Notes on This Manual

Keep these instructions with your computer at all times. The proper set up, use and care can help extend the life of your computer. In the event that you transfer ownership of this computer, please provide these instructions to the new owner.

This manual is divided into sections to help you find the information you require. Along with the Table of Contents, an Index has been provided to help you locate information.

In addition, many application programs include extensive help functions. As a general rule, you can access help functions by pressing F1 on the keyboard. These help functions are available to you when you use the Microsoft Windows® operating system or the various application programs.

This interactive manual is designed to provide additional information about your Notebook as well as useful links accessible via the World Wide Web.

We have listed further useful sources of information starting on page 53.

Document Your Notebook

It is important to document the details of your Notebook purchase in the event you need warranty service. The serial number can be found on the back of the Notebook:

Serial Number ..................................................
Date of Purchase .................................................
Place of Purchase ................................................

Audience

These instructions are intended for both the novice and advanced user. Regardless of the possible professional utilization, this Notebook is designed for day-to-day household use. The functions and applications for use with this Notebook have been designed with the entire family in mind.
Quality

We have selected the components in this computer for their high level of functionality, ease of use, safety and reliability.

Through balanced hardware and software design we are able to provide you with an innovative personal computer useful for applications relating to both work and leisure.

We are pleased to welcome you as our newest customer.

Copying this manual

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# Chapter 1

## Safety and Maintenance

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Safety Instructions

Please follow the instructions in this section for the safe operation of your notebook:

- Do not allow small children to play unattended with electrical equipment. Children are incapable of judging potential risks properly.
- Keep the packing materials, such as foil away from children. The danger of suffocation could arise in the case of misuse.
- Do not open the case of the notebook, the battery or the power adaptor. When the case is open there is a danger of severe electric shock.
- Do not insert objects through the slots and openings of the notebook. This may lead to electric shock, electrical short-circuit or fire that will damage your notebook.
- Slots and openings in the notebook serve to ventilate it. Do not cover up these openings, because the notebook could overheat.
- The notebook is not intended to be operated in a heavy industry company. Operation under extreme environmental conditions can result in damage to your notebook.
- Do not operate the notebook during a thunderstorm, in order to avoid damage through lightning strike.
- Never place objects on top of the notebook that would exert any pressure on the display. There is a danger that even slight pressure may break the TFT display.
- There is a risk of injury if the TFT display breaks. Use protective gloves to pack up the broken pieces and contact customer service to arrange for proper disposal. It is important to thoroughly wash your hands after handling a broken TFT display. There is a chance that chemicals may have been released.
- To avoid damage to the TFT Display, never open it more than 120º. Do not forcibly open it.
- In order to avoid damage to the display, do not touch it with your fingers or sharp objects.
- Never lift the notebook by the TFT Display; doing so could break the hinges.
Switch off your Notebook immediately or do not switch it on at all and contact customer service ...

- if the power cord or the connectors attached to it are burnt or damaged. Replace the defective power cord with an original power cord. Under no circumstances may a defective power cord be repaired.
- if the housing of the Notebook is damaged or fluids have leaked into it. Have the Notebook checked by customer service first, because the Notebook may not be safely operated otherwise and there may be a life-threatening risk of electrocution!

Data Security

Attention!

Every time you update your data make back-up copies on an external storage medium. The supplier does not assume liability for data loss or damage to data storage units, and no claims can be accepted for damages resulting from the loss of data or consequential losses.

Set-Up Location

- Keep your notebook and all connected peripherals away from moisture, dust, heat and direct sunlight. Failure to do so can lead to Notebook malfunction or damage.
- It is highly recommended you do not use the notebook outdoors.
- Operate the notebook and all peripherals on a stable, balanced and vibration-free surface.
- Do not leave the base of your notebook on your lap or any part of your body for a long period of time. The notebook can become very warm while it is turned on or charging and can cause discomfort or injury from heat exposure.
- In the first hours of operation, new devices may emit a typical, unavoidable but completely harmless smell, which will decline increasingly in the course of time. We recommend that you ventilate the room regularly, in order to counteract the formation of the smell. During the development of this product, we have made sure that the applicable limits are clearly lowered.
Ambient Temperature

- The notebook is most reliably operated at an ambient temperature between +41° (5° C) and +95° F (35° C) and at a relative humidity between 20% and 70% (without condensation).
- When powered off, the notebook can be stored at temperatures between 32° and 140° F (0° and 60° C).
- Unplug the cable during thunderstorms and make especially sure to remove the antenna cables, if present. We recommend the use of a surge protector for additional safety, in order to protect your notebook from being damaged by power peaks or lightning strikes through the power network.
- Wait until the notebook has reached ambient (room) temperature before turning it on or connecting it to the power adapter. Drastic variations in temperature and humidity can create condensation within the Notebook and may cause it to short-circuit.
- For transporting the notebook keep the original packing.
Working in Comfort

Sitting in one position for long periods can be uncomfortable. To minimize the potential for physical discomfort or injury, it’s important that you maintain proper posture.

- **Back** – While sitting at your work surface, make sure your back is supported by the chair’s backrest in an erect position or angled slightly backwards.
- **Arms** – Your arms should be relaxed and loose, elbows close to your sides, with forearms and hands approximately parallel to the floor.
- **Wrists** – Your wrists should be as straight as possible while using the keyboard, mouse or trackball. They should not be bent sideways, or more than 10 degrees up or down.
- **Legs** – Your thighs should be horizontal or angled slightly downward. Your lower legs should be near a right angle to your thighs. Your feet should rest flat on the floor. If necessary, use a footrest, but double check that you have your seat height adjusted correctly before getting a footrest.
- **Head** – Your head should be upright or tilted slightly forward. Avoid working with your head or trunk twisted.
- **Overall** – Change your position frequently and take regular breaks to avoid fatigue.
Connecting
Pay attention to the following information, in order to connect your notebook correctly:

Power supply
- Do not open the power adapter housing. When the housing is open there is a danger of severe electric shock. It contains no user-serviceable parts.
- The electric outlet must be in the vicinity of the notebook and within reach of the power adapter cables.
- To disconnect your notebook from the power source, or set the notebook to battery operation, remove the power cord from the notebook’s power socket.
- Only use the notebook with a power adapter operating at AC 110-240V~/50-60 Hz. For details on power consumption, please refer to the rating plate on the rear of your notebook. If you are unsure of the type of power supply available at the point of use, ask your local power company.
- Use only the supplied power cord and power adapter.
- If using an extension cord, make certain that it meets your local safety requirements. If in doubt, consult an electrician.
- To provide additional protection against electric shock, power surges, lightning strikes, or other electrical damage to your notebook, we recommend the use of a surge protector.
- Firstly remove the plug, and then the connector of the notebook, from the power source, if you want to detach the network adapter from the mains power supply. A reverse sequence could damage the network adapter or the notebook. Always hold the connector firmly when removing it. Never pull on the power cord.
Cabling

- Arrange cables so no one can walk on or trip over them.
- Do not place objects on any of the cables.
- To avoid damage to your Notebook, connect your peripherals (e.g., keyboard, mouse and monitor) whilst your notebook is powered off. Some devices can be connected whilst your notebook is in use. These devices usually have a USB connector. Please follow the appropriate instructions for each device.
- Keep the notebook at least one meter (approximately three feet) away from high frequency and magnetic interference sources (e.g., televisions, loudspeaker cabinets, mobile telephones, etc.) in order to avoid malfunctions and/or loss of data.
- Please note that only shielded cables shorter than 3 metres (9.84 ft) should be used for the LPT, COM, USB, IEEE 1394, audio, video and network interfaces with this notebook. Please use only doubly screened cables in the case of printer cables.
- Do not replace the cables supplied. Only use the cable supplied with the notebook, since that cable will have been tested extensively in our laboratory.
- Also only use the connection cables supplied with the devices to connect your peripherals.
- Make sure that all connecting cables are connected with the respective peripheral devices, in order to avoid perturbing radiation. Remove any cables not needed.
- The connection of devices is limited to equipment that complies with EN60950 “Safety of information technology equipment” or EN60065 “Audio, video and similar electronic apparatus. Safety requirements”.
Safety

Handling

Information about the regulatory compliance according to R&TTE

The following remote equipment has been supplied with this notebook:

- Wireless LAN
- Bluetooth

Due to the capacity of the built-in wireless LAN solution (> 100 mW) the device may only be used within buildings in France.

