



# Intel-powered Convertible Classmate PC Intel® Power Manager User Manual

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For Ubuntu Netbook Remix Operating System

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# Revision History

| Document<br>Revision | Revision History                                                                      | Date         |
|----------------------|---------------------------------------------------------------------------------------|--------------|
| 1.0                  | Third generation Intel-powered convertible<br>classmate PC Power Manager User Manual. | January 2009 |

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# 1 Introduction

The Intel-powered convertible classmate PCs are affordable, rugged, and fun netbooks built for learning. Based on research in educational settings, the child-friendly design converts from a clamshell to a touch-optimized tablet – promoting intuitive use, interactive learning, and new mobility. Intel-powered convertible classmate PCs come with education-specific features and software, and are supported by a wide range of local vendors.

## **Key Features:**

- View battery status and detailed information.
- Manage power schemes including viewing a power scheme, adding a power scheme, editing a power scheme, and deleting a power scheme.
- Apply a power scheme.
- Customize general options.

## 2 System Requirements

Hardware requirements:

- Processor: Intel® Core™ N270 processor
- Memory: 512 MB
- Hard disk: 4 G

Operating System: Ubuntu 8.04

## 3 Install Intel® Power Manager

### 3.1 Install Power Manager

The power management installation package format is **deb**. If you are not logged in as a Root account, type the following command: **sudo dpkg -i xxx.deb**.

Power Manager will run as a tray icon in the taskbar. When you right- or left-click the tray icon, a touch-optimized tray menu will display. You can access the functions of Power Manager through this menu.

### 3.2 Uninstall Power Manager

If you are not logged in as a Root account, type the following command: **sudo dpkg -P power-management**.

Once the un-installation process completes, Power Manager will be removed from your computer.

## 4 Getting Started with Power Manager

### 4.1 Power Manager at a Glance

#### 4.1.1 Tray Icon Status

Power Manager will be minimized and display as an icon in the system tray after start up. It has several states to show your power status.



: indicates you are using AC power and the battery is fully charged or there is no battery at all.



: indicates you are using AC power and the battery is charging now.



: indicates you are using AC power and the battery has high capacity now.



: indicates you are using DC power and the battery has middle capacity now.



: indicates you are using DC power and the battery has low capacity now.

## 4.1.2 Battery Status Balloon

When you move the mouse on the tray icon, a balloon will show current power status. If the computer is running on battery, you can view the remaining time and remaining percentage of battery life.

If some devices are disabled for power saving, a link will display on the bottom of the balloon. You can click it to see detailed information about the devices.



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**Figure 1 – Battery Status Balloon**



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**Figure 2 – Charging Status Balloon**



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**Figure 3 – Charged Status Balloon**

You can click the **Battery Status>>** link to switch back to the battery status balloon.



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**Figure 4 – Device Disable Balloon**

If the computer is plugged in to AC without a battery, the tray icon will be the same as that of AC status, and the balloon will show "No system battery".



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**Figure 5 – No Battery Balloon**

### 4.1.3 Tray Menu

When you right- or left-click the tray icon, a touch-optimized tray menu will display. You can see the current power status from the first menu item. If the computer is in battery status, you can view the remaining time and remaining percent of battery life.



**Figure 6 – Tray Menu**

Tray menu comprises several menu options. With this menu, you can access many functions. The next sections describe these function modules in detail.

- **Power Schemes** - There are several power schemes listed in the tray menu, with the default selected. Click the power scheme on the list to apply it immediately. There are three

