BPC-6170

15” Industrial Panel PC
with MainBoard, four PCI slots,
Touch Screen, 300W ATX P/S

Copyright Disclaimers

The accuracy of contents in this manual has passed thorough checking and review before publishing. BOSER Technology Co., Ltd., the manufacturer and publisher, is not liable for any infringements of patents or other rights resulting from its use. The manufacturer will not be responsible for any direct, indirect, special, incidental or consequential damages arising from the use of this product or documentation, even if advised of the possibility of such damage(s).

This manual is copyrighted and BOSER Technology Co., Ltd. reserves all documentation rights. Unauthorized reproduction, transmission, translation, and storage of any form and means (i.e., electronic, mechanical, photocopying, recording) of this document, in whole or partly, is prohibited, unless granted permission by BOSER Technology Co., Ltd.

BOSER Technology Co., Ltd. reserves the right to change or improve the contents of this document without due notice. BOSER Technology Co., Ltd. assumes no responsibility for any errors or omissions that may appear in this manual, nor does it make any commitment to update the information contained herein.

Trademarks

BOSER is a registered trademark of BOSER Technology Co., Ltd.

ISB is a registered trademark of BOSER Technology Co., Ltd.

Intel is a registered trademark of Intel Corporation.

Award is a registered trademark of Award Software, Inc.

AMI is a registered trademark of AMI Software, Inc.

All other trademarks, products and or product names mentioned herein are mentioned for identification purposes only, and may be trademarks and/or registered trademarks of their respective companies or owners.

© Copyright 2008 BOSER Technology Co., Ltd.
All Rights Reserved.
Edition 1.1, May 15, 2009

Table of Contents

Chapter 1 General Description 1
1.1 Major Features 2
1.2 Specifications 2
1.3 Panel Specifications 4
1.4 Control Keys 4
1.5 Dimensions 4

Chapter 2 Unpacking 5
2.1 Opening the Delivery Package 5
2.2 Inspection 5

Chapter 3 Hardware Installation 7
3.1 Open the Cover 7
3.2 HDD/FDD/CD-ROM Installation 9
3.3 Fan Installation 11
3.4 SBC Installation 12
3.5 Wallmount Installation 13

Chapter 4 Touch Screen Deriver Installation 15
4.1 Touch Screen Driver Installation 15
4.1.1 Installing Touch Screen Driver in WIN95/98 15
4.1.2 Installing Touch Screen Driver in WIN2000 17
4.2 Driver Functions 20
4.2.1 PenMount Control Panel 20
4.2.2 PenMount Monitor 21

Declaration of Conformity -- CE Mark

BOSER Technology hereby acknowledges that compliance testing in accordance with applicable standards of the EU's EMC Directive, 89/336/EEC, was successfully completed on a sample of the equipment identified below:

Equipment Class:	*Information Technology Equipment*	
Product Model Series:	***BPC-6170***	
This Product Complies With:	*EN55022:*	*Class A for Radiated emissions*
	EN50082-2:	*Heavy Industrial EMC Immunity*

We, the undersigned, hereby declare that the equipment specified above conforms to the above directives and standards.

Manufacturer:
BOSER TECHNOLOGY CO., LTD.

Safety Instructions

The safety recommendations outlined in this section are to be read, understood and followed before operating the product. Keep this information in a safe place for future reference. Failure to comply with any of the following safety procedures could result in serious hazard.

- Do not operate product for any purposes other than its intended use
- This product is intended for indoor use only
- Do not operate product if power cord is damaged in anyway
- Do not insert objects into openings
- Do not immerse product in water or permit liquids to spill inside
- Turn off power when unattended or not in use. Unplug product before moving it or when it is not in use for an extended period of time. The socket-outlet shall be installed near the equipment and shall be easily accessible
- Do not alter or extend electric plug. Plug is configured for appropriate electrical supply
- Do not overload electrical outlets beyond their capacity as this can result in a fire

NOTE: *DO NOT TOUCH THE PRODUCT OR ANY OTHER SENSITIVE COMPONENTS WITHOUT ALL NECESSARY ANTI-STATIC PROTECTIONS.*

Life Expectancy of Constituent Parts

This section describes the life expectancy of constituent parts (backlight, power supply, internal cooling fan and touch screen) which make up to BPC-6170.

