Safety Instructions

Use the following safety guidelines to help protect yourself and your Hand-Held Device.

When Using Your Hand-Held Device

⚠ CAUTION: Do not operate your portable computer for an extended period of time with the base resting directly on your body. With extended operation, heat can build up in the base. Allowing sustained contact with the skin can cause discomfort or a burn.

• Do not attempt to service the Hand-Held Device yourself. Always follow installation instructions closely.
• Do not carry a battery in your pocket, purse, or other container where metal objects (such as car keys) could short-circuit the battery terminals. The resulting excessive current flow can generate extremely high temperature and may cause burns to your skin.
• Be sure that nothing rests on your AC adapter's power cable and that the cable is not located where it can be tripped over or stepped on.
• While you are using the Device or charging the battery, place the AC adapter in a ventilated area, like on a desktop or on the floor. Do not cover the AC adapter with papers or other items that may prevent ventilation. Also, do not use the AC adapter while it is inside a carrying case.
• Do not insert objects into the air vent of your Device.
  Doing so can cause short-circuiting and may result in fire or electrical shock.

• Use only the AC adapter and batteries that are supplied by your Hand-Held Device manufacturer. Using other types of battery or AC adapter may heighten the risk of fire or explosion.
• Incorrectly placed batteries may result in an explosion.
• Replace only with the same or compatible battery recommended by the manufacturer.
• Please discard used batteries according to the manufacturer's instructions.
• Before you connect your Hand-HeldDevice to a power source, ensure that the voltage rating of the AC adapter matches that of the available power source.
  - *115 V/60 Hz in most of North and South America and some Far Eastern countries such as South Korea and Taiwan.*
  - *100 V/50 Hz in eastern Japan and 100 V/60Hz in western Japan.*
  - *230 V/50 Hz in most of Europe, the Middle East, and the Far East.*
  • *If you use an extension cord with your AC adapter, ensure that the total ampere rating of all devices plugged into the extension cord does not exceed its total capacity.*

• When removing battery from your Hand-Held Device,first turn off the system , disconnect the AC adapter from the electrical outlet, then remove the battery.
• To avoid risk of an electrical shock, do not connect or disconnect any cables, or perform maintenance or reconfiguration of this product during a thunderstorm.
• Do not throw batteries into fire, doing so may cause explosion. Check with local authorities first for battery disposal instructions.
• When setting up your notebook for work, place it on a level surface.

English

- When traveling, do not check your Hand-Held Device as baggage. You can put you device through an X-ray security machine, but never put your device through a metal detector . If you have your device checked by hand, be sure to have a charged battery ready in case you are asked to turn on your device.
- When traveling with the hard drive removed from your Hand-Held Device wrap the drive in an insulated material,such as cloth or paper. If you have the drive checked by hand,you may be asked to install the drive into your Hand-Held Device. Your can have the hard drive checked through an X-ray machine,but never put the drive through a metal detector.
- When traveling, do not place your device in the overhead storage compartment where it could shift around.Do not drop your device or subject it to other mechanical shocks.
- Protect your device , battery , and hard drive from environmental hazards such as dirt, dust, food, liquids, extreme temperature, and direct exposure to sunlight.
- When you move your device in environments where there is a substantial difference of temperature or humidity level, condensation may form on or within your device.To avoid damaging your device , please allow sufficient time for the moisture to evaporate before continue using.

NOTICE: When taking your device from a colder to a warmer environment or vice versa , allow your notebook enough time to adapt to the new environment before turning on power.

- When unplugging the power cord, please make sure that you pull on its connector or on its strain relief loop, and not on the power cord itself. As you pull out the connector, please ensure that it is pulled out evenly in order not to bend its connecting pins. Also, before you connect the power cord, make sure that both connectors are correctly oriented and aligned.
- Before you clean your device,turn it off first,unplug it from its power source, and remove the battery.
- Handle interior components with care. When removing a component, please hold it by the edge and not on the connecting pins (such as the memory module).

⚠ When using your telephone equipments, safety instructions should always be followed in order to prevent fire, electrical shock or injuries, these instructions include:
- Do not use this product near water, for example, near a bathtub, washing basins, kitchen/laundry sinks, wet basements or swimming pools.
- Avoid using cordless phones during an electrical storm as lightening may cause electrical shocks.
- Do not use the telephone to report a gas leak within the leakage area.

WARNING: Void of Warranty
* If the battery is not properly handled, there may be a risk of explosion; make sure you are using the same or compatible battery.
* Please discard used batteries according to the instructions given by the manufacturer.
* Please be aware that use of cracked, severely scratched or poor quality discs may damage the optical drive and corrupt data in the disc. Such discs may break while drive operates in high-speed, in this case, your product warranty may be voided.

Regulatory Notices
Federal Communications Commission Notice

This equipment has been tested and found to comply with the limits for a Class B digital service, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

Any changes or modifications made to this equipment may void the user's authority to operate this equipment. This equipment generates, uses, and can radiate radio frequency energy. If not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.
- All external cables connecting to this basic unit must be shielded.
  For cables connecting to PCMCIA cards, see the option manual or installation instructions.