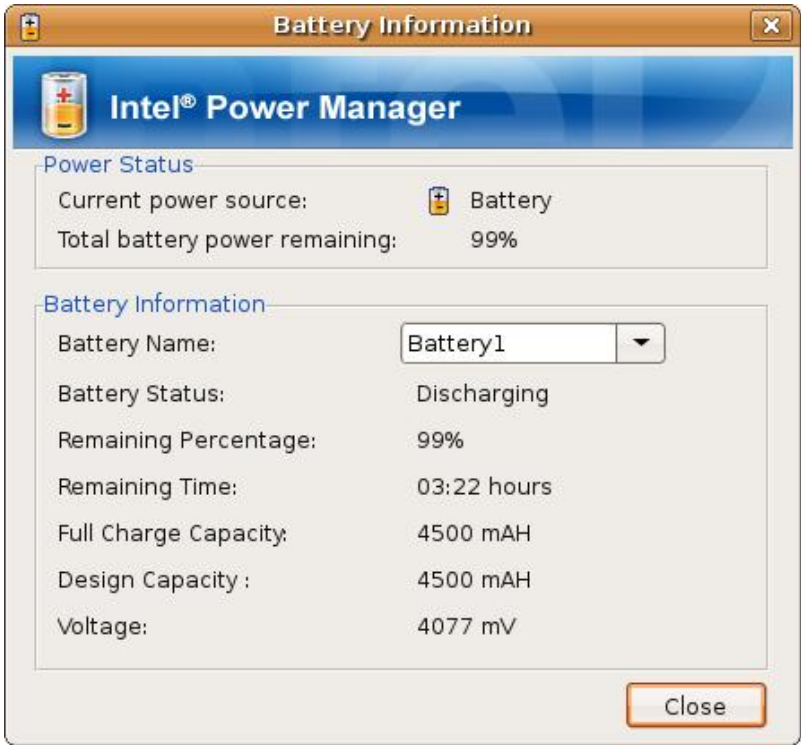
power schemes predefined by Intel. For more information on these power schemes, please refer to section 5.1.

- **Launch Power Manager** – When you click **Launch Power Manager**, the Intel Power Manager dialog opens. This dialog allows for creating new power schemes, editing and deleting power schemes, as well as switching power schemes from the schemes list. For details, please refer to section 5.2.
- **View Battery Information** – When you click Battery Status, the Battery Information dialog appear to show the real-time status of the battery. For details about power scheme settings, please refer to section 4.2.
- **Exit Power Manager** – Click **Exit** to exit the software. You can restart it by clicking **Applications -> Other -> Power Manager**.



## 4.2 View Battery Information

If you are using a battery in your computer and you want to know the current battery status, click the tray icon and select **Battery Information** from the menu to open the dialog. The real-time status of the battery and detailed battery information is displayed in this dialog.



**Figure 7 - Battery Information Dialog**

## 4.3 Predefined Power Schemes

For your convenience, there are three power schemes predefined by Intel.

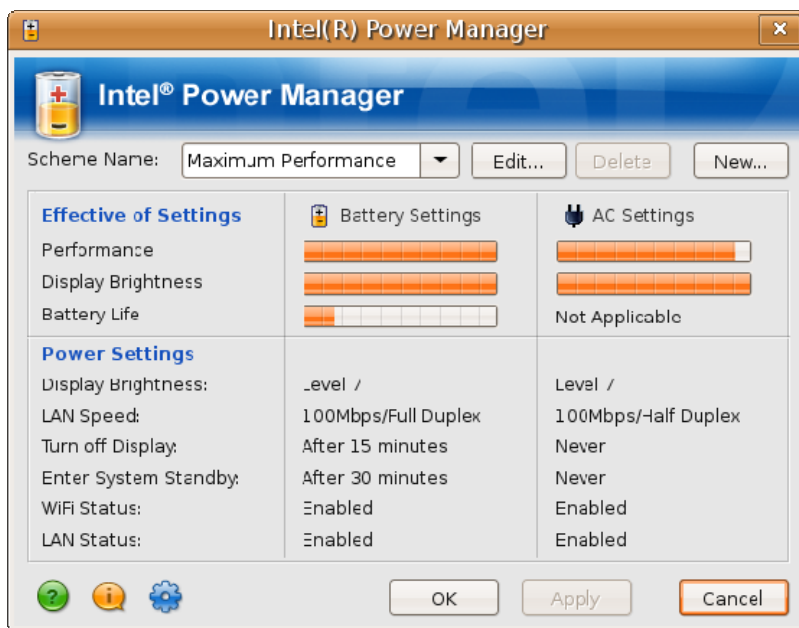
- **Classmate Default** – a balanced power scheme for prolonged classroom usage.
- **Max Performance** – a power scheme emphasizing on high performance.
- **E-reader Mode** – a power scheme that saves power aggressively.

