Copyright

Copyright

Fujitsu has made every effort to ensure the accuracy and completeness of this document. However, as ongoing development efforts are continually improving the capabilities of our products, we cannot guarantee the accuracy of the contents of this document. We disclaim liability for errors, omissions or future changes.

LifeBook is a trademark of Fujitsu Limited.

Microsoft, Windows, MS, MS-DOS, Windows NT, Windows XP, Windows Vista and Windows 7 are registered trademarks of the Microsoft Corporation of the United States in the United States and other countries.

Phoenix is a registered trademark of Phoenix Technologies Corporation of the United States.

Copyright© 1981-1999 Microsoft Corporation, All rights reserved.

Copyright© 2009 Phoenix Technologies, Ltd., All rights reserved.

Other product names are trademarks or registered trademarks of their respective companies.

© Copyright 2010 Fujitsu. All rights reserved. No part of this publication may be copied, reproduced or translated, without the prior written consent of Fujitsu. No part of this publication may be stored or transmitted in any electronic form without the written consent of Fujitsu.

This device complies with Part 15 of the FCC rules. Operations are subject to the following two conditions:

- (1) This device may not be allowed to cause harmful interference.
- (2) This device must accept any interference received, including interference that may cause undesired operation.

Website: hk.fujitsu.com/pc



DECLARATION OF CONFORMITY according to FCC Part 15

IMPORTANT SAFETY INSTRUCTIONS

- 1. Read these instructions carefully. Save these instructions for future reference.
- 2. Follow all warnings and instructions marked on the product.
- 3. Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
- 4. Do not use this product near water.
- Do not place this product on an unstable cart, stand or table. The product may drop, causing serious damage to the product.
- 6. Slots and openings in the cabinet and the back or bottom are provided for ventilation; to ensure reliable operation of the product and to protect it from overheating, these openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug or other similar surface. This product should never be placed near or over a radiator or heat register or in a built-in installation unless proper ventilation is provided.
- 7. This product should be operated from the type of power indicated on the marking label. If you are not sure of the type of power available, consult your dealer or local power company.
- 8. Do not allow anything to rest on the power cord. Do not locate this product where persons will walk on the cord.

- 9. If an extension cord is used with this product, make sure that the total ampere rating of the equipment plugged into the extension cord does not exceed the extension cord ampere rating. Also, make sure that the total rating of all products plugged into the wall outlet does not exceed 15 amperes.
- 10. Never push objects of any kind into this product through cabinet slots as they may touch dangerous voltage points that could result in a fire or electric shock. Never spill liquid of any kind on the product.
- Do not attempt to service this product yourself, as opening or removing covers may expose you to dangerous voltage points or other risks. Refer all servicing to qualified service personnel.
- 12. Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:
 - a. When the power cord or plug is damaged or frayed.
 - b. If liquid has been spilled into the product.
 - c. If the product has been exposed to rain or water.
 - d. If the product does not operate normally when the operating instructions are followed. Adjust only those controls that are covered by the operating instructions since improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to normal condition.
 - e. If the product has been dropped or the cabinet has been damaged.
 - f. If the product exhibits a distinct change in performance, indicating a need for service.

Copyright

- 13. CAUTION: When replacing the battery, be sure to install it with the polarities in the correct position. There is a danger of explosion if the battery is replaced with an incorrect type or is mistreated. Do not recharge, disassemble or dispose of in fire. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of the used battery according to the manufacturer's instructions.
- 14. Power cable which is approved by your local authorizes should only be used.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and 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 of the following measures: Reorient or relocate the receiving antenna.

Increase the separation between the equipment and receiver.

Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This EUT is compliance with SAR for general population/uncontrolled exposure limits in ANSI/IEEE C95.1-1999 and had been tested in accordance with the measurement methods and procedures specified in OET Bulletin 65 Supplement C.

Operation is subject to the following two conduction(1) this device may not cause interference, and(2) this device must accept any interference, including interference that may cause undesired operation of the device.

Cet appareil numérique respecte les limites de bruits radioélectriques applicables aux appareils numériques de Classe B prescrites dans la norme sur le matérial brouilleur: "Appareils Numériques," NMB-003 édictée par l'Industrie. (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device." The Load Number assigned to each telephone terminal device denotes the percentage of the total load to be connected to a telephone loop or circuit which is used by the device to prevent overloading. The termination on a loop may consist of any combination of devices such that the total of the load numbers of all devices does not exceed 100.

WCAUTION_

• For safety, users should ensure that the electrical ground of the power utility, the telephone lines and the metallic water pipes are connected together. Users should NOT attempt to make such connections themselves but should contact the appropriate electric inspection authority or electrician. This may be particularly important in rural areas.

For Authorized Repair Technicians Only

🕅 CAUTION-

 For continued protection against risk of fire, replace only with the same type and rating fuse.

🛕 WARNING ____

 Danger of explosion if Lithium (CMOS) battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufac-turer's instruction.

Proper Disposal of Battery

Under federal, state or local law, it may be illegal to dispose of batteries by putting them in the rubbish bin or trash cans. Please take care of our environment and dispose of batteries properly. Check with your local government authority for details regarding recycling or disposing of unwanted batteries.

NOTE ON USE REQUIRED HIGH SAFETY

This product is designed and manufactured for general use, including general office use, personal use, household use and ordinary industrial use.

This product is not designed for or intended for use under dangerous (fatal) conditions, unless extreme safety precautions are implemented.

Do not use this product without implementing high-level safety precautions.

Failure to follow this warning may result in death, personal injury, severe physical damage or other loss, if used in or near any or more of the following:

- nuclear reaction control system in a nuclear facility
- automatic flight control system in an airplane or other flight control system
- mass transport control system
- medical instruments for life support system
- missile launching control for weapon system

NOTE ON BACKUP DATA

Please make a backup of the Operating System, any software programs, and created files (and update regularly).

If you send this product to Fujitsu, or any of its affiliates, suppliers, service providers or resellers for repair, Fujitsu does not guarantee the data integrity. It is your responsibility to back data up beforehand.

Fujitsu does not assume any obligation for compensation for damages, data integrity, or restoration, etc., if your data is lost for any reason, except as written in the warranty.

Safety notes



Please read these safety instructions before using the device for the first time



Also refer to the safety notes in the manuals for the device and in the additionally provided documentation

Your device complies with the relevant safety regulations for data processing equipment. Do not operate the device if the ambient temperature is above 35 °C or below 5 °C. If you have any questions, contact your sales outlet or our customer service centre.