Federal Communications Commission (FCC)
PART 68 Warning

This equipment complies with Part 68 of the FCC Rules. On the bottom of the computer is a label that contains, among other information, the FCC Registration Number and Ringer Equivalence Number (REN) for this equipment. You must, upon request, provide this information to your telephone company.
FCC Part 68 Registration Number: -   -   -
REN: 0.8B

The REN is useful to determine the quantity of devices you may connect to your telephone and still have those devices ring when your number is called. In most, but not all areas, the sum of the REN's of all devices should not exceed five (5.0). To be certain of the number of devices you may connect to your line, as determined by the REN, you should call your local telephone company to determine the maximum REN for your calling area.

If your MODEM causes harm to the telephone network, the local Telephone Company may discontinue your service temporarily. If possible, they will notify you in advance. However, if advanced notice isn't practical, you will be notified as soon as possible. You will be informed of your right to file a complaint with the FCC.

Your telephone company may make changes in its facilities, equipment, operations, or procedures that could affect the proper functioning for your equipment. I they do, you will be notified in advance to give you an opportunity to maintain an uninterrupted telephone service.

English

III

CE Notice (European Union)

This symbol $C\!E$ indicates this Hand-Held Device complies with the EMC Directive and the European Union's Low Voltage Directive. rective.This symbol also indicates that Hand-Held Device meets the following technical standards:

• EN 55022 — "Limitations and Methods of Measurement for the Radio Interferences of Information Technology Equipment."
• EN 55024 — "Information technology equipment - Immunity characteristics - Limits and methods of measurement."
• EN 61000-3-2 — "Electromagnetic compatibility (EMC) - Chapter 3: Limits - Section 2: Limits on the harmonic current emissions (Equipment input current up to and including 16 A per phase)."
• EN 61000-3-3 — "Electromagnetic compatibility (EMC) - Chapter 3: Limits - Section 3: Limits on the voltage fluctuations and flicker in low-voltage power supply systems for equipment with rate current up to and including 16 A."
• EN 60950 — "Safety of Information Technology Equipment."

⚠ NOTE: EN 55022 emissions requirements provide for two classifications
   • Class A governs commercial use
   • Class B is governs residential use

BSMI Notice (Taiwan Only)
Most Hand-Held Device computers are classified by the Bureau of Standards,Meteorology and Inspection (BSMI) as Class B information technology equipment (ITE).

R32323

The symbol above must be attached to the product indicating compliance with the BSMI standard.

Macrovision License of Notice

This product incorporates copyright protection technology that is protected by methods and claims of certain U.S. patents and other intellectual rights owned by Macrovision Corporation, and other rights owners. Use of this copyright protection technology must be authorized by Macrovision Corporation and is intended for home and other limited viewing uses only unless authorized by Macrovision Corporation. Reverse engineering of disassembly is prohibited.

English

IV
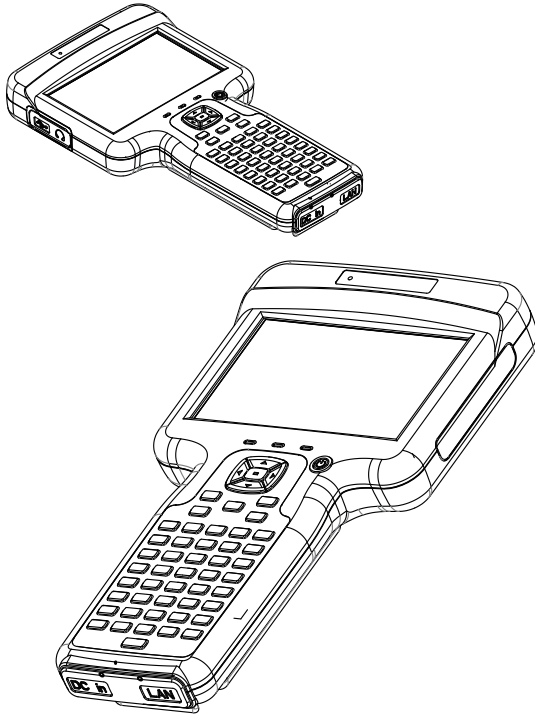
Preface

Congratulations on your purchase of a Hand-Held Device ! Your new hand - held device features the most innovative features in portable computing technology.It combines state-of-the-art ergono -mics with sophisticated architecture , providing you with a device that is compact, powerful, and easy to use. Designed for a wide range of general, business, and personal productivity applications, this device is an ideal choice for use in the office, at home, and on the road.

This Manual contains all the information you need to set up and use your hand - held device , It describes all of its features in a thorough yet easy-to-read manner.

English

V

Content

English

VI

# Chapter 1 Introducing Your Hand-Held Device

This chapter will show you how to operate your Hand-Held Device , including connecting the AC adaptor , turning the portable computer on/off, using touch-pad, keyboard, hot keys, battery, and so on. If you are new to computers and to the operating system, this chapter will guide you through some of the new exciting features.