**Table 1 – Predefined Power Schemes**

| Item                    | Classmate Default |            | Max Performance |          | E-reader Mode |            |
|-------------------------|-------------------|------------|-----------------|----------|---------------|------------|
|                         | DC                | AC         | DC              | AC       | DC            | AC         |
| <b>LCD Brightness</b>   | Level 3           | Level 7    | Level 7         | Level 7  | Level 3       | Level 5    |
| <b>WLAN</b>             | On                | On         | On              | On       | Off           | On         |
| <b>LAN</b>              | On                | On         | On              | On       | Off           | On         |
| <b>LAN Speed</b>        | 100 Mbps          | 100 Mbps   | 100 Mbps        | 100 Mbps | 10 Mbps       | 10 Mbps    |
| <b>Turn off display</b> | 5 minutes         | 30 minutes | 15 minutes      | Never    | 20 minutes    | 30 minutes |
| <b>System standby</b>   | 15 minutes        | 60 minutes | 30 minutes      | Never    | 30 minutes    | 60 minutes |

## 5 Using Intel Power Manager

When you click **Launch Power Manager** from the Tray menu, the Power Manager main window opens.



**Figure 8 – Power Manager Main Window**

There are two sections under either Battery Settings or AC Settings: **Effective of Settings** and **Power Settings**. You can view the effectiveness of your selected power settings in Effective of Settings in a vivid way when you have configured several parameters in Power Settings. This makes it easier for you to recognize the real effects of the scheme you choose.

# 5.1 5.1 Power Scheme Options

The following table describes the various power scheme options that can be set up in Intel Power Manager. Note that some options may not be available in your system.

**Table 2 – Power Scheme Options**

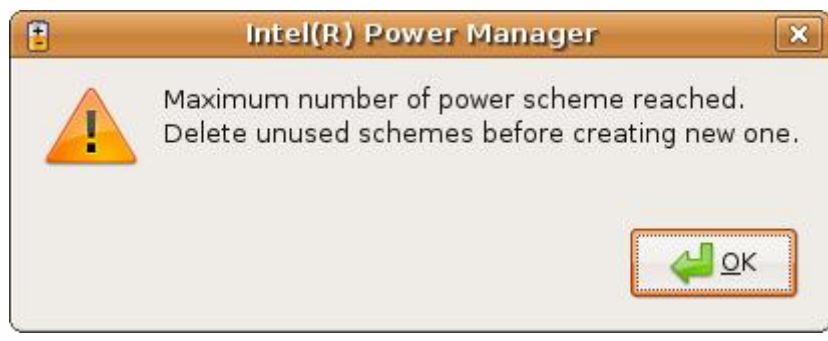
| Options               | Descriptions                                                                                                                                                                                                                                                                                                                                               | Value                                                                                     |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|
| Display Brightness    | Sets your Liquid Crystal Display (LCD) display level for your battery settings or AC settings.                                                                                                                                                                                                                                                             | Level 0 to Level 7                                                                        |
| LAN Speed             | Allows you to limit LAN speed for your Battery Settings or AC Settings to save power.                                                                                                                                                                                                                                                                      | 10Mbps/Half Duplex,<br>10Mbps/Full Duplex,<br>100Mbps/Half Duplex,<br>100Mbps/Full Duplex |
| Wired/Wireless Status | Allows you to Enable or Disable Wired or Wireless, which is a local area network that uses high frequency radio signals to transmit and receive data over distances of a few hundred feet using the Ethernet protocol. If you do not need to surf over the Internet or have a cable link to the Internet, you can Disable Wired or Wireless to save power. | Enable or Disable                                                                         |
| Turn off              | Allows you to turn off the display to                                                                                                                                                                                                                                                                                                                      | After 1 min to After 5                                                                    |

|                      |                                                                                                                                |                                                                          |
|----------------------|--------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|
| Display              | save power, when the computer idles without any signal input for a period of time.                                             | hours. Optionally, you can choose Never to never turn off the display    |
| Enter System standby | Allows you to enable system standby mode to save power, when the computer idles without any signal input for a period of time. | After 1 min to After 5 hours. Optionally, you can choose Never to never. |

## 5.2 Add Power Scheme

You can create customized power schemes. When you click the **New...** button in the main window, the New Power Scheme Wizard will pop up. By default, the parameters are the same as the Classmate Default scheme.