Currently none of the other EU-countries have any restrictions. For use in other countries please obtain information about the applicable regulations locally.

The company declares herewith that these devices are in agreement with the fundamental requirements and the other relevant terms of the 1999/5/EG Guideline. Complete declarations of conformity are available under www.medion.com/conformity.

Touch Pad

- Light pressure with the tip of your finger is all that is required to operate the touch pad. Because the touch pad is electrostatic sensitive, objects cannot be used in place of your fingers. Using a pen or other object can damage the touch pad or cause the notebook to malfunction.
Battery Operation

To extend the life and power of your battery and guarantee secure operation, the instructions below should be followed:

- Never expose the battery to direct sunlight or heat for long periods.
- Do not dispose of the battery by fire.
- Disregarding these instructions will lead to damage and under some circumstances may even cause the battery to explode.
- Do not open the battery housing; it contains no user-serviceable parts.
- Keep the battery away from electrically conductive materials, chemical substances and cleaning agents.
- Only use the originally supplied power adapter to charge the battery.
- Ensure (through the display or the signalling sound of the notebook) that the battery is completely discharged before recharging it.
- Replace the battery only with the same type or an equivalent type recommended by the manufacturer.
- Charge the battery only until the battery charging light goes out. Also, refer to the instructions under “Charging the Battery” on page 28 for instructions on checking the battery level.
- Only change the battery when the unit is switched off.
- Batteries are classified as special waste and should always be disposed of properly. Contact Customer Service for more details.
Chapter 2
Views & Handling

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Included with Your Notebook

Please check that the contents are complete and notify us within 14 days of purchase if any of the following components are missing:

- Notebook
- Battery
- Power adapter with connection cable (Model: FSP065-ASC)
- Application-/Support-Disc
- OEM version of operating system
- Documentation
Views

Open Notebook

1 - Microphone
2 - Display ................................................................. (⇒ p. 33)
3 - Quick launch buttons ........................................... (⇒ p. 17)
4 - Device indicators ..................................................... (⇒ p. 16)
5 - Touchpad ................................................................. (⇒ p. 40)
6 - Keyboard ................................................................ (⇒ p. 36)
7 - Power ON/OFF ......................................................... (⇒ p. 25)
8 - Webcam ................................................................. (⇒ p. 50)
**Left Side**

9 - Kensington® lock ................................................................. (→ p. 52)
10 - Power socket ................................................................. (→ p. 26)
11 - External monitor port VGA ................................................. (→ p. 34)
12 - HDMI connector .............................................................. (→ p. 34)
13 - USB port ........................................................................... (→ p. 51)

**Right Side**

9 - Kensington® lock ................................................................. (→ p. 52)
13 - USB port ........................................................................... (→ p. 51)
14 - Multimedia card reader ...................................................... (→ p. 48)
15 - Line in / microphone ........................................................ (→ p. 43)
16 - Line out ............................................................................ (→ p. 43)
17 - USB Card/34 ................................................................... (→ p. 49)
18 - LAN port (RJ-45) ............................................................... (→ p. 44)
Device Indicators

LED’s indicate the power and operating system states of the Notebook. The meaning of each LED is:

WLAN and Bluetooth indicator
Below you will see the different meanings of the LED in various situations:

- **Lights green**: The wireless LAN function is activated.
- **Lights blue**: The Bluetooth function is activated.
- **Lights light blue**: Wireless LAN and Bluetooth functions are both activated.

Webcam indicator
This LED lights **blue** when the webcam is activated.

Power indicator
This LED lights **blue** when the computer is turned on.
This LED lights green when the ECO function is activated.

Sleep Indicator
This LED is blinking when the Notebook is in stand-by mode.

Battery LED
Below you will see the different meanings of the LED in various situations:

- **Lights green**: The battery is charging.
- **Lights orange**: Battery is low.

LED Flight mode
This LED lights **blue**, when the flight mode is activated.
Access indicator
This LED lights or flashes when the notebook is accessing the hard disk.

Capital Lock
This LED lights when CAPS-Lock has been activated [Caps Lock]. This sets the keyboard to capital letters.

Num Lock
This LED lights when NUM-Lock has been activated [NumLk].

Quick Launch Buttons

Flight mode
This button activates the flight mode. The LAN and Bluetooth functions will be de-activated with the activation of the Flight Mode.

ECO function
This button will activate the ECO function. This function is only available in battery operation. You will read which possible settings are available on P. 31.
Getting Started

Before you get started using your notebook, first take a few moments to read the important section on Safety. This notebook comes with software fully pre-installed. You do not have to install any of the discs supplied.

How to start:

Step 1

• Insert the battery before bringing the notebook into operation by sliding the battery pack into the compartment. Lock the battery under all circumstances, in order to avoid it falling out unintentionally.

• Connect the supplied power adapter to the notebook at the notebook power socket (10). Connect the power adapter via a power cable to a free AC power outlet. Set the switch on the power adapter to the 1 setting, in order to supply the notebook with electricity and to charge the battery. (Set the switch to 0 to interrupt the electricity supply.)
• Open the display to the required position with your thumb and index fingers. To avoid damage to the TFT Display, never open it more than 120°. Do not forcibly open it.

• Please ensure that the battery is inserted and the power adapter connected when operating the Notebook for the first time. If you fail to do this, Windows® will not be able to calculate the performance index correctly.

• Switch the notebook on by operating the On/Off Switch (7). The notebook starts and now goes through a number of phases.

The operating system is loaded from the hard disk. During the initial set-up, the loading process takes slightly longer than normal to register the operating system and the individual components completely. Your operating system is finished loading when a welcome screen is shown on your display.

Step 2
Follow the instructions on the screen. Dialogue boxes will explain any steps that need to be taken.

The greeting procedure will guide you through a series of dialogue boxes. The information in each dialogue box will explain the steps that need to be taken.

Should you have any questions just click on .

• License Agreement
The greeting procedure also displays the license agreement. Please read this carefully. It contains important legal information on the use of your software. In order to see the full text, use the mouse and the scroll bar on the right side of the screen to move downwards until you have reached the end of the document. You accept the agreement by clicking on the “I accept the agreement” option field. Only by doing so will you be entitled to use the product under lawful terms and conditions.

Step 3
After the login procedure the Windows® desktop appears on your screen.
You will find a brief overview on the following pages.

After the login procedure the Windows® desktop appears on your screen. This can be adjusted so that the screen of your computer looks different.
However, basic operation is guaranteed.
Short description of the Windows® desktop
(The respective illustration is shown on the next page.)

1. **The Start button**
   Click once on this button with your left mouse key to call the illustrated start menu.

2. **Program bar**
   The most commonly used programs are listed here. The operating system recognizes them automatically. If you press the right mouse key on an entry you can determine which entry is kept and which is deleted from the list. The program associated with the entry will not be deleted.

3. **All programs**
   Here you find the entries to every program installed on your PC. Here, too, you can edit entries with the right mouse key.

4. **Switching off**
   Click on this button with the left mouse key to switch off the PC.

5. **Task bar**
   Here you receive information and status reports about the operating system and the running programs.

