

# **POS310/312 with B45 M/B Installation Guide**



POS 310(Black/White)



POS312(Black/White)

## **Point-of-Sale Hardware System**

# Safety

## IMPORTANT SAFETY INSTRUCTIONS

- Read these instructions carefully. Keep these instructions for future reference.
- Follow all warnings and instructions marked on the product.
- Do not use this product near water.
- Do not place this product on an unstable cart, stand, or table. The product may fall, causing serious damage to the product.
- Slots and openings in the cabinet and the back or bottom are provided for ventilation; to ensure reliable operation of the product and to protect it from overheating, these openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. This product should never be placed near or over a radiator or heat register, or in a built-in installation unless proper ventilation is provided.
- This product should be operated from the type of power indicated on the marking label. If you are not sure of the type of power available, consult your dealer or local power company.
- Do not allow anything to rest on the power cord. Do not locate this product where persons will walk on the cord.
- Never push objects of any kind into this product through cabinet slots as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Never spill liquid of any kind on the product.

## FCC

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions:

This device may not cause harmful interference.

This device must accept any interference received, including interference that may cause undesired operation.

### Caution on Lithium Batteries

Danger will explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.

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# 1. Accessory



AC Adapter



Power Cord



Driver Bank



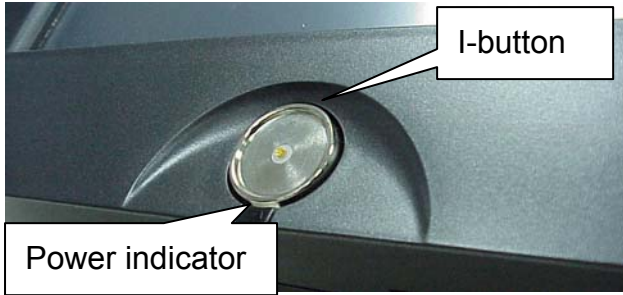
Warranty Card

Folder/File	File Description
<CD>:\B45\B45.htm	B45 Driver list
<CD>:\B45\VGA_Audio\	VGA & Audio driver
<CD>:\Common\LAN_drive\ R8139_810x	LAN driver
<CD>:\Common\MION_Touch	Touch driver

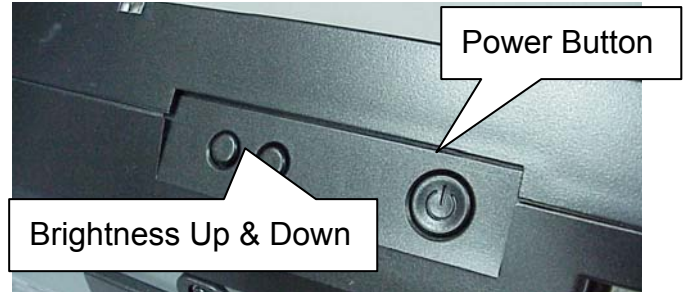
# 2.I/O Function

(Note: POS312 without I-button function)

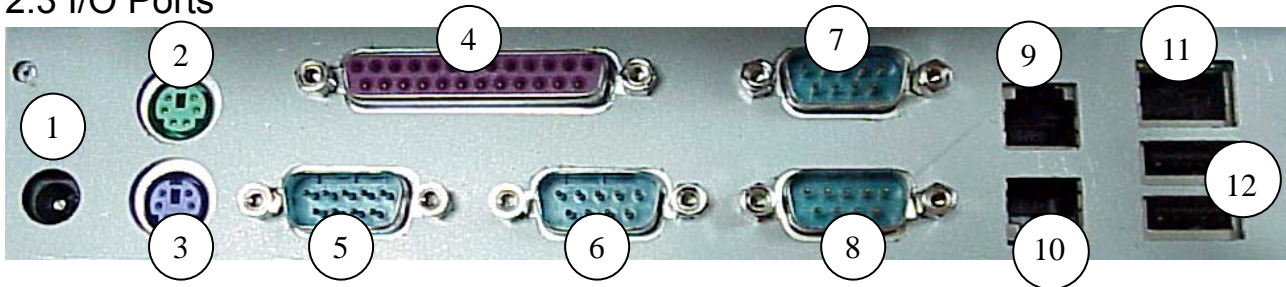
## 2.1 Front View



## 2.2 Bottom View



## 2.3 I/O Ports



#	Function	#	Function	#	Function	#	Function
1	DC 19V IN	4	LPT	7	COM4	10	DIO1
2	PS/2 Mouse	5	COM1	8	COM3	11	LAN
3	PS/2 Keyboard	6	COM2	9	DIO2	12	USB 1 & 2

## 2.4 Side View



For Keyboard connection, please choose between the PS/2 keyboard on the connector board and the one on the side board.

### 3. Specification

Item	Description	
Main Board	B45	
CPU	GXM 233-266GP	
Core Logic	NS GX1	
LCD size	POS310	10" DSTN-LCD Anti-glare
	POS312	10.4" TFT LCD
Brightness	POS310	70~100cd/m <sup>2</sup>
	POS312	150 cd/m <sup>2</sup>
Display Function	(built-in) on NS-CS5530	
Compact Flash	(Secondary/IDE)Type 1, Socket supported	
HDD	(Primary/IDE)Internal Slim type 44pin header (optional)	
RAM	On-board 128MB, 1 x S.O.-DIMM up to 256MB	
Resolution	800 x 600	
Touch Screen	4 Wire Resistive type (Miontec )	
Touch Panel	Miontec 4 Wire (COM5)	
Serial Port	6, Pin 1/9 with +5V/+12V, COM4 for Card Reader, COM5 for Touch Screen, COM6 for Customer Display	
Cash Drawer	2(with 12V/24V Output, MAX 24V≤2A)	
LPT	1	
USB	2(V1.1)	
PS2	Keyboard x 1, Mouse x 1	
LAN	1, (10/100 Base-T), RTL-8100 Chipset	
Audio	Line Out, System Speaker support (LCD Function Board)	
Magnetic Card Reader	3 Tracks, Keyboard or RS232 type (COM4) (Optional)	
Customer Display	LED type, (COM6) (Optional)	
Programmable Keypad	32 keys with key lock, Smart IC Card Reader (Optional)	
Dallars Key	i-Button Key Reader (Keyboard type, Optional)	
Expansion Slot	Mini PCI Socket	
OS support	Windows 98/CE 4.1, Linux	
Power Supply	AC Adapter: Input 100 ~ 240V, Output 19V/90W Safety: UL, CUL. TUV, CB, CSA	
Spill-proof	Touch Screen Panel	
M/B Dimensions	200mm(W) x 185mm(D) x 25mm(H)	
Temperature	5°C~ 35°C, operating	
EMI	FCC/CE Class B, VCCI	

# 4. Install External Device

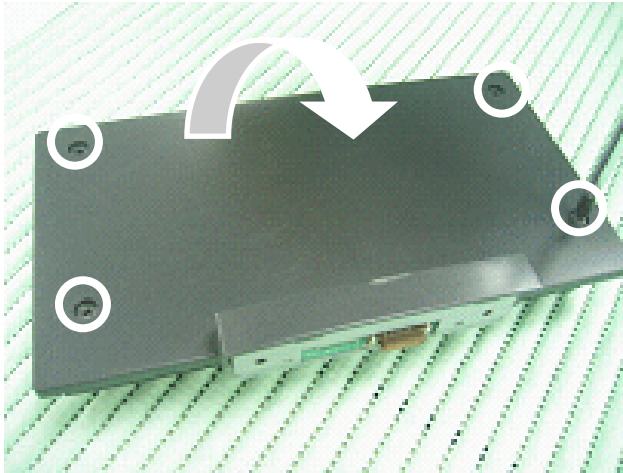
## 4.1 Install Programmable Keypad



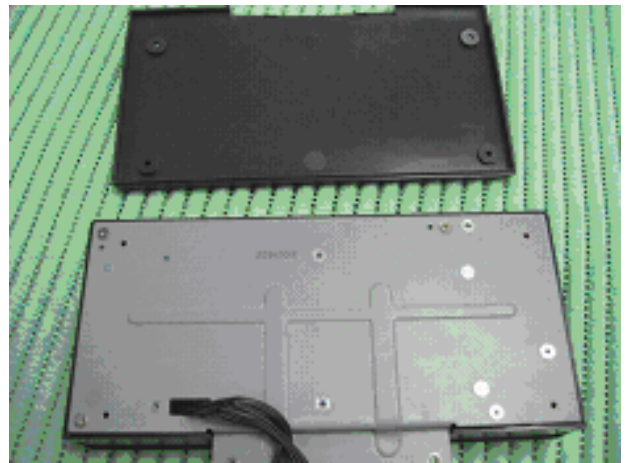
a. Turn over the system before installing the keypad.



b. Loosen the two screws at the side of the system and remove the keypad cover.



c. Turn over the keypad and loosen the back cover four screws.



d. Take off the back cover.



e. Attach the keypad to the side of the system.



f. Tighten the two screws so the keypad can be fully connected to the system.



g. Recover the back cover of the keypad.



h. Attach the keypad to the side of the system and tighten the four screws around the back cover.



i. Now the keypad is fully installed.



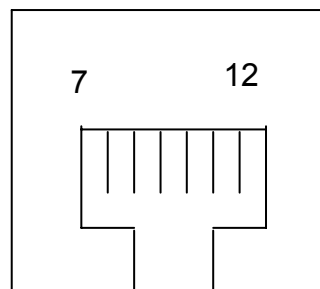
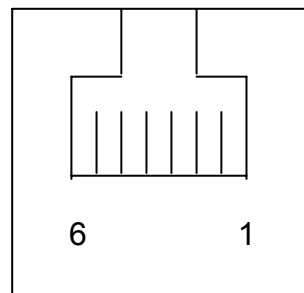
## 4.2 Install Cash Drawer



You can install a cash drawer through the cash drawer port. Please confirm the pin assignment before installation.