 Keep these safety notes and other documentation (e.g. brief guide, operating manual and CD) together with the device. If you pass on the device to third parties, you should also pass on the whole documentation.

Cleaning

• If the battery's terminals are dirty, clean them with a dry, clean cloth.

Repair

- Components identified with a warning sign (e.g. a lightning bolt) may only be opened, removed or exchanged by authorised specialists. (Danger of electric shock, power hazard, fire hazard).
- Only qualified technicians should repair the device. Unauthorised opening and improper repairs can result in considerable danger to the user (danger of electrical shock, highvoltage danger, fire danger).

Transportation and Storage

 Use the original packaging or other suitable packaging, which provides protection against jolts, impacts, moisture and electrostatic discharge for reshipping and other transport.

- During installation and before operating the device, observe the instructions on environmental conditions in the manuals of the device.
- Do not drop the device and protect it from severe shocks.
- For mobile devices (e.g. notebook, pocket PC, keyboard):
 - Do not place any objects on the device.
 - When the device is switched on, do not store it in an environment with poor air circulation (e.g. in a carrier bag or a closed briefcase). Otherwise the device may be damaged or could even catch fire.
- Always transport the device with the battery inserted. This will prevent any foreign objects (e.g. paper clips) from entering the device through openings.
- Do not store the device, batteries or mains adapter near a heat source (e.g. a heater or fireplace). Excessive heating up can cause the device, batteries or mains adapter to catch fire or explode.
- Do not transport the rechargeable battery unprotected in your bag, briefcase or any other container, as metal objects also carried there (e.g. car keys) could short circuit the battery terminals. This can result in damage to the battery or in fire danger.

Power supply

- You may only operate the device, if the voltage for the device is set to the local mains voltage.
 For stationary devices check the rated voltage of the device; for mobile devices check the rated voltage of the mains adapter (see device instructions).
- Ensure that the mains outlet is freely accessible.
- The ON/OFF switch, the standby button, the suspend/resume button and the main switch do not disconnect the device from the line voltage. To completely disconnect the mains voltage, remove the power plug from the socket.

V

Copyright

- For devices with a battery: improper replacement of the device's battery will result in a danger of explosion. The battery may only be replaced by an identical sort or by a sort recommended by the manufacturer (see device instructions).
- Do not use damaged cables (damaged insulation, bare wires). A damaged cable presents a danger of electrical shock or fire.
- If necessary, replace the original power cable with a regular grounded 3-core mains lead.
- If no suitable power cable was supplied with the device, purchase an approved power cable in your country. The voltage and amperage for which the cable is suited must be higher than the voltage and amperage indicated on the product.

Additional information on the power supply for devices with external mains adapter and/or battery

- Only the specified rechargeable battery and the supplied mains adapter may be used to power the device. You can find more detailed information in the operating manual of the device. Use only mains adapters and rechargeable batteries approved by Fujitsu for your device.
- The battery is not waterproof! Never immerse the battery in water and always protect it from splashes of water (rain, sea spray).
- If handled incorrectly, batteries may cause hazards such as fire. Never therefore open, pierce or compress a battery.
- Never throw a battery into a fire (danger of explosion!).
- Take care not to drop the batteries or otherwise damage their casing (fire risk). If rechargeable batteries develop a fault please stop using them immediately. Do not touch the contacts of the batteries. Never interconnect the positive and negative terminals of a battery.

- If a battery is leaking, avoid contact between the liquid and your skin, mucous membranes (eyes, mouth) or foodstuffs and do not inhale the vapours. Clean parts of the body that have already come into contact with such liquids with plenty of soap and water.
- Keep batteries out of reach of children.
- If a lithium battery (button cell) is installed in the device for real-time buffering, please note that: The lithium battery may only be replaced by authorised, specially trained personnel.
- To disconnect the device from all power sources, switch off the device, disconnect the mains adapter from the electrical outlet and remove all batteries from the battery compartment and module slot.
- Make sure that the rated current of the mains adapter is not higher than that of the power system to which you connect the mains adapter (see technical data of the mains adapter).

Installation and Operation

- Ensure that the device is connected to a mains socket with earthing contact and that the device is close to the socket.
- We recommend that you place your device on an insensitive, non-slip surface. In view of the multitude of different finishes and varnishes used on furniture, it is possible that the rubber / plastic feet will mark the surface they stand on.
- Never place the notebook and the mains adapter on a heat-sensitive surface.
- If the device is brought from a cold environment into the operating room, condensed water can form. Before operating the device, wait until it is absolutely dry and has reached approximately the same temperature as the installation site.
- Lay the cables in such a way that they do not create a hazard (danger of tripping) and cannot be damaged. When connecting cables, follow the relevant instructions in the device manuals.

vii

- In the event of a thunderstorm, all data transfer cables (modem/LAN/PC card modem, CF-LAN card, CF-WLAN card) should be removed at the wall from the telephone or LAN socket. No data transfer cables should be connected or disconnected during a thunderstorm.
- Make sure that no objects (e.g. jewellery chains, paper clips, etc.) or liquids get inside the device (danger of electric shock, short circuit).
- In emergencies (e.g. damaged casing, elements or cables, penetration of liquids or foreign matter), switch off the device immediately, remove the power connector, remove the battery (if present), and contact your sales outlet or our hotline/help desk.
- The device is not waterproof! Never immerse the device in water and protect it from spray water (rain, sea water).
- Therefore, check each CD for damage, cracks, breakage etc. before inserting it in the drive. Please note that any additional labels applied may change the mechanical properties of a CD and cause imbalance. Damaged and imbalanced CDs can break at high drive speeds (data loss). Under certain conditions sharp-edged pieces of broken CDs can penetrate the cover of the drive (damage to the unit) and be thrown out of the unit (danger of injury, particularly on uncovered body parts such as the face or neck).
- Protect the contacts of all sockets and plugs of the device against static electricity. Avoid touching the contacts. Should touching be unavoidable, take the following safety measures: Touch an earthed object or wear an earthing strap before touching the contacts. This discharges static charges.
- Keep other objects 100 mm each away from the device and its mains adapter to ensure adequate ventilation.
- Do not install the device near heating devices or other sources of heat (e.g. heater, fireplace). Excessive heating up can cause the device, batteries or mains adapter to catch fire or explode.