6. **“Icons” on the “Desktop”**
   Icons are program links used to start the respective programs. A double click (press the left mouse key quickly twice) on the symbol starts the application.
   The Desktop includes almost the complete screen and is the filing area for those entries or other links you would like to access quickly.

7. **Logged in user**
   This shows the logged in user. The image is changed by clicking on it.

8. **Control Panel**
   This is the central control of your computer. Here you are able to configure your computer at will. However, you should read about the implications of possible changes in “Help and Support”.

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## Chapter 3

Main Components

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Power Supply

On/Off Button
Power on or off your notebook by pressing the on/off button (7) briefly. The operational indicator will inform you about the operational status of the notebook. The notebook will always be switched off, if the main switch is pressed for more than 4 seconds.

Warning!
Do not switch off your notebook while the hard disk is running and the corresponding media activity LEDs are lit. Otherwise data may be lost. To protect the hard disk you should always wait for 20 seconds after powering down the notebook before powering it up again.
**Power Adapter**

Your notebook is supplied with a universal AC power adapter, which automatically adjusts to the available power source. The following levels are supported: **AC 100-240V~/ 50-60 Hz.** Please follow the power supply *safety instructions* found on page 5.

The power adapter is connected via a power cord to an AC outlet. The DC power lead from the power adapter is connected to the *left side* of the notebook (10).

The adapter has an on and off switch. No electricity will be used and the notebook will not be supplied with electricity if the switch is set to OFF (0).

The adapter provides the notebook with power in the ON setting (1) and also charges the battery. The power supply indicators of the notebook provide details on the operating state. The battery is also being charged when you are working on your notebook with the power adapter. The power adapter is still live if the notebook is not connected with it. You should therefore unplug the power adapter from the outlet if it is not connected to the notebook or set the adapter to OFF (0).

**Warning!**

Use only the power adapter and power cord supplied with your notebook.
Battery Operation

**Note**

Please charge and discharge the new battery completely two to three times in succession, so that it will achieve its full performance!

Batteries store electrical energy in their cells and then deliver it when needed. The useful life and performance of your battery depend on careful handling. The battery should be completely discharged before a charging process and completely charged again, in order to optimize its useful life and its performance. You must also pay attention to the Safety Notes from page 8.

**Inserting the Battery**

Slide the battery into the battery compartment. Lock the battery under all circumstances, in order to avoid it falling out unintentionally.
Removing the Battery
Push the Safety Locks (①) to the ‘Unlock’ position, in order to remove the battery pack.

Warning!
Do not remove the battery while the notebook is running on battery power. You increase the possibility of losing data.

Warning!
Pay attention that the contacts to the battery and the notebook are not dirty or damaged when storing the battery and using the notebook. This could lead to malfunctions.

Charging the Battery
The battery is charged via the power adapter. If the power adapter is connected, it charges the battery automatically, whether the notebook is turned on or not. When the notebook is switched off, full charging takes a few hours. If the notebook is switched on, the charging process takes a significantly longer time.

Note
The charging process will be interrupted if the temperature or the voltage of the battery is too high.
Discharging the battery
Operate the notebook by means of the battery until it switches off independently because of the low battery charge.

**Note**
Think about saving your open files in good time, to avoid a possible loss of data.

Battery Performance
The particular operating duration will vary according to the setting of the energy saving functions. You can adjust these to your requirements under **Energy Options** in **System Control**. Apart from this, your notebook will require a higher power demand when carrying out certain tasks.

Checking the Battery Level
In order to check the current level of the battery, move the cursor over the power symbol in the taskbar.
The symbol of a battery is displayed during battery operation.

You will receive additional information about settings if you double click on this symbol.

**Note**
If you ignore the warning signal when the battery level is low, your notebook goes into hibernate mode.

**Warning!**
Never remove the battery while the notebook is switched on or if the notebook has not yet gone into hibernate mode, as this may lead to loss of data.
Power Management

Your notebook offers automatic and modifiable power saving functions that you can use to maximize battery life and reduce overall operating costs. The power saving modes are known as sleep mode and hibernate mode.

Sleep Mode

When in sleep mode, the contents of the RAM of your notebook are preserved while practically all other components of your notebook are shut down, reducing your power consumption to a minimum. By pressing any key on the keypad, you can bring your notebook back to the fully operational state. You will restart at precisely the line in which you were working prior to the interruption. The computer takes less time to go into and come out of sleep mode, but uses more power than hibernate mode.

Hibernate Mode

The hibernate mode is an alternative to a complete shutdown of the notebook. In this mode all data from RAM (system and graphic data) are copied to the hard disk as a file. As soon as the data has been safely saved, the notebook powers down. When the notebook is switched on again, this file is written back to RAM by the BIOS. In a few moments the notebook is in the exact state as when it was last used. If while working on a document the notebook is closed (assuming the correct ACPI setting), the notebook saves the data in RAM for you automatically. You will restart at precisely the line in which you were working prior to the interruption. The computer uses no power while it is in hibernate mode, but it takes a little longer for the computer to go into and come out of hibernation compared to sleep.
ECO Function

With the aid of this function you will be able to save energy and extend the life of your battery if you are working with your laptop in battery operation.

Switching the ECO function on/off

The ECO function is switched on or off by means of the quick start button or the **Fn+FS** key combination.

The following will appear and the operating display (see P. 16) will shine **green** if the ECO function is switched on.

Making settings

The ECO function must have been **deactivated**, in order to make settings.

1. Press the quick start button. The following will appear:

2. Now click on the icon in the Taskbar with the right mouse button. You will open the System Control Manager (SCM), with which you will be able to make settings, by this.

3. Click on **(ECO Settings)**. The following window will appear on the screen:
You will be able to select which functions in this Menu should be deactivated to save energy in battery operation, if the ECO mode has been switched on.

**Attention!**

The ECO function can only be used in **battery operation**.

**Note**

You laptop is set in its delivery status so that the Bluetooth function and the webcam will be deactivated if the ECO function has been switched off.
Display

Unlike a normal monitor, the TFT display does not produce either radiation or flicker.

Opening and Closing the Display

The display is locked by means of a special construction of the display hinge, so that an additional lock is not necessary.

1. To open, lift the display with your thumbs and index finger and position it as desired.

**Warning!**

To avoid damage to the TFT Display, never open it more than 120º. Do not forcibly open it.

The opening and closing of the display can be assigned various functions via the Power management feature.

Screen Resolution

The integral screen has a native resolution of **1366 x 768** pixels. Using a higher resolution can lead to distortion of the display, especially with text. Using a lower resolution may cause the display to use only a portion of the screen area.
Connecting an External Monitor

The notebook has a VGA port (11) for connecting an external monitor.

1. Shut down your notebook.
2. Connect the video signal cable of the external monitor to the VGA port of the notebook (11).

Alternatively, you can use the digital HDMI interface (High Definition Multimedia Interface) (12) to transfer image and sound signals.

3. Connect the external monitor to the electrical socket and power it up.
4. Start your notebook.
There are two options for setting up an external monitor:

1. **Clone your Desktop**
   This option allows you to display the same picture on both internal and external monitor.
   - Press `<Fn> + <F2>` to activate the external monitor. The notebook display will be switched off. Adjust the display settings following the external monitor specification.
   - Press `<Fn> + <F2>` once more and both displays are switched on.
   - Press `<Fn> + <F2>` again to deactivate the external monitor. The notebook display will be switched on.

2. **Extend your Desktop**
   This option extends the picture from your internal monitor to your external monitor. Windows can be switched from one monitor to the other.
   - This option does not support the key combination `<Fn> + <F5>`. Right click anywhere on your desktop and select “Properties” to start the “Display Properties” program.
     - Select the “Settings” tab and left click on the second display.
     - Check the option “extend my Windows desktop onto this monitor” and press “ok”.
     - To deactivate the extension uncheck the option “extend my Windows desktop onto this monitor”.

