SOP	Quick Repair	Troubleshooting Guide
	M50SA	NLT	203		M50SA.RAR	M50SA(W).rar	Test SOP	Quick Repair	Troubleshooting Guide
	M50Sr	NLT			M50Sr.rar		Test SOP	Quick Repair	Troubleshooting Guide
	M50SV	NED	208		M50SV.RAR		Test SOP	Quick Repair	Troubleshooting Guide
M5	M51VA	NPR	102		M51VA.RAR	M51VA(W).EXE	Test SOP	Quick Repair	
	M51VR	NPS			M51VR.RAR	M51VR(W).EXE	Test SOP	Quick Repair	
	M51SN	NFE			M51SN.RAR		Test SOP	Quick Repair	Troubleshooting Guide
	M51Se	NK9			M51Se.rar		Test SOP	Quick Repair	Troubleshooting Guide
	M51E	NPT			M51E.rar	M51E(W).rar	Test SOP	Quick Repair	Troubleshooting Guide
	M51SR/SM	NEN			M51SR.RAR		Test SOP	Quick Repair	Troubleshooting Guide
M7	M70S	NFU			M70S.RAR	M70S(W).RAR	Test SOP		Troubleshooting Guide
	M70Vm	NPT	204		M70Vm.D4D		Test SOP		



Windows Test Program Introduction

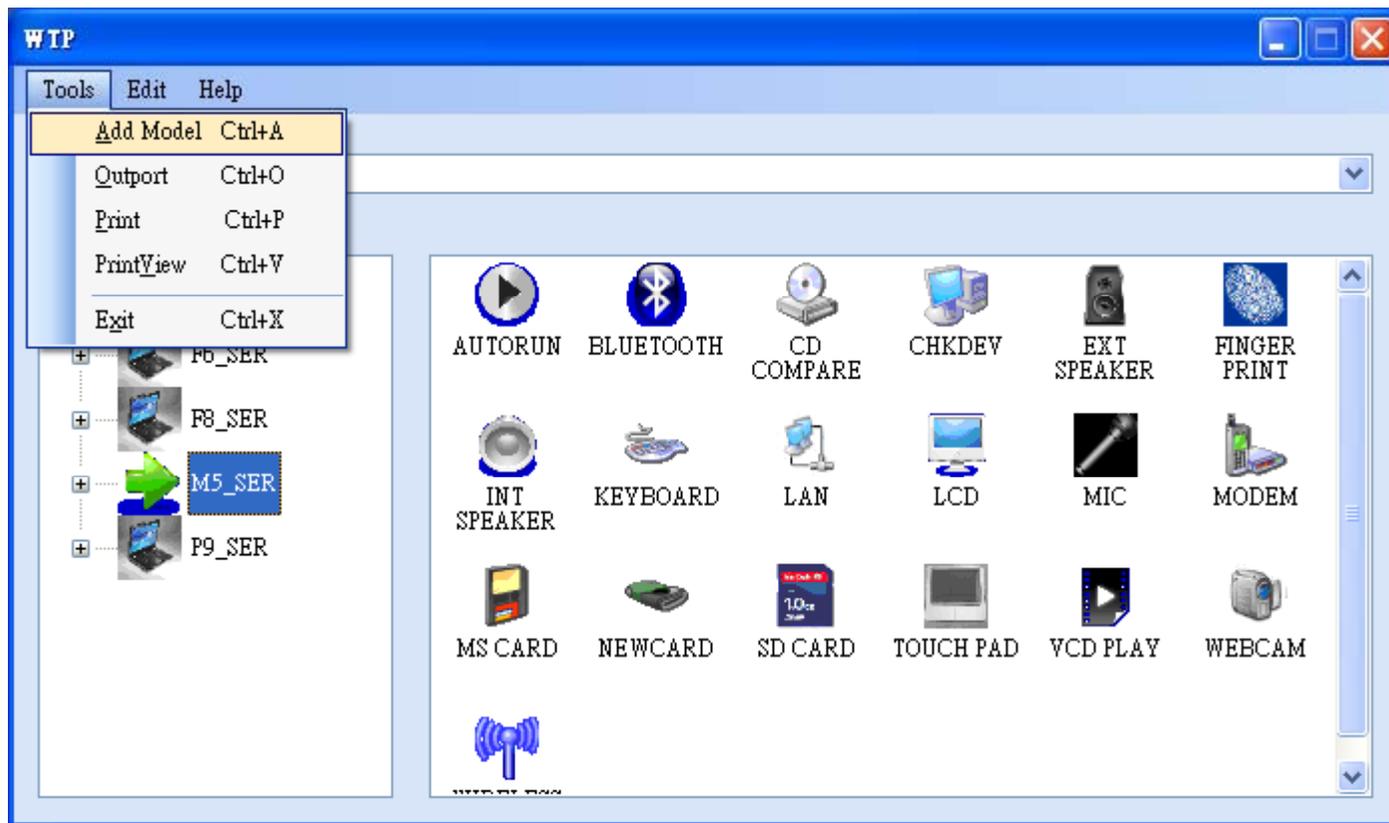
Double-click to extract the program download.





Windows Test Program Introduction

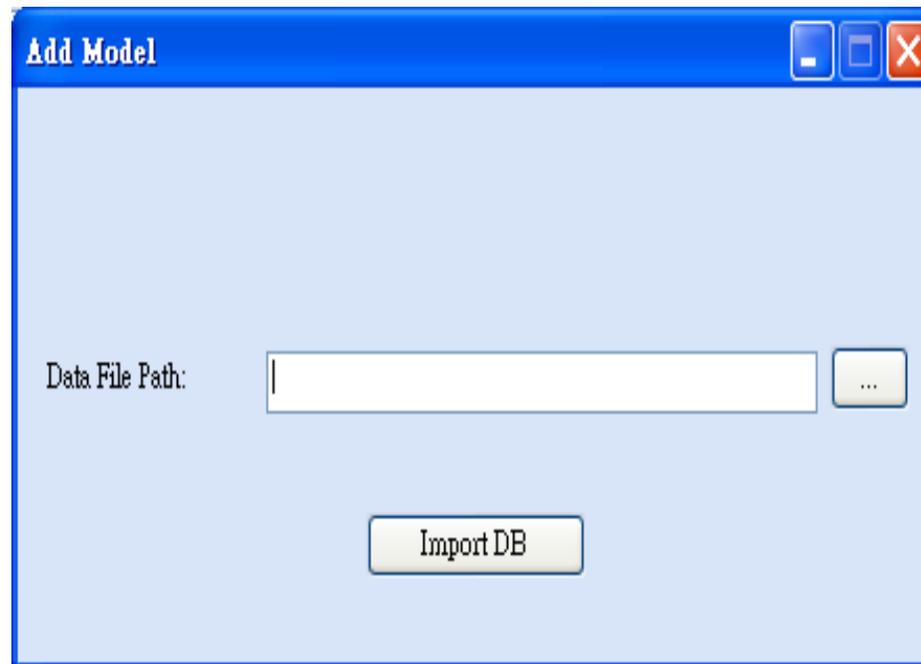
Operate "ASUS WTP", choose Tools->Add Model