- **TFT Display Backlight**
  Display brightness decreases over time with use. The expected operating lifetime of the backlight time to reach 50% initial brightness) is 30,000 hours (assuming continuous lit state at 25 degrees C). Actual lifetime before replacement is about 30,000 hours, although this depends on operating conditions.
- **Touch Screen**
  The operating lifetime of the touch screen is approximately 1 million operations (as tested by mechanical manipulation under 100g of force at a rate of two presses per second)

Chapter 1

General Description

BPC-6170
15" Industrial Panel PC with MainBoard, four PCI slots, Touch Screen, 300W ATX P/S

BOSER Technology Co., Ltd.

The BPC-6170 is an industrial-grade panel PC that provides convenient expandability through 4 to 5 32-bit PCI system slots.

The rear design of BPC-6170 enhances the disassembly process when required. A single drive bay is available for one HDD that can be easily installed before assembly.

The BPC-6170 has a 15" display and a touch screen that operates under all types of working environment. It also comes with a reliable power supply and one 8cm ball bearing cooling fan that enhance system stability.

The unit can also be mounted in several configurations. A variety of BOSER SBCs is compatible with the BPC-6170.

- The BPC-6170 is IBM PC/AT compatible and can draw from a large body of hardware and software resources worldwide
- 300W power supply with UL, CE, CSA, TUV approved

- The user can select the operating system he wants to use just like an ordinary personal computer. An operating system such an MS-DOS, Windows can be selected to suit the application.
- The BPC-6170 features an all-in-one flat display.
- Keyboard less operations are possible through the use of a touch screen. In addition to a watchdog timer indispensable in FA applications.

You can select from a broad range of variations to arrive at the optimum configuration for your application and budget.

1.1 Major Features

The BPC-6170 series comes with the following features:

- Aluminum front panel
- 15" TFT color panel display
- Built-in touch screen, OSD key, HPCI-6S, 300W ATX P/S
- Provides Intel® Pentium® 4/Celeron® D/Core™ 2 Duo Desktop/Pentium® 4/Celeron® D (by M/B)
- Onboard graphics, Ethernet controller (by M/B)
- Parallel, COM, USB2.0, PCI expansion slot x 4 (by M/B)
- 3.5" HDD/FDD space x 2, slim CD-ROM space x 2
- 8cm ball bearing cooling fan x 1

1.2 Specifications

BPC-6170-P

- **System Board:** HS-7004 full-size SBC
- **CPU:** Intel® Pentium® 4/Celeron® D processor in the LGA775 Package
- **Memory:** Two DDRII sockets support max. up to 2GB
- **Chipset:** Intel® 915GV/ICH-6
- **Backplane:** HPCI-6S backplane
- **PCI Slot:** PCI expansion slot x 4
- **OSD:** Provides OSD function
- **Touch Screen:** 15" resistive touch screen
- **Display:** Onboard graphics controller
- **Ethernet:** Onboard Intel® 82562GZ 10/100 Based LAN controller
- **Storage:**
  3.5" HDD/FDD space x 2
  Slim CD-ROM space x 2
- **Parallel:** Standard parallel port x 1

- **Serial Port:** 1 port
- **USB:** USB2.0 port x 2
- **Keyboard/ Mouse:** PS/2 6-pin Mini DIN
- **BIOS:** Award BIOS with 4 Mb Flash EEPROM
- **Watchdog Timer:** Reset; 1 sec. ~ 255 min. and 1 sec. or 1 min./step
- **Power In:** 300W ATX power supply
- **Thermal System:** 8cm ball bearing cooling fan x 1
- **EMC:** CE, FCC
- **Front Panel Protection:** IP65
- **Temperature:** 0~+45°C (operating); -20~+70°C (storage)
- **Dimensions:** 43.0(L) x 32.1(H) x 18.69(W) cm

BPC-6170-W

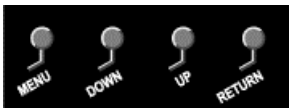
- **System Board:** HS-7005 full-size SBC
- **CPU:** Intel® Core™ 2 Duo Desktop/Pentium® 4/Celeron® D processor in the LGA775 package
- **Memory:** Two DDRII socket supports max. up to 2GB
- **Chipset:** Intel® 915GV/ICH8DO
- **Backplane:** HPCI-6S backplane
- **PCI Slot:** PCI expansion slot x 4
- **OSD:** Provides OSD function
- **Touch Screen:** 15” resistive touch screen
- **Display:** Onboard graphics controller
- **Ethernet:** Onboard dual 10/100/1000 Based LAN controller
- **Storage:**
  3.5” HDD/FDD space x 2
  Slim CD-ROM space x 2
- **Serial Port:** 3 port
- **USB:** USB2.0 port x 2
- **Keyboard/ Mouse:** USB device
- **BIOS:** AMI BIOS with 8 Mb Flash EEPROM
- **Watchdog Timer:** Reset; 1 sec. ~ 255 min. and 1 sec. or 1 min./step
- **Power In:** 300W ATX power supply
- **Thermal System:** 8cm ball bearing cooling fan x 1
- **EMC:** CE, FCC
- **Front Panel Protection:** IP65
- **Temperature:** 0~+45°C (operating); -20~+70°C (storage)
- **Dimensions:** 43.0(L) x 32.1(H) x 18.69(W) cm

