

Ultra Portable PC **Vega**  
**Product Manual**

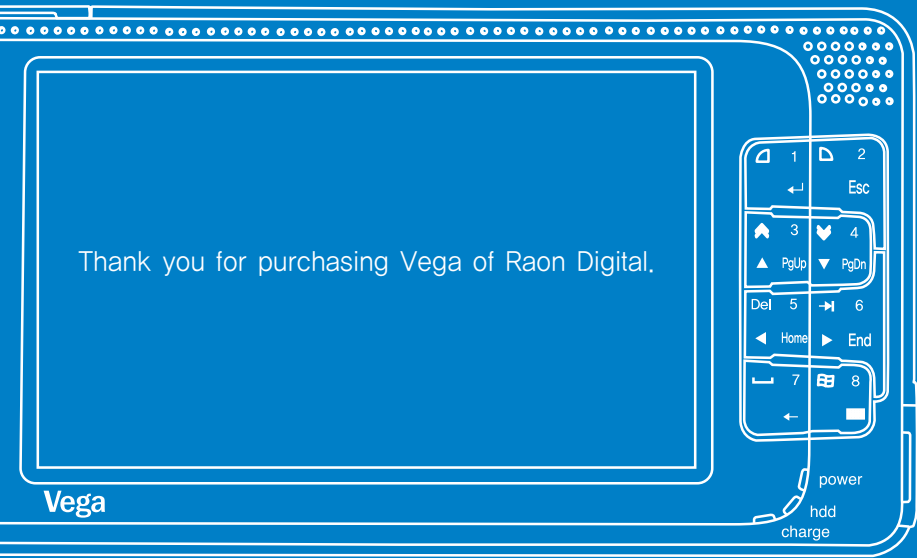
# Vega

[www.raondigital.com](http://www.raondigital.com)



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All-purpose entertainer is right in your hand.

# Ultra Portable PC **Vega**

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## Safety Cautions

It is very important that you follow the safety instruction of the manual in order to prevent any possible malfunctions. We recommend keeping the user's manual at a place where it can be easily found.

- Do not place anything on top of the product.
- Do not use the product while driving.
- Avoid contacting it with heating devices.
- Do not drop or inflict impact on the product.
- Do not disassemble, repair or modify the product.
- Use a soft cloth when cleaning the product.
- Be caution of the foreign substances.
- Do not use in the areas with damp, dust and black dirt.
- Do not place the product near a magnet or in the magnetic field.
- Be caution for malfunction when using the product in the excessive static generating areas.
- Do not disconnect the USB cable or power outage while reading or writing a file. Doing so would cause a problem and is likely to damage the data.
- Always backup important files.  
(The company does not have any responsibility for a problem that occurs due to the user's malpractice.)
- Use only the AC adapter supplied with the product for electric safety.
- Disconnect all connected cables like AC adaptor when thunder and lightning occur. There is high possibility of an electric shock or a fire.

- There could be a bad sector due to a physical impact on the HDD.
- Do not use the headphone/earphone in high volume while on foot, especially when crossing a crosswalk.
- Stop using or reduce the level of sound when you feel ringing in your ears.
- Be caution not to let the headphone/earphone caught between the doors of trains and cars.
- Many hours of music listening in high volume could damage hearing ability.
- Do not use the headphone/earphone when operating a bicycle, car or a motorcycle.

## Things to be caution for data loss (HDD Maintenance)

### Be caution not to damage the data in the HDD.

- HDD is a sensitive product. An impact while in use or external environment could cause malfunction of the product.
- If the HDD is damaged due to external environment or by user's carelessness, the computer manufacturer holds no responsibility whatsoever.

### What could cause the HDD and data damage

- When an external impact is inflicted while disassembling the computer or in installation.
- When reset (re-boot) the computer due to a power breakdown or power goes off while operating HDD.
- When the power goes off while running a program.
- When transporting the main body or inflict an impact while HDD is running.
- When copying or deleting a file using a USB device while in standby or maximum power saving mode.

Customer Information Card	
Product Name :	Model :
_____	
The serial number of the product :	
_____	
Date purchased :	
_____	
Customer' s name :	
_____	
E-mail :	@
_____	
Other :	
_____	

Please fill out the Customer Information Card immediately after purchasing the product.  
You may use it when requesting service.

## Copyright

The copyright of this manual is with Raon Digital. Using or copying the manual, partly or entirely without permission of Raon Digital is prohibited. The details of this manual may be changed without prior notice to upgrade the functions of the product. Raon Digital does not warranty any data loss. It is wholly within the user' s discretion to be caution about important data and always back up for safety.

## Things to be caution when changing OS

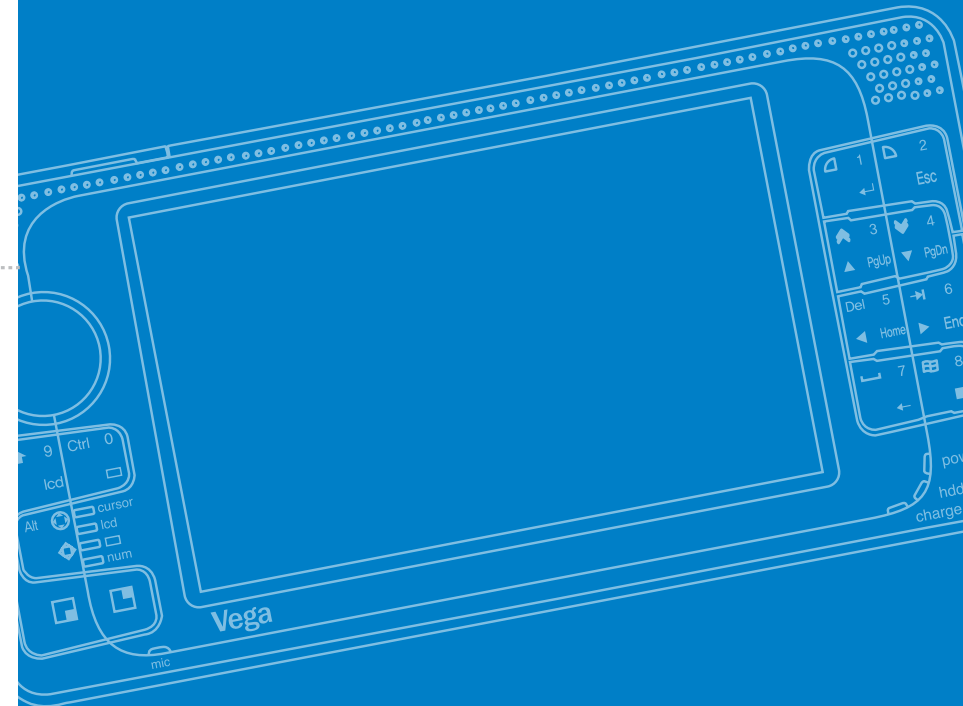
The default OS installed in the computer is Microsoft Windows® XP. Deleting Microsoft Windows® XP and installing other OS means no change, no refund and no free service when a problem occurs.