Windows Test Program Introduction

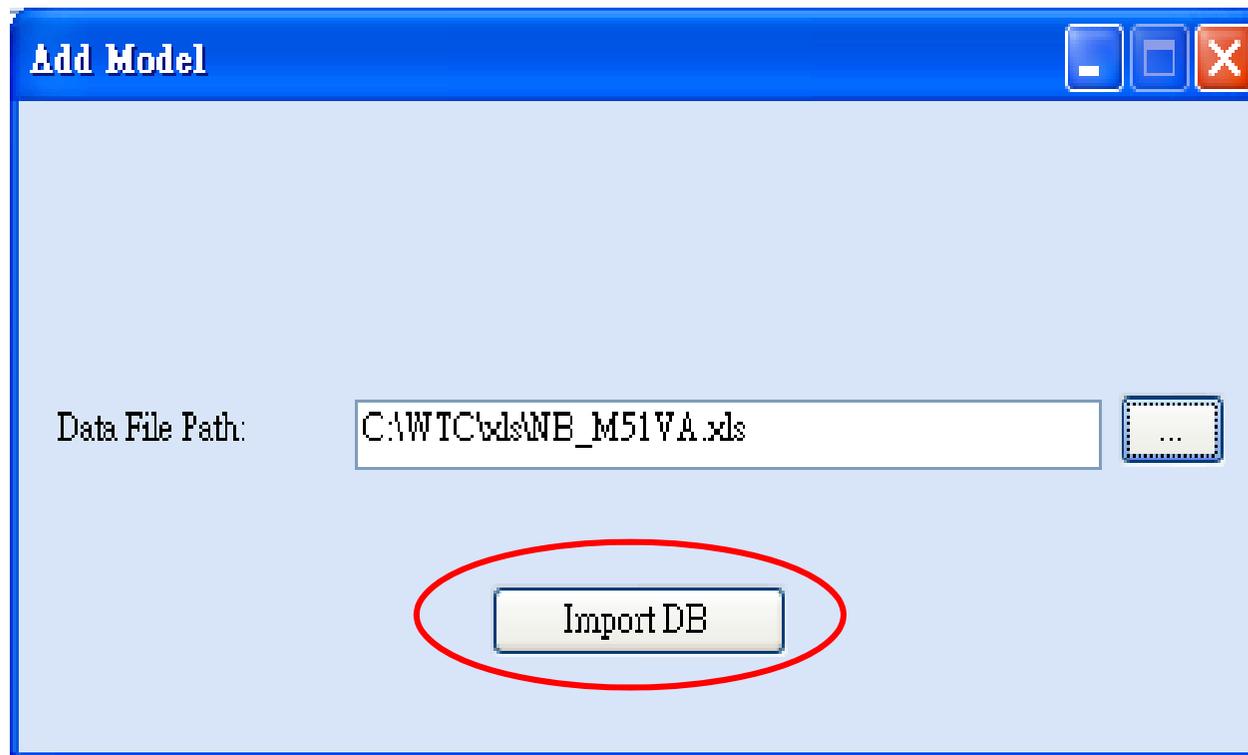
Choose C:\WTC\xls in the pop-up dialog.





Windows Test Program Introduction

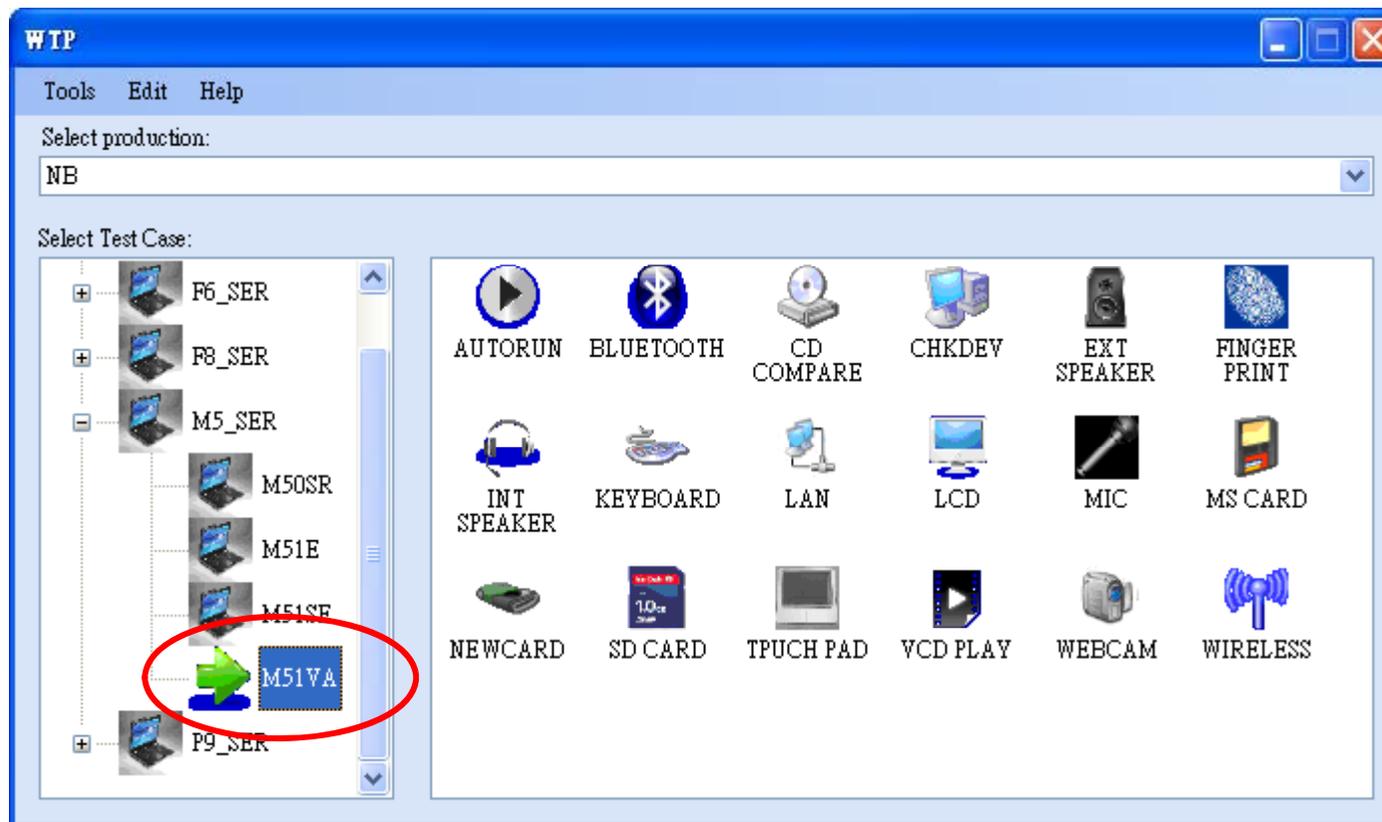
Choose the model which you need to add, then click “Import DB”.