### 4.2.1 Cash Drawer Pin Assignment

Pin	Signal	Pin	Signal
1	GND	7	GND
2	DOUT bit0	8	DOUT bit2
3	DIN bit0	9	DIN bit2
4	12V/24V	10	12V/24V
5	DOUT bit1	11	DOUT bit3
6	GND	12	GND



## 4.2.2 Cash Drawer Controller register description

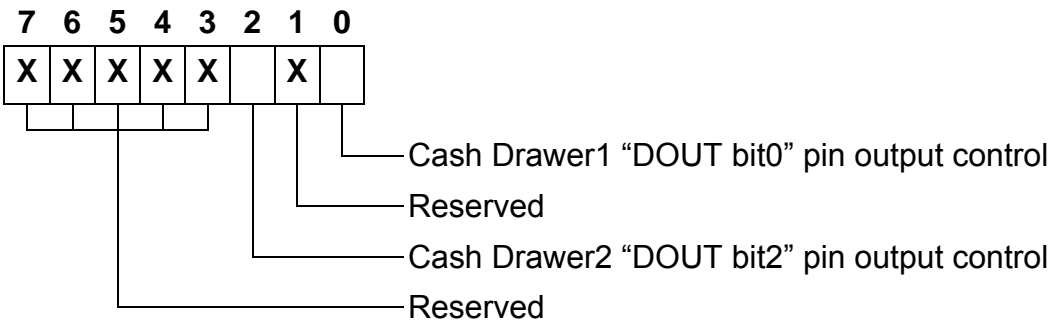
The Cash Drawer Controller use two I/O addresses to control Cash Drawer –Cash Drawer Control Register and Cash Drawer Status Register.

### 4.2.2.1 Cash Drawer Control Register

Register Location: I/O port 206h

Attribute: Write

Size: 8bit



Bit 7-3: Reserved

Bit 2: Cash Drawer2 “DOUT bit2” pin output control.

= 1: Opening the Cash Drawer 2

= 0: Allow close the Cash Drawer 2

Bit 1: Reserved

Bit 0: Cash Drawer1 “DOUT bit0” pin output control.

= 1: Opening the Cash Drawer 1

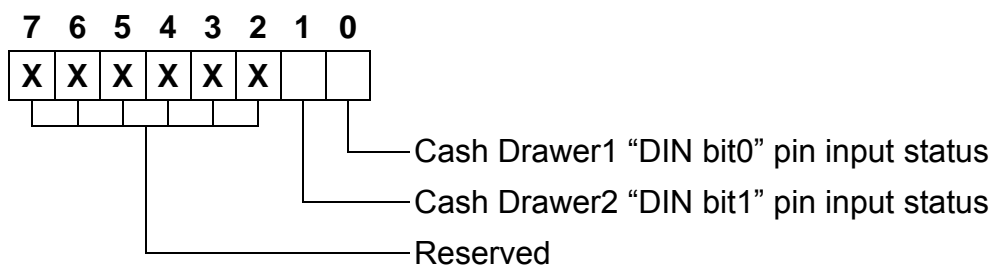
= 0: Allow close the Cash Drawer 1

## 4.2.2.2 Cash Drawer Status Register

Register Location: I/O port 206h

Attribute: Read

Size: 8bit



Bit 7-2: Reserved

Bit 1: Cash Drawer2 "DIN bit1" pin input status.

= 1: the Cash Drawer2 opened or not exist.

= 0: the Cash Drawer2 closed.

Bit 0: Cash Drawer1 "DIN bit0" pin input status.

= 1: the Cash Drawer1 opened or not exist.

= 0: the Cash Drawer1 closed.

## 4.2.3Cash Drawer control command example

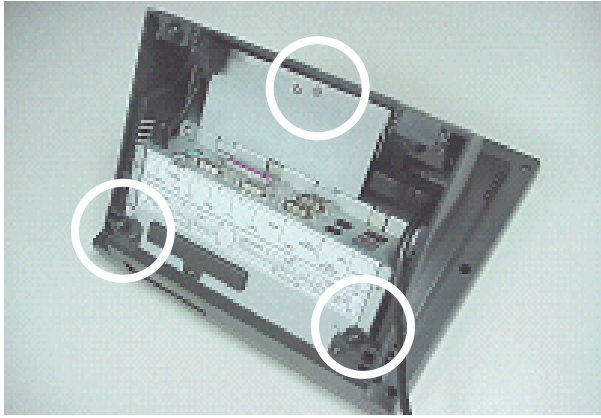
Use Debug.EXE program under DOS or Windows98

Command	Cash Drawer 1
O 206 01	Opening
O 206 00	Allow to close
<ul style="list-style-type: none"><li>➤ Set the I/O address 206h bit0 =1 for opening Cash Drawer1 by “DOUT bit0” pin control.</li><li>➤ Set the I/O address 206h bit0 =0 for allow close Cash Drawer1.</li></ul>	

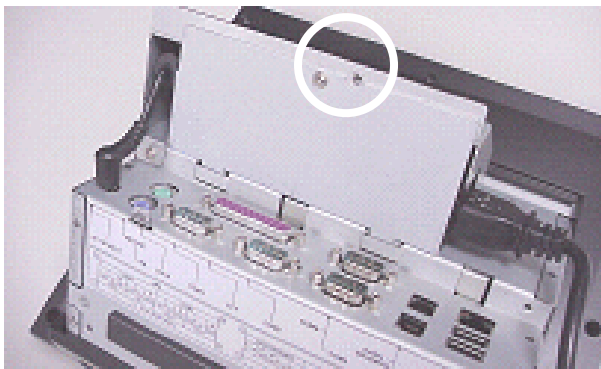
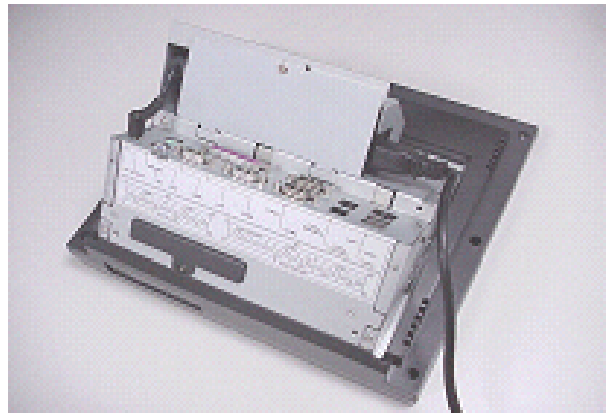
Command	Cash Drawer 2
O 206 04	Opening
O 206 00	Allow to close
<ul style="list-style-type: none"><li>➤ Set the I/O address 206h bit2 =1 for opening Cash Drawer2 by “DOUT bit2” pin control.</li><li>➤ Set the I/O address 206h bit2 =0 for allow close Cash Drawer2.</li></ul>	

Command	Cash Drawer
I 206	Check status
<ul style="list-style-type: none"><li>➤ The I/O address 206h bit0 =1 mean the Cash Drawer1 is opened or not exist.</li><li>➤ The I/O address 206h bit0 =0 mean the Cash Drawer1 is closed.</li><li>➤ The I/O address 206h bit1 =1 mean the Cash Drawer2 is opened or not exist.</li><li>➤ The I/O address 206h bit1 =0 mean the Cash Drawer2 is closed.</li></ul>	

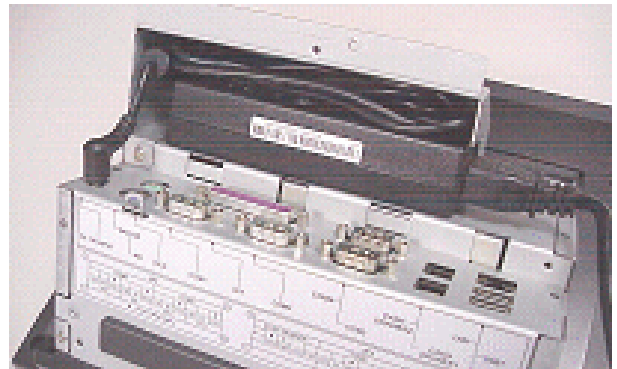
# 5. Disassemble Procedures



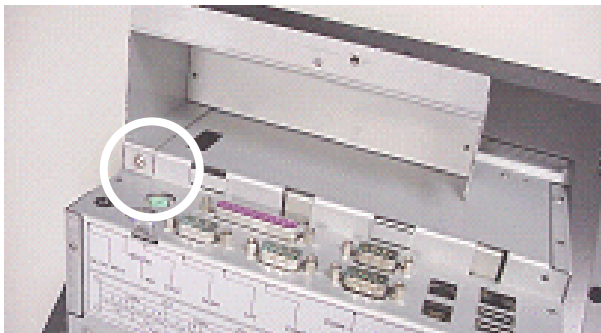
a. Turn over the system and remove the stand by loosening the three screws.



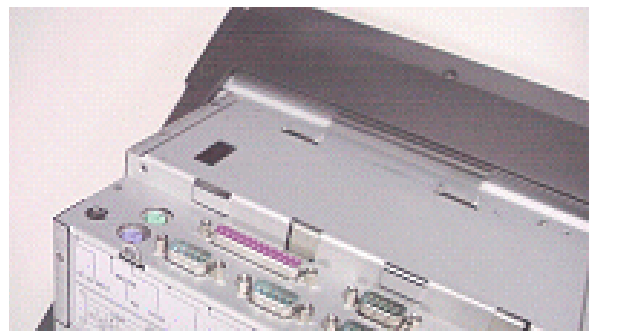
b. Loosen the screw fastening the power cover and the power bracket.



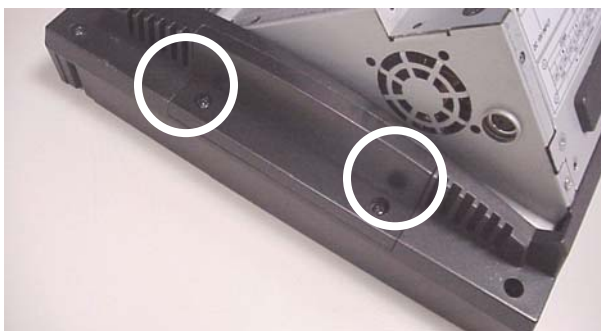
c. Remove the power supply.



d. Loosen the screw fastening the power bracket and the base chassis.



