

OPERATING INSTRUCTIONS

Personal Computer

Model No. **UT-MA6** series

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Getting Started

Useful Information

Troubleshooting

Appendix

Please print and use pages containing important descriptions for software installation, etc.

Introduction

Thank you for purchasing this Panasonic product. For optimum performance and safety, please read these instructions carefully.

■ Terms and illustrations in these instructions

CAUTION :	Conditions that may result in minor or moderate injury.
NOTE :	Useful and helpful information.
F8 :	Press [F8] key.
Enter :	Press [Enter] key.
 :	Page in these Operating Instructions or in the Reference Manual.
 :	Reference to the on-screen manuals.
 (Start) - [All Programs] :	Touch  (Start), and then touch [All Programs].

- Some illustrations are simplified to help your understanding and may look different from the actual unit.
- If you do not log on as an administrator, you cannot use some functions or cannot display some screens.
- Refer for the latest information about optional products to the catalogs, etc.
- In these instructions, the names and terms are referred as follows.
 - “Windows® 7 Professional 64-bit Service Pack 1” as “Windows” or “Windows 7”
 - DVD MULTI drive as “DVD drive”

■ Disclaimer

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■ On-screen Manual

For further information about the computer, you can refer to the on-screen manual.

● Reference Manual

The Reference Manual contains the practical information to help you fully enjoy the computer's performance.

● Important Battery Tips

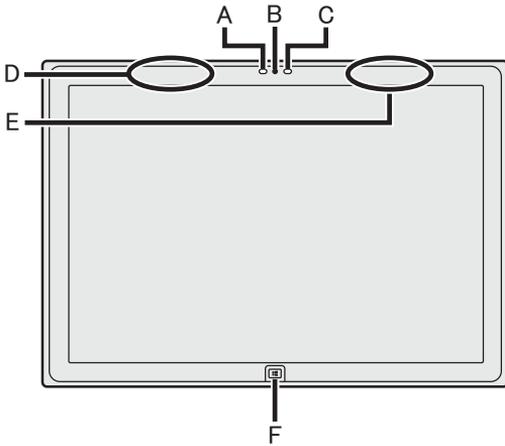
The Important Battery Tips will provide you with the battery information so that you can use the built-in battery in the optimum condition to obtain longer operation time.

To access the on-screen manuals, follow the steps below.

Double-touch [Manual Selector] on the desktop screen, and select the on-screen manual.

Description of Parts

Front side



Left side



Camera

→ *Reference Manual* "Camera"

A: Camera Indicator

B: Camera Lens

C: Ambient Light Sensor

The ambient light sensor is equipped with an automatic brightness adjustment function that adjusts the display screen. (→ page 11)

D: Wireless LAN Antenna / Bluetooth Antenna

<Only for model with wireless LAN>

<Only for model with Bluetooth>

→ *Reference Manual* "Wireless LAN"
"Bluetooth"

E: Wireless LAN Antenna

<Only for model with wireless LAN>

→ *Reference Manual* "Wireless LAN"

F: Windows Button

→ *Reference Manual* "Hardware Buttons"

G: Power Switch

H: Hardware Buttons

→ *Reference Manual* "Hardware Buttons"

I: LED Indicator

: Power Indicator

Off: Power off/Hibernation, Green: Power on, Blinking green: Sleep

: Drive status

: SD Memory Card status

(Blinking: During access or a password is requested)

→ *Reference Manual* "SD Memory Card"

: Battery status

→ page 10 "When the battery indicator does not light on"

→ *Reference Manual* "Battery Power"

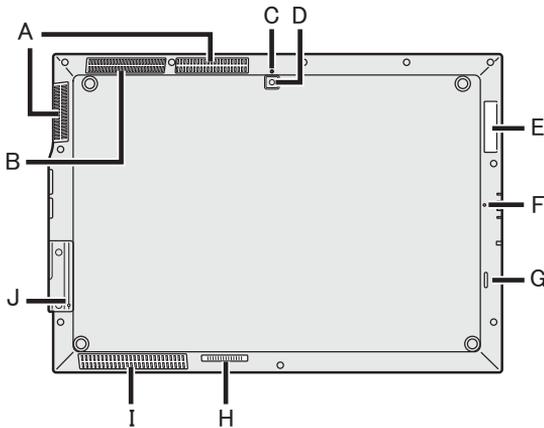
J: Security Hook

Pull out the security hook when passing through a security cable. Store the security hook during normal use.