You can change the resolution and colour depth for either display in this screen. However, you may have to decrease the depth of colour if you increase the resolution since the video memory has a limited capacity.
Data Entry

The Keyboard
By dual assignment of certain keys you have the same range of functions available to you as with a normal Windows keyboard. Some functions are input using the **Fn** key, which is normal on notebook computers.

Notebook-Specific Key Combinations

<table>
<thead>
<tr>
<th>Combination</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fn + F2</td>
<td>Toggles the display screen between internal monitor, external monitor and simultaneous display.</td>
</tr>
<tr>
<td>Fn + F3</td>
<td>Touchpad Enables or disables the touchpad.</td>
</tr>
</tbody>
</table>
| Fn + F4     | Programmable P1 key
You will activate or deactivate the user-defined P1 key with this key combination. Read the following “Programming the user-defined P1 key” section (on P. 38), in order to program the key. |
<p>| Fn + F5     | ECO function Enables or disables the ECO function (see p. 31). |
| Fn + F6     | Webcam Enables or disables the webcam. |
| Fn + F7     | Mute Switches the loudspeakers on / off. |</p>
<table>
<thead>
<tr>
<th>Combination</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fn + F8</td>
<td>WLAN / Bluetooth Switches through the WLAN or Bluetooth functions in the following sequence:</td>
</tr>
<tr>
<td></td>
<td>Bluetooth off and WLAN on</td>
</tr>
<tr>
<td></td>
<td>Bluetooth on and WLAN off</td>
</tr>
<tr>
<td></td>
<td>Bluetooth on and WLAN on</td>
</tr>
<tr>
<td></td>
<td>Bluetooth off and WLAN off</td>
</tr>
<tr>
<td>Fn + 12</td>
<td>Power saving functions. This key combination is set to <strong>power down</strong> by default. To adjust this key to your own needs go to display <em>properties in power saving</em>.</td>
</tr>
<tr>
<td>Fn + ←</td>
<td>Decreases the volume.</td>
</tr>
<tr>
<td>Fn + →</td>
<td>Increases the volume.</td>
</tr>
<tr>
<td>Fn + ↑</td>
<td>Enhances screen brightness.</td>
</tr>
<tr>
<td>Fn + ↓</td>
<td>Reduces screen brightness.</td>
</tr>
</tbody>
</table>
Programming the user-defined P1 key

Proceed as follows to program the user-defined P1 key:

1. Press the **Fn+F4** key combination. The following Window will open:

   ![Window](image)

   - Please set up the program to be opened.
   - The program currently set to be opened.
   - Select the program to be opened and click "OK".

2. Click on **Browse** to give the key a function.
3. Select a program and click on **Open**.
4. Confirm your selection with **OK** in the following Window:
Changing the use of the key

1. Click on the lower right section of the taskbar on the screen with the right mouse button, if you wish to change or remove the use of the key.

2. Then click on (User-Defined Key) and you will be able to change or remove the current programming of the key.
**Touch Pad**

The touchpad is positioned in front of the keyboard. The mouse pointer (cursor) follows the direction pre-determined on the touchpad by the movement of your finger in the normal mode.

<table>
<thead>
<tr>
<th>Caution!</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Do not</strong> use a ball-point pen or other object on the touch pad, as this could damage or cause a malfunction of your touch pad.</td>
</tr>
</tbody>
</table>

Below the touch pad are the left and right mouse buttons which can be used as on a normal mouse.

You can also perform a direct click or double click using the touch pad by tapping the surface briefly once or twice.

In the Windows® Control Panel you will find a number of useful settings that will make using the touch pad easier.

<table>
<thead>
<tr>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>You will activate or deactivate the Touchpad with the <strong>Fn+F3</strong> key combination.</td>
</tr>
</tbody>
</table>
The Hard drive

The hard drive is the main storage medium combining large storage capacity and rapid data access.

The Windows operating system cannot use the full capacity of the hard drive, which means that there will be a difference between the capacity that the BIOS displays and what the operating system displays.

The hard drive contains the operating system of the computer, other application programs and backup files. These programs and files are pre-installed on your notebook, so you may note that some of the space on your hard drive is already taken.

Whenever the computer is accessing the hard disk, the corresponding LED illuminates.

**Warning!**

Never switch off the computer while the busy indicator is lit since this may result in loss of data.

If you are looking for a file on the hard drive and you know the name, go to Search on the Start menu to find the file. Following is some general information on where you might find some common files.

Usually your hard drive is divided into several partitions, as shown below. The partitions of your hard drive may vary from what is shown here.

<table>
<thead>
<tr>
<th>BOOT</th>
<th>C:</th>
</tr>
</thead>
<tbody>
<tr>
<td>RECOVER</td>
<td>D:</td>
</tr>
</tbody>
</table>

C: Windows  
Software programs  
Your documents  

D: Drivers for internal Notebook components  
Installation files for software that came with your Notebook  
Restore software
Important Directories

The most important directories preinstalled on your notebook are shown below. These directories may vary from what is shown here.

**Warning!**

Do not delete or modify these directories or their contents since data could be lost or the functionality of the system could be at risk.

**Also pay attention to this:**

You will no longer be able to carry out the recreation of the supply status by means of the Support Disc (☞ p. 68), if you have converted the Recovery Partition into a NTFS file system.

- **C:** This is the main hard disk drive partition for your notebook. It is where your program files, settings, and documents are stored, as well as files necessary for running Windows.

  - **C:\Program Files**
    Includes files belonging to software programs.

  - **C:\Windows**
    The main directory for Windows.

  - **D:\Driver**
    Drivers for internal notebook components.

  - **D:\Tools**
    Includes installation files for software that came with your notebook.

  - **D:\Recover**
    Includes the files needed to perform a system restore.
The Sound Card

Your notebook has an integrated stereo sound card (on-board) with 16-bit and 3D spatial sound effects (3D). The sound card is compatible with the industry standard Sound Blaster and Microsoft Sound System Version 2.0. This guarantees optimal support for all popular programs and games. If you wish to alter the base volume, click on the loudspeaker symbol in the task bar.

By using the keys \textbf{Fn + $\downarrow$} and \textbf{Fn + $\rightarrow$} you have the possibility to regulate the volume.

External Audio Ports

Your notebook has a loudspeaker, so you can always playback sounds without additional equipment. The use of the external connections gives you a good opportunity to connect your notebook to external devices.

\begin{center}
\begin{tabular}{ | l | } 
\hline
\textbf{Line in / Microphone In} (15) & For recording via an external microphone. \\
\textbf{Audio out / headphones} (16) & For sound reproduction via external stereo equipment such as loudspeakers (active) or headphones. \\
\hline
\end{tabular}
\end{center}

\textbf{Caution!}

The use of earphones with a high volume can lead to lasting damage to your hearing. Set the volume to the lowest level before reproducing any sound. Start the sound reproduction and increase the volume to the level that is comfortable for you.

It can cause damage to the hearing ability of the listener if a device is operated through earphones with an increased volume for a long period.
The Network

What is a network?
A network means connecting your notebook to one or several other computers. Users can transfer data between computers and share resources such as printers, modems and hard disk drives.
Here are some practical examples:

- You can exchange E-mail and manage appointments in an office.
- Users can share a printer in a network and save their data on a central server.
- Users can share one modem among computers for Internet access.
- Two or more computers can be connected to play network games or share data.

Ethernet-Network
If your notebook has an Ethernet connection, you can use this to connect to a network.
The following explanation refers to notebooks with a network connector.
Connect one end to the RJ45 connection (Western plug) at the network interface of your notebook (18) and the other to another PC or a hub/switch.