1.1 Panoramic View
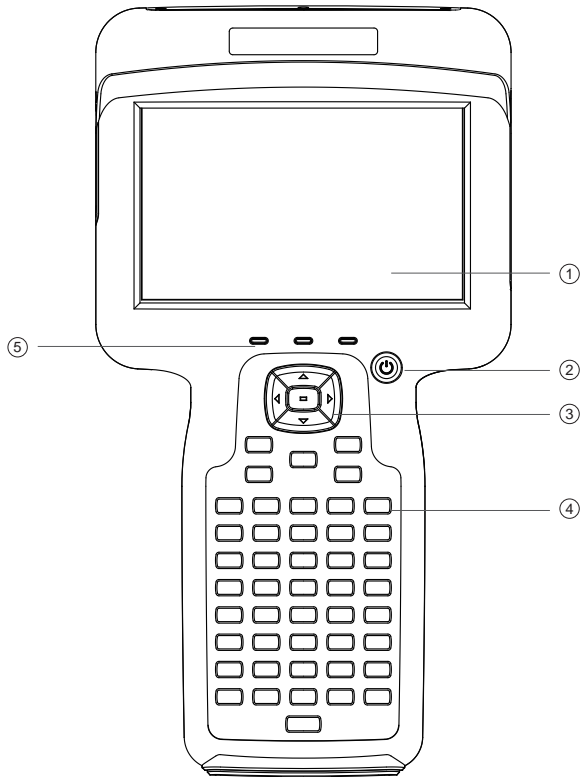
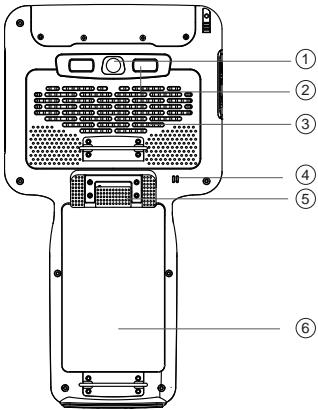| No.	Item	Function
1	LCD	To display the content output form the system.
2	Power key	To turn on/off your notebook.
3	Function keys	To activate some special programs. Please refer to *1.9 Using the Launch Keys*.
4	Keyboard	To input characters and numbers
5	Status indicators	To indicate the status of machine's operation. Please refer to *1.7 Status indicators*.

English

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1.2 Right Side
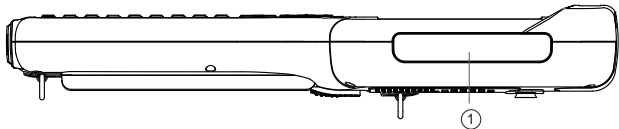
No.	Item	Function
1	Accessory Dock	For extend different function accessories

1.3 Left Side
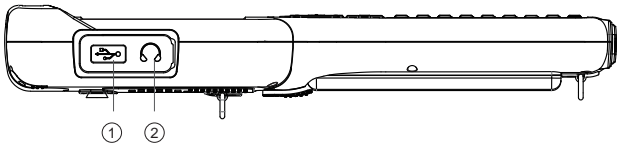
No.	Item	Function
1	USB port	To connect peripheral equipment with USB interface.
2	MIC jack	To connect MIC to iput audio signal.

1.4 Bottom Side

No.	Item	Function
1	Camera	Built-in 1.3 M camera.
2	LED Flash	Flash.
3	Air Vent	To vent heat from the device.
4	Speaker	To output the audio signal from the device.
5	Battery Latch	To fit and lock battery.
6	Battery	Installed in the battery compartment. To supply power to the device when AC power is disconnected.

English

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1.5   Front Side
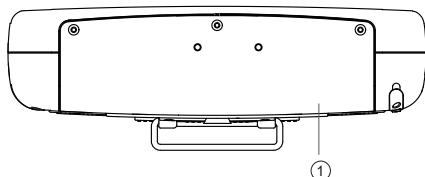
No.	Item	Function
1	Accessory Dock	For extend different function accessories

1.6   Rear Side
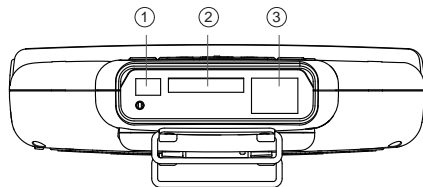
No.	Item	Function
1	DC-in hole	To connect AC adapter to power on Device.
2	Docking Port	To connect with cradle.
3	LAN RJ45 jack	To connect LAN.

1.7   Status Indicators
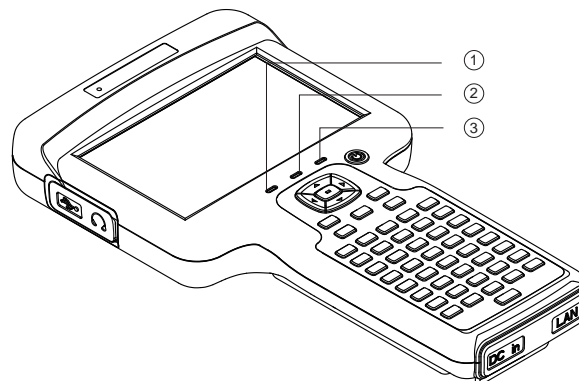
Icon	Item		Function
1	Power status	Green on	System is turn on.
		Green off	System is turn off.
2	Charger status	Red on	Charging.
		Red flashing	Power shortage.
		Red off	Full charged.
3	Wireless status	Red on	Wireless function is activate.
		Red off	Wireless function is inactivate.