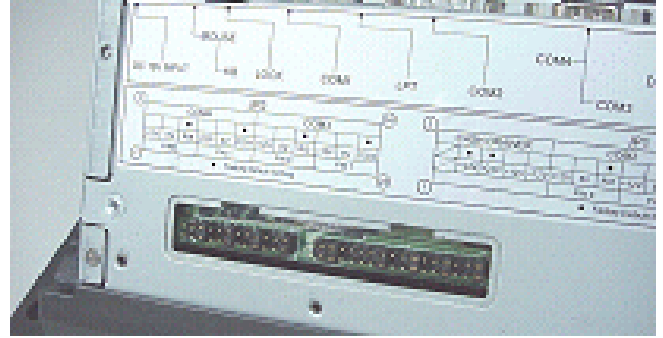
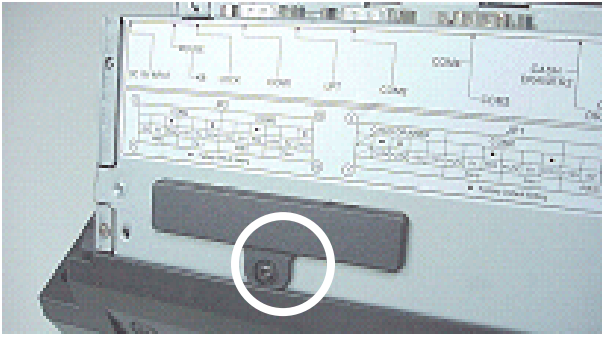
e. Remove the power bracket.



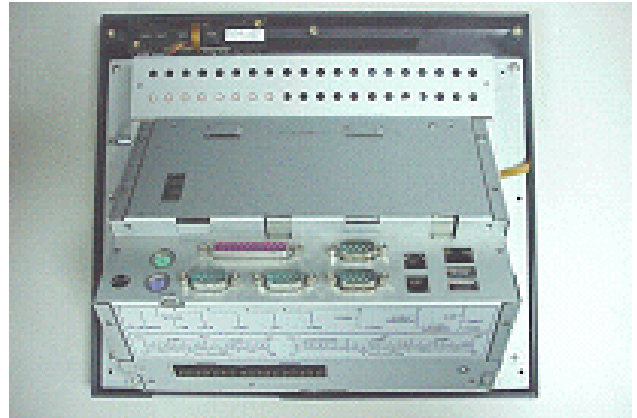
f. Loosen the two screws fastening the keypad cover.



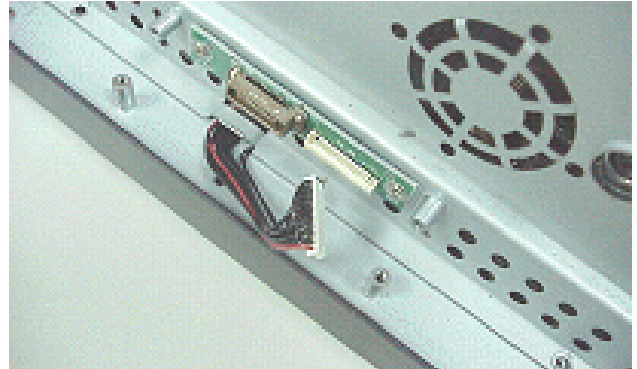
g. Remove the keypad cover and loosen the screw fastening the LCD panel rear cover and LCD panel.



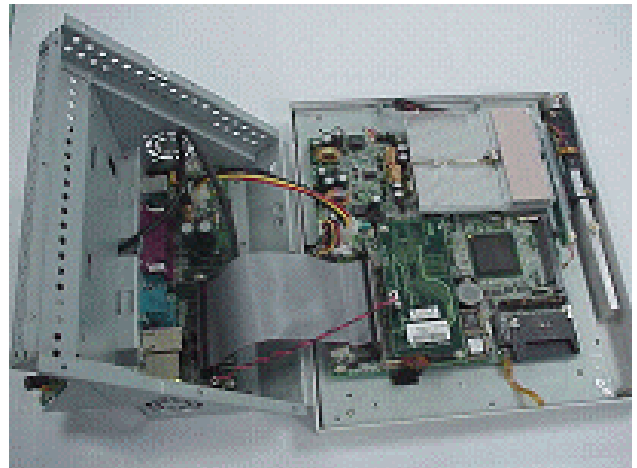
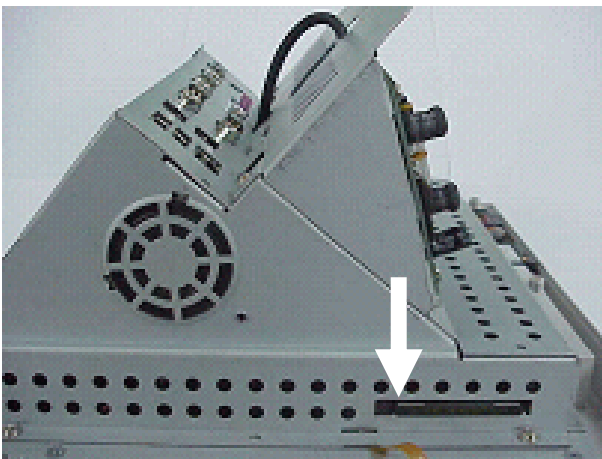
h. Loosen the screw fastening the jumper setting cover and the base chassis to remove it.



i. Loosen the screws fastening the LCD panel rear cover and the panel to remove it.

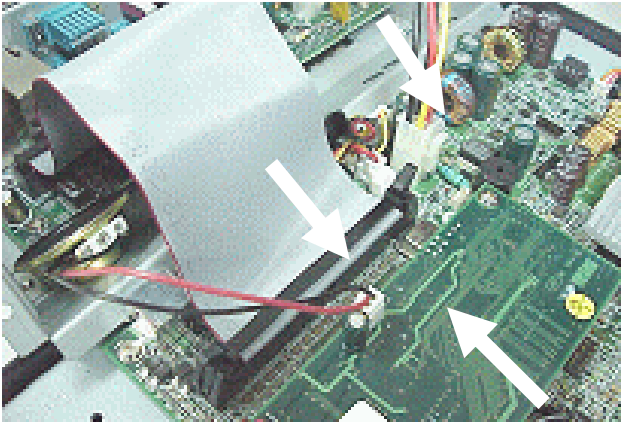


j. Disconnect the keypad cable

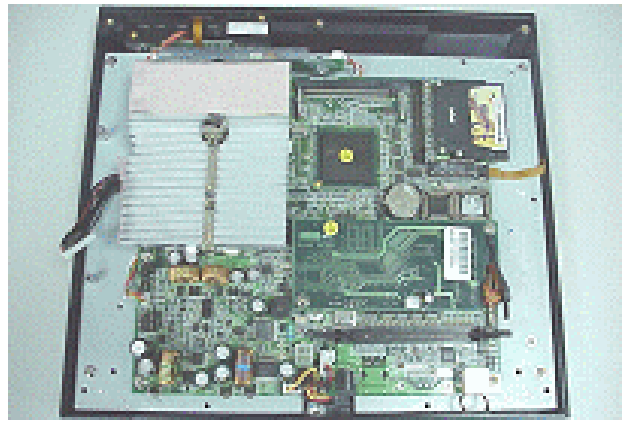


k. Press the button to remove the CF card.

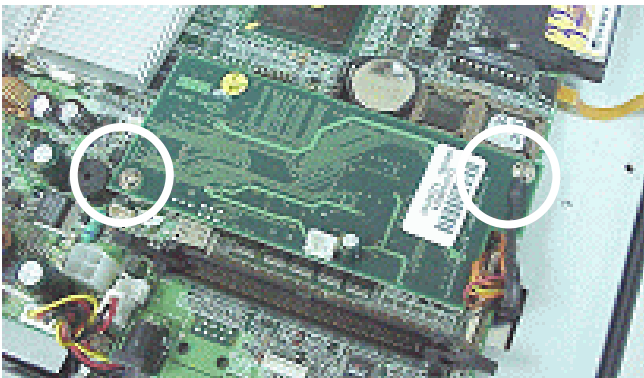
l. Lift the base chassis.



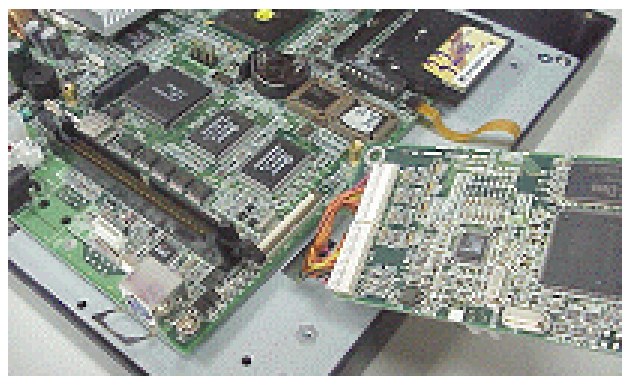
m. Disconnect the connector board cable, audio cable and the connector board power cable.



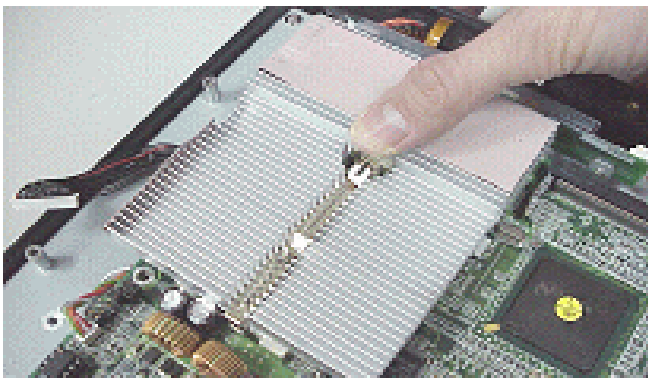
n. Loosen the screws fastening the motherboard and the LCD panel.



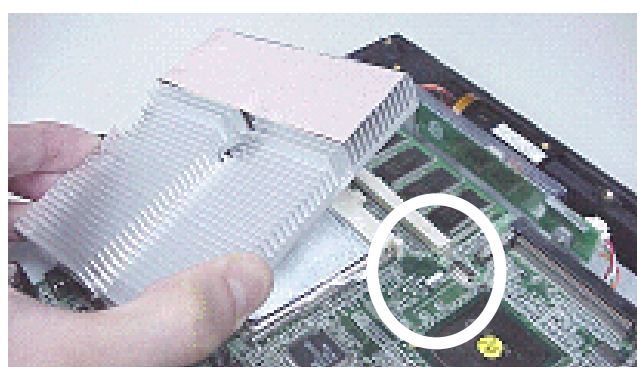
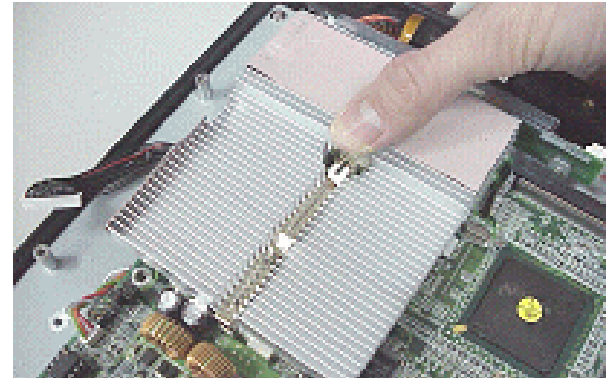
o. Loosen the two screws fastening the motherboard and the bridge board.



