NOTEBOOK COMPUTER

RK9

Preliminary

User's Guide

To be confirmed

SW:

Notice

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FCC (Federal Communications Commission) Statement

This equipment has been tested and found to comply with the limits for a class B digital device pursuant part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses, and radiates radio frequency energy. If not being installed and used in accordance with the instructions, it 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:

- Re-orient 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.

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

> ⚠ *FCC Caution*
>
> To assure continued compliance, any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. (Example - use only shielded interface cables when connecting to computer or peripheral devices).

FCC RF Radiation Exposure Statement

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

The antennas used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.

Regulatory Information/ Disclaimers

Installation and use of this computer must be in strict accordance with the instructions included in the user documentation provided with the product. Any changes or modifications (including the antennas) made to this device that are not expressly approved by the manufacturer may void the user's authority to operate the equipment.

The manufacturer is not responsible for any radio or television interference caused by unauthorized modification of this device, or the substitution of the connecting cables and equipment other than manufacturer specified. It is the responsibility of the user to correct any interference caused by such unauthorized modification, substitution or attachment. Manufacturer and its authorized resellers or distributors will assume no liability for any damage or violation of government regulations arising from failing to comply with these guidelines.

CE

Products with the CE Marking comply with both the EMC Directive (89/336/EEC) and the Low Voltage Directive (73/23/EEC) issued by the Commission of the European Community.

Compliance with these directives implies conformity to the following European Norms:

EN55022	(CISPR 22) Radio Frequency Interference
EN55024	(EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN61000-4-8, EN61000-4-11, EN61000-3-2, EN61000-3-3) Generic Immunity Standard
LVD	EN 60950 Product Safety, IEC 60950-1: 2005

R&TTE (CE) Manual Regulatory Requirement

WLAN - IEEE 802.11a/b/g/n

802.11a/b/g/n Restrictions:

European standards dictate maximum radiated transmit power of 100mW EIRP and frequency range 2.400-2.4835 GHz. In France, the equipment must be restricted to the 2.4465-2.4835 GHz frequency range and must be restricted to indoor use.

CE Declaration of Conformity

C E ⓵

It is confirmed to comply with the requirements set out in the Council Directive on the approximation of the laws of the member states relating to Electromagnetic Compatibility (89/336/EEC), Low-voltage Directive (73/23/EEC), the Amendment Directive (93/68/EEC), and the procedures given in European Council Directive (99/5/EC and 89/3360EEC).

The equipment was passed, and the equipment test was performed according to the following European standards:

EN 300 328 V1.7.1: 2006
EN 301 893 V1.4.1 (2007-07)
EN 301 V1.8.1 2008-04 / EN 301 489-17 V1.3.2 2008-04
EN 50371:2002
EN 60950-1: 2005

UL, TÜV
AC Adapter (TÜV includes EN60950 LVD)

Power Conservation

This computer consumes much less power than conventional computers. However, power consumption may be reduced by configuring the Power Management Setup properly.

It is recommended the power saving functions to be enabled even when not running on battery power.
Power Management will not degrade performance while saving power.

Power Safety

There are specific power requirements for this computer:
● Only use an approved power adapter for this computer.
● There is a 3-prong grounded plug of the power adapter. The third prong is an important for safety. Do not neglect the importance for it. If you are not able to access a compatible outlet, installing one by a qualified electrician is necessary.
● When unplugging the power cord, please be sure to disconnect it from the plug head but from its wire.
● Make sure the socket and any other extension cord you use can support the total current load of all the connected devices.
● Before cleaning the computer, make sure it is disconnected from any external power supplies.

> ⚠️ *Warning*
> Before any upgrade procedures, make sure the power is turned off, and all the cables are disconnected (including telephone lines). Also, it is advisable to re-move your battery in prevent from turning the computer on accidentally.

Battery Precautions

- Only use the batteries designed for this computer. The wrong battery may cause explosion, leakage or damage to the computer.
- Do not remove the battery from the computer while it is powered on.
- Do not continuously use a battery that has been dropped, or that appears damaged (e.g. bent or twisted) in any way. Even if the computer is able to continuously work with a damaged battery, the circuit damage may occur and possibly cause fire.
- Always use the notebook's system or charger to recharge the battery. Incorrect recharging may make the battery explode.
- Do not try to repair a battery pack by yourself. Refer to any battery pack repair or replacement, please contact with to your service representative or qualified service personnel.
- Please dispose of a damaged battery promptly and carefully. Explosion or leakage may occur, if the battery is exposed to fire, improperly handled or discarded.