1.3 Panel Specifications

- **Screen Size:** 15 inches
- **Display Format:** 1024 x 768 pixels
- **Pixel Pitch:** 0.3075(H) x 0.3075(V) m/m
- **Color:** 262K
- **Brightness:** 350 cd/m^2
- **Contrast Ratio:** 400:1
- **MTBF:** 50,000 hrs.

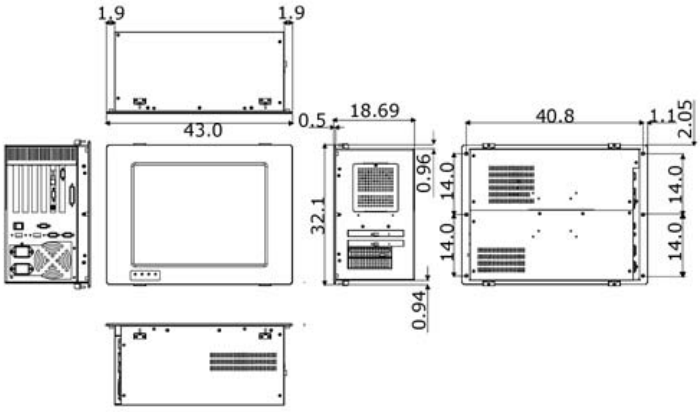
1.4 Control Keys

- **OSD Control Keys Define**



- **Menu:** Menu/Item select
- **Down:** Cursor down control
- **Up:** Cursor up control
- **Return:** Return to menu

1.5 Dimensions



Chapter 2

Unpacking

2.1 Opening the Delivery Package

The BPC-6170 is packed in an anti-static bag. The board has components that are easily damaged by static electricity. Do not remove the anti-static wrapping until proper precautions have been taken. Safety instructions in front of this manual describe anti-static precautions and procedures.

2.2 Inspection

After unpacking the Panel PC, place it on a raised surface and carefully inspect the board for any damage that might have occurred during shipment. Ground the board and exercise extreme care to prevent damage to the board from static electricity.

Integrated circuits will sometimes come out of their sockets during shipment. Examine all integrated circuits, particularly the BIOS, processor, memory modules, ROM-Disk, and keyboard controller chip to ensure that they are firmly seated. The BPC-6170 delivery package contains the following items:

- **BPC-6170 x 1**
- **Power Cable x 1**
- **Drive CD Disk x 1**
- **System Board User's Manual x 1**
- **BPC-6170 User's Manual x 1**
- **Touch Screen Drive Diskette x 1**

It is recommended that you keep all the parts of the delivery package intact and store them in a safe/dry place for any unforeseen event requiring the return shipment of the product. In case you discover any missing and/or damaged items from the list of items, please contact your dealer immediately.

This page intentionally left blank.