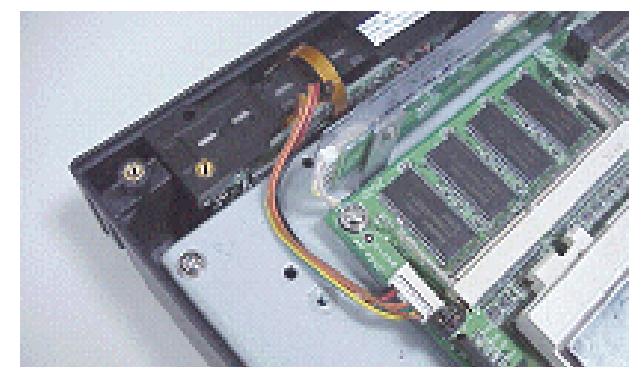
p. Lift the bridge board and disconnect the panel signal cable.



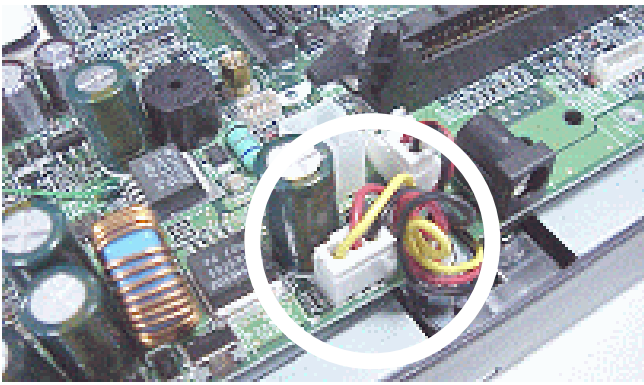
q. Press the heat sink clip and lift it.



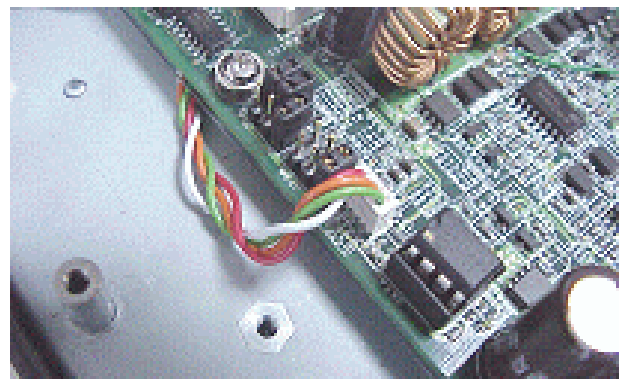
r. Remove the heatsink.



s. Disconnect the card reader cable.



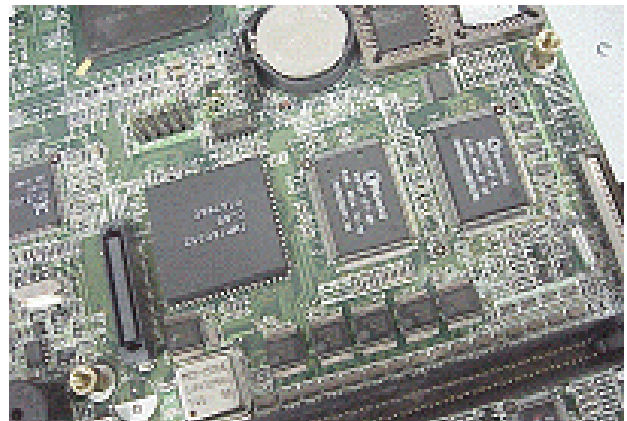
t. Disconnect the I-button and the LED cable.



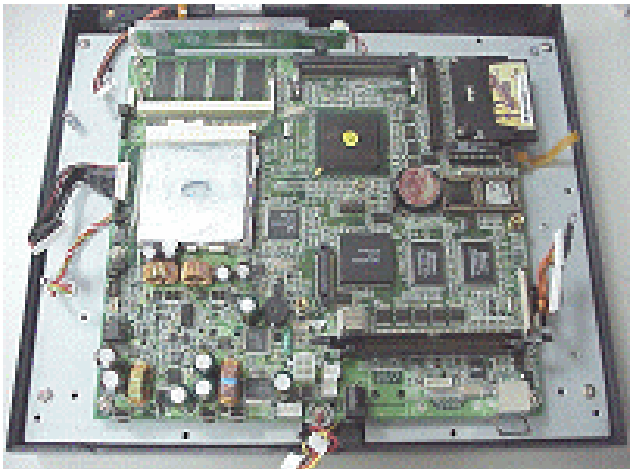
u. Disconnect the inverter cable.



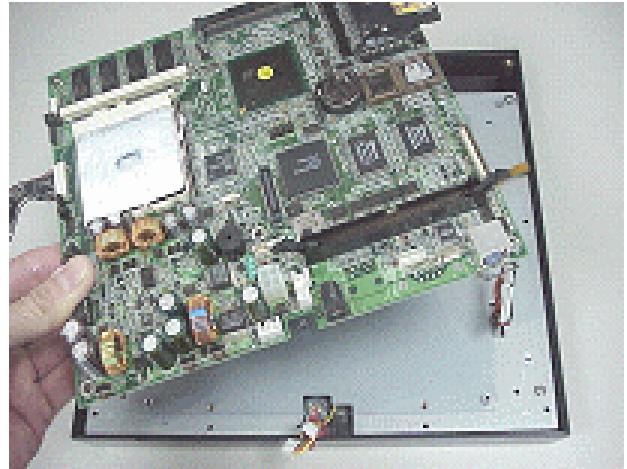
v. Disconnect the touch panel cable.



w. Disconnect the two hexagonal screws.



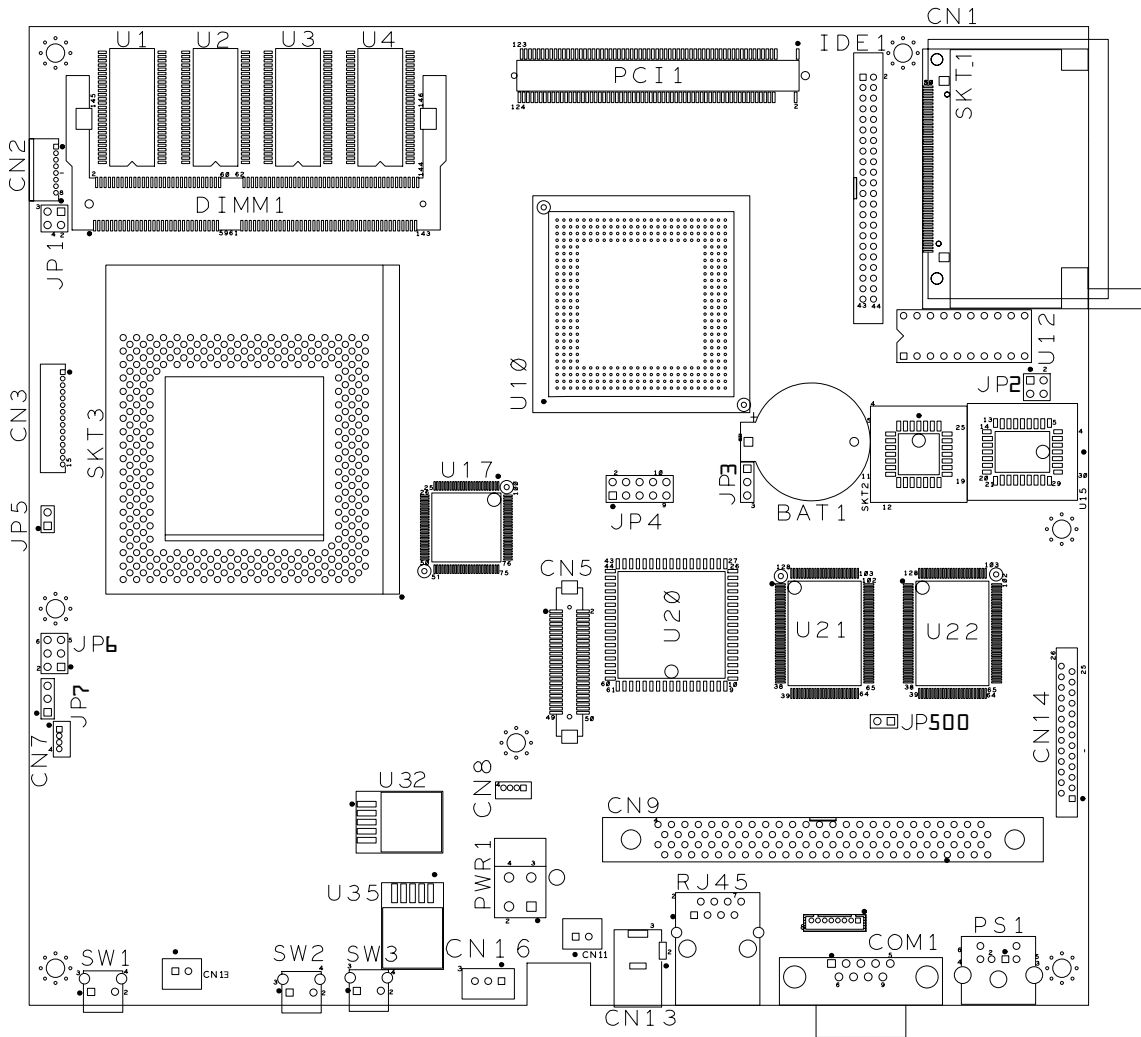
x. Loosen the screws fastening the motherboard and the LCD panel and remove it..