The Windows Help and Support Centre offer extensive information about networking your Notebook. You can access this information by clicking on Start, then Help and Support.
Wireless LAN

Wireless LAN is an optional feature. This function allows you to create a wireless network link with an access point or directly with another wireless-enabled PC.

Using the key combination **Fn + F8** you can enable or disable the wireless LAN function. The Wireless LAN function will have been activated, if one of the two following displays appears below at the right edge of the display:

![Warning!]

Make sure the Wireless LAN option is switched OFF in any environment where it might interfere with critical and sensitive devices, e.g., on aircraft, in hospitals and other medical centres, etc.

Conditions

An access point is a wireless transmitter that communicates with your notebook and controls access to the network connection (e.g., a home network or a broadband connection such as DSL). Wireless access points are often found in offices, airports, universities or Internet cafés. They offer access to networks or to the Internet. **Access authorizations** are normally needed. A fee may be required to use a public access point. To set up a wireless network to share Internet access, files, and printers at home, you will need an access point, a router, and a broadband (DSL or cable) modem. Some access points can also serve as a router and/or a broadband modem. Check with your retailer or Internet Service Provider to find the best solution for your needs. A link to another computer with wireless LAN functionality can also be created **without an access point**. This will allow you to share files, but you will need an access point and a router to share an Internet connection. The wireless network connection works in accordance with the IEEE 802.11n Standard (compatible with the 802.11b/g Standard). The 802.11a Standard is not supported. If encrypted transmission is used, this must operate according to the **same principle on all devices**. Encryption is a method of protecting the network from unauthorized access. The transmission speed (max. 300 Mbp/s) can vary according to the distance and loading of the partner.

* 300 Mbit/s is a gross value. A maximum of 75 Mbit/s will be achieved on the application level. A WLAN router in accordance with the 801.11 standard will be necessary, in order to be able to exploit the complete performance.
Bluetooth

Bluetooth wireless technology is designed to replace cables between devices, such as your printer, keyboard, and mouse.

Bluetooth wireless technology operates over a short distance. Bluetooth devices use radio transmission, which enables your computer, mobile phone, printer, keyboard, mouse, and other devices to communicate with each other without cables.

There are several uses for Bluetooth wireless technology, including, but not limited to:

- Creating a wireless connection to the Internet with a mobile phone.
- Transferring files between computers or between a computer and another device.
- Printing to a Bluetooth wireless printer.
- Using a Bluetooth wireless keyboard and mouse.
- Joining a personal area network (PAN).
- Synchronizing a personal digital assistant (PDA) to a computer or another device using Bluetooth wireless technology.

The data transfer speed for Bluetooth wireless technology can be up to 700 kilobits (Kbp/s) per second. The data transfer speed can vary depending on the device or environmental factors. A Bluetooth device can transmit through walls, pockets, and briefcases.

Since Bluetooth is using the same frequency range as WLAN, simultaneous use might cause interference. If this should happen you can disable one service temporary.

Using the key combination \textbf{Fn + F8} you can enable or disable the Bluetooth function. The Bluetooth function will have been activated, if one of the two following displays appears below at the right edge of the display:

| ![Bluetooth Icon 1] | ![Bluetooth Icon 2] | ![Bluetooth Icon 3] |

\textbf{Warning!}

Make sure the Bluetooth option is switched OFF in any environment where it might interfere with critical and sensitive devices, e.g., on aircraft, in hospitals and other medical centres, etc.
Troubleshooting within the Network

Why does an error message appear when I click on the network environment?

The **computer name** must be unique on the network and may not be the same as the **task group**.

It appears that the network boards are unable to communicate. What might be the problem?

Maybe one of the used network boards works with a **different speed** (e.g., 10 instead of 100 Mbit/s) and your network computer is unable to recognize this. If necessary, set the network driver to the compatible speed.

If two PCs should be linked you require a **cross-link** cable, otherwise use a **patch** cable.

In addition, check the **protocols** and the **configuration**.

The data transmission is incorrect or very slow. What might be the problem?

Maybe you have the wrong cable (UTP / CAT3 or lower) or the problem is the proximity of a power cord or another source of interference.
The Multimedia Card Reader

Memory cards are media that are being used for a variety of purposes, especially in digital photography. They are increasingly replacing the floppy disk. The form and capacity of a memory card can vary according to the manufacturer.

Your notebook supports the following formats:

- MMC (MultiMediaCard)
- SD (Secure Digital)
- Memory Stick / Memory Stick Pro

When inserting memory cards, ensure that the contacts are facing the right way. See table below. Incorrect insertion of a card can cause damage to the card reader and/or the card.

<table>
<thead>
<tr>
<th>Card type</th>
<th>Contacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>SD (Secure Digital)</td>
<td>pointing downwards</td>
</tr>
<tr>
<td>MMC (MultiMediaCard)</td>
<td>pointing downwards</td>
</tr>
<tr>
<td>Memory Stick</td>
<td>pointing downwards</td>
</tr>
<tr>
<td>Memory Stick Pro</td>
<td>pointing downwards</td>
</tr>
</tbody>
</table>

Inserting Memory Cards

**Note**

Memory cards can only be installed in **one direction**. Refer to the instructions on the previous page.

Push the memory card into the slot.

Removing Memory Cards

To remove the SD/MMC-cards or memory sticks pull it out and remove it.
USB Card/34

Your laptop supports **Express/34 cards** with a **USB connection**.

### Installing USB Card/34

**Note**

Please always read the instructions that come with your Express card before installation. Remove the dummy card from the slot before installation. Replace the card to protect contacts against dirt if the Slot is not used.

### Removing USB Card/34

Please take note of the following before removing the USB card:

- Terminate the program which you used with the USB card.
- Left-click on the icon *Safely Remove Hardware* in the taskbar, select the card and click on *Stop*.

In order to remove the card, first push it into the contact to unlock it. Pull the USB card from the bay and store it securely.
Webcam

Various services like calling online can be used with the built in webcam.

Actual example using Windows Messenger

1. Start Windows Messenger and create a user account if you do not already have one. This service is free of charge. You only pay the cost of your Internet connection.
2. Select your contact from the list and click on the camera icon below your display image.
   A wizard helps you optimize the settings of your speakers, microphone and webcam. Follow the instructions on your screen.
3. Click on Finish to transmit your image via the webcam.
4. If your contact also has a webcam, click on the camera icon below the display image of your contact to receive the live image.
Universal Serial Bus (USB) Port

USB ports provide an easy way to connect many peripheral devices to your Notebook (13). You can use any USB device with any USB port. Your notebook will have **3 USB 2.0 connection sockets** (USB 1.1 compatible).

Should the devices need more power than this, it will be necessary to provide a powered hub. The data transfer speed is 1.5 Mbit/s or 12 Mbit/s, depending on the device connected.

**Note**

Some USB devices require that you reinstall software drivers when you connect the device to a different USB port than the one originally used. This can be avoided by always using the device with the same USB port.
Securing the Notebook

Unauthorized access to software and hardware solutions will be made available to you with your new Notebook.

Startup Password

You can protect your notebook against unauthorized use with a switching on password. Then, an invitation to enter the password will appear on the screen when the notebook is switched on.

The password will be set up in BIOS.

**Warning!**

Keep your password in a safe place. You will not be able to delete your password if you forget it. Contact your customer Service if you loose your password.

You can also use the security options of Windows®, in order to protect your data against unauthorized access. You will find further information in the chapter “Data and System Security” starting on page 64.

Using a safety lock

You can prevent theft by using a so called Kensington lock, which can be bought at your local retailer.

The cable wraps around an object and the “T” shaped end inserts into the Kensington lock port and a key or combination dial is used to secure the lock in place. Please keep your key in a safe place.
Software

There are many kinds of help and information for using your Notebook. This section tells you where to get help with the Microsoft® Windows® operating system, software programs, and your notebook.