4

1.8 Expanding Accessories
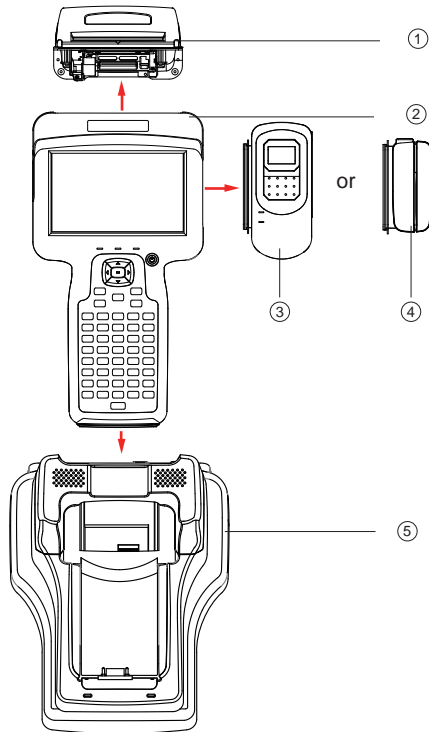
No.	Item	Function	
1	Accessory	Fingerprint Recognition Module	+ Contact Smart Card Reader.
			+ Contactless Smart Card Reader.
2	Main Device	2 " thernal printer.	
3	Accessory	Swipe Card Reader+Barcode Scanner.	
4	Accessory	Cradle for battery charging and extending I/O functions.	

1.9   Turning Your Device On and Off

Turning on the power
Open the device , press and hold the power button for one or two seconds . The power indicator will glow red once the computer is powered on.

Turning off the power
If you are not going to use your device for a while , it is best to turn off its power.Before turning off power,close all program first and shut down the operating system.
After turning off your device,make it a habit to leave the LCD panel open for a while after it has been used for an extended period of time . This allows the interior of your device to cool off.Closing the panel will force the heat up against the LCD screen,and doing so after a while may damage the screen.

Suspend mode
You can adjust default power management settings in the Power Option/Advanced dialog box. The Power Options dialog box provides several operating functions after your computer has been idle for a while.

1.10 Keyboard Functions
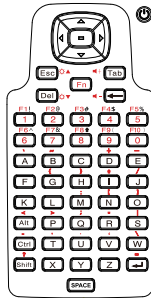
Icon	Description
Caps Lock	Press **Caps Lock** to light up the indicator of **Caps Lock**, and all the characters input are capital letters.
Num Lk	To turn on the numeric keypad overlay, press **Num Lk.** The numeric mode keyboard indicator light glows when the numeric overlay is on.
Scrl Lk **(Fn+Num LK)**	Press this key to scroll the screen under some programs.
	Press this key to activate Windows® START menu.
	Press this key to function as the right key of mouse.

Fn Combination Keys (Hot Keys)

Use ⬚Fn⬚ key combined with other keys to activate, close or set special functions. These combinations are also called Hot Keys. To use the Hot Keys, press and hold down **<Fn>** together with the keys described below:

Icon	Description
Fn+F1	**Hibernation** Press this key combination to make system enter hibernation mode. In this mode, the back light of the LCD panel would be turned off and a host of internal devices would enter into a stage of lower power consumption.
Fn+F2	**Wireless LAN** To activate Wireless LAN.
Fn+F3	**LCD / Video-out Switch** Press this key combination to switch between: ■ LCD mode only; ■ Video-out mode only; ■ LCD and Video-out simultaneously mode *Notice: This function works under certain setting of OS, please refer to your instruction of OS.*
Fn+F4	**Brightness decreasing** Press this key combination to decrease the brightness of the LCD.
Fn+F5	**Brightness increasing** Press this key combination to increase the brightness of the LCD.

English

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Fn+F6	**Mute**
	Press this combination to open/close output of audio signal.
Fn+F7	**Voice weakening**
	Press this key combination to weaken the voice output.
	Notice: This function works under certain setting of OS, please refer to your instruction of OS.
Fn+F8	**Voice strengthening**
	Press this key combination to strengthen the voice output.
	Notice: This function works under certain setting of OS, please refer to your instruction of OS.
Fn+F9	**Play**
	To play or pause when audio or video program is running.
Fn+F10	**Stop**
	To stop when audio or video program is running
Fn+F11	**Return, Last**
Fn+F12	**Speed, Next**

1.11 Using the NAVI Key
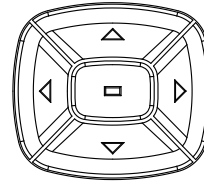
1.12 Using the built-in camera

The availability of the function depend on the configuration of notebook you bought. The model you bought may be equipped with a built-in camera, and the built-in camera adds video functionality to instant messaging software and video editing software.

....
Tips: For using the built-in camera, see the help file on the utility software.