# Components of Vega

Components of Vega

Names of each Vega part

Vega specifications



# Components of Vega

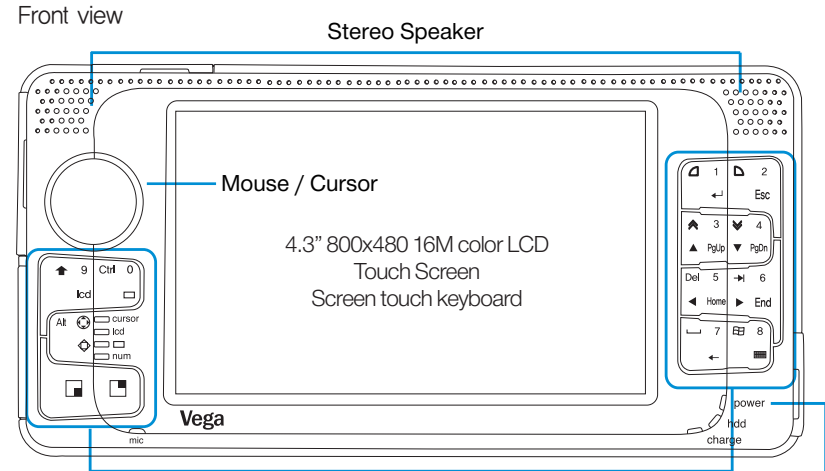
The following items, accessory and the user's manual come together as a Vega package. All other additional components can be purchased in the Raon Digital's on-line shopping mall ([www.vega-mall.com](http://www.vega-mall.com)).

## Standard package



## Names of each Vega part.

The world smallest Ultra Portable PC has employed 4.3 inch LCD and it maximized mobility thanks to the long battery lifetime that lasts close to 6 hours. You can experience all kinds of movie clips and various kinds of games in the working environment same as computers with window XP operating system. You can also enjoy all kinds of word processing and the unrestricted wireless Internet when connecting it to external WiFi.



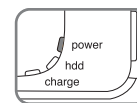
### 13 Keys + Control

- Cursor & Cursor Control
- Enter, Esc, Tab, Delete, Back Space
- Scroll, Space, Windows
- Function F1~F10
- Number 0~9 - Shift, Ctl, Alt

When installed a standard battery (Basic spec.)  
160 x 80 x 27.5 mm 480g

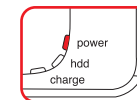
When installed a compact battery (Option)  
160 x 80 x 24 mm 350g

### Condition of the device according to the power LED colors



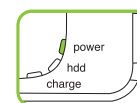
#### off

If a task is terminated using power off or maximum power saving mode and when a task is terminated in standby mode for the first time.



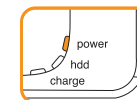
#### red

If power has been turned off in the standby mode and if the power has been turned off forcefully after changing the battery for the first time.