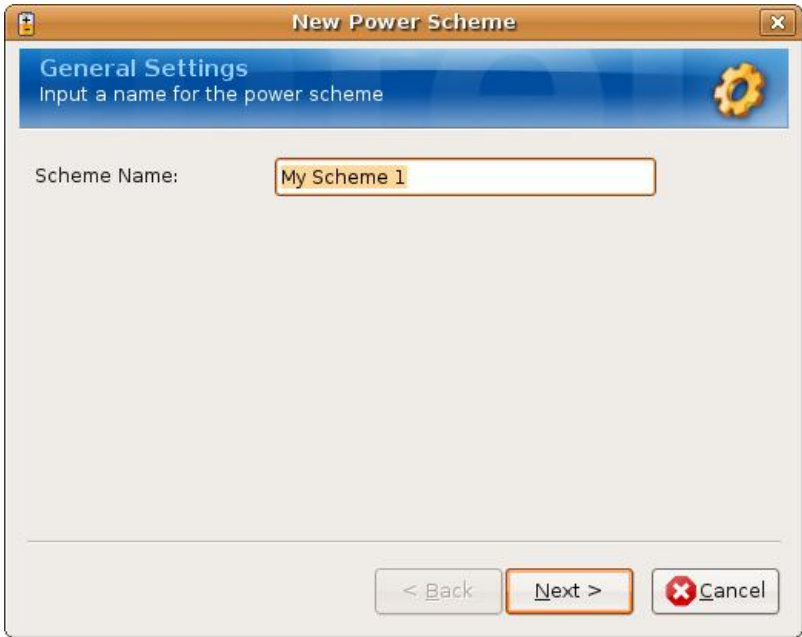
If the total number of power schemes reaches the maximum, a warning message will pop up when you click **New...** in the main window.



**Figure 9 – Maximum Number Warning**

## 5.2.1 Step 1 - General Settings

You can input a scheme name in Step 1. Click **Next** to continue. You can input no longer than 20 characters for a scheme name



**Figure 10 – New Power Scheme Step 1**

### NOTE

- *The default power scheme name is: “My Scheme X”. (X stands for scheme number: 1, 2 or 3.).*

- If you leave the scheme name empty, input an existing name, or use a name that contains "%", "\", "<", ">", "\"", a warning message box will pop up.

## 5.2.2 Step 2 - Battery Settings

You can set up battery settings in Step 2. Effective of Settings will be displayed real-time based on your settings. Click **Next** to continue.

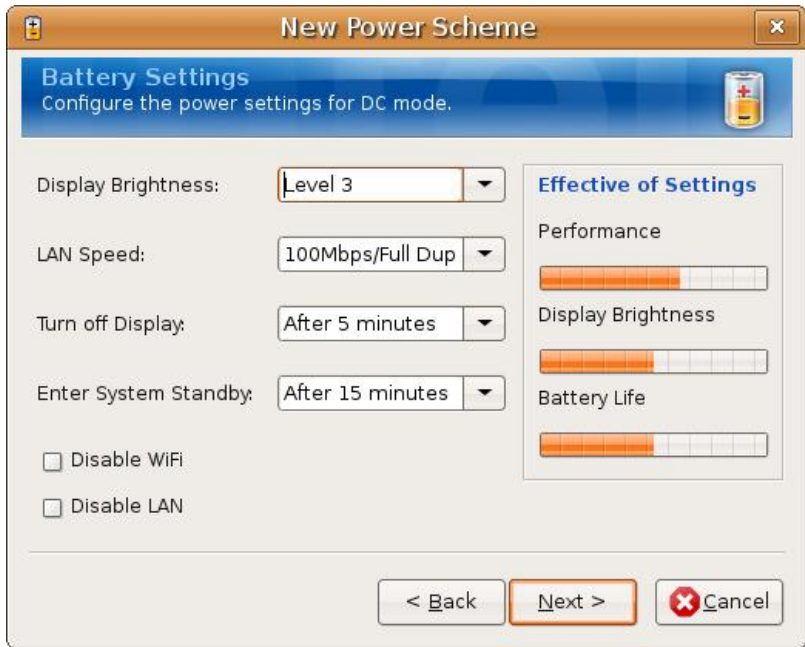


Figure 11 – New Power Scheme Step 2

### 5.2.3 Step 3 - AC Settings

Effective of Settings will display in real-time based on your settings. Click **Finish** to complete the settings.