> ⚠️ *Battery Disposal & Caution*
>
> The product that you have purchased contains a rechargeable battery. The battery is recyclable. At the end of its service life, under various state and local laws, it may be illegal to dispose of this battery into the municipal waste stream. Check with your local solid waste officials for details in your area for recycling options or proper disposal. Danger of explosion may possibly occur, if the battery is incorrectly replaced. Replace only with the same or the equivalent battery recommended by the manufacturer. Discard the used battery according to the manufacturer's instructions.

Environmental Information, Material Safety & Recycling

All materials used in the manufacturing of this equipment are recyclable or environmentally friendly.

Please recycle the packing materials by the local regulations at the end of the product's service life.

Notice:
- The equipment may still contain tiny amount of hazardous substances for health and environment, though those are below control level.
- To avoid spreading such substances into the eco system, and to minimize the pressure on the natural, you are encouraged to use the appropriate take-back for reusing or recycling most of the materials in a safe way after the service life.
- The crossed bin symbol indicates proper disposal is required.
- For more information on collection, reuse and recycling, please consult the local or regional waste administration for more information.
- You can also contact with the dealer for more information on the environmental details of the equipment.

CONTENTS

Chapter One- Getting Started

Unpacking

The following components are along with your computer. If there is any missing or damaged, please notify the dealer immediately.

- Computer Unit
- Removable ODD (Optical Disk Drive)
- AC Adapter
- AC Power Cord
- Utility DVD
- Quick Start
- Carrying Bag

Quick Operation

- Loosen the battery screw, remove the battery insulation sheet, and mount the battery.
- Connect the AC adapter with the computer and start charging the battery for at least 10 minutes.
- Turn ON the computer by pressing the power switch.

Notice:
- When ambient temperature is under +5 (This is the default setting for this computer.), the system may not boot up immediately. System will beep with LED heater light flashing to remind the user while heater working. Also, the frequency of the LED will become faster to remind the user while the temperature is approaching to be suitable. After 5~15 minutes, the system will boot up automatically.
- Under an emergency situation, it is able to skip heating for booting up the system immediately by pressing the power switch for >9 seconds. The speaker will also beep with a special sound. (It is not guaranteed all devices on the computer are possible to work properly.)
- Press the power switch again during the heating process will shut down the computer.
- Driver or application installation may be necessary for further operation.
- The following procedures will help to Turn OFF the computer:
  1. Press power switch to "Shut Down", "Standby"* or "Hibernate"* dependent on operating system (OS) and power management settings.
  2. Press power switch for 4 seconds for a "Hard" power off. But the system will shut down immediately without saving any data or parameters.
  3. Click **Start** $\rightarrow$ **Shut Down** in Windows to **Turn OFF.**

> **Note:** *Some operating systems may not support the above-mentioned functions.*

Appearance Overview

LCD Panel Open
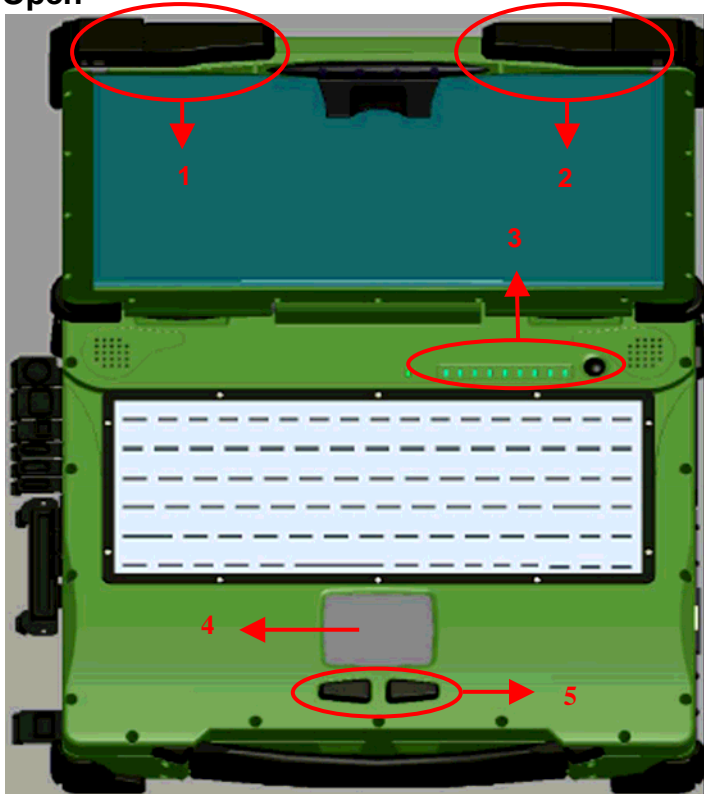
1. Embedded Antennas (from left to right): WLAN-L, Bluetooth, Internal GPS
2. Embedded Antennas (from left to right): WLAN-R, HSDPA
3. LED Indicators and Power Switch:

Heater		HDD in Use	
BT/WLAN/GPS		Secondary Battery Charging	
Keyboard Number Lock		Primary Battery Charging	
Keyboard Caps Lock		Power Indicator	
Keyboard Scroll Lock		Power Switch	

4. Touchpad
5. Touchpad Right and Left Button

Chapter One - 3

Right View
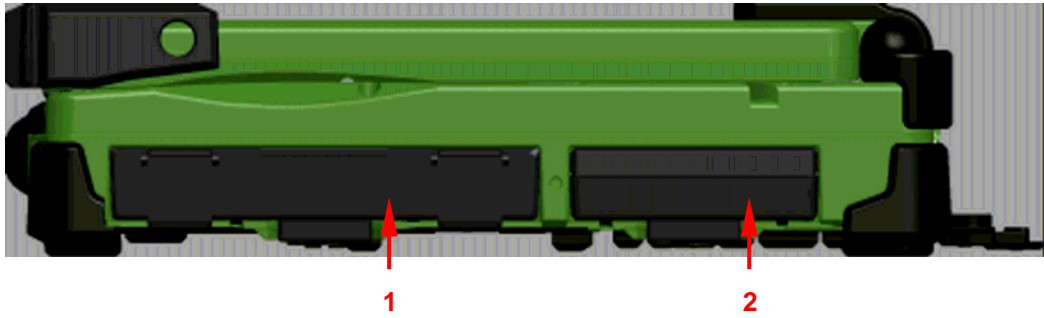
1. Flex Bay:
   a. Standard: SATA ODD (Optical Disk Drive)
   b. Optional: 2nd HDD or 2nd Battery

2. SATA HDD (Hard Disk Drive)

Left View
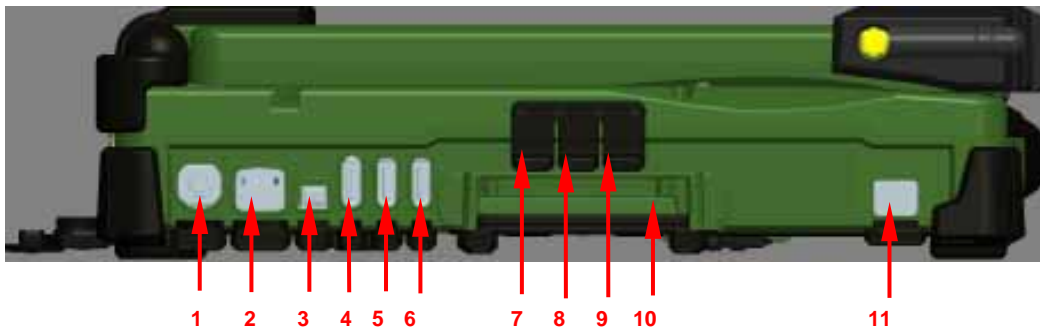
1. PS/2 Port (Keyboard + Mouse)
2. LAN RJ45
3. IEEE1394 Port (Fire Wire)
4. USB Port (Universal Serial Bus)
5. USB Port (Universal Serial Bus)
6. USB Port (Universal Serial Bus)
7. External Speaker & Earphone Jack
8. Line-in Jack
9. Microphone Jack
10. Express Card Slot x 1 & PCMCIA II Slot x 1
    (Optional: PCMCIA II Slots x 2)
11. Optional: Modem Jack RJ11