- If the device is installed in a cabinet or a drawer, sufficient ventilation must be provided. Otherwise damage from overheating may result.
- Never place the notebook/the Tablet PC on a soft surface (e.g. carpeting, upholstered furniture, bed). This can block the air vents and cause overheating and damage. If, for example, you place the notebook/Tablet PC on your knees for a longer period, this can become unpleasant or can even lead to burns.
- Never cover the fan intake or exhaust openings of the device and the mains adapter.
- Keep the device away from naked flames.
- Do not use the device in a damp environment, e.g. near a bathtub, a wash basin or a swimming pool.
- Do not use the accessories (e.g. mains adapter, battery, cables and adapters) included with the respective device or component for other devices or components.
- To avoid injuries, be sure to keep the following devices and objects out of the reach of small children: personal computers, workstations, servers, small parts of the device, batteries, cables and packaging materials (e.g. plastic bags).
- Except with headphones or headset: do not hold the loudspeaker of your device directly up to your ear.
- Headphones and headset: To prevent damage to your hearing, check the configured volume before putting on the headphones or headset.
- To avoid damages on the fingerprint sensor, don't touch the fingerprint sensor with hard or metallic objects (e.g. pens or rings).

Screen/touchscreen (for devices with integrated screen)

- If the LCD panel or touchscreen is damaged (e.g. glass broken), do not allow any escaping liquid to come into contact with skin, mucous membranes (eyes, mouth) or foodstuffs. Do not inhale vapours. Clean parts of the body and clothing that have already come into contact with such liquids with plenty of soap and water.
- You may set only those resolutions and refresh rates specified in the operating manual for the device or in the operating manual for the monitor. Otherwise you may damage your monitor. If you are in any doubt, contact your sales outlet or our Hotline/Help Desk.
- To prevent the device from overheating, the LCD panel must be in its open position when the device is on.

Connecting headphones

- Excessive volume from headphones can damage your hearing.
- It is best for your hearing if the equalizer settings are set to the mid-position. Settings other than the mid-position can cause hearing damage.
- There are other factors beyond the control of the manufacturer which can change the output voltage at the headphone connection and thus increase the headphone volume (including e.g. the operating software, equalizer software, drivers etc.). In such a case the risk of hearing damage cannot be excluded.
- Only use headphones recommended by Fujitsu. Otherwise there is a risk of hearing damage due to excessive volume.

System expansions and accessories

- Install only system expansions that satisfy the requirements and rules governing safety and electromagnetic compatibility and relating to telecommunications terminal equipment. If you install other expansions, you may damage the device or violate the safety regulations and regulations governing RFI suppression. Information on which system expansions are suitable can be obtained from your sales outlet or our hotline/help desk.
- Data cables for peripherals must be adequately shielded to avoid interference.
- The devices are only designed for indoor LANs. In the case of an external LAN feed, a LAN switch must be used to connect the LAN to the devices.
- The warranty is invalidated if the device is damaged during the installation or replacement of system expansions.
- PC cards can become quite warm during operation. Proceed with caution when removing PC cards.

Additional information on system expansions and accessories for stationary devices

- Before opening the device first switch it off and then disconnect the power plug. Observe the specifications in the device instructions.
- The components (e.g. power supply) marked with a warning sign (e.g. lightning sign) may only be opened, removed or exchanged by authorised, qualified personnel.
- Make sure that you also switch off the attached monitor and/or other peripherals when you switch off the device.

 Connect the device and the attached peripherals to the same circuit. Otherwise data may be lost, for instance during a power failure, if the fixed device continues to operate but the peripheral device (e.g. a memory subsystem) fails.

- When you connect the cables and install additional components (e.g. hard disk, main memory) watch the edges of the case or components. These may be sharp or hot while in operation (danger of injury).
- Please read the security and operating information in the manual for the system where you are installing the additional components.

Additional safety notes for devices with radio components

The following additional safety notes apply for devices with radio components (e.g. BLUETOOTH, Wireless LAN):

- Switch off the device, when you are in a hospital, an operating room or near a medical electronics system, as the radio waves transmitted by the radio component can impair the operation of the medical devices.
- Keep the device at least 20 cm from a pacemaker, as otherwise the proper operation of the pacemaker may be impaired by radio waves.
- The radio waves transmitted by the radio component can cause an unpleasant humming in hearing aids.
- If the radio component cannot be switched off, remove the battery or disconnect the power supply.
- Switch off the radio component, when you let the device get near flammable gases or into hazardous environments (e.g. petrol station, paintshops), as the transmitted radio waves can cause an explosion or a fire.

- Deactivate the radio components in blasting areas and in the vicinity of blasting operations.
- It is not generally permitted to use radio components on airplanes. To date, no case of damage to the on-board electronics of an aircraft has been proven, but interference with the sensitive devices cannot be ruled out. Please follow the crew's instructions in all cases.
- With data traffic via a wireless connection, it is also possible for unauthorised third parties to receive data.
- The company Fujitsu cannot be held responsible for radio or television faults arising from unauthorised changes made to this device. Fujitsu is, furthermore, not responsible for replacing and / or exchanging connector cables and devices which have not been specified by Fujitsu. The user is solely responsible for repairing faults arising from such unauthorised changes made to a device and for replacing and / or exchanging devices.
- Switch off the radio component for security reasons when you cannot exclude that the transmitted radio waves can negatively affect electrical and electronic devices in your surrounding area.

Table of Contents

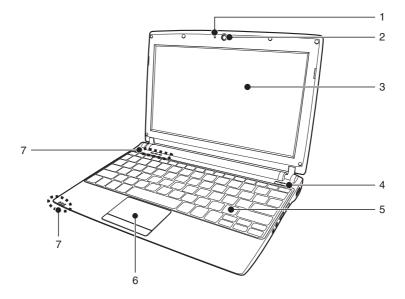
GETTING TO KNOW YOUR

NOTEBOOK	.1
Names of the parts and their functions	1
Front features of the notebook	
Left features of the notebook	
Right features of the notebook Bottom features of the notebook	
Notebook: switching off	
Status indicators	
Keyboard	
Virtual numeric keypad	
Key combinations	
Country and keyboard settings	10
Touchpad and touchpad buttons	11
Using touchpad buttons	11
LCD screen	
Screen settings	12
Webcam	12
Battery	13
Charging, caring for and maintaining	
the battery Removing and installing the battery	
Using the power-management	10
features	15
Memory cards	
Inserting the memory card	
Removing the memory card	16
Hard Disk	17
Loudspeakers and Microphones Switching the loudspeaker off and on Adjusting the volume	17

Wireless LAN radio components	17
Wireless LAN - switching on and off	17
Configure wireless Internet connection	17
Ethernet and LAN	18
SECURITY FUNCTIONS	19
Configuring password protection in	
BIOS Setup Utility	19
Protecting BIOS Setup Utility (supervisor	r
and user password)	20
Password protection for booting of the	
operating system	21
CONNECTING EXTERNAL	
DEVICES	22

	~~
Connecting an external monitor	22
Setting the refresh rate for your external	
monitor	23
Connecting USB devices	23
How to remove USB devices correctly	24
Connecting external audio devices	24
Microphone port / Line In	24
Headphone port	24

TROUBLESHOOTING AND TIPS...... 25



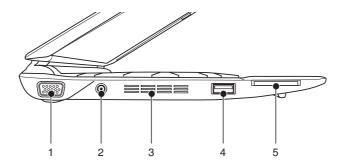
Names of the parts and their functions

Front features of the notebook

This chapter presents the individual hardware components of your MH330. It gives an overview of the displays and connections to the device. Please familiarise yourself with these components before you start to work with the device.