Windows Test Program Introduction

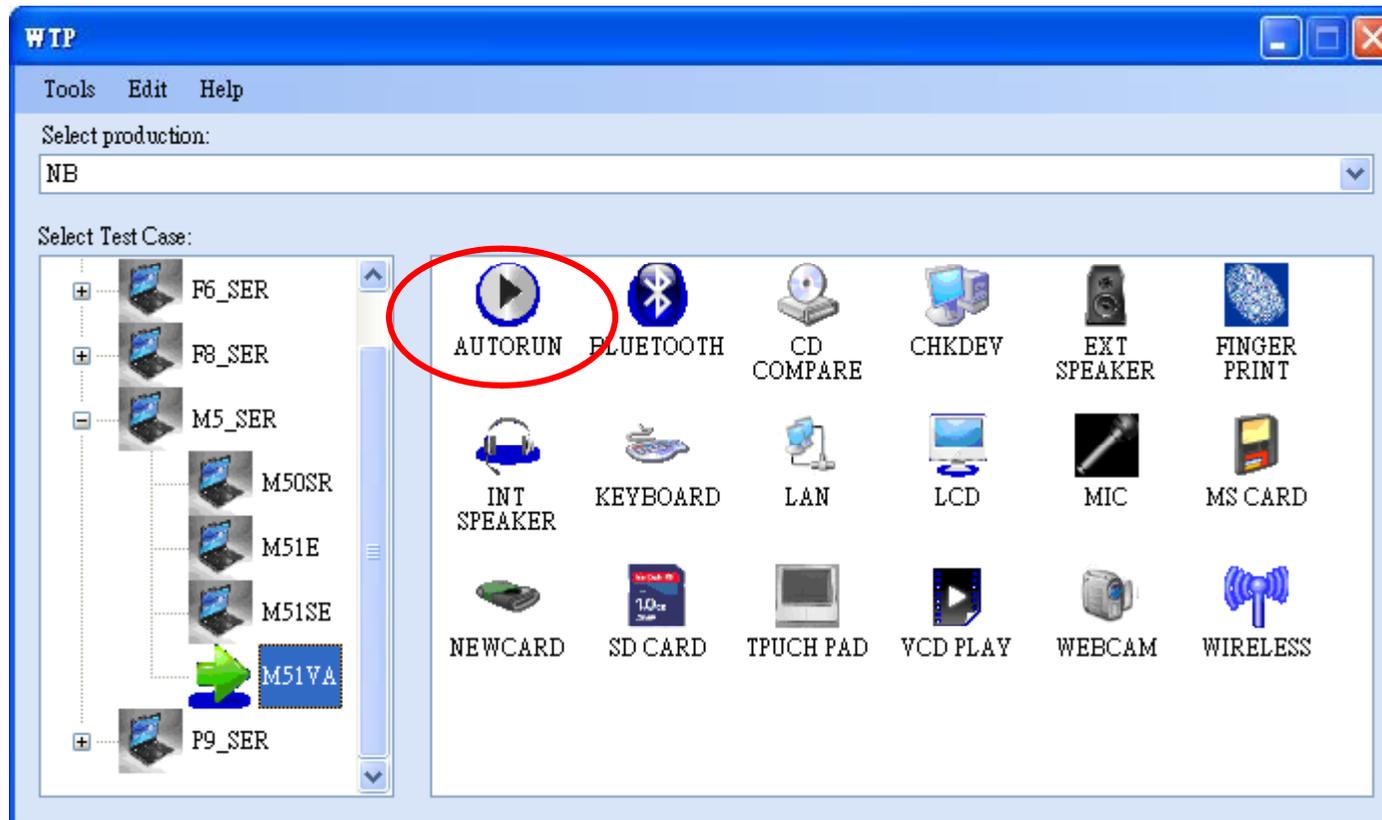
After add in it successfully, we can find the new program which is added right now. Then we can start the test.





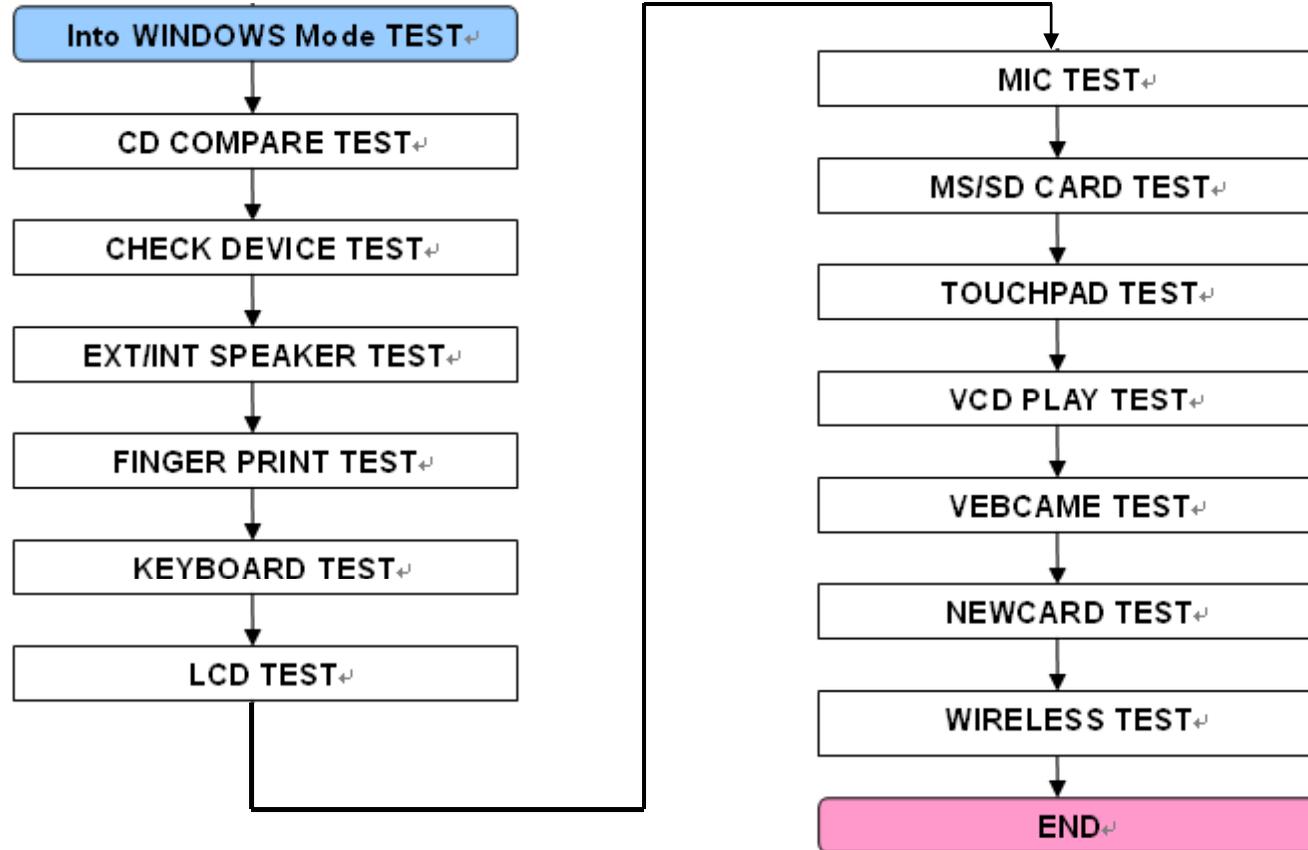
Windows Test Program Introduction

Double-click the “**AUTORUN**” to run the test program.