....
Tips: The built-in camera cannot be shared by more than on software application. If another application is using the camera, exit the application before using the built-in camera.

English

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1.13 Using the Audio
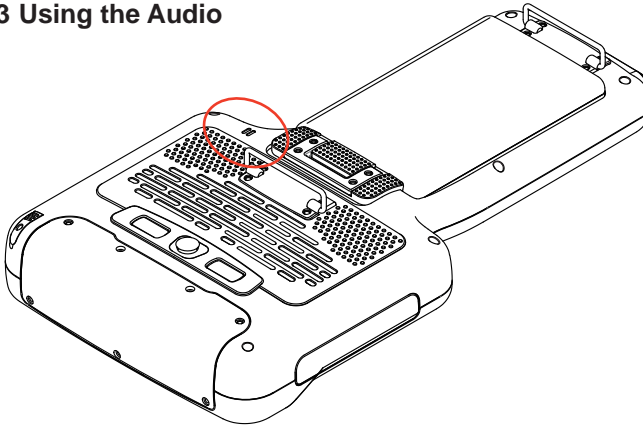
You can Control volume under your Windows operation system:

Click the volume icon ◀± on task bar and use the button to adjust volume.

Or you can double click the volume icon ◀± to activate Volume Control to adjust control items of volume.

....

Tips: You can use Fn combination keys to adjust volume. Please refer to "FN combination keys".

Please adjust the voice down before your connect an external audio equipment, such as earphone or MIC.

1.14 Using the Wireless LAN (WLAN)

You can use Wireless LAN to connect to the network and use the Internet in your home and office,so there is no need anymore to pull cables or wires.

Connecting and using the wireless network

You can use the Function key　Fn combination keys (　　TBD　　) to turn on wireless Lan

Right-click the Wireless network icon on the Taskbar and select View available wireless network

Select AP (Access Point) you want to connect to and type necessary information. Click Connect. And If you place the mouse pointer on the Wireless network icon on the Taskbar, you can see the status of the wireless network.

....

Tips: You can learn details by referring to instruction document of wireless network.

....

The availability of the functions depend on the configuration of notebook you bought, see the Spec to see whether your model supports the function.

....

Notice: Creating security settings for the wireless LAN is important, we assume no responsibility for any security problems that may arise from the use of the wireless LAN.

English

1.15 Using the Battery Pack

Hand-Held Device is designed to operate with one of the following power sources:

- AC power (using the AC adapter connected to an electrical outlet)
- Lithium-Ion (Li-Ion) battery pack

You should use the AC adapter whenever possible; use the battery pack only when AC power is unavailable. The rechargeable Li-Ion battery pack allows you to operate your notebook computer without an external power source. When you use the AC adapter to connect your notebook to a power outlet, the internal battery will begin to recharge. While the battery is charging, the Battery Charge icon on the indicator panel will be on. Once the battery is fully charged, the Battery Charge icon will turn off. Quick charging time is 2.5 hours for the Lithium-Ion (Li-Ion) battery when the computer is turned off, while the normal battery charging time is 4 hours.

- Operating a fax modem, video, or audio equipment can increase the use of your computer's power.
- Decreasing monitor brightness can also save power.
- When the battery is not fully charged, allow your battery to be charged completely before using it (i.e., before disconnecting AC power). Calibrating the battery before use is also highly recommended.
- Li-Ion Battery is vulnerable; do not charge it with other power adapter, otherwise fire or explosion may occur.

Replacing the Battery

The battery will gradually weaken over time. We recommend that you replace your battery when you notice a significant decrease of battery capacity.

To change the battery pack, follow the steps below:

1. Turn off the computer.
2. Close the lid and flip the device over.
3. Slide the battery latch. Continue to hold it until the battery is removed.
4. Make sure the replacement battery is properly oriented before inserting it into the battery compartment.

Note: The battery can not be charged to 100% when remaining battery is no less than 95%. It is based on the supplier's advice, and to extend charging frequency and battery life.

Maintenance of the AC Adapter

- Do not connect the adapter to any other device.
- Do not step on the power cord or place heavy objects on top of it. Carefully route the power cord and keep cables away from all traffic.
- When unplugging the power cord, do not pull on the cord itself but on the plug instead.
- If you are using an extension cord, make sure that the devices plugged onto the cord do not exceed its total capacity. Furthermore, the devices plugged into the electrical outlet shall not exceed the fuse's total ampere rating.
- Please verify power voltage before connecting the electrical cord to the power outlet. If you are uncertain of its power specification, please consult with your local vendors or power company for more details.

1.16 Connecting the AC Adapter

The AC adapter converts AC power to DC power and reduces the voltage supplied to the devic. It can automatically adjust to any voltage from 100 to 240 volts and outputs power at 7.4V, (7.4V, 4000 mAh for device), allowing you to use your device in almost any region.