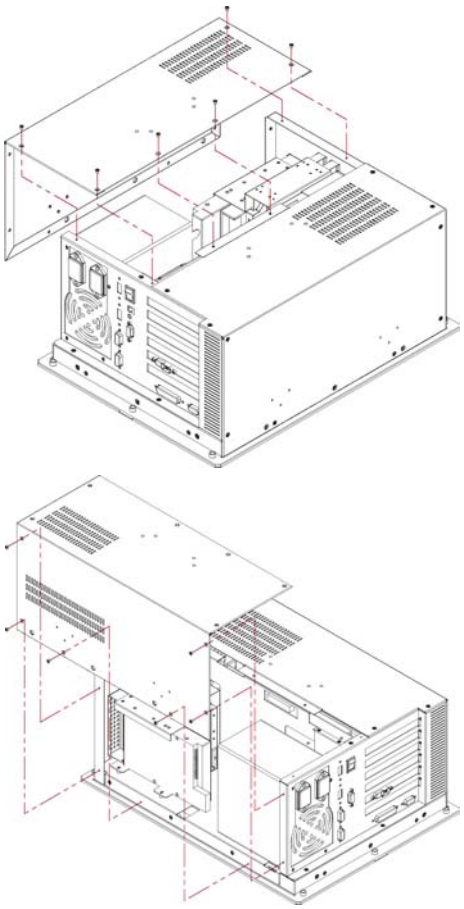
Chapter 3

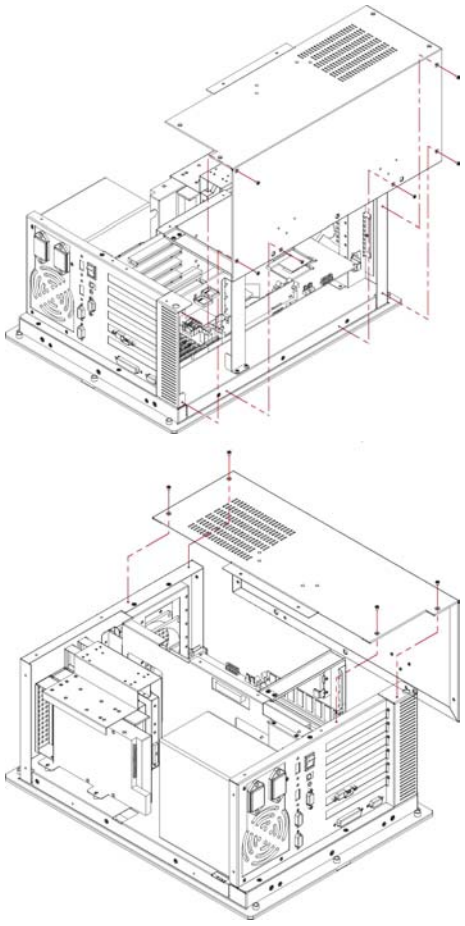
Hardware Installation

This chapter tells how to install components into the Panel PC system. External interface please refers to system board's manual.

3.1 Open the Cover

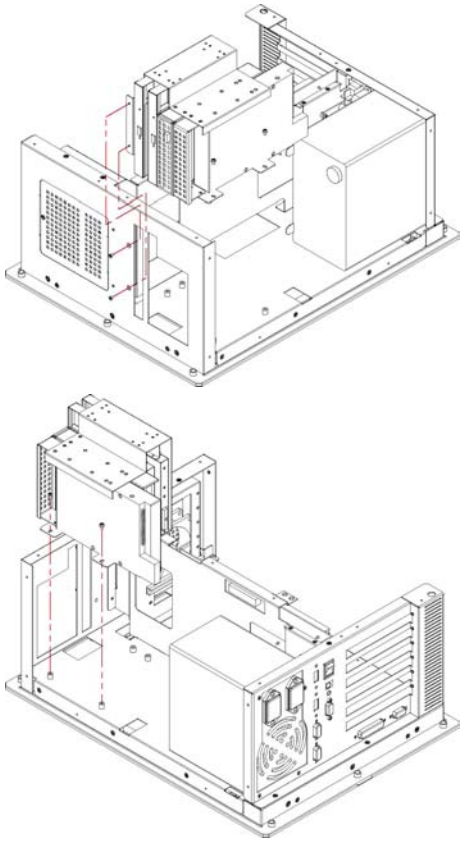
1. Remove screws from the top and bottom cover accordingly。