#### green

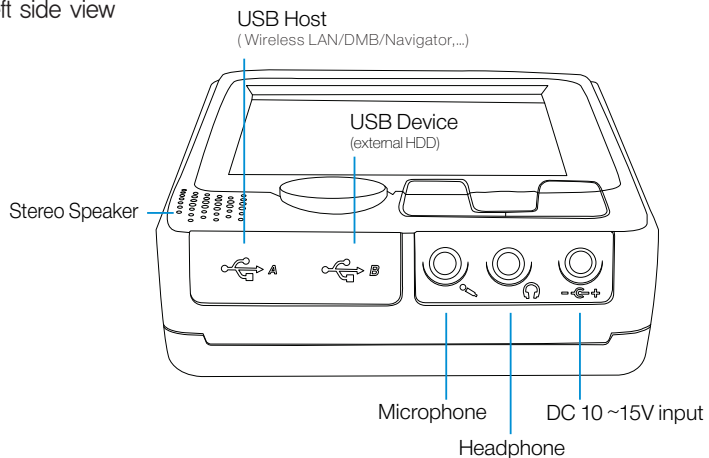
If started in the power off mode



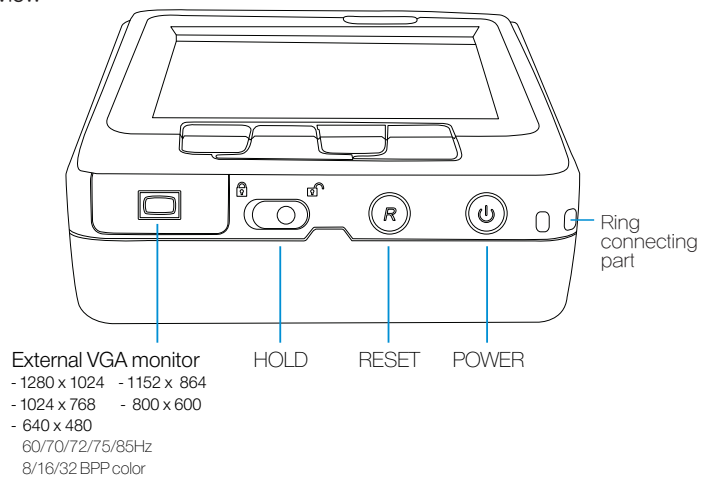
#### Orange

If started in the standby mode

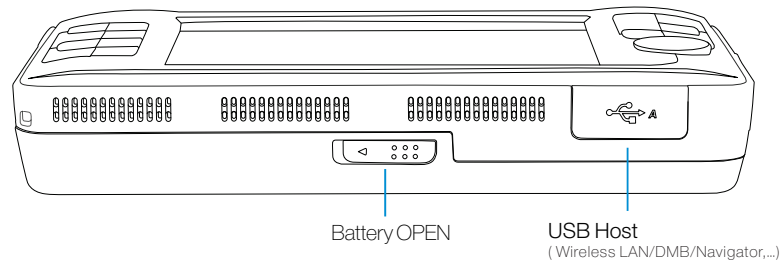
Left side view



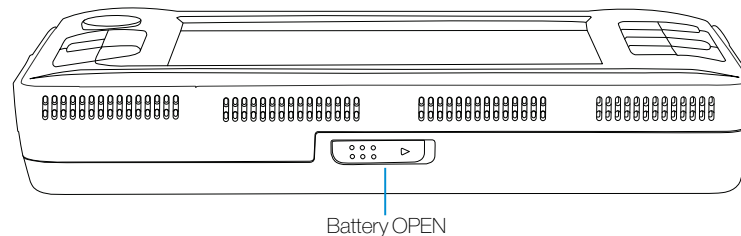
Right side view



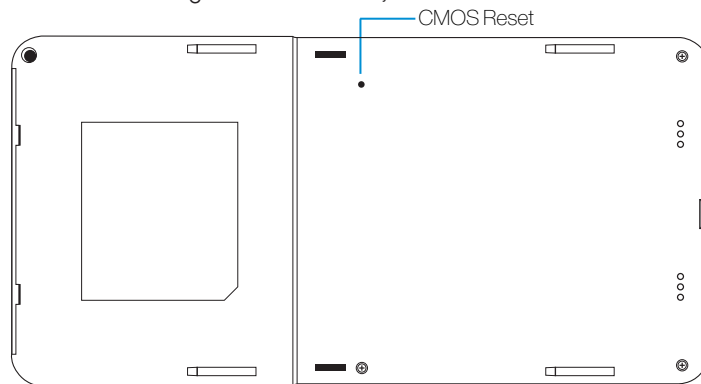
Upper view



Bottom view

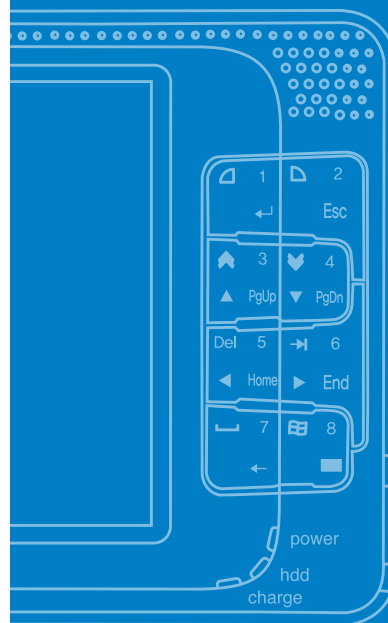


The back of Vega (Detach the battery)



## Vega System Specifications

Items	Specification	Remark
<b>OS</b>	Microsoft® Windows® XP Home	
<b>CPU</b>	AMD Geode LX800	
Cache Memory	L1 64KB-I/64KB-D L2 128KB	
Instruction set	X86 + Integrate FPU + intel MMX + AMD 3Dnow	
Main Memory	DDR400 / PC3200 256MB/512MB	
Main Chipset	AMD CS5536	
<b>HDD</b>	Toshiba 1.8" 30GB 4200rpm	
<b>Graphics</b>	High performance 2D graphics controller Microsoft® Windows® GDI GUI acceleration Hardware screen rotation	
Video processor	Video Scaling / Mixing / VOP	
Display Controller	Up to 1920x1440x32bpp 85Hz	External Monitor
<b>Sound</b>	RealTek ALC203 EAX/DirectSound3D/A3D/I3DL2 compatible	
Speaker	0.7W+0.7W Stereo Speaker	
Headphone	50mW / 20Ohm	
Microphone	1 Internal Mono / External Jack	
<b>LCD</b>	4.3" (93.6 x56.16mm) WVGA 800x480 resolution 16M color 60Hz	H x V
Contrast Ratio/Luminance	400:1 / 200cd/m2	
Viewing angle	80° /80°	
<b>Battery</b>	Li-ion 10.8V 3300mAH Standard Pack Li-ion 10.8V 1100mAH Compact Pack	Optional
Battery Life	Up to 5.5Hrs (Standard Pack) Up to 1.8Hrs (Compact Pack) (VGA Size Movie playing, LCD Full Brightness, 50% Internal Speaker Volume Condition)	
Charge Time	3Hrs(80% Charge)	
<b>Temperature</b>	Operating : 10 ~ 35 (20~80% Humidity) Storage : -5 ~ 40 (5~90% Humidity)	
<b>Power</b>	AC100~240V 50/60Hz 35W	Operating + Charge
DC input	DC 10~15V 3A	
<b>Physical</b>	Dimension 160 x 80 x 27.5 mm (Standard Pack) Dimension 160 x 80 x 24 mm (Compact Pack) 480g/350g (Standard/Compact Pack)	W x H x D



## Vega Key

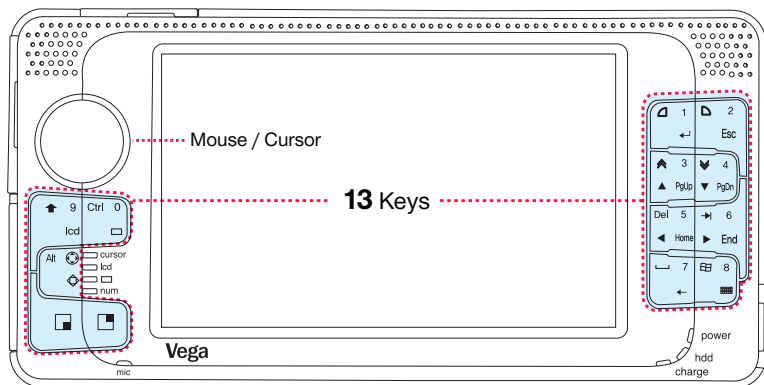
[How to use the front view keys](#)  
[How to use the shortcut keys](#)  
[How to use the Virtual Keyboard](#)  
[Examples on how to use the Virtual Keyboard](#)  
[How to use the Touch Panel](#)

# Vega Key

Vega has the front view keys and the Virtual Keyboard that displays in the screen. These are similar functions to the keyboards and mouse of the general PCs and the Virtual Keyboard is operated in the touch screen using the touch pen.