Getting to Know Windows XP

Windows® XP Manual

This printed manual provides general information about the operating system. We recommend that all beginning users or users of previous versions of Windows® read this information.

Windows® XP Tour

Windows® XP includes a tour that you can take to familiarize yourself with the operating system. This tour can usually be found by clicking on the Start menu. You can also find the tour by selecting All Programs, then Accessories.

Windows® XP Help and Support

An answer to almost every question can be found in this program. This help function fully covers the Windows operating system. It is helpful for both beginners and professionals. You can print or bookmark the information, which is categorized into topics. You start like this:

1. Click on 
2. Now select

Help and Support
**Microsoft® Interactive Training**

To obtain an overview over the functions and the operations of Windows® we recommend the program “Windows® Step by Step Interactive”.

The objective of the program is to ease both the initial contact with and the transition to Windows® for beginners and experienced users.

The program is categorized into many small topics, so that the user can gain access to the information according to his requirements. Multimedia effects including video clips and speech output convey the contents of the various topics clearly and efficiently.

Interactive tasks allow you to apply the conveyed topics in a simulation environment of the program to facilitate a successful learning experience.

Windows XP Step by Step Interactive covers ...

- operating Windows XP
- new functions in Windows XP
- the process of log-on log-off and user administration for creating a security structure
- configuration of the Internet access
- operating the email program
- ... and much more!

Use this program to better understand your PC and to operate it optimally. It also is an additional source of information for recognizing and eradicating potential problems. You start the program like this:

1. Click on ![Start](start.png)

2. Select now ![All Programs](all_programs.png)

3. You will find the program in “Accessories”, “Microsoft Interactive Training”.

UK/ N. IRELAND HELPLINE 0871 37 61 020
REP. IRELAND HELPLINE 1-800-992508
Software Installation

**Note**

If your operating system is configured so that the installation procedure accepts only signed drivers (default) and software an information screen will appear.

The software included in delivery is **already pre-installed** in the factory.

![Warning](warning_icon.png)

It happens that during installation procedure important files can be changed or even cancelled. To avoid eventual problems in using older files after installation, make sure to safeguard your hard disk.

**Note**

If the automatic start does not work, it is likely that the so-called **Autorun** function has been deactivated. Read the respective chapter in Windows Help on how to activate this function.

An example for the manual installation without the autorun function:

1. Click on **Start** and select the item **Run**.

2. Now enter the letter of the drive followed by a colon and the program name setup:

![Run](run_icon.png)

3. Click on **OK**.

4. Follow the instruction given by the program.
Uninstall Software
In order to remove installed software from your Notebook, follow the next steps:

1. Click on \[\text{Start}\].

2. Click on \[\text{Control Panel}\].

3. Then select the following program:

4. Select the respective program, start the de-installation and follow the instructions on the screen.

Windows Activation
Microsoft is committed to the protection of intellectual property rights and the reduction of software piracy. Therefore Windows® contains software-based product activation technology. Your copy of Windows® has already been **activated for your Notebook.**

Product activation is needed if some components of your Notebook have been replaced or you use a non-authorized BIOS. If necessary you can activate Windows® as often as requested.

You will probably need to activate Windows® by telephone even if Internet Activation is available. This is due to the pre-activated SLP version which runs with a special Product-ID. However, activation needs your unique Product ID which can be found on the **Certificate of Authenticity** sticker on your Notebook housing. When you call, please inform your agent that you are running an OEM-(SLP) version of the software.
Product activation on your Notebook

In few cases it may still be required to activate Windows®. If activation via the internet is acknowledged with an error message you should perform the following steps.

1. Please select the telephone activation and click until the related screen appears.
2. Now click on Change Product Key. A new window appears. Enter the product key. This is located on the Certificate of Authenticity (COA), on the computer’s casing.
3. Acknowledge your entry and follow the instructions on the screen. Notify your Microsoft consultant, if necessary, that you have purchased an OEM license with your computer.

The BIOS Set-up-Program

In BIOS setup (Basic Configuration) there are a number of configurable parameter settings available for your notebook. For example, you can change the operating mode of the interfaces, security features or power management.

Warning!
The notebook is factory pre-set to guarantee optimum operation. Only modify the parameters if necessary and if you are familiar with the configuration options.

Running the BIOS Set-up

You can only run the BIOS configuration program at system start-up. If the notebook has already started, power it down and then up again. Press the F2 key in order to start the BIOS-SET-UP.
BullGuard Internet Security

The BullGuard Internet Security Package is a combination of the currently most up-to-date PC security technologies on the market and thus offers you 24-hour optimum protection.

BullGuard is already installed, so that additional installation will not be necessary. If you nevertheless have to carry out an installation (e.g. after system restoration), you will find the software package on the application/support disc supplied with the machine.

BullGuard Internet Security consists of the following security components:

- **Antivirus**
  The centrepiece of any serious PC security application, the Antivirus application screens your e-mails, and scans your hard drives for viruses and malware. The BullGuard Antivirus combines the highest update frequency in the business with a no-nonsense user-interface.

- **Antispyware**
  BullGuard Antispyware protects your PC from all known kinds of spyware and adware by searching and cleaning files, registry keys, processes and cookies, protecting you from identity theft and the loss of personal information.

- **Spamfilter**
  The BullGuard Spamfilter will protect you from annoying spam and potentially costly phishing attempts – a key tool in keeping your Inbox free from unsolicited mail.

- **Backup**
  Backing up your files has never been easier with both local and online backup. Not only can you customise the size of your online backup drive to suit your needs - once uploaded, you can access these files from any computer connected to the internet anywhere in the world!

- **Support**
  BullGuard Support is a key component in all BullGuard products. Assistance with all security related questions available to all users directly from the application. No FAQ, no automated response – real people and live help.

*Information*

The Antispyware, Spam filter, Backup and Support components will only be released at the free registration and will be deactivated after the expiry of 90 days. Procure a BullGuard subscription through the internet link given below, in order to be able to continue to use this module.
The BullGuard Internet Security Package will be updated with the most up-to-date virus information for 90 days after the **free registration**.

The registration window will only appear after your notebook has been restarted. You will register by entering your email address.

<table>
<thead>
<tr>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Keep your password at a secure place.</td>
</tr>
</tbody>
</table>

The antivirus software will continue to run after the expiry of 90 days, but it will no longer be updated, so that your notebook will not be protected against new viruses.

The purchase of various subscriptions through BullGuard is possible in order to always receive the most up-to-date information and updates.

A subscription will be purchased on the internet and carried out without complications. An additional release or the entering of a licence is not necessary. Neither changes nor additional settings will have to be made.

The release will take place automatically after the purchase of a subscription.


<table>
<thead>
<tr>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>The operating system and anti-virus software are automatically updated when the first online connection is made. These processes usually take a few minutes, during which time the operating speed of the computer may be affected although this is only noticeable on initial start-up.</td>
</tr>
</tbody>
</table>
# Chapter 4
First Aid

<table>
<thead>
<tr>
<th>Subject</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>FAQ</td>
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<td>Data and System Security</td>
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<td>69</td>
</tr>
<tr>
<td>Maintenance</td>
<td>72</td>
</tr>
</tbody>
</table>
FAQ – Frequently Asked Questions

Do I still have to install the enclosed discs?
No. Basically all programs are already preinstalled. The discs are only intended as backup copies.

What is the Windows activation?
Your operating instructions include a chapter about this subject.

When do I have to activate Windows?
Your software has been preactivated in the factory. An activation will only be required, if ...

... several components are replaced by others.
... you installed a new motherboard.
... a different BIOS version has been installed.
... you install the software on to another computer.

When is the recovery of the factory setting recommended?
This method should be chosen as the last resort. Read chapter “System Restore” concerning the possible alternatives.