# 6. Jumper Setting

## 6.1 Main Board Jumper Setting



### 6.1.1 PS2 Card Reader Selection (Add-on Card Reader or not)

Function	JP1 (1-2), (3-4)
Yes	OPEN
No	SHORT

### 6.1.2 I-Button Selection Clear CMOS (Mount U12 or not) \* Factory Default Setting

Function	JP2	
	1-2	3-4
*Yes	OPEN	OPEN
No	SHORT	SHORT

### 6.1.3 CMOS Clear Selection

Function	JP3 (SHORT)
* Normal	1-2
Clear	2-3

### 6.1.4 CRT Interface: JP4

### 6.1.5 Keypad Selection

Function	JP5
*Yes	OPEN
No	SHORT

### 6.1.6 CPU Type & CPU Core Voltage Selection

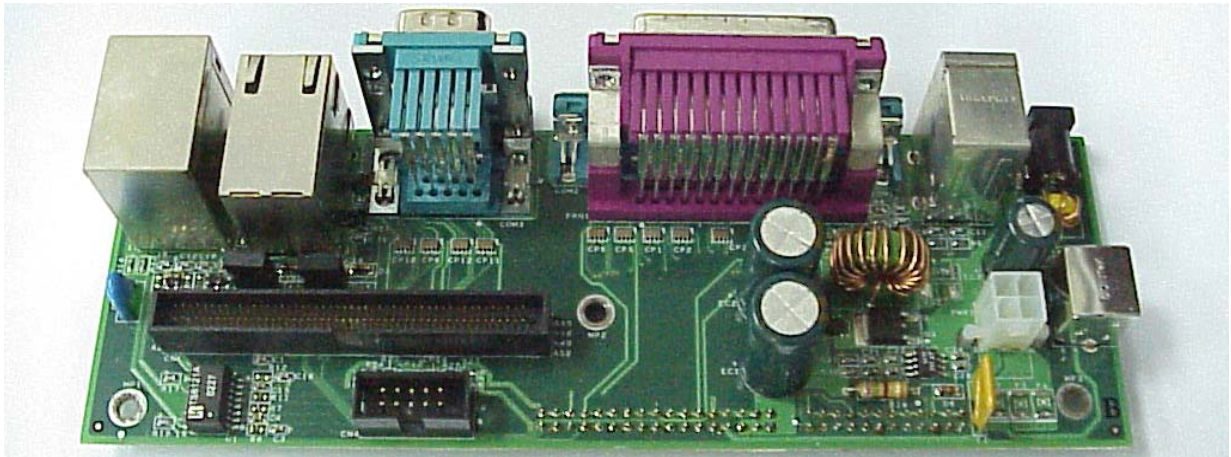
Function	JP6			JP7	
	1-2	3-4	5-6	1-2	2-3
GXM-233(2.9V)	SHORT	OPEN	OPEN	SHORT	--
GXLV-233(2.5V)	SHORT	OPEN	OPEN	--	SHORT
GXM-266(2.9V)	OPEN	OPEN	OPEN	SHORT	--

### 6.1.7 GPIO SET (Reserved) JP500

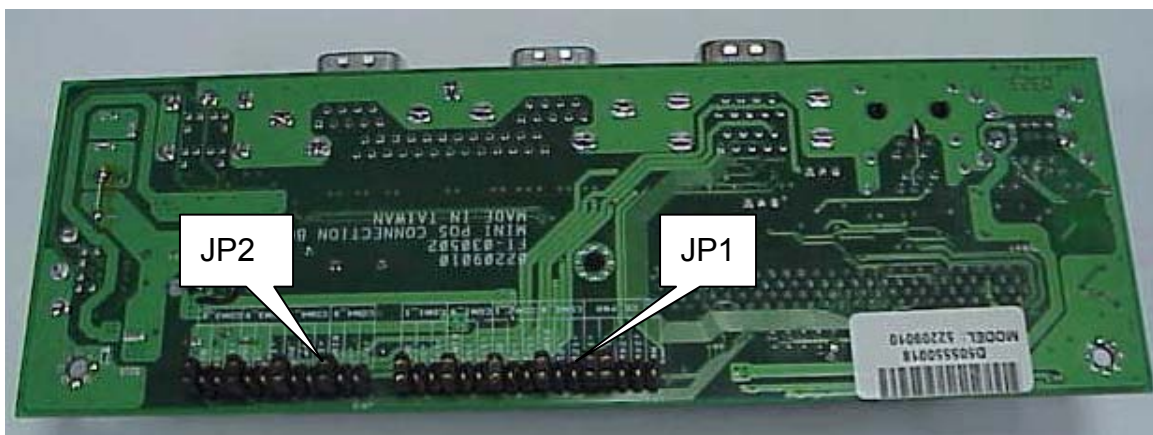
Note:



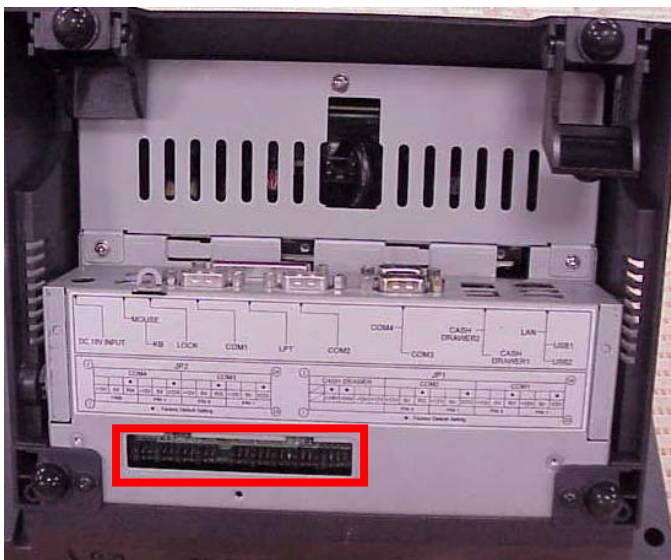
## 6.2 Connector Board Jumper Setting



a. This is the POS310 connector Board. Turn over the board...

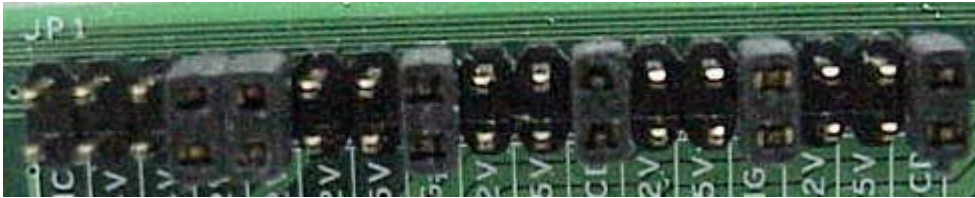


b. And you will see JP1 and JP2 at the back.



c. The Connector Board Jumper location of POS 310/312

## 6.2.1 JP1



### 6.2.1.1 Cash drawer

	CASH DRAWER				
Pin (JP1)	1-2	3-4	5-6	7-8	9-10
Default				●	●
Function	NC	+24V	+24V	+12V	+12V

### 6.2.1.2 COM1 and COM2

	COM2						COM1					
Pin (JP1)	11-12	13-14	15-16	17-18	19-20	21-22	23-24	25-26	27-28	29-30	31-32	33-34
Default			●			●			●			●
Function	+12V	5V	RI	+12V	5V	DCD	+12V	5V	RI	+12V	5V	DCD
Pin(COM)	Pin 9			Pin 1			Pin 9			Pin 1		

## 6.2.2 JP2



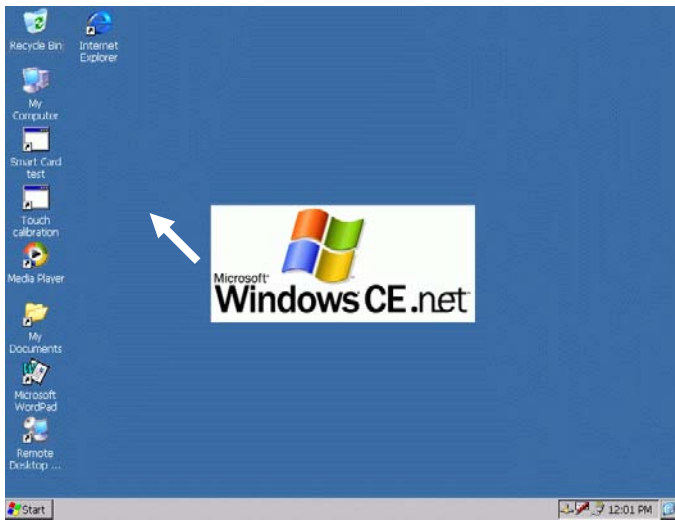
	COM4						COM3					
Pin (JP2)	1-2	3-4	5-6	7-8	9-10	11-12	13-14	15-16	17-18	19-20	21-22	23-24
Default			●			●			●			●
Function	+12V	5V	RI	+12V	5V	DCD	+12V	5V	RI	+12V	5V	DCD
Pin(COM)	Pin 9			Pin 1			Pin 9			Pin 1		

Note:

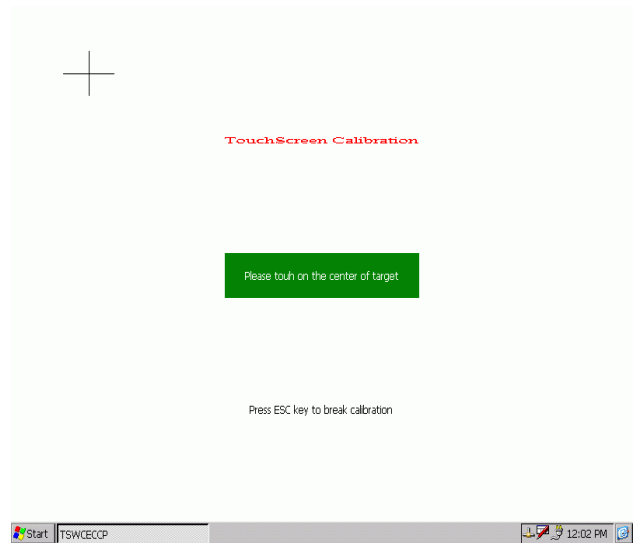


# 7. Windows CE Installation Guide

## 7.1 Touch calibration.



a. Click control panel and double Click the "Touch Screen Calibration" icon.