## How to use the front view keys

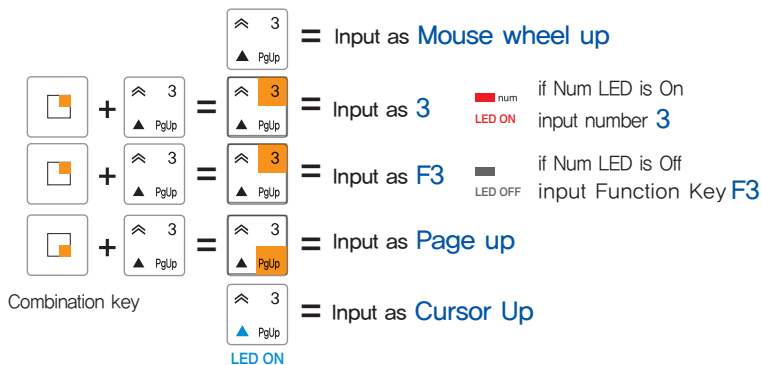
There are 13 key buttons on the right and left side of Vega, and each key has several functions according to how they are combined. The users can use the product more freely and conveniently once they get used to the key buttons.



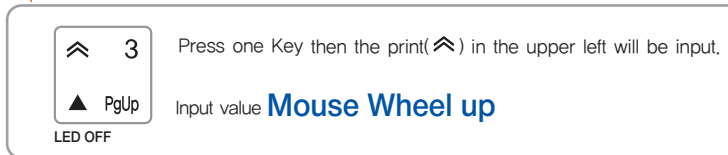
### The 4 basic key input methods

Each key can be input in the following 4 types of methods according to general input, combination of keys and ON/OFF of LED.

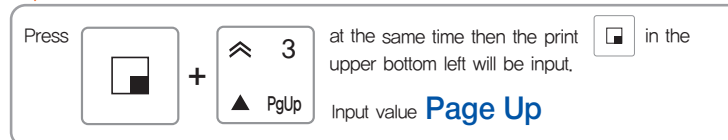
►Combination principal of the keys : **example**



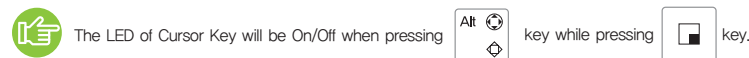
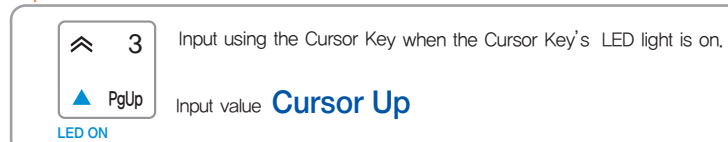
### Input method No. 1



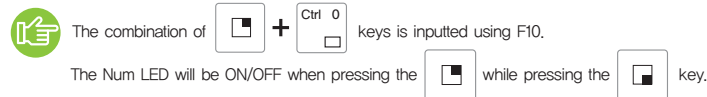
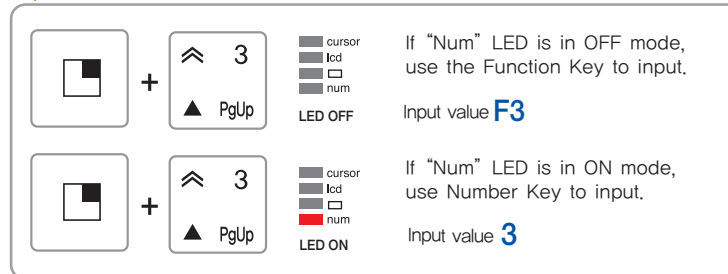
### Input method No. 2



### Input method No. 3



### Input method No. 4












































































The value for other keys will be determined in the same inputting pattern. Please refer to the diagram in the next page!



# The key input diagram

Now, try to input the following values!



Input method No.1		Input method No.2		Input method No.3		Input method No.4  num(LED ON)		 num(LED OFF)	
Key	Key input value	Key	Key input value	Key	Key input value	Key	Key input value	Key	Key input value
 1 Mouse left button		 +  1 enter				 +  1 1		 +  1 F1	
 2 Esc Mouse right button		 +  2 escape				 +  2 2		 +  2 F2	
 3 PgUp Mouse Wheel up		 +  3 Page Up		 3 PgUp Cursor Up		 +  3 3		 +  3 F3	
 4 PgDn Mouse Wheel down		 +  4 Page Down		 4 PgDn Cursor Down		 +  4 4		 +  4 F4	
 5 Home delete		 +  5 Home		 5 Home Cursor Left		 +  5 5		 +  5 F5	
 6 End tap		 +  6 End		 6 End Cursor Right		 +  6 6		 +  6 F6	
 7 ← space		 +  7 ← back space		LED ON		 +  7 ← 7		 +  7 ← F7	
 8 Keyboard icon window		 +  8 Keyboard icon key board Call/Return				 +  8 Keyboard icon 8		 +  8 Keyboard icon F8	
 9 lcd Left shift		Retrieve the Virtual Keyboard and press it again to release.				 +  9 lcd 9		 +  9 lcd F9	
 0 □ Left control						 +  0 res 0		 +  0 res F10	
 Left alt									

 The Num LED will be ON/OFF when pressing the  key while pressing the  key.




## How to Use the Shortcut Keys

This section introduces the shortcut keys that would use for changing or controlling the device using other combination beside the standard front keys.

### The shortcut keys





Alt + Ctrl + Del  
 Input value **Call task manager**






Alt + F4  
 Input value **Terminate program**






Alt + Tab  
 Input value **Change program**

### Device controlling keys





Force ON/OFF the LCD Back Light.  
 The  LCD LED will be ON/OFF at each press and is set to force OFF when the LCD Back Light is ON position.  
 This can be used to save energy while listening to music.





Change LCD resolution  
 As the buttons are pressed, it will converse into 640x480, 800x480, 800x600 and 1024x768 resolution.

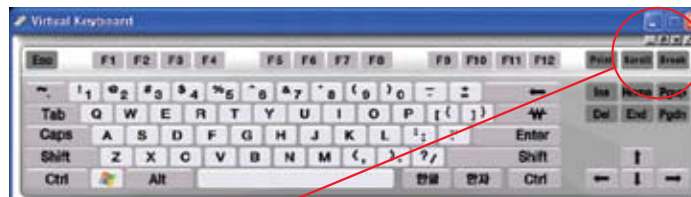


Change the left Mouse to cursor key  
 The  LCD LED will be ON/OFF at each press and in ON position, use it as the Cursor Key and as Mouse when in Off position.