CAUTION: Use only the AC adapter and the power cord we recommend. Using the wrong adapter may damage your computer. We assume no responsibilities for damages arising from misuse of AC adapters.
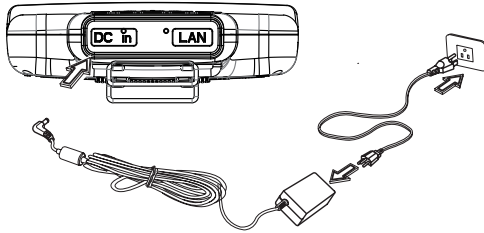
To properly connect the adapter, follow the steps as below:
1. Connect the power cord to the AC adapter.
2. Connect the AC adapter to the DC power port of your device.
3. Connect the AC adapter power cord to an AC outlet.

1.17 Installing Hand-Held Device Drivers

If your W348M Notebook Computer already has an operating system installed, it is best to install all necessary device drivers in order for he hardware to properly function.

Before installing drivers, check with your vendors to see if they have already installed all the drivers with the operating system, if not, please follow the steps below:

1. You can find the Utility Driver CD like the one shown below:
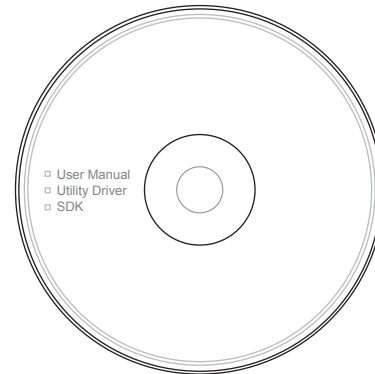
2. Put the CD into the CD R-W or DVD-RW (optional) Drive. An Auto Run installation screen will appear.

Chapter 2   The BIOS Setup program

The BIOS Setup Utility is a hardware configuration program built into your Notebook's BIOS (basic input/output system). Your Notebook is already properly configured and optimized, and you do not need to run this utility. However, if you encounter configuration problems, you may need to run it.

This chapter will introduce:

- ■ Activate the BIOS Setup Utility
- ■ Security
- ■ Setup Boot priority order
- ■ Recover original setting

2.1 Activate the BIOS Setup Utility

To activate the BIOS Setup Utility, press F2 during POST.
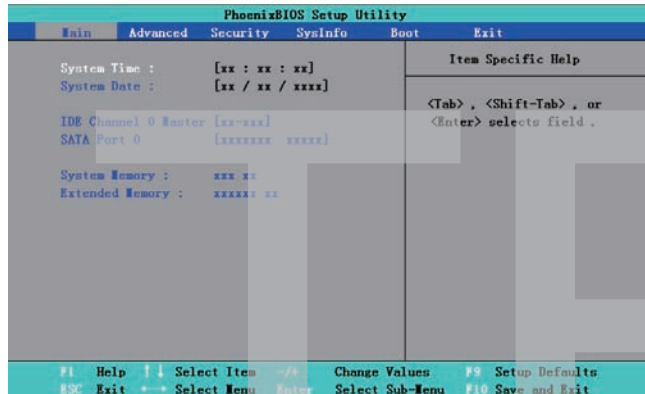
The setup utility menu bar has six main screens. Following is general introduction on these six items:

Menu	Description
Main	The Main screen displays a summary of your Notebook hardware information, and also includes basic setup parameters.
Advanced	This screen contains parameters involving your hardware devices.
Security	The Security screen contains parameters that help safeguard and protect your Notebook from unauthorized use.
Sysinfo	This page is to display the version of CPU, BIOS, KBC firmware.
Boot	To set the order of booting equipments, enabling or disabling equipments.
Exit	To exit the interface of setting system.

Tips: For more information about Menu and Keys, please refer to the help information of respective selection. There may be difference of BIOS setting between different versions of BIOS of different batch of notebook produced.

Notice: The BIOS of your notebook has been initialized to best settings. It's advised you not to change it if not so necessary.

Tips: The pictures showed at this chapter may be different from those showed by your notebook due to different versions of BIOS. Please set pictures of your notebook as standard.

English

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2.2   Security

The Security screen contains parameters that help safeguard and protect your Notebook from unauthorized use.
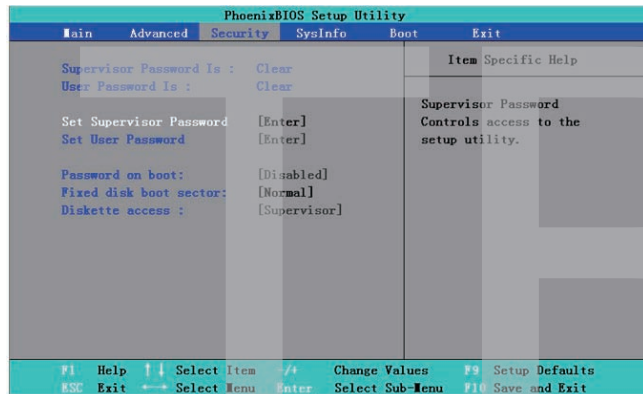
Set Supervisor Password

With this setting, only authorized user can enter the system. Follow the below to set:

- Select menu **Security**.
- Select **"Set Supervisor Password"** and then press "Enter".
- Input the desired password twice.
- When the box of **Setup Notice** shows password information, press "Enter".

Set User Password

It's always the same to set user passport as that of supervisor password. But the former can only enter OS, not BIOS Setup.