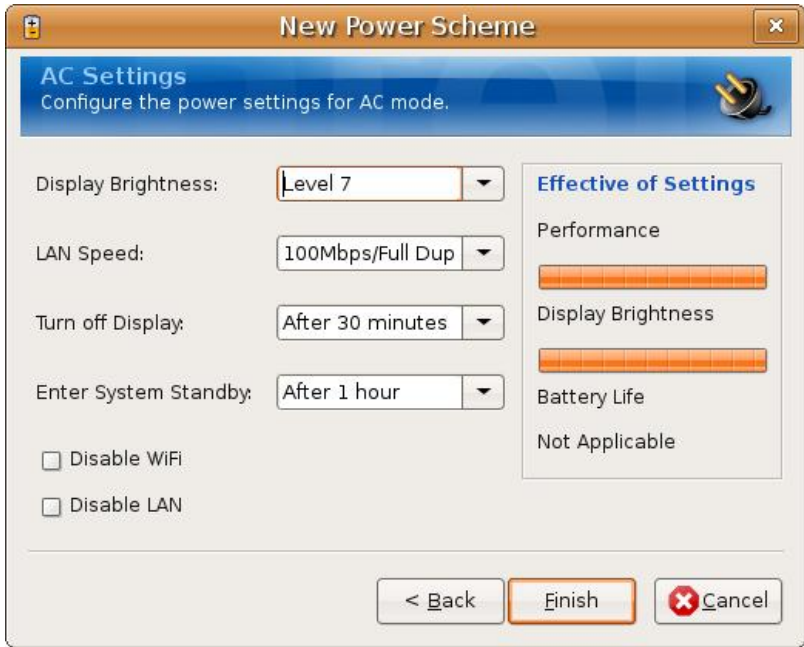


Figure 12 – New Power Scheme Step 3

## 5.3 Edit Power Scheme

You can change power scheme settings depending on the situation. All the schemes are editable, including the three default ones. You can select a power scheme in the main window and click **Edit** to open the **Edit Power Scheme** window.

### 5.3.1 Change Power Settings

You can edit a scheme name, battery settings, and AC settings in this window.

After configure settings, click **Save** to save the scheme and the result is shown in the main dialog. Click **Cancel** to cancel this operation.