## How to use the Virtual Keyboard

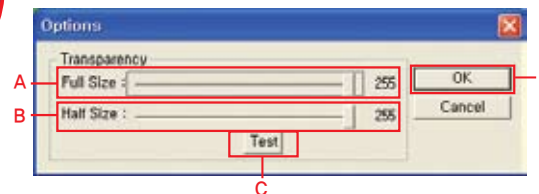
### Call the Virtual Keyboard

Press the  key while pressing the  key.  
 Place the cursor at the location you want using Touch or Mouse and input the words into the virtual Keyboard.

The Virtual Keyboard will disappear when the  key is pressed again while pressing the  key.




1. Pressing this button will move location to up and down.
2. This button displays the full screen.
3. This button terminates the Virtual Keyboard.
4. This option button adjusts transparency.



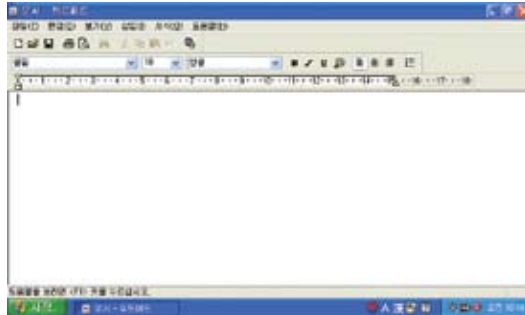
- A. You can adjust the transparency setting value of the full screen.
- B. You can adjust the transparency setting value of the standard screen.
- C. You can test and check selected transparency prior to applying the setting value.
- D. Selecting 'OK' will apply the set transparency.



 The least setting value will set clear transparency.

# Utilizing the Virtual Keyboard

1. Run a program to process character input. (Example: Word Pad)



2. Run the Virtual Keyboard using the front view key.



3. Change the Virtual Keyboard to full window mode.



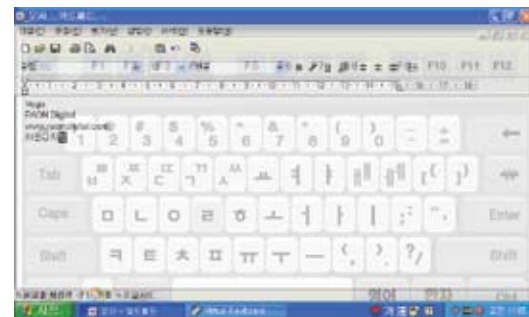
4. Adjust transparency from Options and select 'OK' .  
(If execute the Virtual Keyboard after this, the selected information will be saved and execute in full mode.)



5. Activate the program that is subjected to input character by pressing the 'Tab' key while pressing the 'Alt' key.

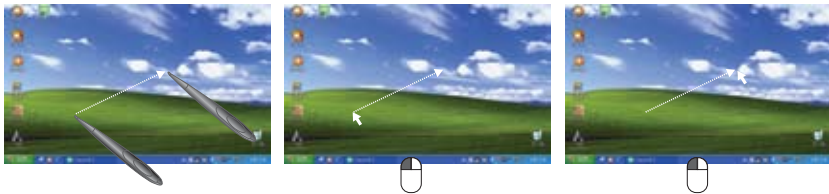


6. Use the Virtual Keyboard and process word processing.



## How to use the Touch Panel

### If using the Touch Pen without pressing Key.



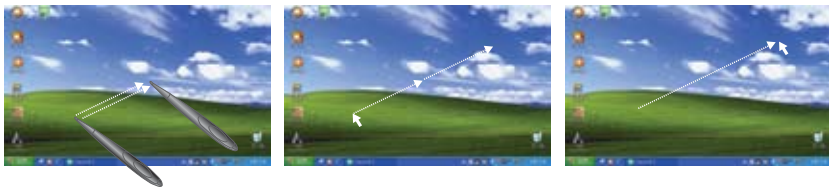
The location of the cursor movement in the screen and the tip of the pen are identical and it operates as if the mouse is moving while pressing the **left button** of the mouse.

### If using the Touch Pen while pressing the key.

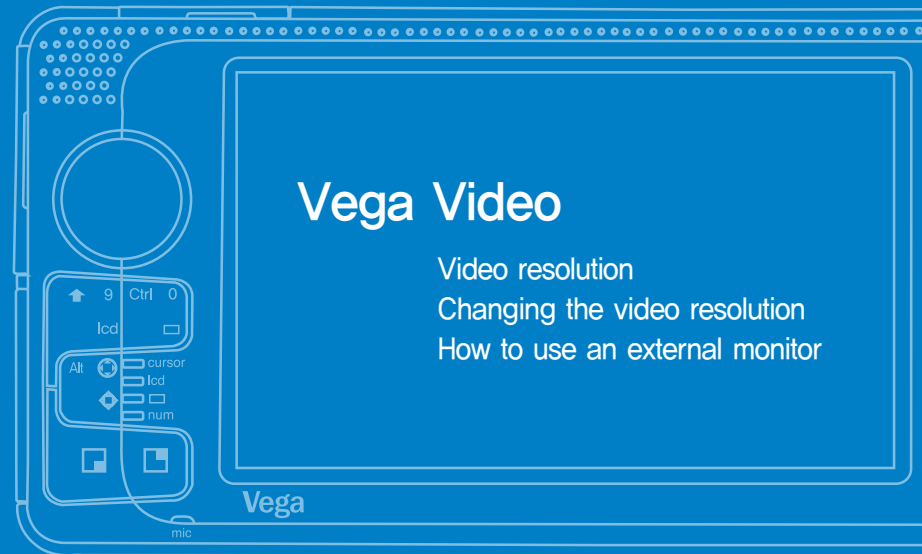


The location of the cursor movement in the screen and the tip of the pen are identical and it operates as if the mouse is moving while pressing the **right button** of the mouse.

### If using the Touch Pen while pressing the key.



Move the cursor as much as the moved distance of the pen from the cursor's first location. Only the cursor is moving as if none of the buttons of the left/right mouse buttons are pressed. It displays same effect like moving mouse in the Touch Pad.



# Video

Please set the Video resolution according to the operating environment.