Windows Test Program Flow





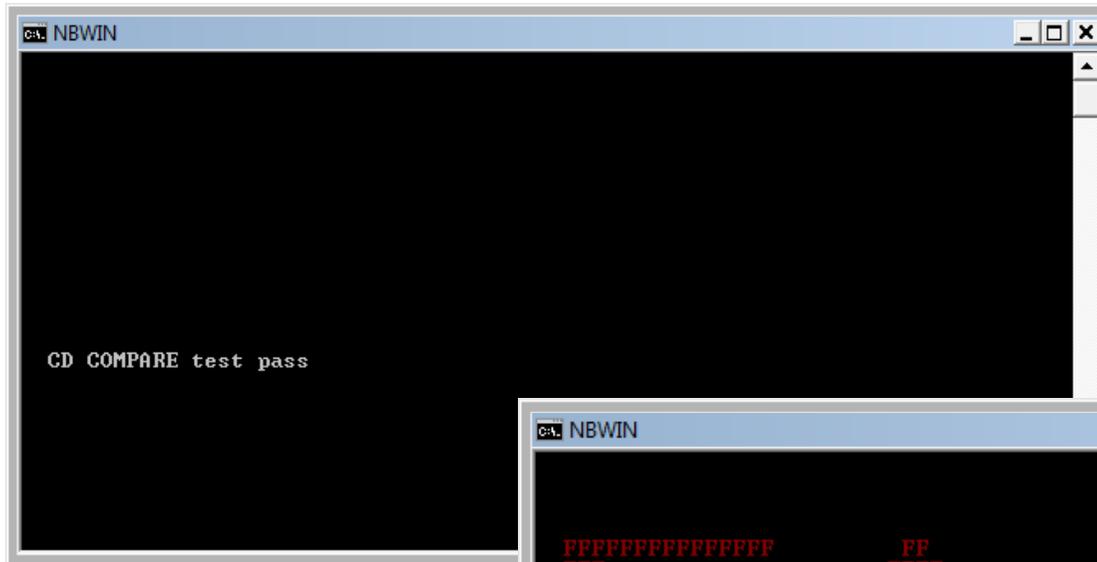
DVD COMPARE Test

Please insert a DVD-RW disc into ODD

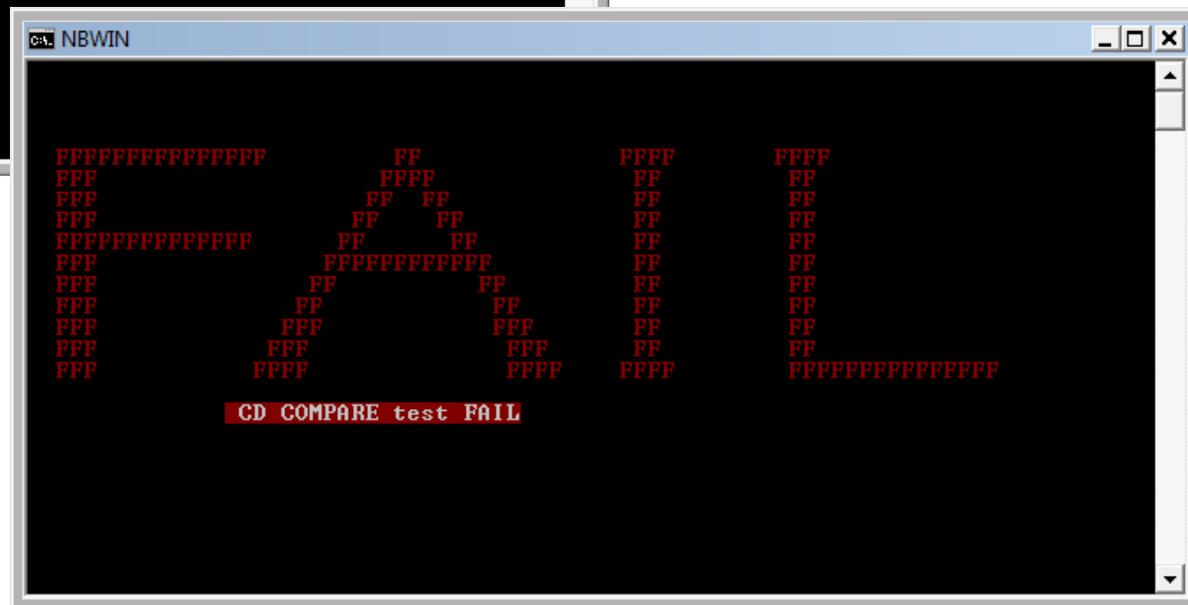




CD COMPARE Test



Test fail will show this PIC





CHECK DEVICE DRIVER Test

```
ca. NBWIN
Build DATE: 2007-08-25
ASUS Windows ASUS Tools, Copyright by ASUS Rev1.08 Diags
-----
Search Data = DISABLE
The Result Is :

Return_Code=255
*****CHECK DEVICE DRIVER PASS*****
*****CHECK DEVICE DRIVER PASS*****
Press any key to continue . . . _
```

Test fail will show this PIC



```
ca. NBWIN
Build DATE: 2007-08-25
ASUS Windows ASUS Tools, Copyright by ASUS Rev1.08 Diags
-----
Search Data = DISABLE
The Result Is :
Line 456 = DRIVER IS DISABLE

Return_Code=0
*****CHECK DEVICE DRIVER FAIL*****
*****CHECK DEVICE DRIVER FAIL*****
Press any key to continue . . . _
```



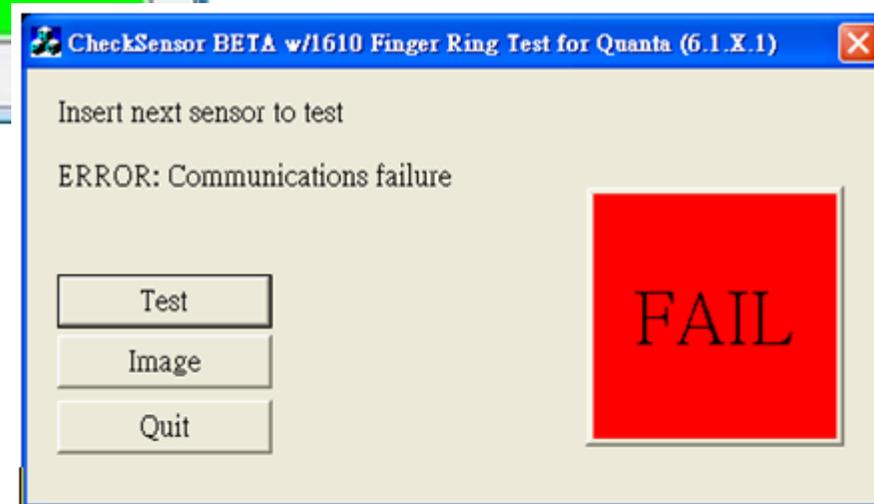
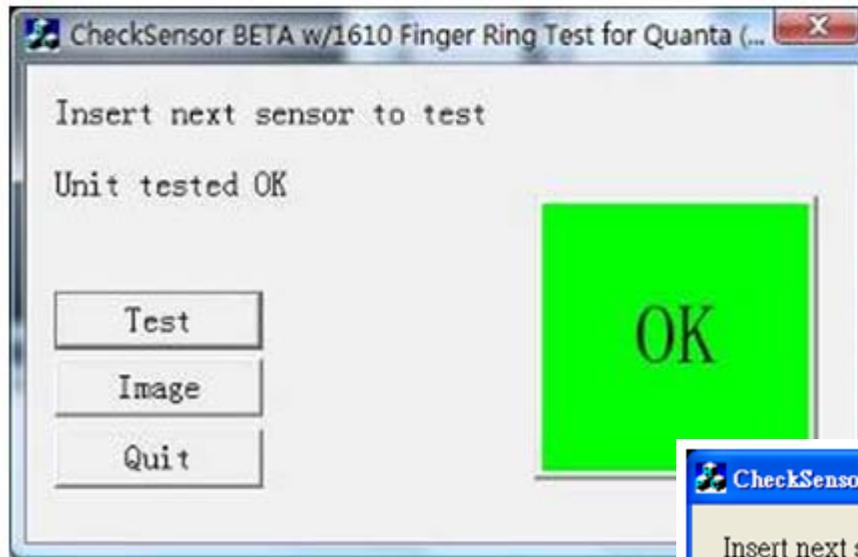
EXT/INT SPEAKER Test