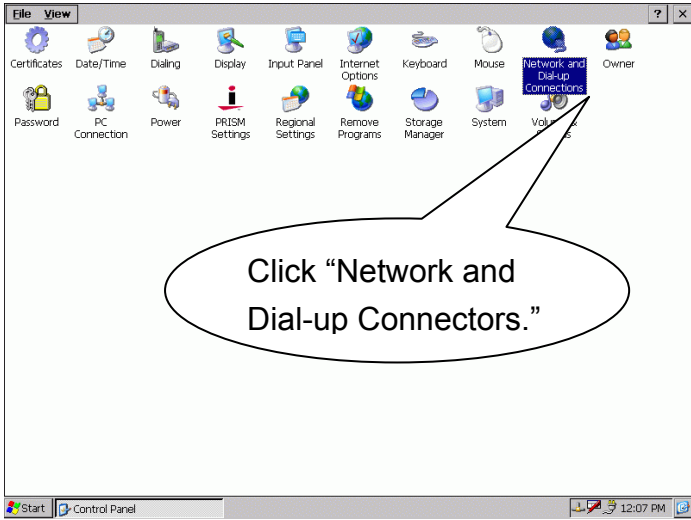


b. Touch the targets with your finger for alignment.

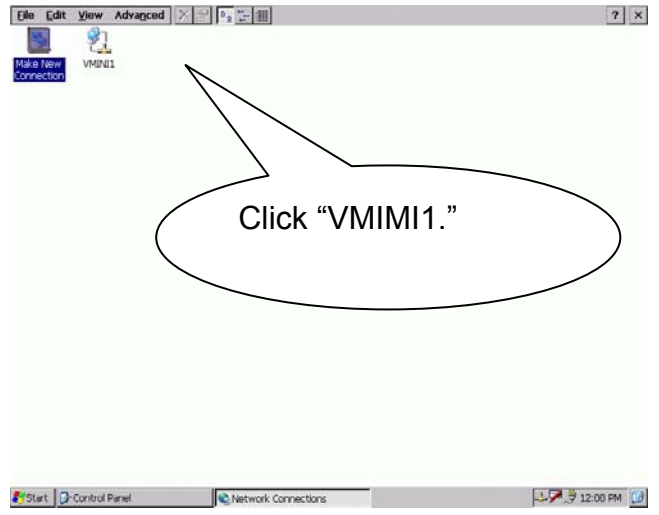


c. Click "Yes" on the check video alignment window.

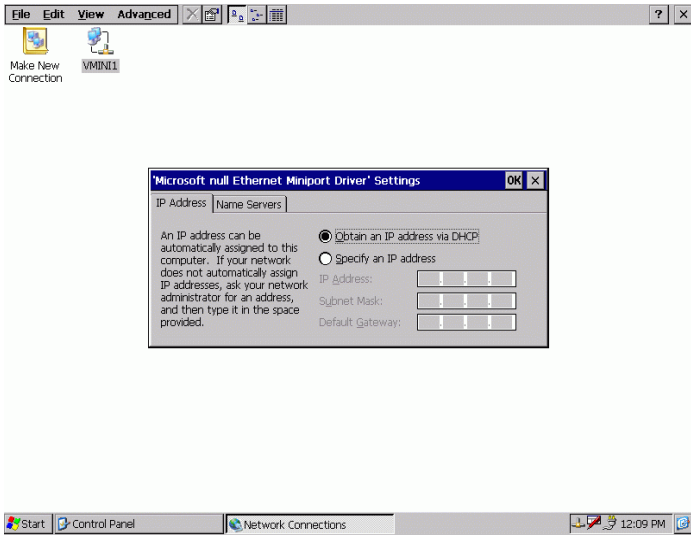
# 7.2 Network connect setting -- Onboard LAN



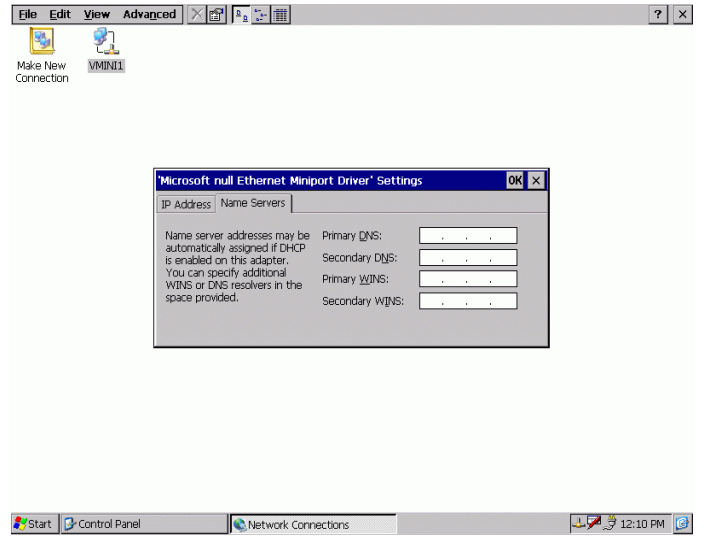
a.



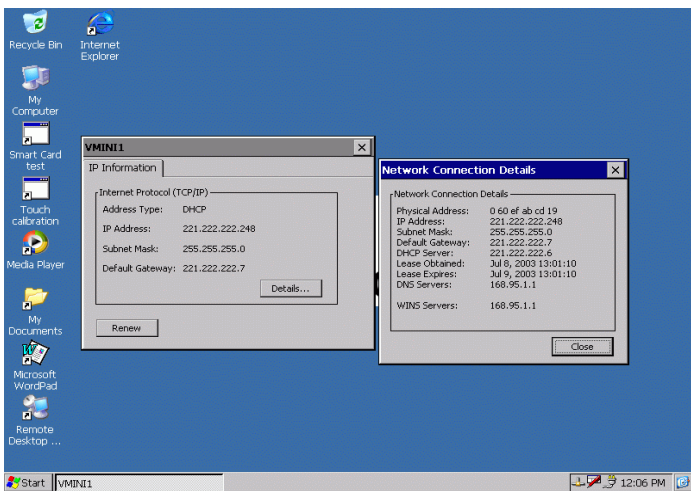
b.



c. Identify the IP address.



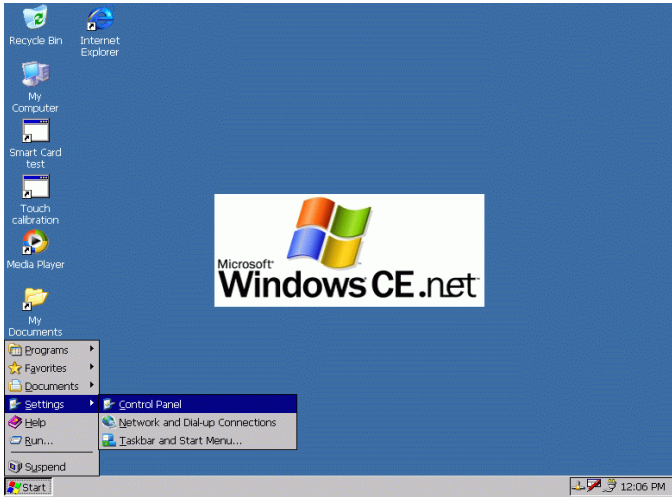
d. Input the name servers of DNS/WINS.



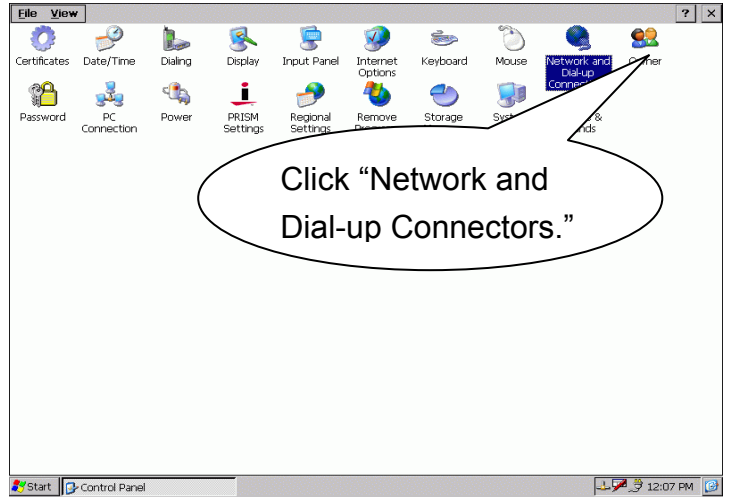
e. The IP address will be automatically disturbed on DHCP if don't identify it. The default connect type is set to DHCP protocol.



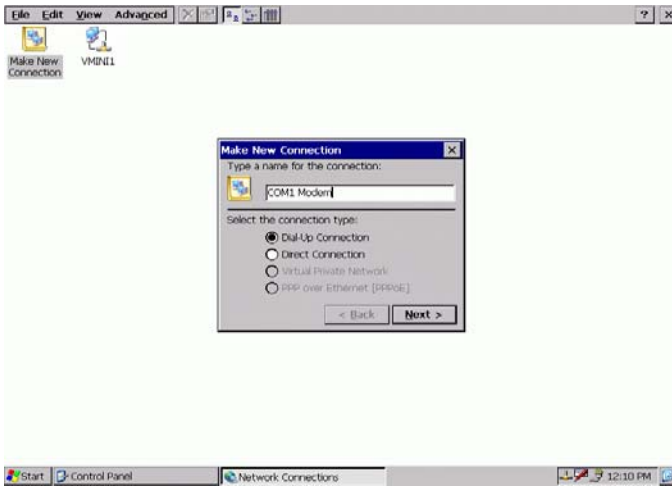
# 7.4 Network connect setting -- Dial-up Network



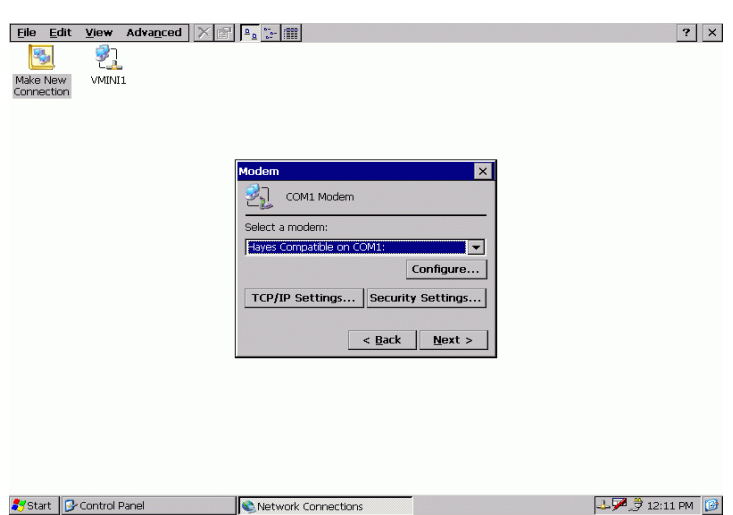
a. Click the Control Panel.