## Video Resolution



### 640 x 480

Displays in the 800X480 expanded horizontal screen



### 800 x 480

The product's default resolution



### 800 x 600

Displays in the 800X600 contracted vertical screen

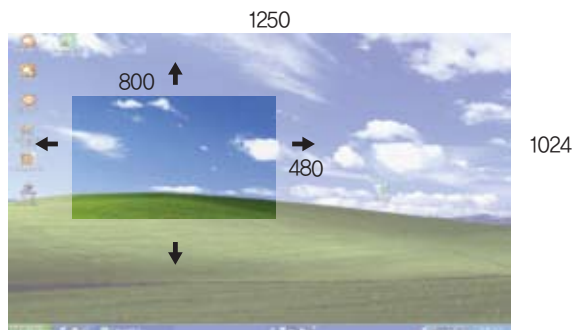


### 1024 x 768

Displays in the 800X480 contracted horizontal/vertical screen



Expansion or contraction is not doable in the resolution that exceeds 1024X768 but will cut and display in the 800X480 screen.



## Changing the video resolution

### Video Resolution

1. Use  +  keys to change LCD resolution.

As the buttons are pressed, it will converse into 640x480, 800x480, 800x600 and 1024x768 resolution.

2. Setting the standard resolution

Background screen → Set → Advanced → 'Geode LX setting Tap'

Select 'Simultaneous' and 'Display scaling'

640x480 (VGA) → 800x480 Expand horizontally

800x600 (SVGA) → 800x480 Contract vertically

1024x768 (XGA) → 800x480 Contract horizontally/vertically

~ pan

Select 'Simultaneous' and 'no Scaler'

640x480 (VGA) → 800x480 Center

800x600 (SVGA) → 800x480 Vertically pan

~ pan

Select CRT

LCD off

3. Reinstate LCD support resolution


Background screen → Set → Advanced → Adapter →

Display the entire mode → Select 800x480 32 bpp

Background screen → Set → Advanced → 'Geode LX setting Tap' →

Select 'Simultaneous' and 'Scaling' .

### Changing LCD Backlight brightness

While pressing the  press the left mouse to upward for brightness and downward for darkness.

## How to use an external monitor

**Cautions:** To use an external monitor, make sure to connect an external monitor before changing the display setting. The main LCD screen will not display if setting an external monitor.

1. Click right button of the mouse from the background window and select 'PROPERTY' menu.



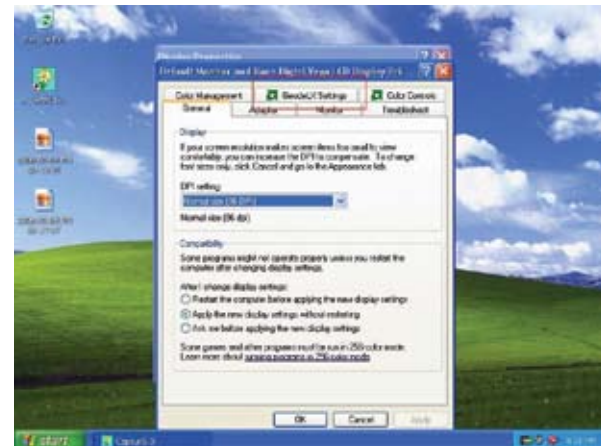
2. Select 'Setup' from the Display Register Information screen.



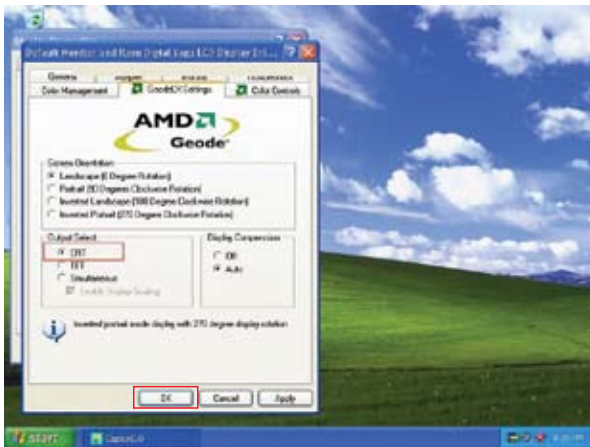
3. Setup the screen resolution to more than 800x600.  
If the screen resolution is under 800x600 (640x480 or 800x480), there could be difficulty in changing setting because some part of the advanced setting screen will not be displayed.



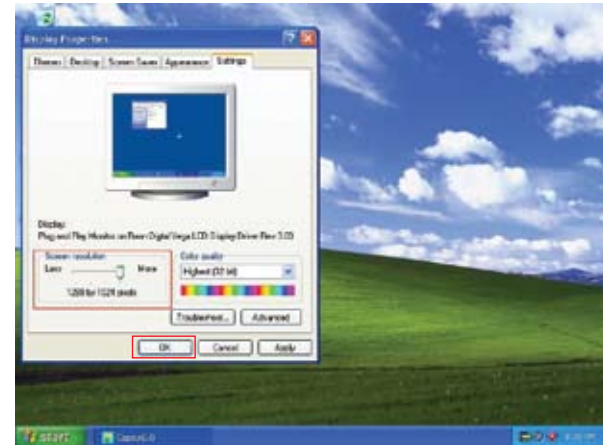
4. Select the 'Advanced' button and select 'GeodeLX Settings' in the advanced setting changing screen.



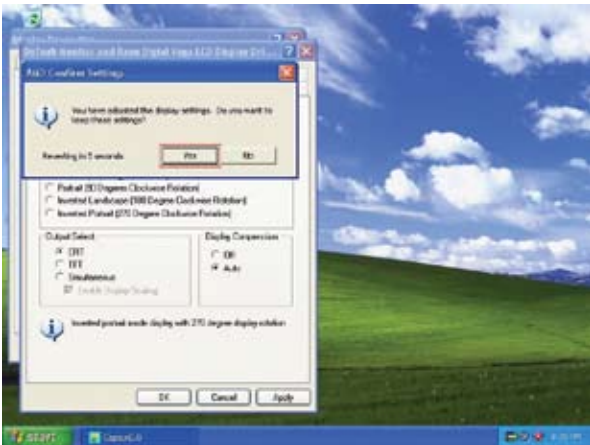
5. Select 'CRT' from Output Select and select the 'OK' button.



7. Adjust the resolution of the external monitor and select the 'Confirm' button. Select the 'OK' button from the monitor setting.