Why is the boot partition missing when booting from the support/application disc?
The first partition is formatted with the file system NTFS. Compared to FAT32 this file system offers more security and a more efficient access. However, NTFS partitions can only be read from operating systems supporting this. This is not the case in the aforementioned disc.
Data and System Security

The programs described below are part of your Windows operating system. You will find additional information on these programs in the Windows Help file.

Data Security

Back up data regularly on external media. Windows offers both a Backup program and a Files and Settings Transfer Wizard.

Both programs are found in Accessories/System Tools within the Start menu. You should make a backup disk with all your passwords and the operating system’s original configuration.

Maintenance Programs

You can avoid some hardware and software errors with disk maintenance programs such as Disk Defragmenter and Disk Cleanup. The program System Information can also be helpful since it gives you detailed information about your system configuration. You will find these programs in Accessories/System Tools.
Windows® Update

Windows Update is the online updating of Windows. Use Windows Update to download elements such as security updates, important updates, the newest help files, drivers and Internet products from the Internet.

The website is regularly augmented by new content, so that you can download the newest updates and error corrections at any time, to protect the notebook and guarantee its functioning.

Windows Update will search through the notebook and provide a list of individual updates specially for the configuration of your notebook.

Each update that Microsoft regards as important for the operation of the operating system, programs or hardware components will be classified as an “important update” and automatically selected for installation for you.

Important updates will be provided to remove known problems and to protect the notebook against known security risks.

Carry out four simple steps, to download the updates needed and to keep your computer on the current status of technology:

Note

Updates can be done only via the Internet. When downloading updates, make sure that your notebook is online.

1. Open Windows Update in the Help and Support Center.
2. Click on Search for update.
3. Click on Add to select the desired update and to add it to the updates to be installed, while you are searching through the available updates in each category. You can also read a complete description of each individual element by clicking on the Read further Link.
4. Click on Check and install updates, when you have selected all the desired updates, and then click on Install now.
Windows Update Information for Data Security

Windows Update needs certain information about the respective notebook, so that a suitable list with updates can be provided for you. This information will include the following:

- Version number of the operating system
- Version number of Internet Explorer
- Version numbers of additional software programs
- Plug & Play identification key of the hardware devices

Windows Update will stand up for the protection of your private data and will not record your name, address, email address or other forms of personal data. The information collected will only be used during the time that you are visiting the website. It will also not be stored.
System Restore

Windows XP® provides a useful function (System Restore) enabling the storage of the so-called Recovery points.

The system remembers the current configuration as a snapshot and returns to this, if necessary. The advantage is that an unsuccessful installation can be cancelled. Recovery points are created automatically by the system, but they can also be set manually.

You can determine and configure yourself the maximum memory taken up by this. You find this program in the program file under accessories, system programs.

We recommend setting a recovery point before installing a new software or driver. If the system does not run stable any longer this enables you usually to return to a workable configuration without deleting newly created documents. In the next paragraph read your options for a repair of an incorrect installation.

Correction

Windows XP® includes various functions ensuring that the Notebook as well as the installed applications and devices work correctly.

These functions assist you in solving the problems which might occur by adding, deleting or replacing files required for the functionality of the operating system, the applications and devices. The recovery function or functions you use depend on the type of occurring problem or error. For detailed information refer to the Windows help.

Enter the search word “Overview over the repair” in order to evaluate which of the following functions is the safest way to correct your problem:

- Backup
- Recreation of device drivers
- Deactivation of the device
- System recreation
- Last configuration known to function
- Protected Mode and system recreation
- Recreation console
- Windows installation disk
System Restore powered by Symantec

If your system is not functioning properly and Windows’ System Restore did not solve the problem, then you should use the Application Support Disc to restore your system.

Limits of the Recovery

- Changes made to the original configuration (RAS, Desktop or Internet settings) and installed Software will be ignored by this Recovery and will not be reloaded.
- Driver Updates or hardware installed by you will be ignored by this Recovery.

Warning!

All data on drive C will be erased. If necessary, backup all required data on external media. (You must pay attention to the information of pages 4 and 64).

This recovery will reset your system to its condition at delivery. Printer installations or other additional software must be reinstalled.

Performing the State of Delivery

1. First, please read the entire System Restore section of the Windows Help file.
2. Power up the Notebook and immediately press the key F3 to display the recovery menu.
3. Follow the instructions on the screen.

The Notebook will restart and will return to the state at delivery.
Troubleshooting

Localize the Cause
Errors can have simple causes, but sometimes they are caused by faulty equipment. We would like to give you some tips to help solve common problems. Should these instructions not lead to success, please feel free to contact us.

Check Cables and Connections
Visibly check all cables and connections. Should all lights be off, check whether all equipment is supplied with power.

• In battery mode, connect the notebook to the power adapter and ensure that the battery is charged up.
• If you are operating the notebook with the power adapter, check the electrical socket, power cord and all switches in the circuit of the electrical socket.
• Switch off the notebook and check all cable connections. Check the connections to peripherals. Do not exchange cables, even though they may look similar. The polarity in the cables may be different. When it is confirmed that the notebook has power and all connections are correct, turn the notebook on again.
Errors And Possible Causes

The screen is black:
- This error can have different causes:
  1. The operational display (On /Off switch) does not shine and the Notebook is in the swap file status.
     Solution:
     Operate the On /Off switch.
  2. The sleep display is flashing. The Notebook is in the sleep mode.
     Solution:
     Operate the On /Off switch.

The notebook switches itself off during operation.
- The accumulator could be empty. Connect the notebook by means of the network adapter and charge the accumulator.

The notebook cannot be switched on.
- Operate the notebook by means of the accumulator and check whether it is correctly inserted and charged.

Incorrect time and date display.
- Click the time display in the task bar and set the correct values afterwards.

The touchpad is not functioning.
- Press the Fn + F3 key combination, in order to activate the touchpad.

The webcam is not functioning.
- Press the Fn + F6 key combination, in order to activate the webcam.

The WLAN / Bluetooth connection is not functioning.
- Using the key combination Fn + F8 you can enable or disable the wireless LAN or Bluetooth function.
Additional Support
If the suggestions in the above section have not solved your problem, please contact customer care and we will attempt to help you solve the problem. Before you call, however, please have the following information available:

- How is your computer configured?
- What additional peripherals do you use?
- What messages, if any, appear on your screen?
- What software were you using when the error occurred?
- What steps have you already undertaken to solve the problem?
- Have you upgraded or removed drivers or hardware?
- Can you manually repeat the problem?
- If you have been given a customer number previously, please have this available.

Driver Support
This notebook has been extensively tested in our laboratories with a large number of compatible devices. It fulfils all required standards and complies with the standard “Designed for Windows”, which certifies utmost compatibility. However, the software drivers for individual components are updated from time to time. This is a regular process provided by the manufacturer to mend possible compatibility problems that may occur with components (e.g., programs or hardware) that were not tested at the time of your notebook’s manufacture.
Maintenance

**Warning!**

There are no user-serviceable or user-cleanable parts inside the notebook housing. Never open the notebook housing.

Following these measures can extend the lifetime of your notebook:

- Before cleaning, always remove the power adapter plug and all connecting cables.
- Only use a damp, lint-free cloth to clean the notebook.
- Do not use any solvents, corrosive or gaseous cleaning agents.
- Dust or grease on the touchpad will impair its sensitivity. Remove dust or grease on the surface of the Touchpad with a strip of sticky tape.