Password on Boot

This setting is to select whether password of supervisor and/or user is needed when booting.

Fixed disk boot sector

This setting is to select whether to have Write Protect on hard disk boot section to anti virus or not.

> *Notice: Do not lose the password of your system. In the event of this, you should have to refer to the service center of your Notebook.*

English

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2.3   Set Boot priority order

With this setting, you can set the order of booting the hardware of Notebook.
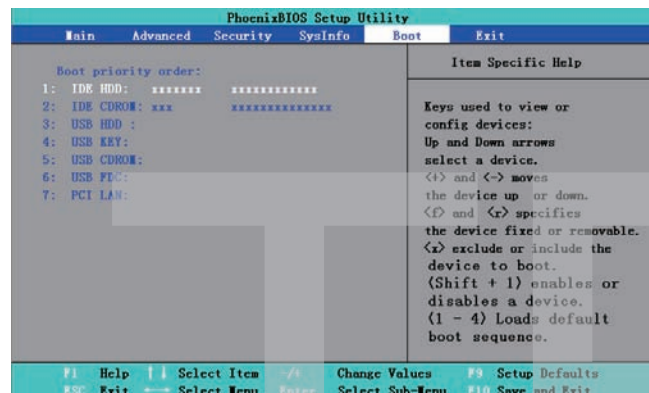
2.4   Recover original settings

Exit Saving Changes:
Save the settings by user and exit the BIOS setting menu.

Exit Discarding Changes:
Not save the settings by user and exit the BIOS setting menu.

Load Setup Defaults:
Recovery all the default setting by manufacturer.

Tips: If you change the BIOS settings and can not return to original settings, you can return to original settings by " Load Setup Defaults".

Discard Changes:

User can discard current settings and return to last settings.

Save Changes:

User can save the settings but will not exit the BIOS setting menu.

TBD

Chapter 3   Troubleshooting

This chapter contains advice and solutions to a few basic troubles you might encounter when you use the device.Please refer to this chapter and follow the instructions to solve troubles.

（⚡） ....

Warning: Under the condition that you can't handle trouble, please refer to your dealer to get professional service.

AC Adapter

Trouble	Solution
No power supplies to Notebook	Make sure the AC adapter is well connected to the power source and Notebook.
	Check the cable and plug to make sure they are OK. If they are broken, please contact your local dealer ASAP.

Battery pack

Trouble	Solution
No power supplies to Notebook	The remaining power in battery pack may be not enough to power on the machine. Connect AC Adapter to recharge it.
Can't be recharged after connecting AC Adapter	Check temperature of battery pack's surface. Battery pack can't be recharged if its temperature is too high or too low. Recharged it after its temperature is the same with the normal environment one.
	If battery pack is fully discharged, it won't be recharged at once. Please wait for some minutes.
	If the power indicators of battery pack are always not lit up, its life may be over. Please contact your dealer to buy another one.

Battery life is not as long as it should be	Battery life depends on using condition of Notebook. You can change the settings in Power Manager of OS to save power.
	Battery pack can't exert its full capacity if it works when not fully recharged frequently. Power Notebook by battery pack until its power drops to a critically low level and the machine emits a high-pitched beep or displays a warning message; after that, recharge battery pack to make battery pack work longer.

Keyboard

Trouble	Solution
Press character keys but number displayed instead of character	Check if **Num Lock** is activated. Press **Fn + Num Lock** and make sure the indicator of **Num LK** key isn't on.
Confusing display	Make sure there is not certain software to configure to the keyboard.

Hard disc drive (HDD)

Trouble	Solution
HDD can't be booted	Operating system was corrupted by incorrect operating or virus. Try to clean virus and then configure your operating system correctly.
	The documents of your OS maybe run in error, please refer to the manual of your OS.

English

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HDD performs very slowly	There is too much file fragment. Use disk defrag tools to rearrange the programs on the hard disk.

LCD

Trouble	Solution
The screen is blank	Press hot key **Fn + F5** to change the display mode if certain external monitor is connected.
	Make sure the system isn't in the mode of **Hibernation** or **Standby.**

Printer

Trouble	Solution
The data can't be output from Note-book to printer	Make sure printer is powered on. Make sure its cable is OK and its USB interface is well connected to Notebook.
	Make sure your printer is compatible to your Notebook.
Error printing	Please refer to the user's manual of your printer for help.

Audio

Trouble	Solution
No sound emitted	Adjust sound controller.
	Check the setting of sound volume of software.
	Check if the ear phone is firmly connected.
	Check the Devices Manager of Windows. Be sure the Sound function has been activated and isn't interfered with other hardware.

USB

Trouble	Solution
Equipments connected can't work	Check and be sure USB port of Notebook is firmly connected with the USB cord of the equipment.
	Be sure the driver of the equipment is installed correctly.

Stand by / Hibernation

Trouble	Solution
Can't enter into Standby /Hibernation	Please check if the Windows Media Player is running. If Yes, the Notebook can't enter into Standby or Hibernation mode. Please close Windows Media Player.

LAN

Trouble	Solution
Can't be connected	Be sure the RJ45 connector is firmly connected to the Network Hub or Switch.
Can't be booted	Check the configuration of hardware in BIOS Setup Utility and activate the function of LAN Waken.