Rear View
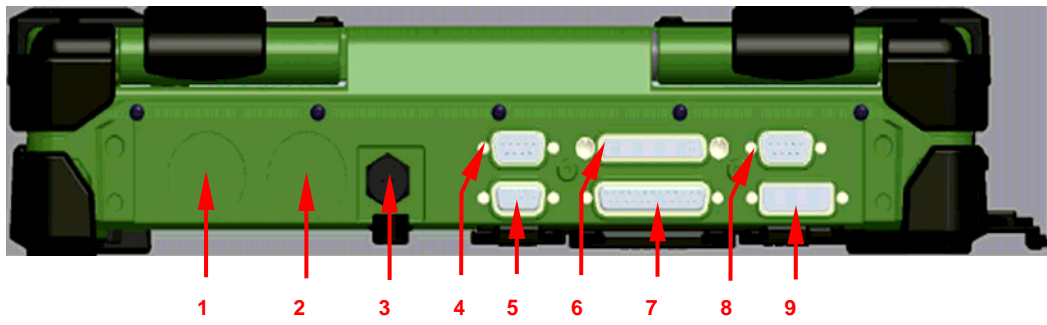
1. Optional: Military Connector Port
2. Optional: Military Connector Port
3. DC Power Jack
4. Serial Port DB9 (COM1/ Default: RS232)
5. RGB Port
6. Printer Port
7. Docking Port
8. Serial Port DB9 (COM2/ Default: RS232)
9. DVI Port

Bottom View
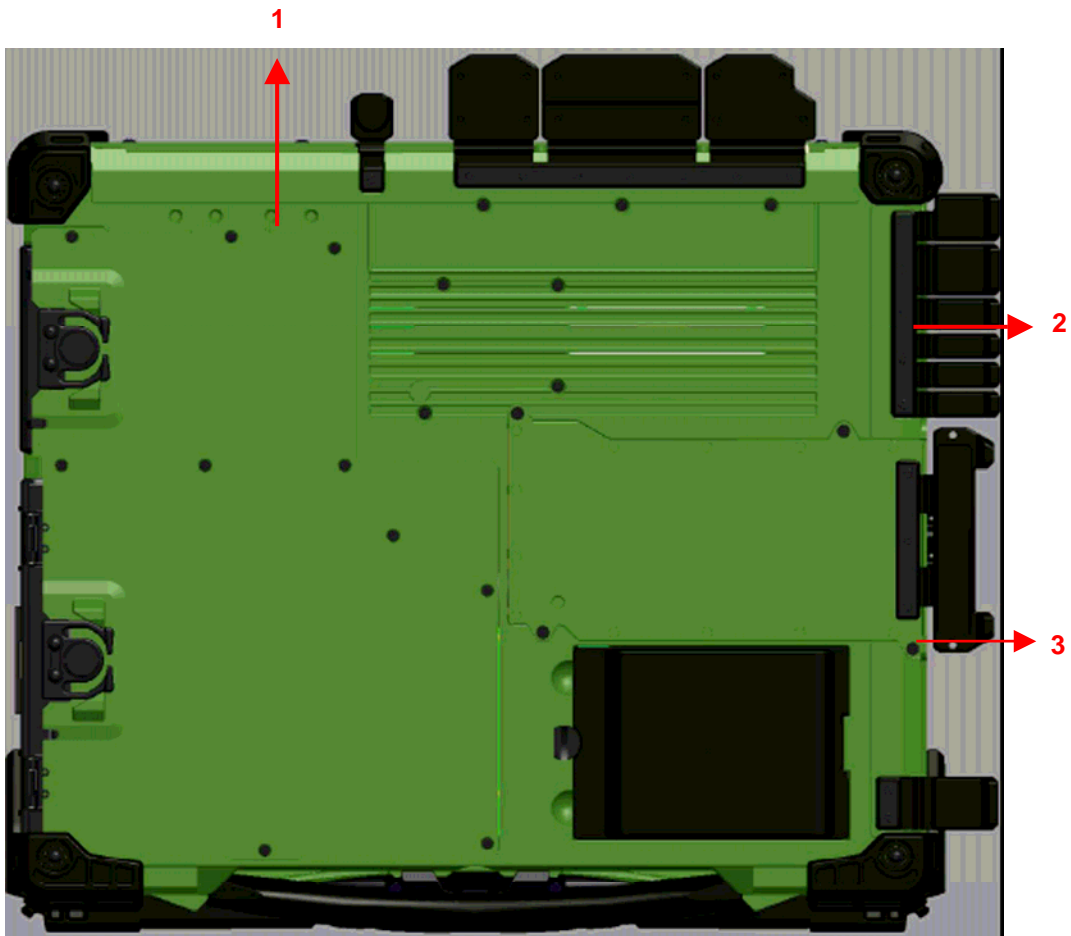
1. Primary Battery
2. ODD Latch
3. HDD Latch