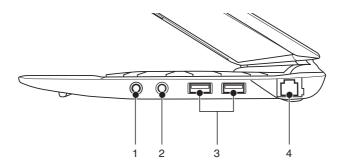
- 1. Built-In Microphone
- 2. 0.3 Mega Pixel Camera
- 3. Display Panel
- 4. Power / Suspend / Resume Button
- 5. Keyboard

- 6. Touch Pad
- 7. Status Indicator LED



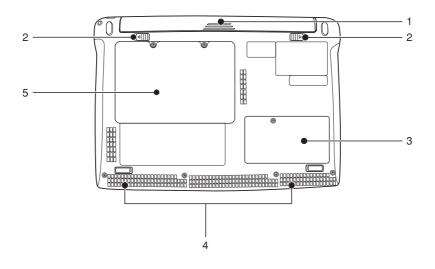
Left features of the notebook

- 1. External Video Port
- 2. DC Power Jack
- 3. Air Vents
- 4. USB 2.0 Port
- 5. MMC / SD / MS PRO Card Slot



Right features of the notebook

- 1. Microphone Jack
- 2. Headphone Jack
- 3. USB 2.0 Ports
- 4. LAN (RJ-45) Jack

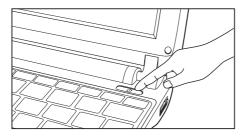


Bottom features of the notebook

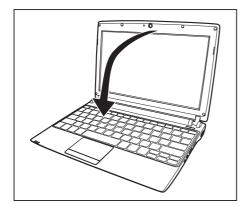
- 1. Lithium Ion Battery
- 2. Battery Latches
- 3. Memory Upgrade Compartment
- 4. Stereo Speakers
- 5. Internal Hard Disk Drive

Getting To Know Your Notebook

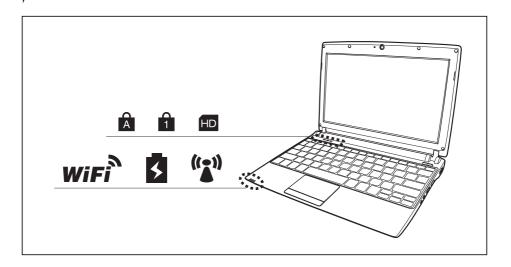
Notebook: switching off



- Shut down the operating system properly (in Windows via the Start menu by clicking *Start Symbol Shut Down Shut Down OK*).
- If the notebook is not switched off automatically, press the ON / OFF switch for about five seconds.



• Close the LCD screen.



Status indicators

The status indicators provide information about the status of the power supply, the drives and the keyboard functions. Three indicators are visible when the device is closed: 3G indicator, battery indicator, wireless LAN indicator (device dependent).

P 0 I N T—

Depending on the model, the status indicators on your device may be in a different order to that shown below.



Wireless LAN Emission indicator

The Wireless LAN Emission indicator appears when the Wireless LAN is emitting.



Battery Charge / DC IN indicator

- Purple, solid: AC adapter and battery are available and system is charging.
- Blue, solid: AC adapter and battery are available and system is fully charges.
- Red, solid: AC adapter and battery are available and waiting to charge battery.
- Purple, blinking: The battery is abnormal status.
- Off: AC adapter is not plugged in.



3G* indicator

The 3G indicator appears when 3G is emitting.

* Light-on applicable on 3G model only

Getting To Know Your Notebook



Caps Lock Indicator

The Caps Lock indicator states that your keyboard is set to type in all capital letters.



Num Lock Indicator

The Num Lock indicator states that the integral keyboard is set in ten-key numeric keypad mode.

If there is no battery activity and the power adapters are not connected, the Battery Level indicators will also be off.



POINT

If you are using the optional external numerical keypad, pressing the [NumLk] key will activate the external keypad. The indicator will come on, however it will not change any of the functionality of your keyboard keys.



Disk/Optical Drive Access Indicator

This indicator turns on when an internal hard disk drive or an optical drive device or a removable disk drive is being accessed.

NCAUTION-

Do not power off the notebook when the disk drive access indicator is shown.

Keyboard

ΡΟΙΝΤ

The keyboard of your notebook is subject to continuous wear through normal use. The key markings are especially prone to wear. The key markings are liable to wear away over the life of the notebook.

The keyboard has been designed to provide all the functions of an enhanced keyboard. Some enhanced keyboard functions are mapped with key combinations.

The following description of keys refers to Windows. Additional functions supported by the keys are described in the relevant manuals supplied with your application programs.

The figure below shows how to access the different characters on keys with overlaid functions. The example applies when the Caps Lock key has not been activated.



Backspace key

The Backspace key deletes the character to the left of the cursor.



Tab key

The Tab key moves the cursor to the next tab stop.



Enter key (return)

The Enter key terminates a command line. The command you have entered is executed when you press this key.

Г	1
Υ.	Ļ.
~	7

介

Fn

Caps Lock key

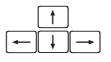
The Caps Lock key activates the Caps Lock mode, and the corresponding icon is displayed in the Windows information area. In Caps Lock mode, all of the characters you type appear in upper case. In the case of overlay keys, the character printed on the upper left of the key will appear when that key is pressed. To cancel the Caps Lock function, simply press the Caps Lock key again.

Shift key

The Shift key causes uppercase characters to appear. In the case of overlay keys, the character printed on the upper left of the key appears when that key is pressed.

Fn button

The $\begin{bmatrix} r_n \\ r_m \end{bmatrix}$ key enables the special functions indicated on overlay keys (see "Key combinations", Page 9).



Cursor keys

The cursor keys move the cursor in the direction of the arrow, i.e. up, down, left, or right.



Start key The Start key opens the Windows Start menu.