TBD

Appendix I   Specification

Main-Device Performance

Features	Function
CPU	Intel AtomTM processor
zXX series	Intel AtomTM (800MHz to 1.6GHz)
Chipset	Intel System Controller Hub
Memory	System Memory 512MB (Up to 1G)
Display	5" TFT color LCD
	- 800 x 480 pixels
	- Trans-reflective LCD
	- Touch Resistive with stylus
	- LED Backlit
	Display be 100% dimmable via hardware buttons or software controls. LED (Automatic control via brightness sensor).Orientation of display be landscape
Battery	External 12V adaptor
Audio + Speaker	2 channel Audio
Audio + Speaker	Stereo Headphone out / Microphone in, built in mono speaker
Key pad	Full Alphanumeric keypad
	50 keys: 26 alphabets,10 numbers,4 functions,others (Shift, Ctrl,Esc,Arrows,Enter,Delete,Backspace,Power, Tab, navigation keys)

IO Expansion

Features	Function
USB port	1 ✕of USB2.0 external ports (One external USB to user for storage)
Ethernet port	1 ✕of 10/100 Fast Ethernet port
Expansion port 1 (right side)	IO expansion port for the right side of the device
Expansion port 2 (bottom side)	IO expansion port / docking connector located on the bottom side
Micro SD card	Secure micro SD card slot
RFID	Integrated RFID (ISO 14443)

Inside Main-Device of Optional Function

Features	Function
Wi-Fi /BT GPS	SIB module (USI 8601-600229-21 or similar)
Mini card 1	Supports LAN /WAN
Mini card 2	Supports LAN /WAN
Camera	2MP web cam with auto focus
Power Adaptor	Input :90 ~ 230V AC,50Hz/60Hz
Battery 4400mAhr; 8000mAhr	Built in battery charging management . 2nd battery pack hot swappable by the user . Gas Gauge Recharging time – 4hours or less
OS	Support standard PC OS, WinXP/XPe Supports Linux (Ubuntu version)

Physical

Features	Function
Dimension(WxHxL)	140 mmx37.5mmx260.3mm
Dimension(WxHxL) (with Printer)	140mmx74.7mmx293.5mm
Heigh	30 mm at finger grip; 50mm at base
Weight	Main-Device: 0.53kg(without Battery)
	Battery: 4000mAhr 0.19kg
	Battery:8000mAhr 0.35kg
	Thermal Printer:0.13kg
	Outside Function Module:0.13kg
ROHS	Compliance with RoHS
Safety	EN60950, UL60950
EMI ,EMC	EN55022/EN55024, FCC Part 15B – Class B

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Environment

Features	Function
Operating temp	0°C to 50°C
Storage	(not incl. battery: (0°C to 60°C)
Humidity	5 – 95% relative humidity , non-condensing

Ruggedness

Features	Function
Housing	plastic / metal with protective rubber cladding and bumpers, Protection against dirt & liquid drops IP53
Drop Spec	Withstands 1.2 m drop , onto concrete.

User accessories

Features	Function
Holster; hand strap; wrist strap; protective case, swiveling belt clip	
Docking Cradle	Single way communications cradle with support for the following USB , serial , display (S D V O) , Ethernet , battery charging.Part of the accessories which plugs on the bottom side IO expansion port of the main body

Outside Plug-In Function

Features	Function
Thermal Printer (Serial 6) (Serial 6)	2inch / 57 mm width thermal printer, 80mm Width : 2 inch Print area :0~48mm Diameter of scrolled paper ~35mm
SAM(Connects to Smart card controller)	2 × Security Access Modules (SAM) which ships as part of the smart card module
Smart card (Contact) (Serial 3) Smart card (Contactless)	Smart Card Reader/Writer With Contact -Standard ISO 7810, 7816 1-4: Smart Card Reader/Writer With Contactless - Standard ISO 14443 type A of B; with embedded antenna - With Mifare protocol JAVA Card 2.2 PC /SC compatible SDK API - The card be durable & withstand flexing / abrasion / ESD / Humidity / magnetic field
Biometric Finger print sensor module	Finger Print Access:Optical, 500dpi finger print sensor.SDK for enrollment, verification and identification - ISO/IEC 19794-4:2005 - Access & verification time <= 1 Sec
Bar Code Scan C-MOS Imager	1/4-inch C-MOS Imager
Bar Code Scan 1D readable	EAN, UPCA/E, Code39, NW7/Codabar, ITF, Code93, Code128, MSI/Plessy,IATA, Code11, GS1 DataBar (RSS-14)
Bar Code Scan 2D readable	Code49, PDF417, MicroPDF, Codablock F, Composite,GS1 DataBar (RSS-14) Stacked , DataMatrix, MaxiCode, QRCode, Aztec
Magnetic Stripe Reader module	Snap-on magnetic stripe card reader ISO Tracks 1, 2 and 3 (ISO/IEC 7811-2 2001)

Appendix II   Service Centers

This appendix will list our global service centers for your Hand-Held Device.

TBD