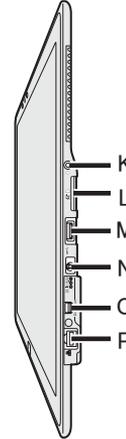
(The insulation coating has been applied to the metal part.)

For further information, read the manual that comes with the cable.

Rear side



Right side



A: Ventilation Hole (Exhaust)

B: Ventilation Hole (Intake)

Rear Camera

<Only for model with Rear Camera>

→ Reference Manual "Camera"

C: Camera Indicator

D: Camera Lens

E: Smart Card Slot

<Only for model with Smart Card Slot>

→ Reference Manual "Smart Card"

F: Microphone

G: Speaker

H: Expansion Bus Connector

→ Reference Manual "Cradle"

I: Ventilation Hole (Intake) / Speaker

J: Reset Button (For servicing by Panasonic)

K: Headphone Jack

A headphone can be connected.

L: SD Memory Card Slot

<Only for model with SD memory card slot>

→ Reference Manual "SD Memory Card"

M: USB3.0 Port

→ Reference Manual "USB Devices"

N: DC-IN jack

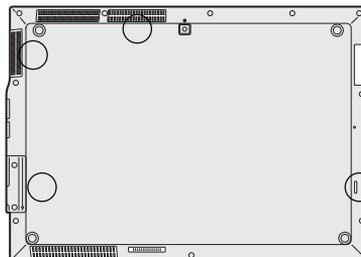
O: Mini DisplayPort

→ Reference Manual "External Display"

P: LAN port

→ Reference Manual "LAN"

This computer contains a magnet and magnetic products at the locations circled in the illustration at right. Avoid leaving metallic object or magnetic media in contact with these areas.



First-time Operation

■ Preparation

① Check and identify the supplied accessories.

If you do not find the described accessories, contact Panasonic Technical Support.

- AC Adaptor... 1
- AC Cord 1
- Soft Cloth . . . 1

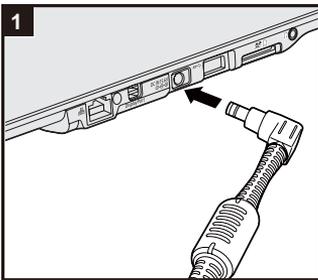


Model No: CF-AA5713A

→ Reference Manual
"Screen Input Operation"

- OPERATING INSTRUCTIONS (CD-ROM / -R) 1
- Safety Precautions and Regulatory Information 1
- Before using this computer 1

② Read the LIMITED USE LICENSE AGREEMENT before breaking the seal on the computer's packaging (→ page 25).



1 Connect your computer to a power outlet.

The battery charging starts automatically.

CAUTION

- Do not disconnect the AC adaptor until the first-time operation procedure is completed.
- When using the computer for the first time, do not connect any peripheral device except AC adaptor.
- **Handling the AC adaptor**
 - Problems such as sudden voltage drops may arise during periods of thunder and lightning. Since this could adversely affect your computer, an uninterruptible power source (UPS) is highly recommended unless running from the built-in battery alone.

2 Turn on the computer.

Press and hold the power switch (→ page 4) until the power indicator (→ page 4) lights.

CAUTION

- Do not press the power switch repeatedly or do not hold the power switch for four seconds or longer.

3 Select language.

CAUTION

- Carefully choose your language because you cannot change it later. If you set a wrong language, you need to reinstall Windows.
 - ① Select language and touch [OK].

The language setting will start by touching [OK] on the confirmation screen.