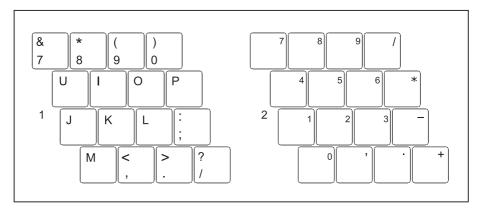


Menu key

The Menu key opens the menu for the selected item.



Getting To Know Your Notebook





Virtual numeric keypad

To provide the convenience of a numeric keypad, your keyboard is equipped with a virtual numeric keypad. The special keys of the virtual numeric keypad are recognisable by the numbers and symbols printed in the upper right corner of each key. If you have switched on the virtual numeric keypad, you can output the characters shown on the upper right of the keys.

- 1 = Character valid when the Num
- 2 = Character valid when the Num key is active key is not active

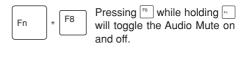
Further information about the status indicators can be found in chapter "Status indicators", Page 6.

Key combinations

The key combinations described below apply when using Microsoft Windows operating systems. Some of the following key combinations may not function in other operating systems and with some device drivers. Other key combinations are described in the relevant manuals supplied with your application programs.

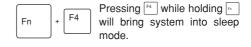
Key combinations are entered as follows:

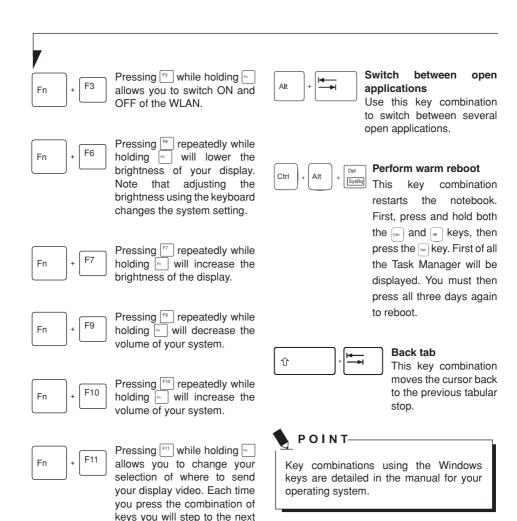
- Press and hold the first key in the combination.
- While holding the first key down, press the other key or keys in the combination.





Pressing ^[5] while holding ^[n] will toggle the built-in pointing device on and off.





choice. The choices, in order, are: built-in display panel only, external monitor only, and

both built-in display panel and

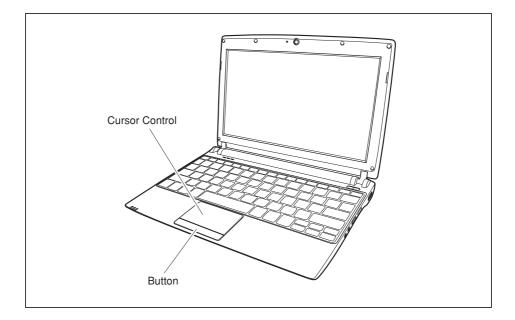
external monitor.

Country and keyboard settings

If you want to change the country and keyboard settings, proceed as follows:

• Enter the settings by clicking *Start* – (*Settings*) – *Control Panel* – *Time*, *Regional and Language Options*.

Getting To Know Your Notebook



Touchpad and touchpad buttons

POINT-

Keep the touchpad clean. Protect it from dirt, liquids, and grease. Do not use the touchpad if your fingers are dirty. Do not rest heavy objects (e.g. books) on the touchpad or the touchpad buttons.

The touchpad enables you to move the mouse pointer on the screen. The touchpad buttons allow you to select and execute commands. They correspond to the buttons on a conventional mouse.

Using touchpad buttons

Moving the pointer

- Move your finger on the touchpad.
- The pointer will move accordingly.

Selecting an item

- Move the pointer to the item you wish to select.
- Tap the touchpad once or press the left button once.
- The item is selected.

Executing a command

- Move the pointer to the field you wish to select.
- Tap the touchpad twice or press the left button twice.
- The command is executed.

Dragging an item

- Select the desired item.
- Press and hold the left button and drag the item to the desired position with the finger on the touchpad.
- The item will be moved.

LCD Screen

Screen settings

Setting the resolution

The screen resolution of the LCD monitor of your notebook is optimally set at the factory.

Synchronising the display on the LCD screen and an external monitor

Your notebook supports simultaneous display on the LCD screen and an external monitor. Pressing the key combination $\left[\frac{r_{in}}{r_{i}}\right] + \left[\frac{r_{i1}}{r_{i}}\right]$ switches between LCD only, external monitor and LCD and external monitor only. The last setting is useful if you would like a high resolution and a high refresh rate on an external monitor.

Webcam

your notebook is equipped with a WebCam. Depending on the software used, you can take pictures, record video clips or take part in web chats.

- The picture quality depends on the lighting conditions and the software being used.
- You can only used the WebCam with a particular application (e.g. an Internet telephony program or a video conferencing program which supports WebCams).
- When using the webcam the notebook support must not wobble.

POINT-

Further information on use of the WebCam and additional settings can be found in the Help function of the program which uses the Webcam.

Getting To Know Your Notebook

Battery

The battery is one of the most important components of your notebook. When not plugged into a mains socket, the notebook runs on its built-in battery. You can increase the life of the battery by caring for the battery properly.

You can extend the battery life by taking advantage of the available energy saving functions.

Charging, caring for and maintaining the battery

The notebook battery can only be charged, when the ambient temperature is between 5° C and max. 35° C.

You can charge the battery by connecting the notebook to the mains adapter.

You can increase the life of your battery by allowing it to fully discharge before recharging it again. To do this, leave your notebook turned on when it is operated with the battery. Once the battery is running low you will hear a warning alarm. If you do not connect the mains adapter within five minutes of the warning alarm described above, your notebook will automatically switch off.

Monitoring the battery charging level

Windows also has a "Battery status meter" in the taskbar for monitoring the battery capacity. When you place the mouse pointer on the battery symbol, the system displays the battery status.

Battery storage

Keep the battery pack between 0° C and $+30^{\circ}$ C. The lower the temperature at which the batteries are stored, the lower the rate of self-discharge.

If you will be storing batteries for a longer period (more than two months), the battery charge level should be approx. 30 %. To prevent exhaustive discharge, check the charging level of the battery at regular intervals.

To be able to make use of the optimal charging capacity of the batteries, the battery should be completely discharged and then fully recharged.

POINT-

If you do not use the batteries for long periods, remove them from the notebook. Never store the batteries in the device.

Removing and installing the battery

🛕 WARNING.