**Care of the TFT Display**

- Always close the notebook when not in use. Avoid touching or scratching the surface of the screen as it is easily damaged.
- Make sure that no water drops are allowed to remain on the screen. Water can cause permanent discoloration.
- Clean the screen with a dry, soft, lint-free cloth.
- Do not expose the screen to bright sunlight or ultraviolet radiation.
- The notebook and its packaging are recyclable.
**Transporting the Notebook**

Please use the following guidelines when transporting the notebook:

- Switch off the notebook. This will prevent damage to the hard disk. When the notebook is turned off, the hard disk heads are moved into a safe area.
- Wait until the Notebook has reached ambient (room) temperature before connecting it to the power supply. Drastic variations in temperature and humidity can create condensation within the Notebook and may cause it to short-circuit.
- Close the notebook and ensure that the cover locks shut.
- Always use the notebook carrying case. This helps to protect the notebook from dirt, moisture, jolts and scratches.
- Should you need to ship your notebook, always use the original packaging and make certain the shipper knows the contents contain fragile electronic equipment.
- Fully charge your battery and any spare batteries immediately before a long journey.
- Enquire about the electricity and communication provision at the location before a journey.
- Acquire the necessary adapter for electricity or communication (modem, LAN, etc.), if necessary, before starting your journey.
- Put the battery into the packaging separately when despatching the notebook.
- It is recommended to send the notebook and all magnetic storage media (floppy disks, external drives) through the x-ray device (the device into which you put your bags), when you are passing through the baggage check at airports. Avoid the magnetic detector (the construction, through which you walk) or the magnetic rod (the manual device of the security personnel), because they could destroy your data, among other consequences.
Recycling and Disposal

Device
At the end of its life, the appliance must not be disposed of in household rubbish. Enquire about the options for environmentally-friendly disposal.

Batteries
Do not dispose of used batteries in the household rubbish! They must be deposited at a collection point for used batteries.

Packaging
To avoid damage during transport, the Notebook is stored in a packaging. Packaging is produced mostly from materials which can be disposed of in an environmentally friendly manner and be professionally recycled.

Should you have any questions concerning the disposal please contact your dealer or our service.

Batteries and Proper Treatment
Batteries may contain combustible materials. By misuse, this may cause battery leakage, heat, explosion or ignition, bringing about injury or damage to the device. Please observe strictly the following matters:

<table>
<thead>
<tr>
<th>Warning!</th>
</tr>
</thead>
<tbody>
<tr>
<td>There is a lithium battery on the motherboard. Lithium batteries are hazardous waste and need to be disposed of properly. If necessary, we will take back your used CMOS lithium battery.</td>
</tr>
</tbody>
</table>

- KEEP CHILDREN AWAY from batteries. If by any chance, the batteries are swallowed, consult a doctor immediately.
- DO NOT CHARGE batteries (except rechargeable batteries).
- DO NOT FORCIBLY DISCHARGE batteries.
- DO NOT SHORT-CIRCUIT batteries.
- DO NOT HEAT or DISPOSE OFF IN FIRE.
- DO NOT DISASSEMBLE or DEFORM batteries. Your hands and fingers may be injured, or the liquid of the battery may get into your eyes or adhere to your
skin. If this happens, rinse with a large quantity of water immediately and consult a doctor.

- DO NOT expose batteries to strong impact by dropping or throwing the batteries.
- DO NOT reverse the positive (+) and negative (-) terminals to avoid short-circuit.
- Do NOT MIX used and new or different types of batteries together. Your equipment may not operate properly. In addition, the battery exhausted first may be excessively drained (over-discharged).
- REMOVE PROMPTLY the used batteries from the device.
- REPLACE ALL BATTERIES with new batteries of the same type at the same time.
- INSULATE THE TERMINAL parts with tape or the like at the storage or disposal of the batteries.
- DO NOT throw rundown batteries in the domestic refuses! Respect the environment and throw them in the specific containers for separate collection. If necessary, turn to your reseller or to our service assistance. Thank you!
Upgrades and Repairs

- Only a qualified Service Engineer should perform upgrades and repairs to your notebook.
- If you do not have the necessary qualifications, go to an appropriate Service Engineer. Please contact the Service Centre if you are experiencing technical problems with your notebook.
- Please contact our authorized Service Partners exclusively in the case of a necessary repair.

Notes for Service Engineers

- Before opening the housing, disconnect the notebook from all power sources and remove any connecting cables. If the notebook has not been disconnected from the power outlet before being opened, there is a danger of severe electric shock. There is also a risk of damage to the components.
- Internal components of the notebook may be damaged by electrostatic discharge (ESD). Perform system upgrades and changes in an ESD-protected work area. If no such work area is available, wear an antistatic wrist strap or touch a highly conductive metal object. Your service centre can repair damage sustained by inappropriate handling for a fee.
- Use only original spare parts.
## Chapter 5

### Appendix

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Standards

Electromagnetic Compatibility

- When connecting additional components, please observe the Guidelines on Electromagnetic Compatibility (EMC).
  Please note that only shielded cables shorter than 3 meters (9.84 ft) should be used for the LPT, COM, USB, IEEE 1394, audio, video and network interfaces with this notebook.

- Keep the notebook at least one meter (approximately three feet) away from high frequency and magnetic interference sources (e.g., televisions, loudspeaker cabinets, mobile telephones, etc.) in order to avoid malfunctions and/or loss of data.

ISO 13406-2 Class II

Active matrix LCDs (TFT) with a resolution of 1366 x 768 pixel (WXGA), which are in turn composed of three sub-pixels each (red, green, blue), contain about 3.1 million addressable transistors. Because of this very high number of transistors and their extremely complex production process occasionally defective or incorrectly addressed pixels or sub-pixels may occur.

There have been several attempts in the past to define the acceptable number of defective pixels. But this can be difficult and varies widely between different manufacturers.

We, therefore, adhere to the clear and strict requirements of ISO 13406-2, class II, for the warranty handling of all TFT display products. These requirements are summarized below.

Within ISO-standard 13406-2 the general requirements regarding pixel defects are defined. Pixel defects are classified into three failure types and four failure classes. Each individual pixel is made up of three sub-pixels in the primary colours (red, green, blue).
Pixel structure

Types of Pixel Failures:

- Type 1:
  A constantly lit pixel (a bright, white spot), even though it is not addressed. A white pixel is caused when all three sub-pixel are lit.

- Type 2:
  A pixel that does not light up (dark, black spot), although it is addressed

- Type 3:
  Abnormal or defective red, green or blue sub-pixels.
  (E.g. constantly lit with half the brightness, one colour is not shining, blinking or flickering, but not belonging to Type 1 or 2 Pixel Failures)

In addition: A cluster of type 3 (= 2 or more defective sub-pixels in an array of 5 x 5 pixel). A cluster is an array of 5 x 5 pixel (15 x 5 sub-pixel).

ISO 13406-2, Class II

<table>
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<th>Resolution</th>
<th>Type 1</th>
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<th>Type 3</th>
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<tr>
<td>1024 x 768</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>1280 x 854</td>
<td>3</td>
<td>3</td>
<td>6</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>1280 x 1024</td>
<td>3</td>
<td>3</td>
<td>7</td>
<td>0</td>
<td>3</td>
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<td>1366 x 768</td>
<td>3</td>
<td>3</td>
<td>7</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>1400 x 1050</td>
<td>3</td>
<td>3</td>
<td>8</td>
<td>0</td>
<td>3</td>
</tr>
</tbody>
</table>

Example:
A 17" - SXGA-display consists of 1280 horizontal and 1024 vertical picture dots (pixel), which amounts to a total of 1,31 million pixels. Based on one million pixels this translates into a factor of about 1.31.

Class II type failure consequently allows for three defects each of type 1 and type 2 and 7 defects of type 3 and 3 cluster of type 3.

These cases are normally not covered by warranty.

If the number of failures exceeds the figures of any category mentioned above then this may be covered by the warranty.
FCC Compliance Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, 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 technician for help.

Changes or modifications not expressly approved by the party responsible for compliance could void the user’s authority to operate the equipment. Shielded interface cables, if any, must be used in order to comply with the emission limits.
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