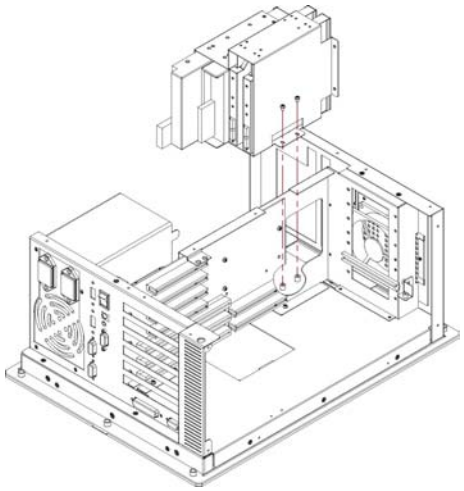




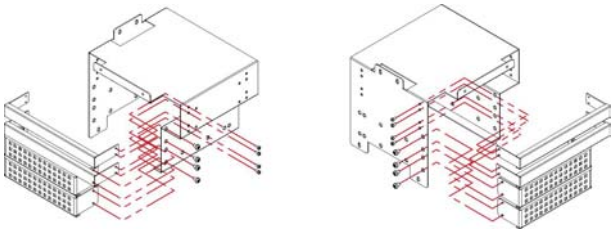
3.2 HDD/FDD/CD-ROM Installation

1. Remove the drive bay holding bracket。

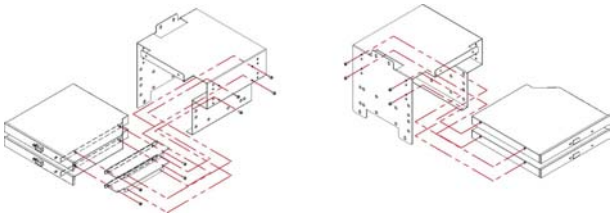




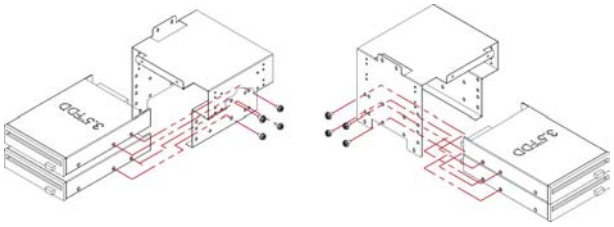
2. Remove the drive cover plate from the drive bay holding bracket



3. Install the CD_ROM



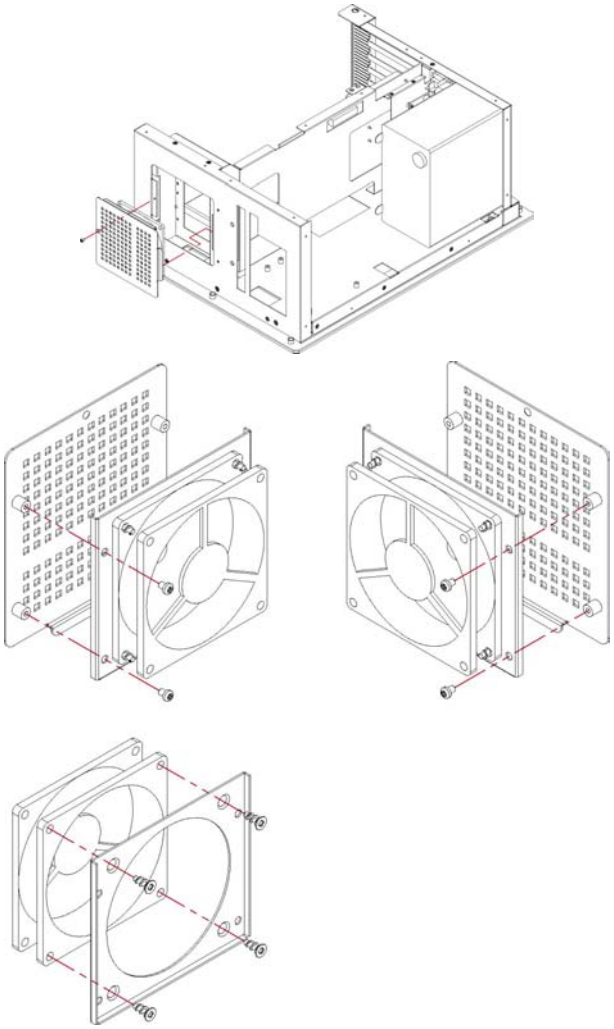
4. Install the HDD disk drive or floppy drive。