Please press the number that you heard

```
Build DATE:2007-01-03
Audio diagnostic , Copyright by ASUS Rev1.05
-----
Test Speaker function utility
Play 0~9 wav file randomly.
Please press the number (0~9) that you heard: _
```

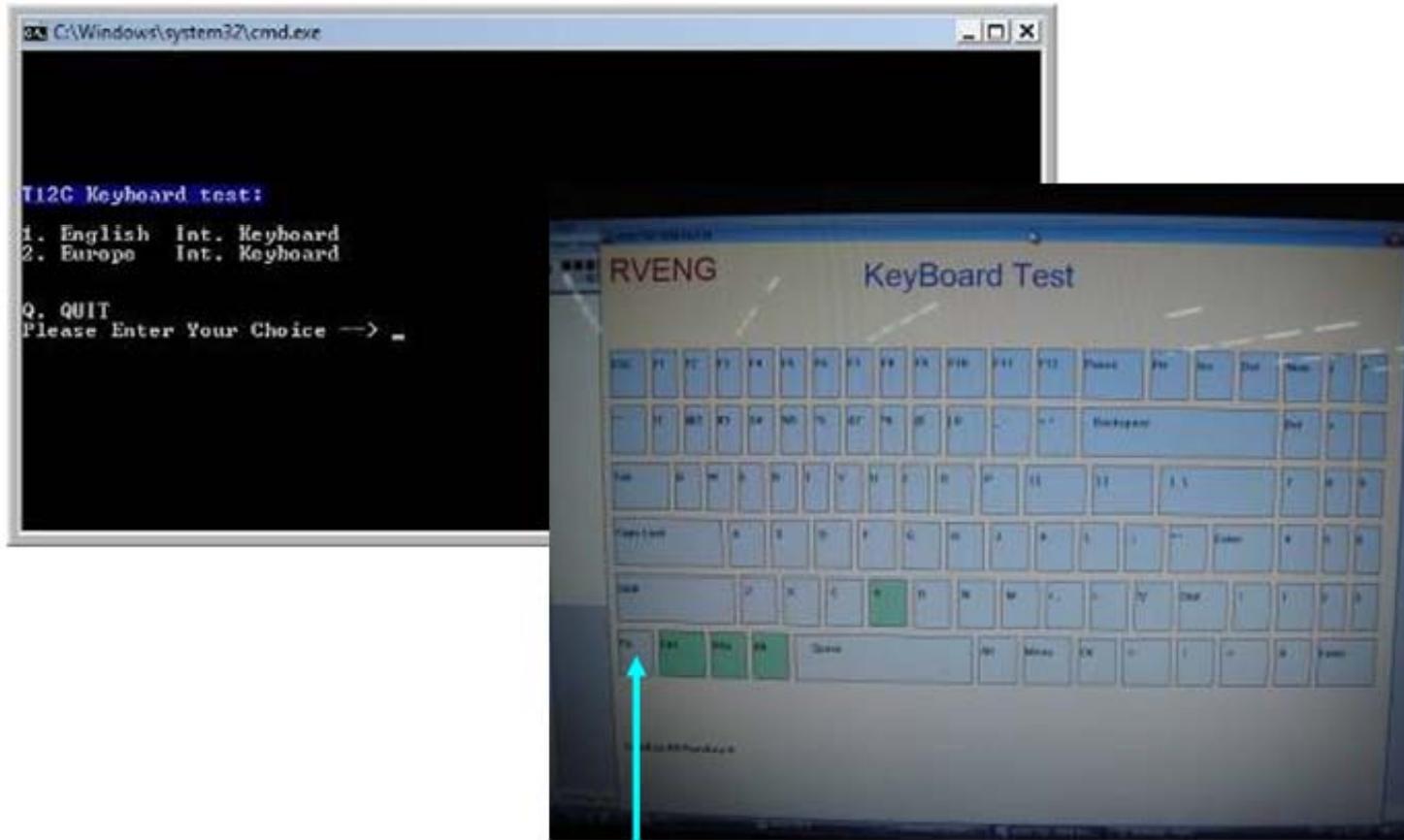


FINGER PRINT Test





KEYBOARD Test

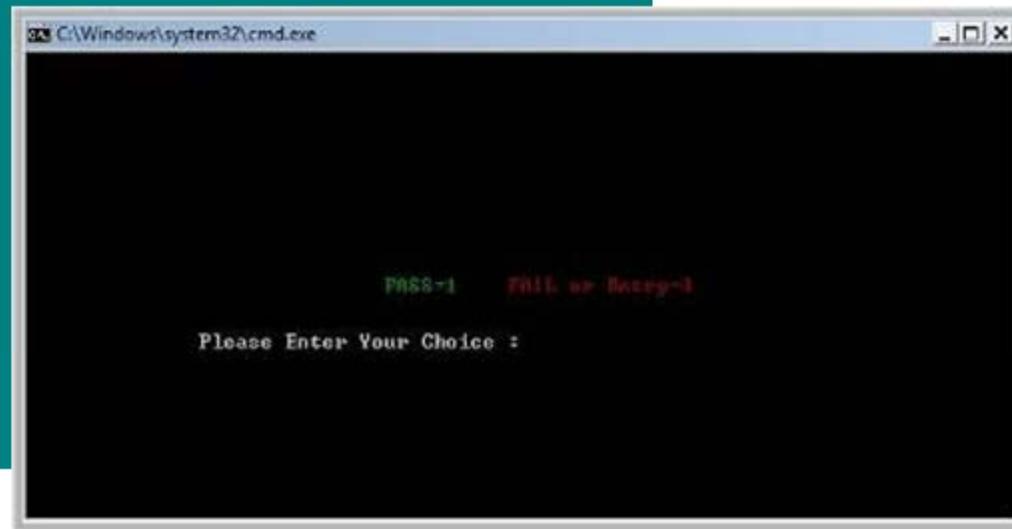
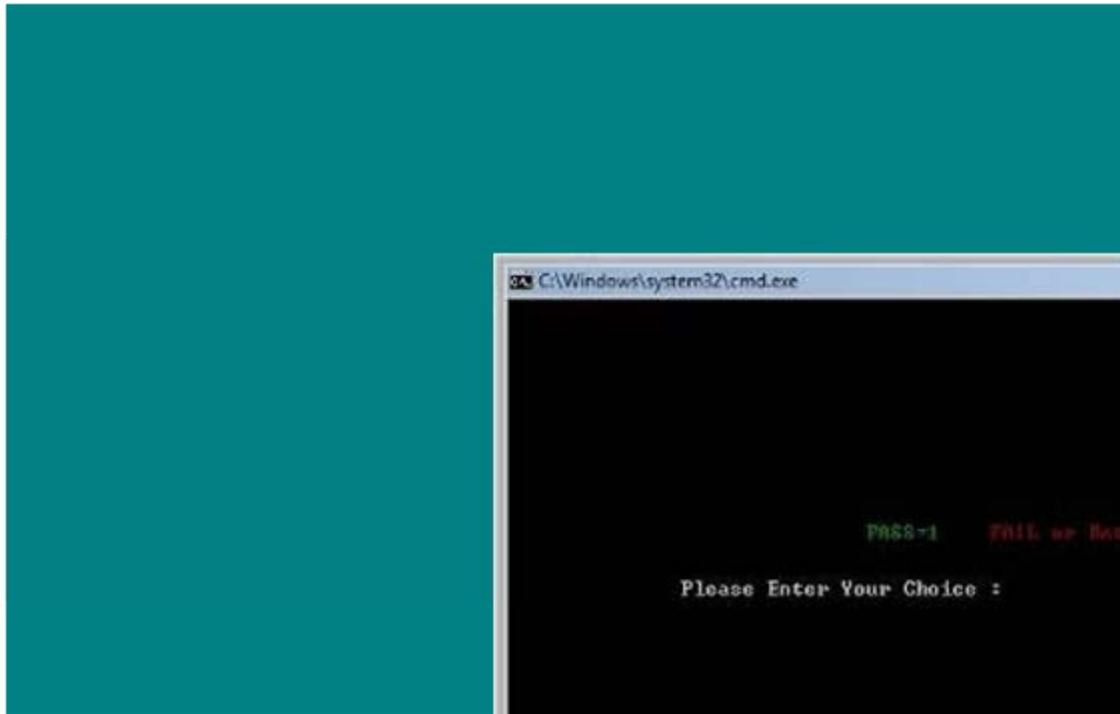