6. After selecting the 'Confirm' button, select the 'Yes' button from AMD Confirm Settings. The main LCD screen will not be displayed from this point.



# Utilizing Vega functions

Utilization Tips

Restoring BIOS Parameter

Charging the battery

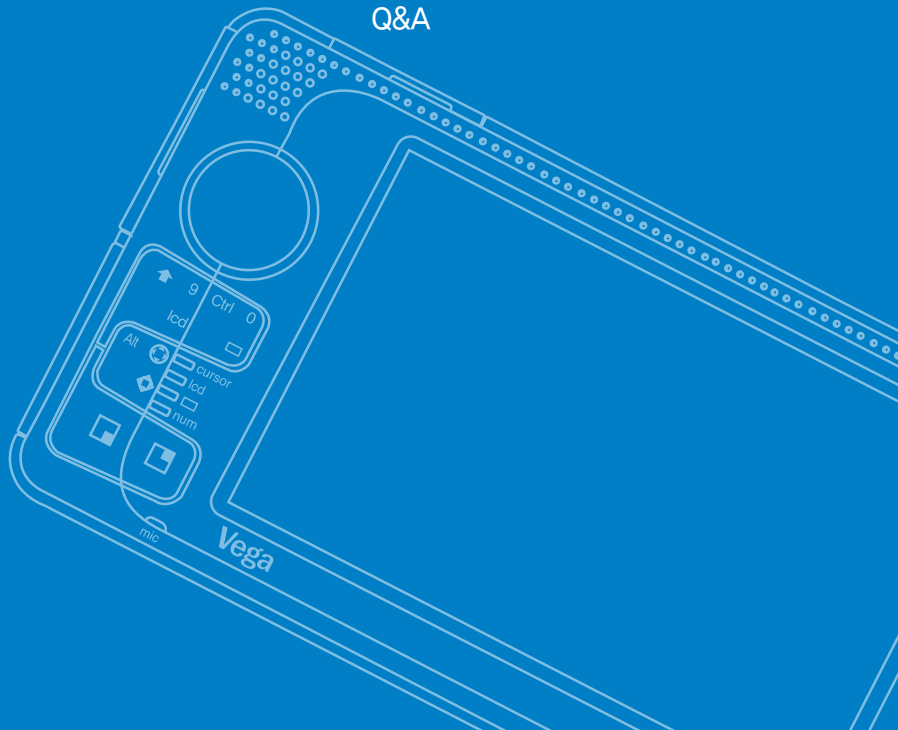
Using Vega as a USB storage device

Controlling the Master Volume

Changing the LCD brightness

Device power forced OFF

Q&A



## Utilization Tip

When a problem occurs, take the following steps.

**Tip** When a movie clip viewing is unstable.

Run the subjected player, select the subjected player from the Task Manager Process, go to Process Priority by right clicking the mouse and change it to Realtime.

**Tip** When the program menu is cut vertically and doesn't show.

Most programs required standard 800x480 LCD resolution, which is a proper setting to view a program screen however, some programs require high vertical resolution in the installing screen. Change the video resolution from 800x480 to 800x600 or 1024x768 when running this kind of program.



Use



+



keys to change the LCD resolution.

As the buttons are pressed, it will converse into 640x480, 800x480, 800x600 and 1024x768 resolution.

**Tip** When system error occurs while changing the game screen.



Most games automatically change the resolution to their default screen resolution upon starting a program (Or the resolution returns to the original screen when the game is terminated) and the problem is likely to occur at this time. In this case, changing the standard LCD resolution according to the resolution that requires for the particular game could prevent the error because there will be no resolution converting transition.



## Restoring BIOS Parameter

The Parameter for BIOS is maintained by means of a separate Backup power. If the Parameter is not being used for long time however, or if the BIOS Parameter is setup inappropriately, there could be a system malfunctioning.

### Take the following steps to restore.

1. Discharge of the CMOS Battery – Release the battery and using a pen, press the CMOS Reset Hole in the back for 10 seconds.
2. When the product is turned ON, the screen will read 'CMOS Check Sum Error' and will be halted.
3. Press the 'Del' Key to get into the BIOS Setup screen.  
From the Setup screen, press the   keys to use the direction key and change the Mouse Mode to the Cursor Mode.
4. Execute the Load Optimized Default.
5. Execute booting after Save & Exit Setup.

## Charging the Battery

The battery is being charged while in use and the charging process can be confirmed with the Blue LED at the bottom right. The LED light is ON in charging process and will go OFF when the process is finished. It will take about 4 hours to be fully charged once the battery is completely discharged. The charging LED light goes OFF after completing the charging process and the LED light will be ON again if the AC Adapter is connected for additional charging. In general, the battery will be only charged up to 80% during the initial charging process. When the AC Adapter is reconnected, it will try to recharge if the battery is not fully charged by checking the charging voltage.




It will take about 4 hours to be fully recharged once the battery is completely discharged.


## Using Vega as a USB storage device

The product can be connected with a computer in the standby mode (including the maximum power saving mode) or when the power is off. The file that has been copied onto the USB-HDD in the standby mode will not be displayed when the product is operated in the standby mode. On the other hand, the deleted file will show as if it still exists. This is because the Window System doesn't check the changes of File System when executing standby booting to reduce the booting time. In this case, the changed File status through the USB will properly reflect if restarts the product. Copying or deleting a file into the product in the maximum power save mode might cause damage to the system or to the file.

## Changing the LCD brightness

Pressing the left mouse to upward while pressing the  button will increase the brightness and decrease when pressing the mouse to downward.

## Controlling the Master Volume

Pressing the left mouse to the right while pressing the  button will increase the volume and decrease when pressing the mouse to the left.

## Device power forced OFF

The power will be off forcefully when pressing the power button for 4 seconds.

## Q&A

### Q : There is no power.

A : Check if the battery is discharged.

A : Connect the AC Adapter, charge the battery and check if the problem persists.

A : The cause of malfunction could be of PCM activation in the battery due to the loose contact battery.

Connect the AC Adapter for a while, then it will release the PCM activation and the power will come on.

### Q : Poor screen displaying.

A : Avoid direct rays and adjust the brightness.

A : Check whether the LCD brightness setting is correct.

A : If the product is being much used in the outdoor, attaching a LDC protection sheet will help.