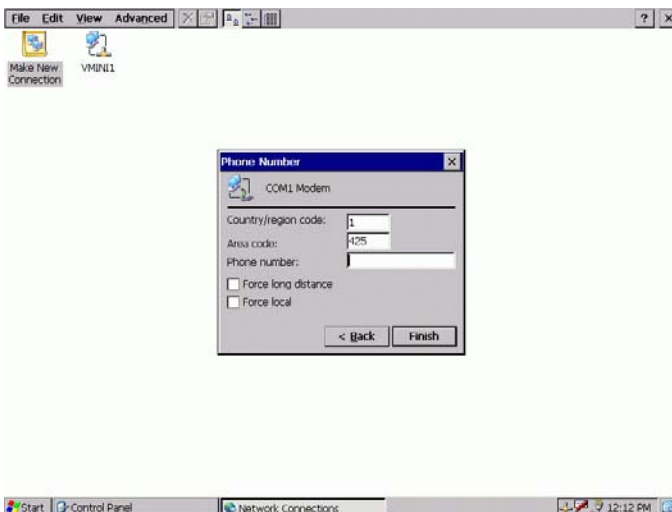
b. Click the Network and Dial-up connections



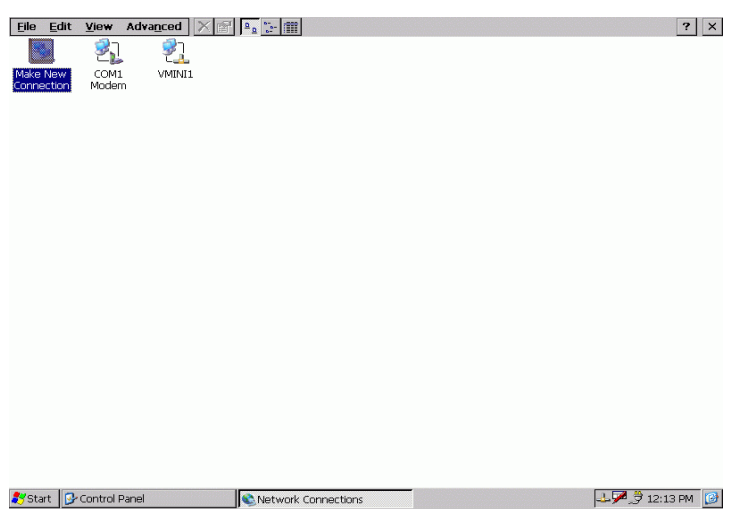
c. Click the Make New Connection and choose the connection type. Input the new connection name and click the Next button.



d. Choose the modem connect port and input else settings.



f. Input the phone number and click "Finish" button.



g. Now the new connect icon included in network and Dial-up connections.



## 7.5 Windows CE Update

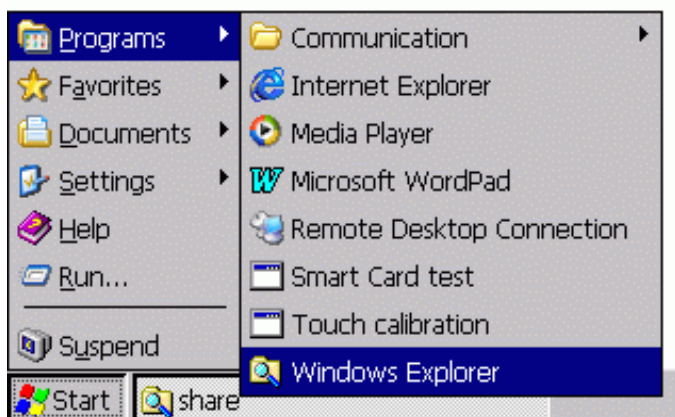
About the Windows CE update, just need upgrade the Windows CE image file. The Windows CE image file put in your boot storage, like the hard disk, and the file name is NK.BIN. You can copy the WinCE image file into your boot storage to replace the old Windows CE image file. The below show you how to update Windows CE image example under DOS and Windows CE.

### 7.5.1 Update Windows CE image example under DOS

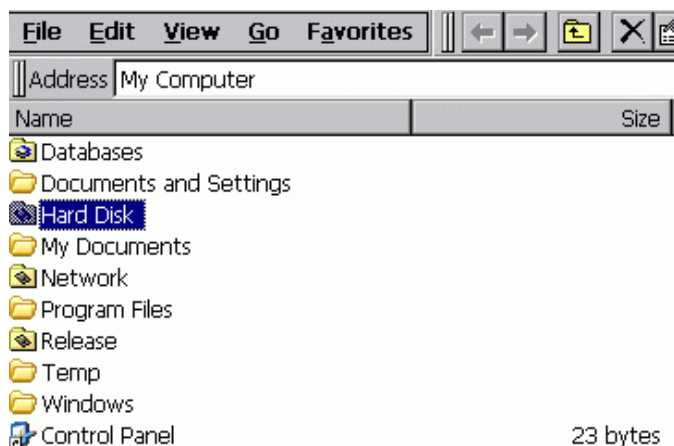
DOS command: copy c:\45C1E02.bin d:\nk.bin

### 7.5.2 Update Windows CE image example under Windows CE -- update the local storage's Windows CE image file by network.

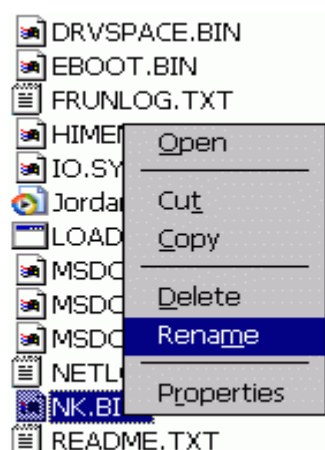
#### 7.5.2.1 Rename or Delete the old Windows CE image file.



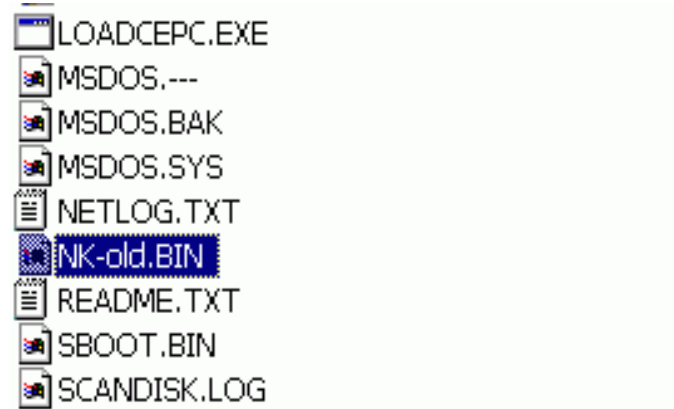
a. Open the "Windows Explorer" program



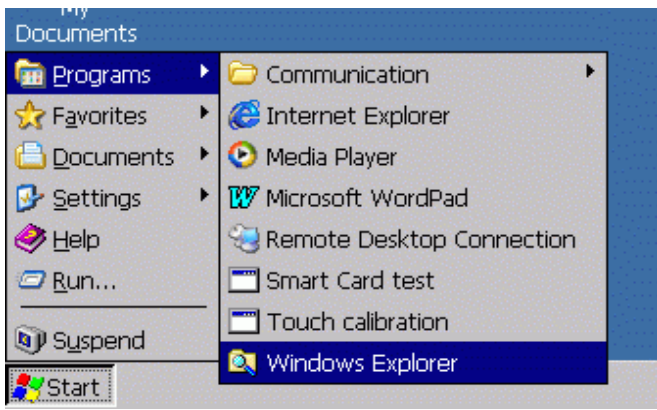
b. Choose Hard Disk Folder



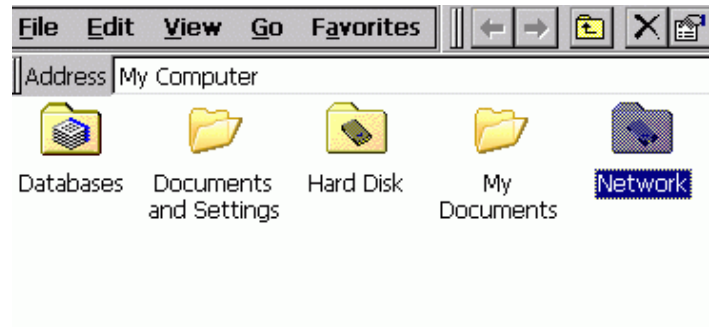
c. Rename the old Windows CE image file -- NK.BIN to NK-old.BIN



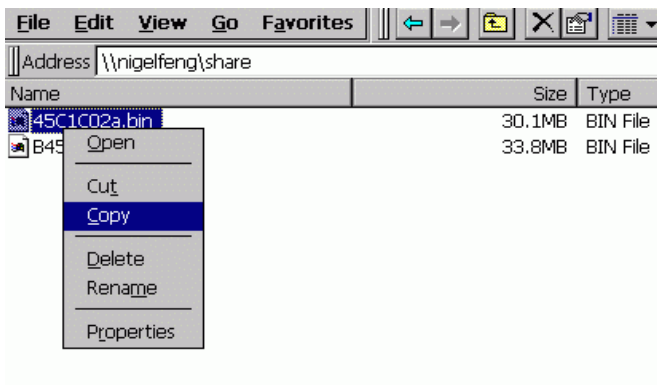
### 7.5.2.2 Copy the new Windows CE image file for network:



a. Open the "Windows Explorer" program

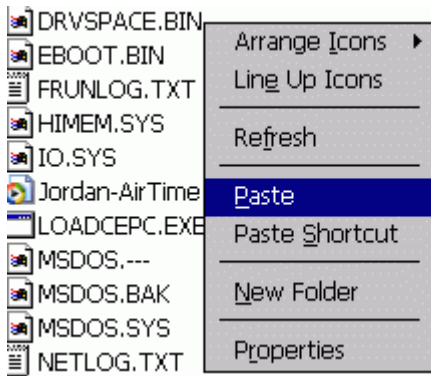


b. Choose "Network" folder

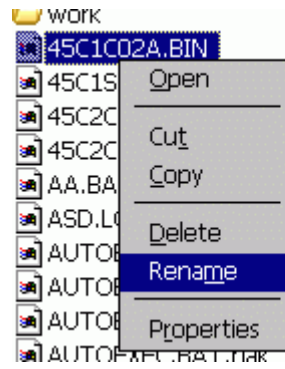


c. Find the new Windows CE image file and copy it.