5. Install the drive holding kit with drives back to the system。

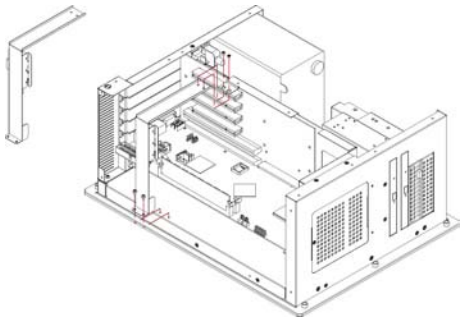
3.3 Fan Installation

1. Remove the fan holder and install the fan completely。

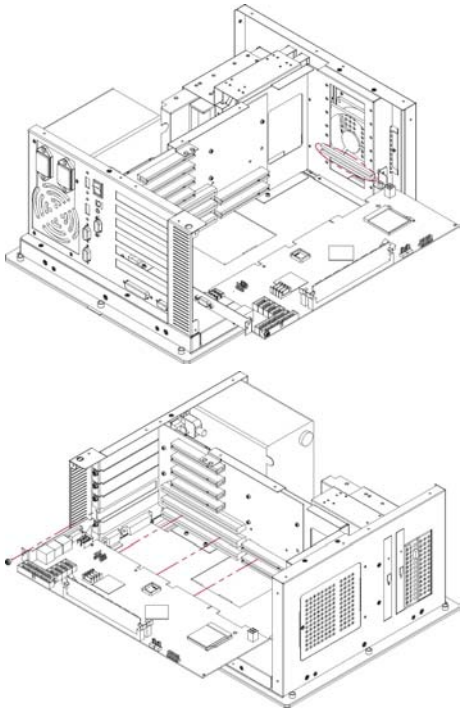


3.4 SBC Installation

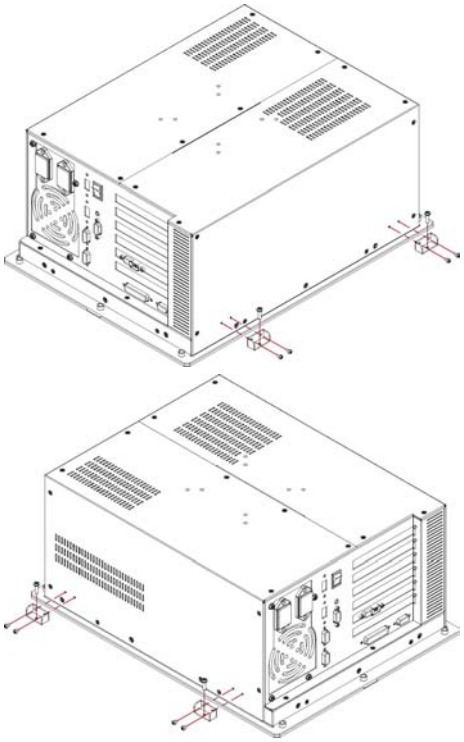
1. Remove the SBC holding bracket



2.Install the SBC and tie it up with the SBC holding bracket。



3.5 Wallmount Installation



This page intentionally left blank.

Chapter 4

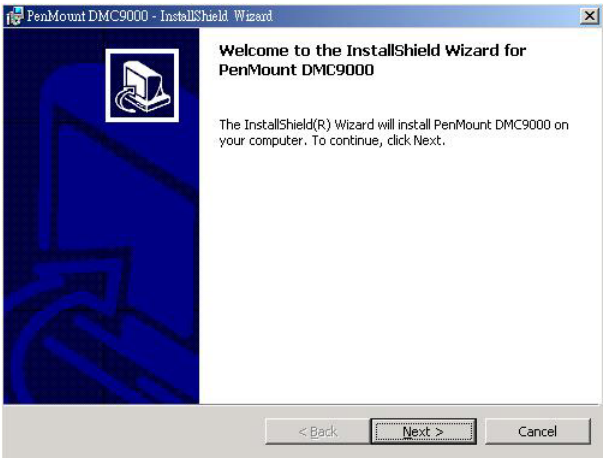
Touch Screen Driver Installation

This chapter contains the detailed information of touch screen driver installation procedures. The utility disk that came with the delivery package contains an auto-run program that invokes the installation programs for the touch screen driver. The following sections describe the installation procedures of driver based on WIN2000 operating systems. It is recommended that you install the drivers matching the sections listed in this chapter.