Press Fn + Num key to test.



LCD Test

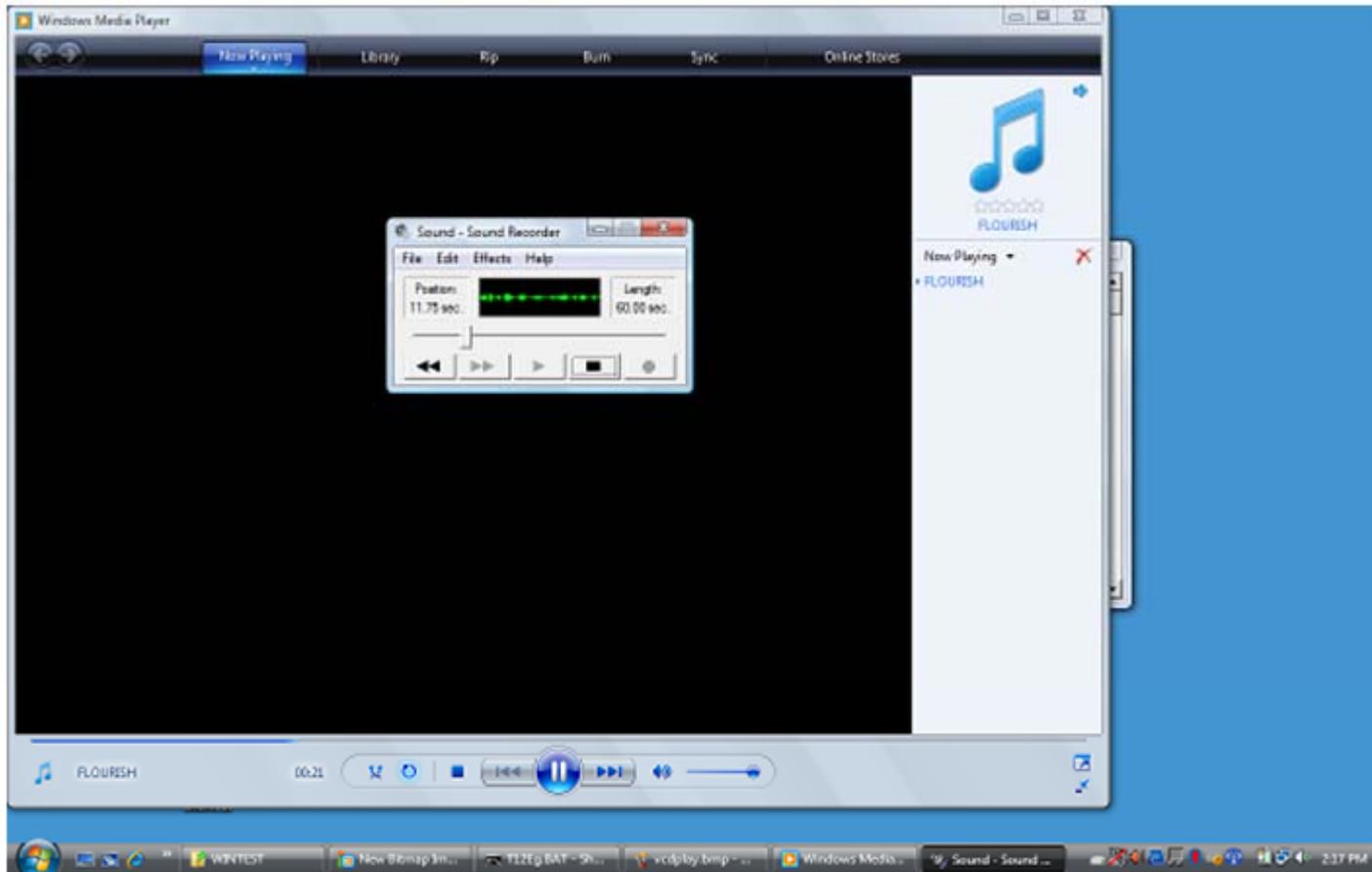
Check LCD Water Wave, press "ESC" to EXIT
Please choice PASS or FAIL