### 7.5.2.3 Paste the new Windows CE image file into hard disk and rename to NK.BIN.



a. Paste the new Windows CE image file into hard disk



b. Rename the new Windows CE image file to NK.BIN

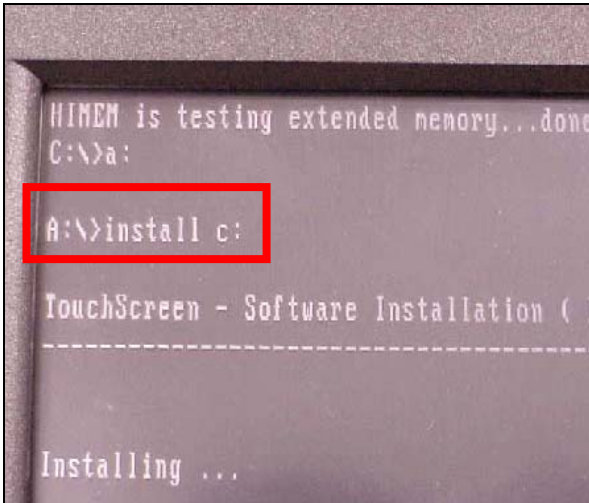


c. Finish. Restart your system will load the new Windows CE image file.

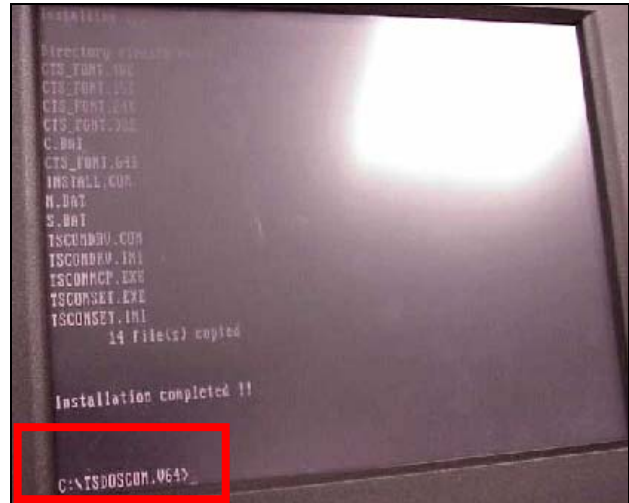
Remark: WinCE ability of PNP (Plug and Play) is weakness. Don't change the Bios setting after complete "Load Setup Default" and insert any device after Power-on.

# 8. Install touch driver on DOS mode

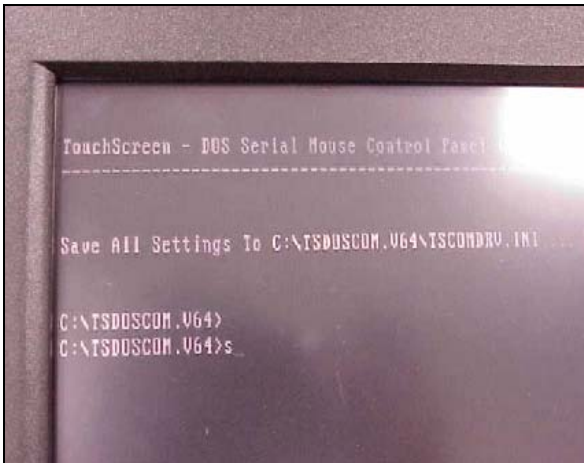
Driver path in Driver Bank: COMMON\MION\_Touch\DOS\



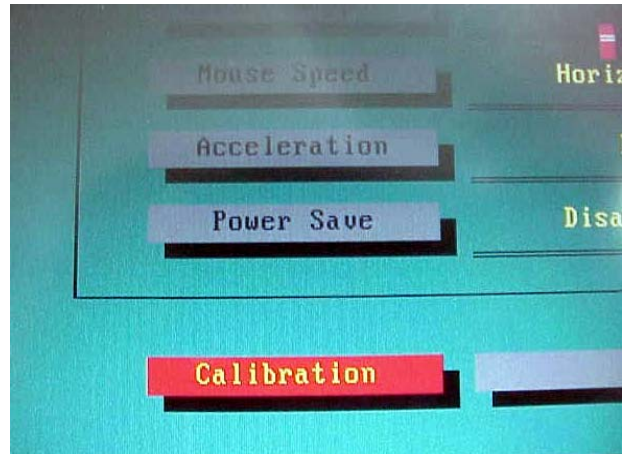
a. Input command "install C:" to install the driver to C



b. Input Command "m" to install driver



c. Input command "s" to run Touch screen control panel window.

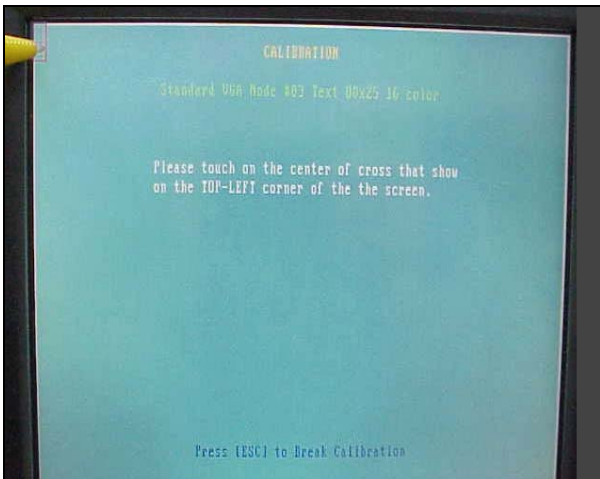


d. Select "Calibration" on Touch screen control panel window.

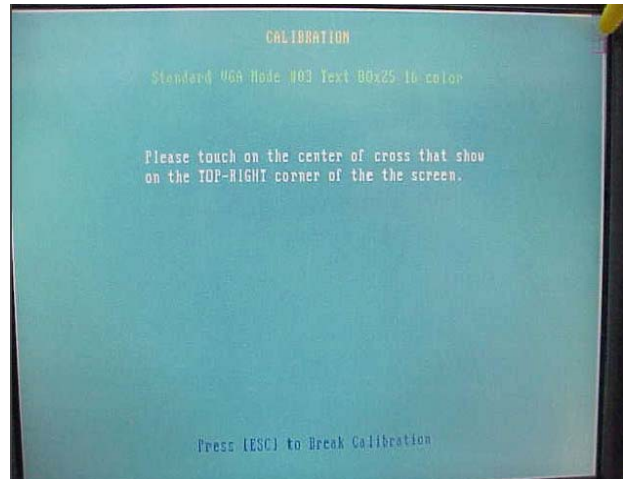


e. Select "VGA 3h" and then click "Start"

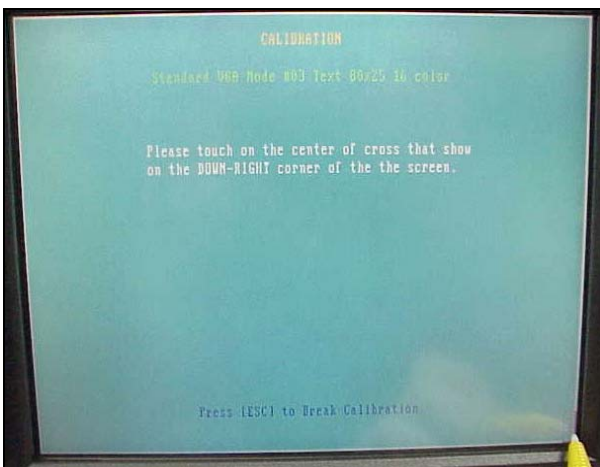




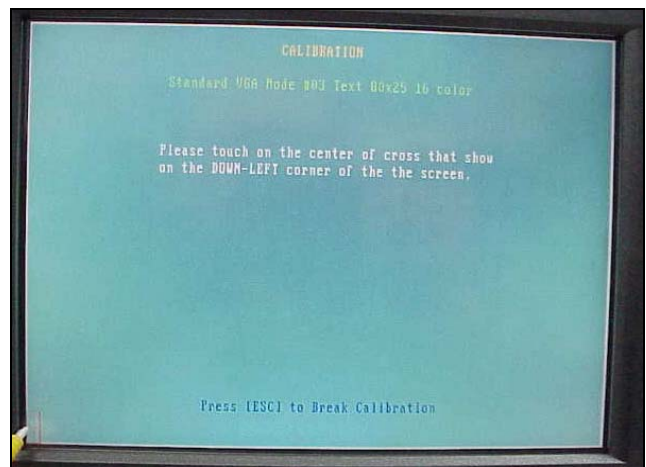
f-1. Touch the targets for alignment.



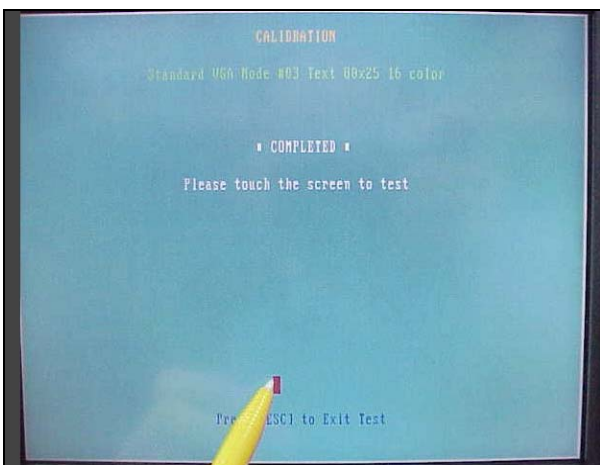
f-2. Touch the targets for alignment.



f-3. Touch the targets for alignment.



f-4. Touch the targets for alignment.



f-5 Touch the targets for alignment.

Note: You also can select other VGA mode you want. Please follow the installation step e.

For Example: VGA 3h=> Text 80\*25 16 color

VGA 4h=> Graph 320\*200 4 color