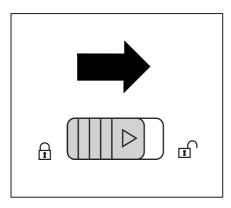
Only use batteries approved by Fujitsu for your notebook.

Never use force when inserting or removing a battery.

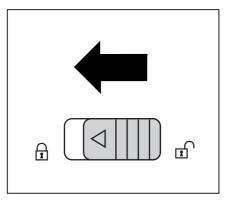
Make sure that no foreign bodies get into the battery connections.

- Switch off your notebook and disconnect the power plug from the mains socket.
- Close the LCD screen so that it fully locks into place.
- Disconnect all cables connected to the notebook.
- Turn your notebook over and place it on a firm, flat and clean surface. If necessary, lay an anti-slip cloth on this surface to prevent the notebook from being scratched.

Battery lock positions:

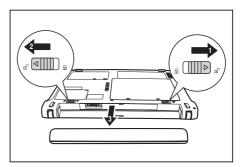


The battery is released.



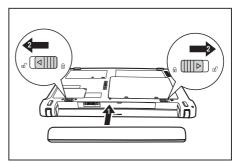
The battery is locked.

Battery removing



- Push the battery lock (1) in the direction of the arrow.
- Slide the battery lock in the direction of the arrow (2) and hold it in place.
- Remove the battery from the battery compartment (3).

Installing the battery



- Insert the battery in the battery compartment (1).
- Carefully push the battery into the battery compartment until it is felt to engage.
- Push the battery lock (2) in the direction of the arrow.

Getting To Know Your Notebook

Using the powermanagement features

The notebook uses less power when the available power-management features are used. You will then be able to work longer when using the battery before having to recharge it.

POINT-

Power efficiency is increased and environmental pollution reduced. By choosing the best power options, you can make significant savings and at the same time help protect the environment.

When you fold down and close the LCD screen, depending on the setting in Windows, the notebook automatically enters a power saving mode.

We recommend the following settings:

Function	On external power	On battery power
Turn off monitor	After 10 minutes	After 5 minutes
Turn off hard disk(s)	After 15 minutes	After 10 minutes
Energy saving (S3)	After 20 minutes	After 15 minutes
Hibernate mode (S4)	After 1 hour	After 30 minutes

- Start (Settings) Control Panel Mobile PC – Power Options.Start – (Settings) – Control Panel – Appearance and Personalization – Personalization – Change screen saver.
- or Personalization Change screen saver.



If you need further information about an option, you can get help with most settings by pressing [F] to open the Microsoft Help.

If your notebook is in a power saving mode, be sure to remember the following:

POINT-

During power saving mode, open files are held in the main memory or in a swap file on the hard disk.

Never turn off your notebook while it is in a power saving mode. If the built-in battery is nearly flat, close the open files and do not go into power saving mode.

If you do not intend to use your notebook for a long period of time:

- Exit power saving mode if necessary via the mouse or keyboard or by switching on the notebook.
- Close all opened programs and completely shut down the notebook.

Memory cards

Your notebook is equipped with an integrated memory card reader. It supports the following formats:

Without adapter:

- Secure Digital (SDTM card)
- SDHC
- MultiMediaCard (MMC)
- Memory Stick / Memory Stick pro (Sony[®])

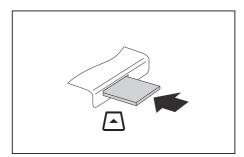
With adapter:

- RS-MMC
- MMC-Micro
- miniSD
- MicroSD
- MS-Duo
- MS-PRO Duo
- MS-PRO HG
- MS-PRO HG Duo

POINT

Observe the manufacturer's instructions when handling the memory cards.

Inserting the memory card



- Carefully slide the memory card into the slot. The label should be facing upward. Do not apply excessive force, as otherwise the delicate contacts surfaces could be damaged.
- Depending on the particular type used, the memory card may protrude slightly from the slot.

Removing the memory card

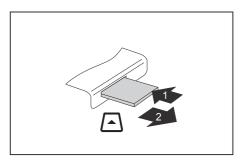


🕼 WARNING_

In order to protect your data, always follow the correct procedure for removing the card outlined below.

You can stop the memory card via the corresponding icon in the task bar:

- Left-click on the icon.
- Select the card you want to stop and remove.
- Press the Enter key.
- Wait for the dialogue box which tells you that it is now safe to remove the memory card.



- On devices with card locking: Press on the storage card (1).
- The storage card is released and can now be removed.
- Pull the storage card out of the slot (2).

Getting To Know Your Notebook

Hard Disk

The hard disk is the most important storage medium of your notebook. You can work considerably faster and more efficiently if you copy applications and files from external data carriers, such as CDs/DVDs or USB storage media, to your hard disk.

Loudspeakers and Microphones

Stereo loudspeakers and two microphones are built into your notebook.

For information on the exact position of the loudspeakers and microphones, please refer to the "Startup guide" manual for your Notebook.



If you attach an external microphone, the built-in microphone is disabled.

If you connect headphones or external loudspeakers, the built-in loudspeakers are disabled.

Switching the loudspeaker off and on

 To switch the loudspeaker off and on, either use the key combination [n] or [F] use the quick start buttons (device dependent).

Adjusting the volume

- Set the desired volume with the key combination $\overline{r_n} + \overline{r_9}$ or $\overline{r_n} + \overline{r_{10}}$.
- or
- Double-click on the speaker symbol in the taskbar and on Mixer.
- or
- Select Start symbol (Settings) Control Panel – Hardware and Sound – Sound: Adjust system volume.
- Use the slide control to change the volume.
- To turn the speaker on or off, double-click on the speaker symbol in the taskbar.

Wireless LAN radio components

🛕 w a r n i n g____

The installation of a wireless LAN/Bluetooth module not approved by Fujitsu voids the permits (CE!) issued for this device.

Wireless LAN - switching on and

off

POINT

Check whether the wireless LAN module is activated/deactivated in the installed wireless LAN software.

Activate or deactivate the wireless LAN module with the key combination [*] + [*3].

Configure wireless Internet connection

With just a few steps you can wirelessly connect your MH330 to the Internet.

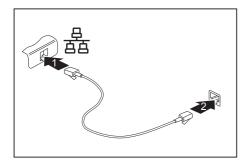
Using WLAN access

Requirement:

- You have a WLAN and the corresponding access data.
- On the Taskbar (lower right hand corner) click on icon.
- Under Wireless Network Connection, select the desired WLAN and confirm with Connect.
- If required, enter the corresponding access data (e.g. network key, password).
- The connection to the WLAN is established.