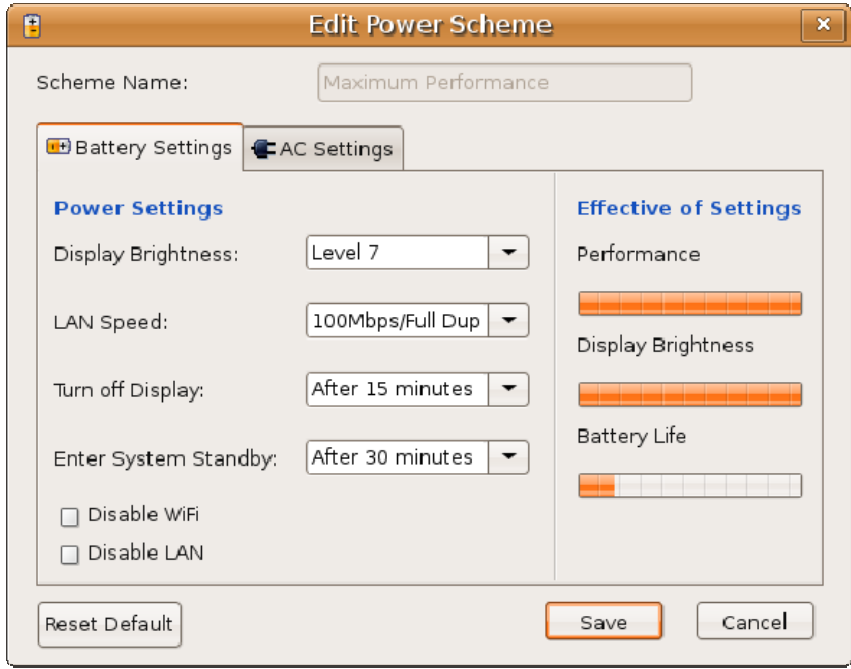


Figure 13 – Edit Power Scheme

 **NOTE**

*You cannot change the name of default schemes and the name input boxes of default schemes are disabled.*

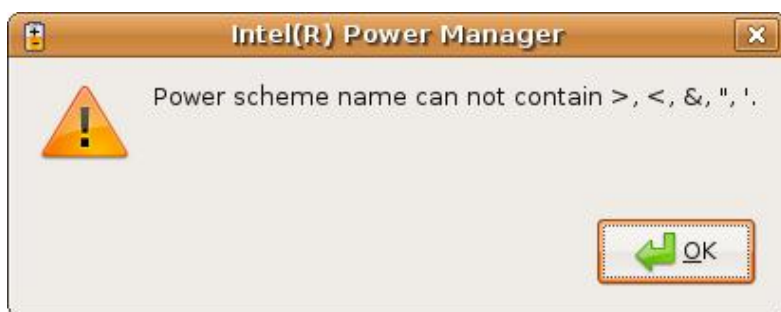
If you don't input the name of the new scheme and then click **Save**, a warning message will pop up: "Please enter scheme name."



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**Figure 14 – Scheme Name Empty Warning**

The **Scheme Name** can accept all characters except "<", ">", "&", "\"", and "'". If you input invalid characters for the new scheme name and then click **Save**, a warning message will pop up: "Power scheme name can not contain >, <, &, \", '."



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**Figure 15 – Scheme Name Contain Special Character Warning**

If you enter the same name as an existed scheme and then click **Save**, a warning message will pop up: "The name has already been used."

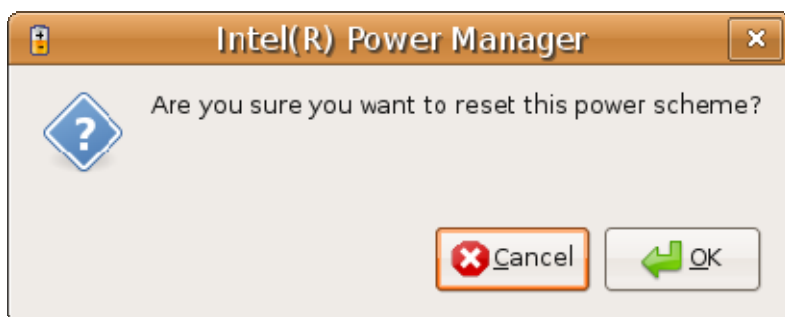


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**Figure 16 – Scheme Name Repeated Warning**

### 5.3.2 Reset Default Settings

If you changed the settings of the default power scheme, you can restore the settings by clicking **Reset Default** button on the bottom left of the Edit Power Scheme window. A message will prompt for confirmation.



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**Figure 17 – Reset Default Warning**

## 5.4 Delete Power Scheme

If you click **Delete** button to delete a power scheme, the confirm dialog will pop up to require your confirmation.



Figure 18 – Delete Power Scheme Warning

### NOTE

*You can't delete the current active scheme. You can't delete three default power schemes.*

If you try to delete the current active power scheme, a warning message box will pop up.