Chapter Two- Operating Information

Workplace

A clean and moisture-free environment is preferred. Make room for air circulation. Remember to avoid areas from:

● Sudden or extreme changes in temperature.
● Extreme heat.
● Strong electromagnetic fields (near television set, motor rotation area, etc.).
● Dust or high humidity.

If it is necessary to work in a hostile environment, please regularly maintain your notebook computer by cleaning dust, water, and etc. to keep it in an optimal condition.

Ruggedness

This notebook computer is designed with rugged features such as vibration, shock, dust, and rain/ water protection. However, it is still necessary to provide appropriate protection while operating in harsh environments.

The notebook computer is also designed to withstand rainfall from top with mild wind blowing only. Please keep the keyboard facing up, i.e. normal operating direction, to maintain water resistance. NEVER immerse the unit in water, or spray water at an upside-down system. Doing so may cause permanent damage.

The D-sub connector caps on the rear of the computer are for dust and shock protection. The connectors are sealed internally. Other I/O ports

and devices on the left or right must have caps tightly closed or cable inlets sealed while being exposed to water or dust.

There are optional gaskets for DB-9 and DB-25 connectors. You may install them to improve rain/ dust/ moisture resistance on your commercial type cable. Insert the packing into the male connector (with pins) and fasten the screws.

All connectors will be corroded if being exposed to water or moisture. Corrosion is accelerated if the power is ON. Please take proper water-resistant measures for cable connections.

The DC jack and cables are sealed and may be operated with water splashing while attached. All port covers should be in place when no cable is attached.

Operating System

This notebook computer is compatible with most operating systems (OS). However, not all functions are 100% compatible. For example, ACPI, Smart Battery, and etc. are not available on DOS, and other non-Microsoft OS. Consequently "Standby", "Hibernation", "Battery Gauge", and etc. would not work under such operating systems.

Boot Up and POST

Boot up
The computer turns ON and loads the operating system (such as Windows) into the system memory. This start-up procedure is called "boot up".

The ROM BIOS Power on Self-Test (POST)
Each time the computer powers on, it automatically performs a self-test of its memory and hardware devices.

Shut down

Before shutting down, please always remember to save the unfinished works and close the application for preventing from any possible data loss or HDD damage.

"Shut down" will totally turn OFF the power of your notebook computer. If you want to start your notebook computer again, you need to press the power switch.

Sleep/ Hibernate

Sleep
Under "Sleep" mode, the system will temporarily save your work into RAM. You are able to do enter "Sleep" mode by directly clicking from your OS. Or, you can do the "Sleep" Mode settings in your OS. If you want to start your notebook computer again, all you need to press any key.

Hibernate
Under "Hibernate" mode, the system will save your work into HDD. You are able to do enter "Hibernate" mode by directly clicking from your OS. Or, you can do the "Hibernate" Mode in your OS. If you want to start your handheld computer again, you need to press the power switch.

> *Note:*
> ➢ *Standby/Hibernate/Resume works with both AC adapter and battery. The power management functions may not work under non-ACPI operating systems.*
> ➢ *If you work under Windows 7 (64 bit) with external KB or mouse, please do the Windows Setting as follows:*
>   1. *External Mouse: Device Manager   Mice and other pointing devices   HID- compliant   Power Management   Disable "Allow this device to wake the computer"*
>   2. *External KB: Device Manager   Keyboards   HID-compliant   Power Management   Disable "Allow this device to wake the computer"*