MIC Test

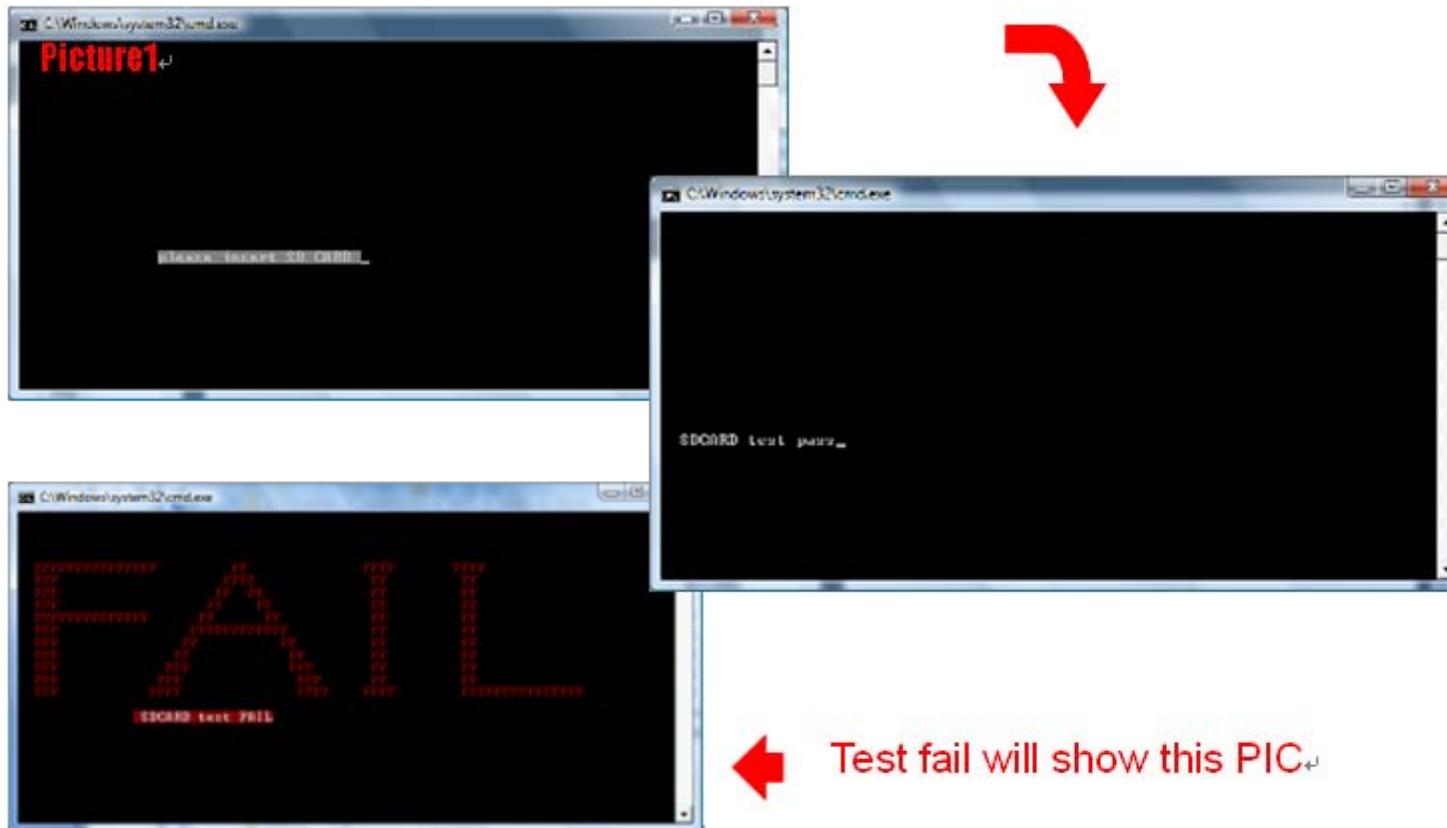
Please insert Mic-Phone to test





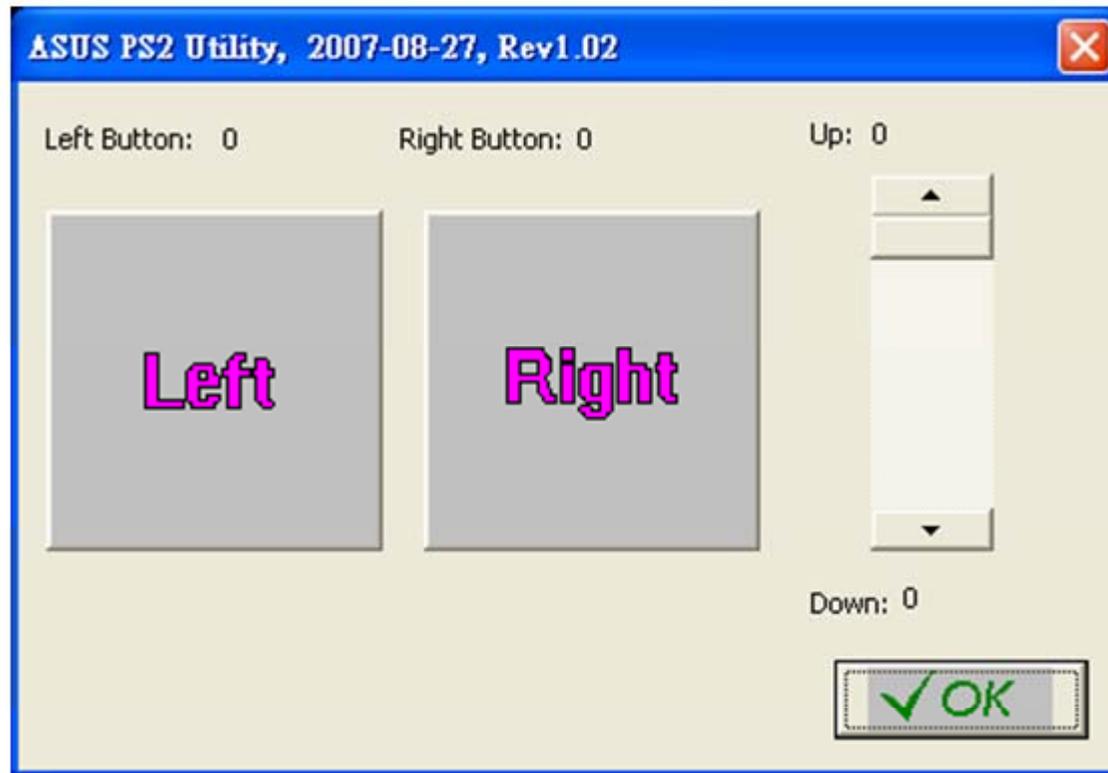
MS/SD CARD Test

Please insert the MS/SD-card into card-Reader (Picture 1)