Ethernet and LAN

The internal network module of your notebook supports Ethernet-LAN (10/100 Mbps). This allows you to establish a connection to a local network (LAN = Local Area Network).



- Connect the network cable to the LAN port of the notebook (1).
- Connect the network cable to your network connection (2).

POINT-

Your network administrator can help you to configure and use the LAN connections. The network cable is not included in the delivery scope. This type of cable can be obtained from a specialist dealer.

Security functions

Your notebook has several security features that you can use to secure your system from unauthorised access.

This chapter explains how to use each function. and what the benefits are.

🚺 WARNING____

Please remember that in some cases, for example, forgetting your password, you may be locked out and unable to access vour data. Therefore, please note the following information:

- Make regular backups to external storage devices such as external hard drives. CD or DVD disks.
- Some security functions need you to choose passwords. Make a note of the passwords and keep them in a safe place.

If you forget your passwords you will need to contact the help desk. Deletion or resetting of passwords are not covered by your warranty and a charge will be made for assistance.

Configuring password protection in BIOS Setup Utility

🛦 WARNING____

Before using the various options for password protection in the BIOS Setup utility to increase data security, please observe the followina:

Make a note of the passwords and keep them in a safe place. If you forget your supervisor password you will not be able to access your notebook. Passwords are not covered by your warranty and a charge will be made for assistance.



POINT-

Your password can be up to eight characters long and contain letters and numbers. No distinction is made between uppercase and lowercase.

Protecting BIOS Setup Utility (supervisor and user password)

POINT

If you have opened these operating instructions on the screen, we recommend that you print out the following instructions. Because you cannot call the instructions onto the screen while you are setting up the password.

You prevent unauthorised use of the *BIOS Setup Utility* with both the supervisor and the user password. The supervisor password gives you access to all functions of the *BIOS Setup Utility*, while the user password only provides some of the functions. You can only set a user password if a supervisor password has already been assigned.

Setting supervisor and user password

- Start the BIOS Setup Utility and go to the Security menu.
- Select the Set Supervisor Password field and press the Enter key.
- With Enter new Password: you are asked to enter a password.
- Enter the password and press the Enter key.
- Confirm new Password requires you to confirm the password.
- Enter the password again and press the Enter key.
- Changes have been saved is a confirmation that the new password has been saved.
- To set the user password, select Set User Password and proceed exactly as when configuring the supervisor password.
- If you do not want to change any other settings, you can exit BIOS Setup Utility.

- In the Exit menu, select the option Save Changes & Exit.
- Select Yes and press the Enter key.
- The notebook will be rebooted and the new password will come into effect. It will now be necessary to first enter your supervisor or user password in order to open the BIOS Setup Utility. Please note that the user password only provides access to a few of the BIOS settings.

Changing the supervisor or user password

You can only change the supervisor password when you have logged into the BIOS Setup Utility with the supervisor password.

- Call the BIOS Setup Utility and go to the Security menu.
- When changing the password, proceed exactly as for password assignment.

Removing passwords

To remove a password (without setting a new password) perform the following steps:

- Start the BIOS Setup Utility and go to the Security menu.
- Highlight the Set Supervisor Password or Set User Password field and press the Enter key.
- You will be requested to enter the current password by the Enter Current Password prompt. You will be requested to enter a new password by the Enter New Password prompt.
- Press the Enter key twice.
- In the Exit menu, select the option Save Changes & Exit.
- Select Yes and press the Enter key.
- The notebook will now reboot with the password removed. Removing the supervisor password simultaneously deactivates the user password.

Security Functions

Password protection for booting of the operating system

ΡΟΙΝΤ

With the supervisor password you have set in the BIOS Setup Utility (see section "Setting supervisor and user password", Page 20), you can also prevent booting of the operating system.

Activating system protection

- Start the BIOS Setup Utility and go to the Security menu.
- Select the Password on Boot option and press the Enter key.
- Select Enabled and press the Enter key.
- Select the Save Changes & Exit option under Exit.
- The notebook will reboot. You will be prompted to enter our password (the supervisor password).

Deactivating system protection

- Start the BIOS Setup Utility and go to the Security menu.
- Select the Password on Boot option and press the Enter key.
- Select the Disabled option and press the Enter key.
- If you do not want to change any other settings, you can exit BIOS Setup Utility.
- Select the Save Changes & Exit option under Exit.
- The notebook will reboot. The system is no longer password-protected.

Connecting external devices

WARNING_

Always refer to the safety information provided in *"Important Safety Instructions", Page ii* before connecting or disconnecting any devices to or from your notebook. Always read the documentation supplied with the device you wish to connect. Never connect or disconnect cables during a thunderstorm.

Never pull at a cable when disconnecting it. Always grasp the plug. Follow the steps below in order, when connecting or disconnecting devices to your notebook.

ΡΟΙΝΤ-

With some devices such as USB devices, it is not necessary to switch off the notebook and the device before connecting/disconnecting. For more information about whether or not devices need to be switched off, please refer to the documentation supplied with the external device.

Some of the external devices require special drivers (see the operating system and external device documentation).

Connecting devices to the notebook

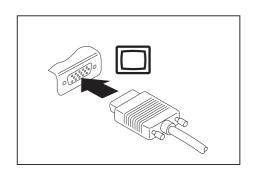
- 1 Turn off your notebook and all external devices.
- 2 Unplug your notebook and all devices from the mains sockets.
- 3 Connect the cables for your external devices following the instructions.
- 4 Plug all power cables into the mains sockets.

Disconnecting devices from the notebook

- 1 Turn off your notebook and all external devices.
- 2 Unplug your notebook and all devices from the mains sockets.
- 3 Disconnect the cables for your external devices following the instructions.

Connecting an external monitor

You can connect an external monitor to the analogue VGA monitor connection of the notebook. Screen output is limited to a maximum of two screens at any one time.



Analogue VGA monitor connection socket

- Switch off the notebook and the external monitor.
- Connect the data cable of the external monitor to the monitor port of the notebook.
- First switch on the external monitor and then the notebook.

ΡΟΙΝΤ-

Using the r_{n} + r_{1} key combination, you can toggle back and forth between the external monitor and the notebook's LCD screen.

You can display the same picture on the external monitor and the notebook LCD screen simultaneously.

Connecting External Devices

Setting the refresh rate for your external monitor

🛕 W A R N I N G_

If the refresh rate set is too high, the monitor may be damaged. Please see the documentation included with your monitor for the maximum possible refresh rate.

By setting the optimum refresh rate you will avoid screen flicker.