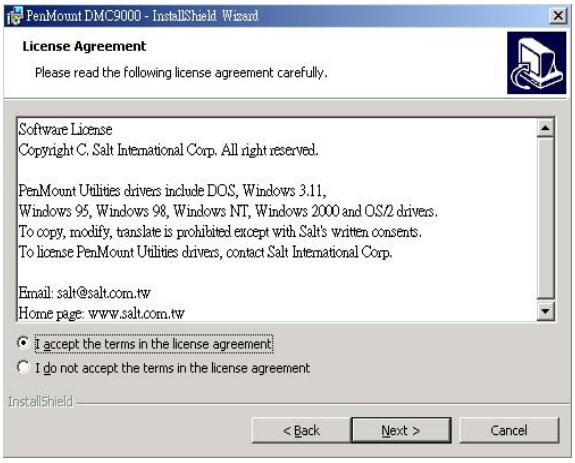
4.1 Touch Screen Driver Installation

4.1.1 Installing Touch Screen Driver in WIN95/98

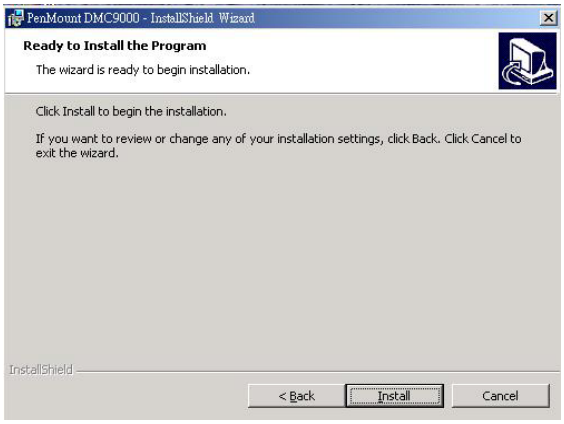
1. Insert Utility CD disk to your CD-ROM drive. The main menu will pop up as shown below.
2. The screen displays copying "Installation Wizard" and "PenMount Utilities Installation" screen plus "welcome" message appear, click on **Next>**.



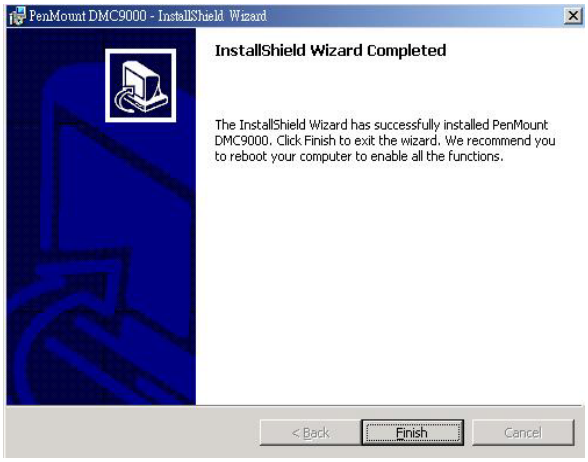
3. The next screen is “Software License Agreement”, select “I accept” and click on **Next>**.



4. The next screen is Ready to Install the Program, click on **Install**.

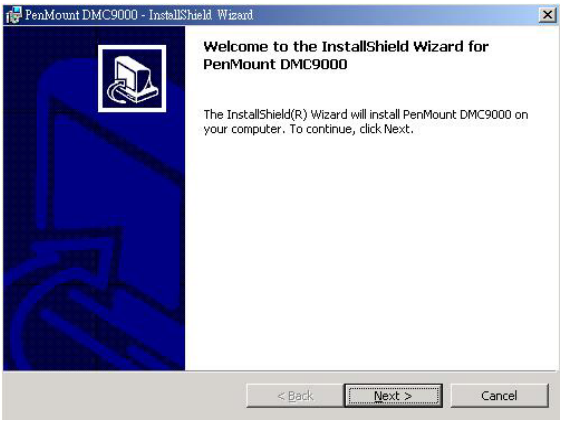


5. Once the Install Shield Wizard finishes updating your system, it will prompt you to restart the computer. Click on **Finish** to exit the wizard.

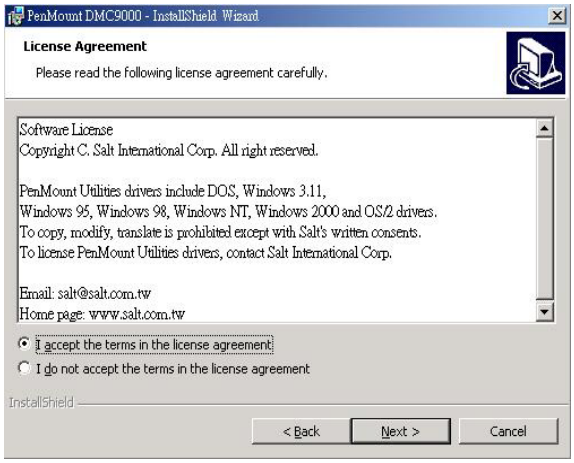


4.1.2 Installing Touch Screen Driver in WIN2000

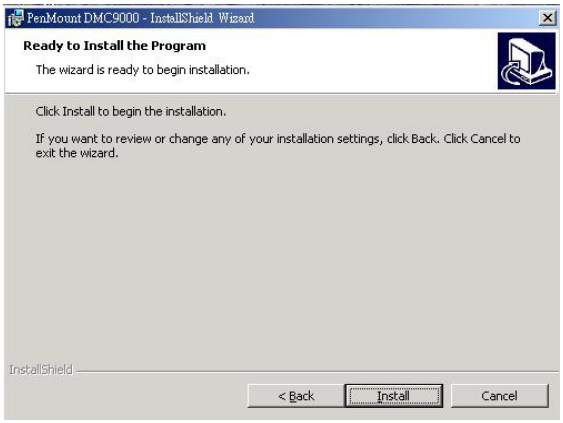
1. Insert Utility CD Disk to your CD-ROM drive. The main menu will pop up as shown below.
2. The screen displays copying Installation Wizard and PenMount Utilities Installation screen plus welcome message appear, click on **Next>**.