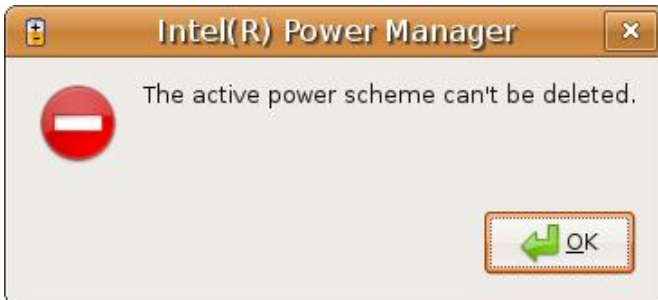


Figure 19 – Delete Active Power Scheme Warning

## 5.5 Switch Power Scheme

You can switch a power scheme from two places:

- Select the power scheme directly from the tray menu to apply it.
- Select the power scheme from the combo box and click the **Apply** button or **OK** button in the Power Manger main window.

If some devices need to be disabled after you switch to a certain power scheme, a dialog will pop up asking you for confirmation. If you want to open the device anyway, you can uncheck the buttons to enable it.



**Figure 20 – Device Disable Settings**

If you want to save all current settings, check **Remember my settings....**


If some options aren't available in your system, a warning message box will pop up.



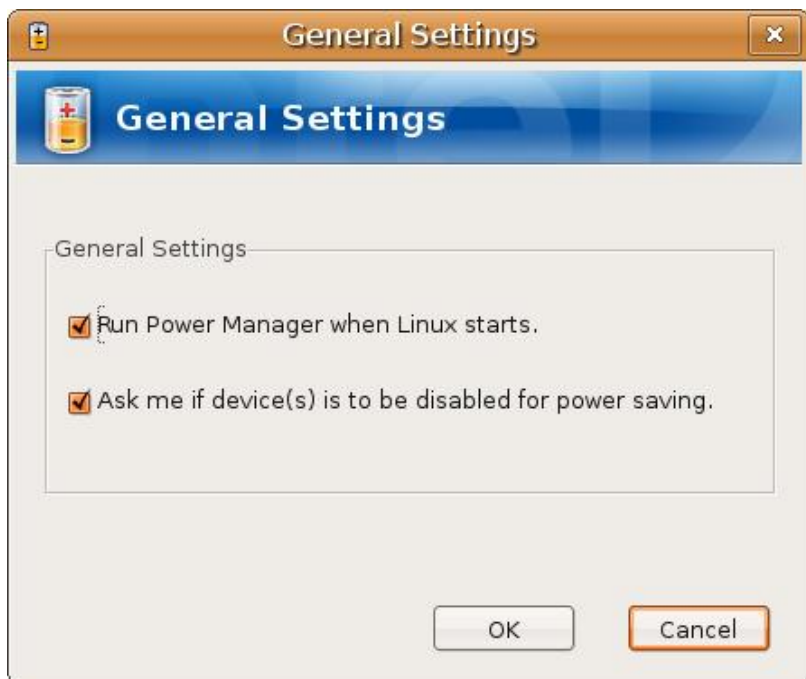
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**Figure 21 – Apply Power Scheme Warning**

## 5.6 Options Settings


You can enter the Options Dialog by clicking  on the bottom left of the main window. In this dialog, you can determine whether to run application when the operating system OS starts up.

You can determine whether to show the device enable/disable dialog during the power scheme switch.



**Figure 22 – Options Settings**


## 5.7 About

When you click  on the Power Manager main window, a dialog will pop up to show the product name, version, and copyright information.



**Figure 23 – About Dialog**

## 5.8 Help

When you click  button on the Power Manager main window or press the F1 key, a window will pop up providing you with help information about Power Manager.

## 6 Frequently Asked Questions

Q: When I apply a power scheme, a warning message box pops up and the **Some operations were not supported** message displays. Why?

A: Some options may not be available in your system. For example, the set LAN speed option can't be supported if your computer can't connect to the network through LAN.

Q: Sometimes my time to discharge is out of the way, why?

A: Battery may be faulty and its discharging/charging rate may not be stable at this time. .

Q: Does Power Manager for Second Generation Intel-powered convertible classmate PC support ACPI?

A: Yes.

Q: What about the Standby state?

A: The Standby state is a power saving feature which is the lowest level of power consumption that preserves program data in the computer's memory. When your computer is in the suspended state, computation will not be performed until normal activity is resumed. It will not resume until signaled by an external event such as a keyboard button press. It generally takes a few seconds to suspend and then resume your computer.