### Q : The buttons are halted.

A : Check if the Hold function is setup (The button/touch/mouse will work when the slide switch at the right side of the product is positioned upward).

## System maintenance

Reinstalling Windows

Installing Display Adaptor

Installing Vega Utility



## Reinstalling Windows

Your computer must be connected to the network in order to go through Certificate of authenticity using the Internet.  
For the authenticity process, please refer to the user's manual that comes with the Windows® XP CD.



### The order of Windows reinstallation

#### 1. Windows & Service Pack

#### 2. Open control panel → system → hardware → device manager

- ① AES VegaDriver/AES
- ② Display adaptor VegaDriver/VegaVideo
- ③ Sound VegaDriver/Audio

#### 3. The version more than Direct X9.0

How to check run "dxdiag"

## Installing Display Adaptor

### 1.Delete the previously installed Driver (Disregard this process if installing for the first time)

Control panel → system → hardware → device manager → display adaptor  
Delete the "Raon Digital Vega LCD Display Driver".  
Restart the Windows.

### 2.Installing the Vega Driver

A new hardware, 'Video Controller' will be detected after booting.  
Cancel 'Starting new hardware search wizard'.  
Control panel → system → hardware → device manager → display adaptor  
Select 'Video Controller (VGA compatible)' and execute 'Driver update'.  
Hardware search wizard  
Select 'Installation' from the list or other specific location and select 'Next'.  
Select D:\RaonDriver\RaonVideo by selecting 'Search',  
select 'Confirm' and select 'Next'.  
Select 'Continue' from the compatibility test result screen,  
...after a few seconds later, the hardware update wizard  
will be completed ... 'Finish'.

### 3.Setting up the initial resolution

Select 'Property' from the background screen  
by clicking the 'mouse's right button'.  
Go to 'V for advance' from the 'Setting' tab.  
Select the 'GeodeLX Settings'.  
Select Output Select as 'Simultaneous' and 'Enable display Scaling'.  
Select Display Compression as 'Auto' and select 'Confirm'.

### 4.Change the screen resolution to

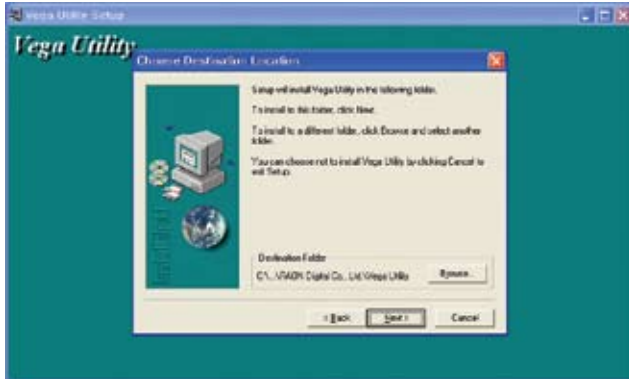
800x480 using the front view keys.



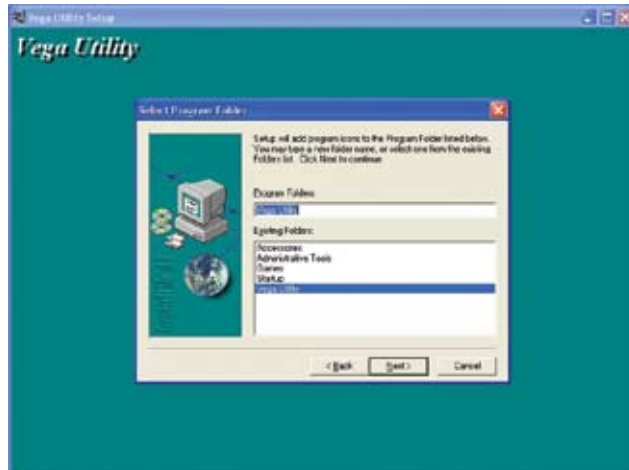
## Installing Vega Utility

The Virtual Keyboard is included in the Vega Utility and the Utility can check status of battery residual as well as volume controlling. Please take the following steps to install the Vega Utility.

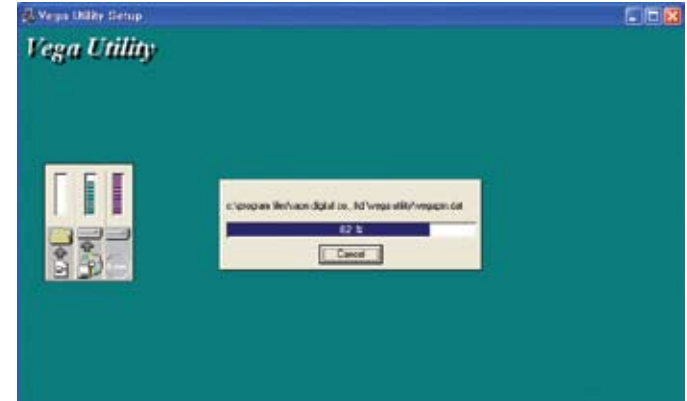
**Cautions :** Deleting Vega Utility could restrict some of the functions.



Select 'NEXT' at the bottom of the screen.



Select 'NEXT' at the bottom of the screen.



Installing the Vega Utility



Confirm installation

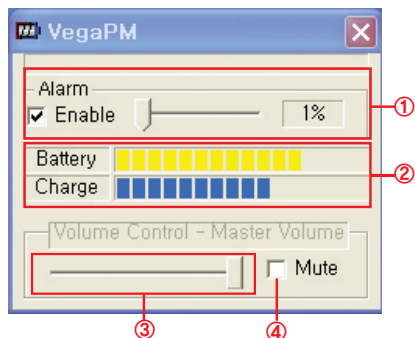
**Cautions :** Before installing the Vega Utility, you must terminate activating Vega Utility program and delete the installation program that has been installed previously.

## Vega Utility program description



Vega PM Icon

1. The Vega Utility menu will be displayed when right clicking the Vega PM icon with the mouse.
2. The Vega PM Window can be displayed/hidden by clicking the Vega PM icon.



### Vega PM

1. An alarm can be set for the battery residual. If the battery residual gets smaller than its set value, an alarm message will be displayed.
2. It shows the current charged status and the battery residual. It will display 0% if the battery is completely charged or if there is no power connection,
3. It displays the current audio status and can control audio volume.
4. It displays the current audio Mute status and can On/Off Mute.

MEMO

MEMO

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