TOUCHPAD Test



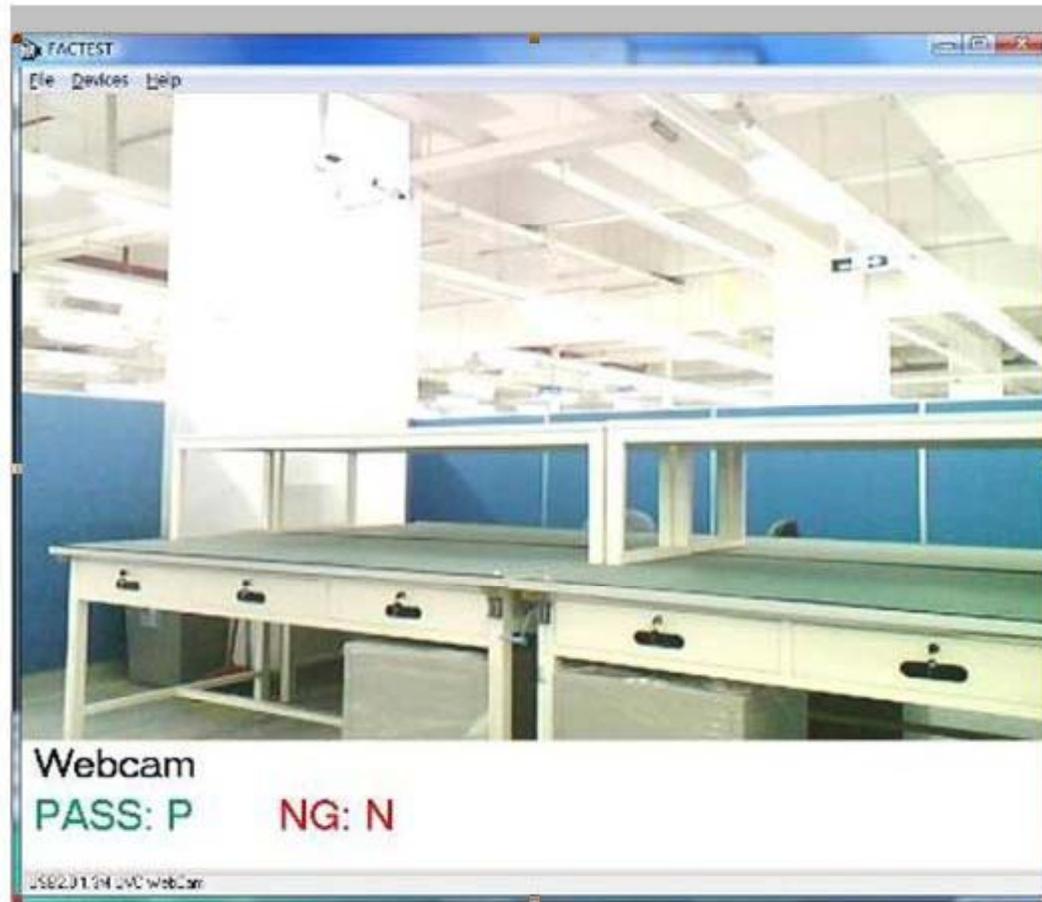


VCD PLAY Test





WEBCAM Test





NEWCARD Test

If the newcard is normal, it will appear the pictures1.

Picture1

Build DATE:2006-10-13
Network Utility, Copyright by ASUS Rev1.03

02: Description - Marvell Yukon 88E8851 PCI-E Gigabit Ethernet Controller
Manufacturer - (16ECC057-BC10-4646-8652-124640644043)
LANSpeed - 100 Mbps
NIC Address - 08-12-8E-62-1D-0B
Connect - Connected

Return_Code=01_

ASUS M Series
ASUS AI Surround Technology
Puts You in the Audio Sweet Spot

Product Comparison

News

ASUS P5Q Series Motherboards
ASUS EPU - World's First Energy Saving Engine

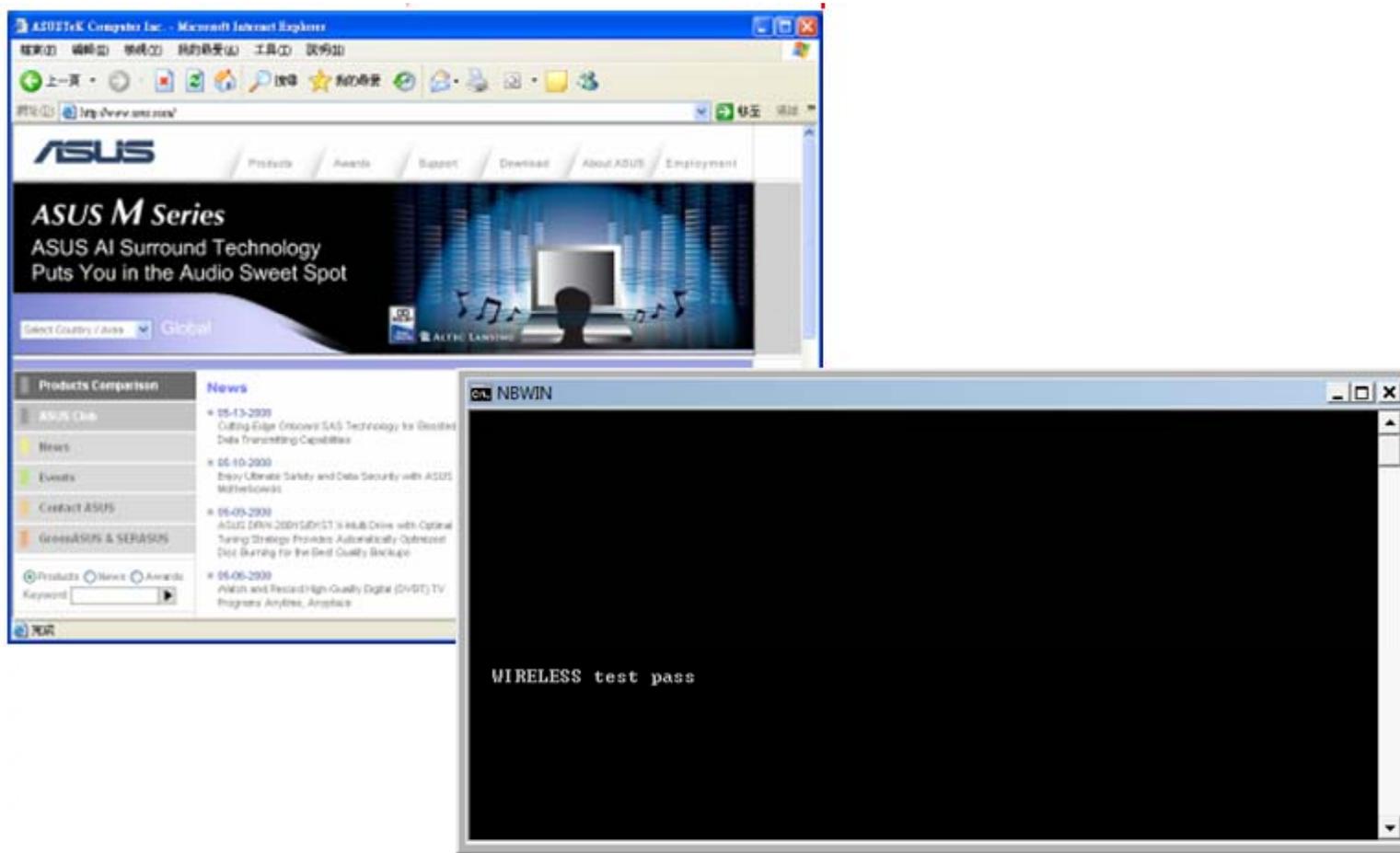
NEWCARD test FAIL_

Test fail will show this PIC



WIRELESS Test

If the wireless is normal, it will appear the below pictures.





WIRELESS Test

```
C:\Windows\system32\cmd.exe
Build Date: 2006-10-13
ASUS Windows ASUS Tools. Copyright by ASUS Rev1.00 Diags
-----
Search Data - DISCONNECTED
The Result Is :
Line 5 - CONNECT - DISCONNECTED
Line 6 - CONNECT - DISCONNECTED
Return_Code=0
Press any key to continue . . . _
```

← Test fail will show this PIC



```
NBWIN
FFFFFFFFFFFFFF  FF  FFFF  FFFF  FFFF
FFF  FFFF  FF  FF  FF  FF
FFF  FF  FF  FF  FF  FF
FFF  FF  FF  FF  FF  FF
FFFFFFFFFFFFFF  FFFF  FFFF  FFFF  FFFF
FFF  FF  FF  FF  FF  FF
FFF  FF  FF  FF  FF  FF
FFF  FF  FF  FF  FF  FF
FFF  FFF  FFF  FFF  FFF  FFF
FFF  FFFF  FFFF  FFFF  FFFFFFFFFF
WIRELESS test FAIL_
```