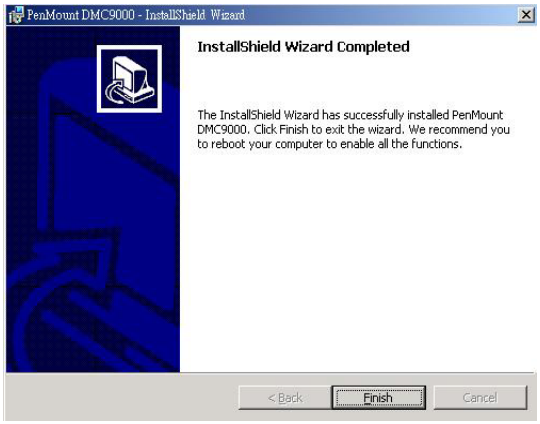
3. The next screen is Software License Agreement, select I accept and click on **Next>**.



4. The next screen is Ready to Install the Program, click on **Install**.



5. Once the Install Shield Wizard finishes updating your system, it will prompt you to restart the computer. Click on **Finish** to exit the wizard.

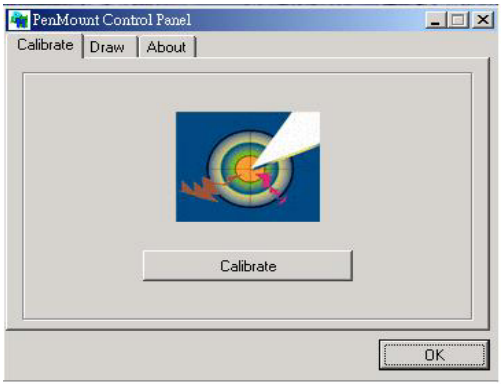


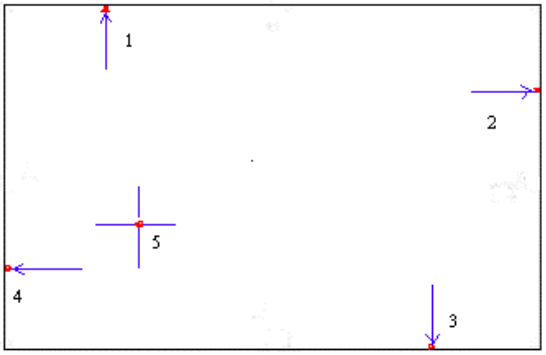
4.2 Driver Functions

4.2.1 PenMount Control Panel

- **Calibrate**

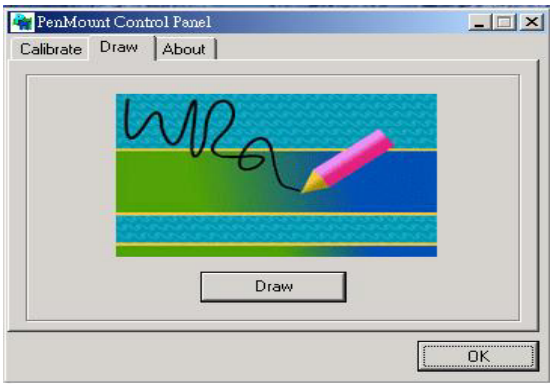
To adjust the display with touch screen, click on Calibration and follow the calibrate point to do calibration, there are five points on screen for calibration.





- **Draw**

Test or demonstrate PenMount touch screen operation, also the touch location is shown on the display, touch DRAW to start.



- **About**

It shows information about PenMount controller and this driver.

4.2.2 PenMount Monitor

The PenMount monitor icon is shown in the menu bar of WIN2000 system when turn on PenMount monitor from PenMount Utilities.

There are several functions on PenMount monitor:

- **Right Click Button**

When select this function, there is a mouse icon shown in the right-button place of screen. It shows Left Button being as default for normal use, touch this mouse icon to change the next touch to be Right Button function. After one touch, the mouse icon will change to Left Button automatically. If user needs to use right button again, user has to touch the mouse icon again for changing the button function.

- **Beep**

Turn on or off beep sound.

- **Exit**

Close the PenMount Monitor function.

This page intentionally left blank.