Chapter Two - 10

Keyboard

The keyboard is functionally equivalent to a full size desktop keyboard. A sample layout is shown below.
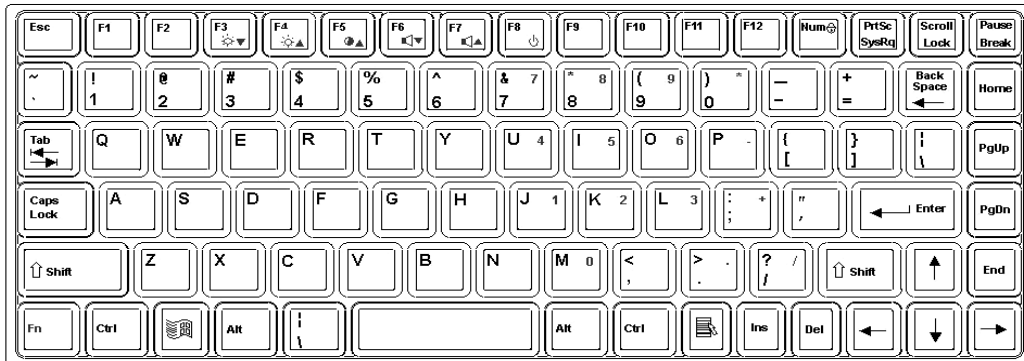
The Numeric Keypad

The numeric keypad functions are the same as an electronic calculator. It is embedded in the main keyboard, with the numeric figures printed on the upper right of their respective keys. There are keys for the digits 0~9, the decimal point (.), addition (+), subtraction (-), multiplication (*), and division (/) in the keypad.
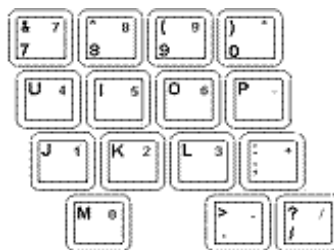
To activate the keypad, press the Num Lock key. There are 15 keys switching from alphabetic to numeric. Press Num Lock again to return.

Chapter Two - 11

Keyboard Backlight (Optional)

Press **[Fn] [F5]** key for approximately 1 second to turn the keyboard backlight ON or OFF.

Hard Disk Drive (HDD)

The Hard Disk Drive (HDD) is a 2.5" type/ 9.5mm height standard **SATA interface** data storage device.

HDD and ODD (Optical Disk Drive) are removable. This design provides convenience and security. They can ONLY be removed when the power is OFF.

> *Note:*
> *NEVER drop your HDD, ODD or expose them to high temperature, high humidity, or any hazardous environment. NEVER try to disassemble the module. Static discharge may destroy your device and data. Always pick up the modules by touching the case only.*

ODD (Optical Disk Device)

There is a 5.25" type/ 12.7mm height standard **SATA interface** ODD. The actual device will depend on the model you purchased. The ODD may be used as a boot device if properly set in the BIOS.

The ODD accepts a variety of standard 12cm CDs, DVD-ROM (Single Layer, Dual Layer), DVD-Video, DVD-R*10 (1.4 GB, 2.8 GB, 4.7GB), DVD-RW (Ver.1.1/1.2 1.4 GB, 2.8 GB, 4.7 GB, 9.4 GB), DVD-R DL (8.5 GB), DVD-RAM (1.4 GB, 2.8 GB, 4.7 GB, 9.4 GB), +R (4.7 GB), +R DL (8.5 GB), +RW (4.7 GB), CD-Audio, CD-ROM (XA compatible), CD-R, Photo CD (multiple session compatible), Video CD, CD EXTRA, CD-RW, CD-TEXT and etc. ***Do not use the IDE-interface ODD; it may cause the***

computer malfunction.

The following procedure assumes that all the necessary ODD utilities were installed on the computer. For ODD utility installation, please refer to "**Utilities and Drivers**". ODD also can be removed and swapped with the 2nd battery or 2nd SATA HDD.

Put disk into the ODD
While the power is ON, push the ejecting button of ODD. The tray will release. Then gently pull the tray out. Put the disk with its label facing up on the holder and push the tray back into the cabinet. Any dirt on the data side of the disk may cause to the erroneous read. Please avoid touching the data side.

Read from the ODD
The ODD may be designated as drive D: or higher depending on your configuration. You may access to it in DOS or Windows. Please avoid shock or vibration when the optical device is active.

Express and PCMCIA Cards

The computer supports one PCMCIA II and one Express card or two PCMCIA II cards. To remove the card, push the button on the right of the card to eject it. The ejecting button can hide into the compartment by pushing it inward gently.

RTC

Battery backed up RTC (Real Time Clock/Calendar) is built in an on-board CMOS (Complementary Metal Oxide Semiconductor) chip. The RTC keeps track of the time and date while the computer is off. The CMOS chip also stores system setup information.