- Set the appropriate refresh rate for the type of monitor connected.
- Select Startsymbol (Settings) Control Panel – Appearance and Personalization – Personalization: Adjust screen resolution.

or

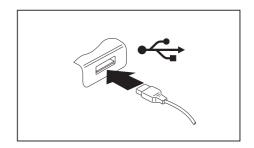
- Right-click on the desktop. Under *Personalization – Display Settings*, choose screentype 1 or 2.
- Select Advanced Settings Monitor.
- Select *Screen Refresh Rate* to choose the optimum refresh rate for the connected monitor type.
- Click Apply and OK.

Connecting USB devices

On the USB ports you can connect external devices that also have a USB port (e.g. a printer, a scanner or a modem).



USB devices are hot-pluggable. This means you can connect and disconnect devices while your operating system is running. USB 1.x has a maximum data transfer rate of 12 Mbit/s. USB 2.x has a data transfer rate of up to 480 Mbit/s. Additional information can be found in the documentation for the USB devices.



- Connect the data cable to the external device.
- Connect the data cable to a USB port of the notebook.

POINT-

Device drivers

USB devices will be automatically recognised and installed by your operating system.

How to remove USB devices correctly



WARNING_

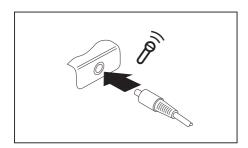
Always correctly remove the device according to the rules described below, to ensure that none of your data is lost.

- Left-click on the taskbar symbol.
- Select the device which you want to shut down and remove.
- Press the Enter key.
- Wait for the dialogue box which tells you that it is now safe to remove the device.

Connecting external audio devices

Microphone port / Line In

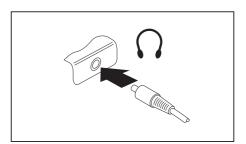
The microphone port/Line In allows you to connect an external microphone, a MiniDisc player, MP3 player, CD player or a tape deck to your notebook.



- Connect the data cable to the external device.
- Connect the data cable to the microphone port/Line In of the notebook.

Headphone port

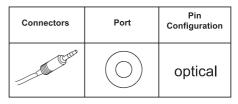
You can use the headphone port to connect headphones, external loudspeakers or an audio device with a digital optical input to your notebook.



- Connect the data cable to the external device.
- Connect the data cable to the headphone port of the notebook.

POINT-

If you connect headphones or external loudspeakers, the built-in loudspeakers are disabled. If you purchase a cable from a retailer, please note the following information: The headphone port on your notebook is a "3.5 mm jack socket". If you want to connect headphones or a speaker you will need a "3.5 mm jack plug".



Adjusting the volume

• To set the desired volume, see "Adjusting the volume", Page 17.

24

Troubleshooting and tips

Problem	Possible Cause	Possible Solution
The notebook's date or time is incorrect	Time and date are incorrect.	With the <i>BIOS-Setup-Utility</i> , you can set the date and time in the <i>main</i> menu.
When certain characters are entered on the keyboard, only numerals are written	The virtual numeric keypad of your device is activated, see <i>"Virtual</i> <i>numeric keypad", Page 9</i>	Press the key combination $\overline{r_n} + \overline{Num}$.
A beep sounds at a rate of one per second	The battery is almost flat.	Charge the battery.
The notebook's	Monitor is switched off.	Press a key or touch the touchpad.
remains blank	External monitor or television set connected.	Press the key combination $r_n + r_1$ (switch screen output).
The LCD screen is difficult to read	Reflected glare.	Turn the notebook or alter the tilt of the LCD screen.
The external monitor remains	Monitor is switched off.	Switch the external monitor on.
blank	Power saving has been activated (monitor is blank).	Press any key to continue.
	Brightness is set to dark.	Adjust the brightness of the monitor.
	Screen output is set to the notebook's LCD screen.	Press the key combination $r_n + r_1$ (switch screen output).
	The external monitor's power cable or data cable is not connected properly.	 Switch off the external monitor and the notebook. Check whether the power cable is plugged properly into the external monitor and into the power socket. Check whether the data cable is properly connected to the notebook and the external monitor (if it is plugged in with a connector). Switch on the external monitor and the notebook.

POINT-

If the date and time are repeatedly incorrect when you switch on the notebook, the built-in battery that supplies the internal clock has failed. Please contact our Authorized Service Centre.

Problem	Possible Cause	Possible Solution
The external monitor is blank or the image is unstable	The wrong external monitor has been selected or the wrong screen resolution has been set for the application program.	 Terminate the application program in Windows by pressing Alt + F4. If the fault persists after closing the program, switch over to the notebook's internal LCD screen with r. + F11. Change the following setting:
		• Set the screen resolution: Select the required resolution with <i>Startsymbol</i> – (<i>Settings</i>) – <i>Control Panel</i> – <i>Appearance and</i> <i>Personalization</i> – <i>Personalization:</i> Adjust the screen resolution as required.
		• Select monitor: Right-click on the desktop. Under Personalization – <i>Display Settings</i> Choose monitor 1 or 2 and under <i>Advanced</i> <i>Settings</i> – Monitor Choose the correct monitor.
The notebook is not installed correctly	The battery is not installed correctly.	 Switch the notebook off. Check whether the battery is installed correctly in its compartment. Switch the notebook on.
	The battery is dead.	 Charge the battery. or Insert a charged battery. or Connect the mains adapter to the notebook.
	The power adapter is not connected correctly.	 Switch the notebook off. Check whether the mains adapter is connected correctly to the notebook. Switch the notebook on.

Troubleshooting and tips

Problem	Possible Cause	Possible Solution
The notebook stops working	Notebook is in energy saving mode.	Leave energy saving mode.
	An application programme has caused the malfunction.	Close the application program or restart the notebook (by restarting the operating system or switching the device off and back on again).
	The battery is dead.	 Charge the battery. or Insert a charged battery. or Connect the mains adapter to the notebook.
The printer does not print	The printer is not switched on.	Make sure that the printer is switched on and is online (see the manuals supplied with the printer).
	The printer is not connected correctly.	Check that the cable connecting the notebook and the printer is connected properly.
	The printer driver is faulty or not correctly installed, or it is the wrong printer driver.	 Check that the cable connecting the notebook and the printer is connected properly. Check whether the correct printer driver is loaded (see printer documentation).
The radio connection to a network does not work	The wireless component is disabled.	Switch the radio components on (<i>see "Wireless LAN - switching on and off", Page 17</i>).
	The wireless component is enabled. Despite this, the wireless connection to a network does not work.	 Check whether the radio connection is switched on via the software. Further information on using the wireless component can be found in the help files (see <i>"Information sources", Page 17</i>).