The language and OS setting will be completed in about 15 minutes.
 - ② When termination screen is displayed, touch [OK] to turn off the computer.

4 Setup Windows.

Follow the on-screen instructions.

- The computer restarts several times. Wait until the drive indicator  has turned off.
- After the computer is turned on, the screen remains black or unchanged for a while, but this is not a malfunction. Wait for a moment until the Windows setup screen appears.
- Setup of Windows will take approximately 20 minutes.
Go to the next step, confirming each message on the display.
- Follow the steps below.
 - ① When “Enable sensors” is displayed, touch [Enable this sensor].
 - ② When the [User Account Control] screen is displayed, touch [Yes].
 - ③ At the [Display Rotation Tool] confirmation screen, touch [Yes].
The computer restarts automatically, and the setting is enabled.
- You can set the Wireless Network after the setup of Windows is complete.

CAUTION

- You can change the user name, password, image and security setting after setup of Windows.
- Remember your password. If you forget the password, you cannot use Windows. Creating a password reset disk beforehand is recommended.
- Do not use the following words for user name: CON, PRN, AUX, CLOCK\$, NUL, COM1 to COM9, LPT1 to LPT9, @, &, space. In particular, if you create a user name (account name) that includes the “@” mark, a password will be requested at the log-on screen, even if no password has been set. If you try to log on without entering a password, “The user name or password is incorrect.” may be displayed and you will not be able to log on to Windows (→ page 22).

5 Create the recovery disc.

A recovery disc allows you to install OS and restore its factory default condition, in case, for example, the recovery partition of the flash memory is damaged. We recommend creating a recovery disc before you begin using the computer.

Refer to →  *Reference Manual* “Recovery Disc Creation Utility” about creating the disc.

NOTE

- You can create the recovery disk of the OS which is pre-installed at the time of purchase.

NOTE

● PC Information Viewer

This computer periodically records the management information of the flash memory, etc. The maximum data volume for each record is 1024 bytes.

This information is only used for estimating the cause when the flash memory goes down by any possibility. They are never sent to outside via network nor used for any other purpose except for the purpose described the above.

To disable the function, add the check mark for [Disable the automatic save function for management information history] in [Hard Disk Status] of PC Information Viewer, and touch [OK].

(→  *Reference Manual* “Checking the Computer’s Usage Status”)

- If the recovery partition is deleted, you cannot create Recovery Disc(s).

First-time Operation

■ Battery duration

Note that the computer consumes electricity even when the computer power is off. If the built-in battery is fully charged, the battery will fully discharge in the following period of time:

Status	Discharge period
In sleep	Approx. 4 days (Approx. 3 days with Wake Up from wired LAN function activated)
In hibernation	Approx. 49 days (Approx. 7 days with Wake Up from wired LAN function activated)
When power is off	Approx. 49 days (Approx. 7 days with Power On by LAN function activated)

The above table shows the battery duration while the USB port continuous charging function is not used.

The battery duration will slightly be longer if a LAN cable is not connected to the computer, even when Wake Up from wired LAN function is activated.

■ Before using wireless function

- ① Touch the Wireless Switch Utility icon to show the pop-up menu.
- ② Select ON for the device you want to enable.

■ To change the partition structure

You can shrink a part of an existing partition to create unallocated disk space, from which you can create a new partition. In the default setting, you can use a single partition.

- ① Touch  (Start) and long touch [Computer], then touch [Manage].
 - A standard user needs to enter an administrator password.
- ② Touch [Disk Management].
- ③ Long touch the partition for Windows ("c" drive in the default setting), and touch [Shrink Volume...].
 - The partition size depends on the computer specifications.
- ④ Input the size in [Enter the amount of space to shrink in MB] and touch [Shrink].
 - You cannot input a larger number than the displayed size.
 - To select [Reinstall to the OS related partitions.] in installing OS (→ page 17), 70 GB or more is necessary for [Total size after shrink in MB].
- ⑤ Long touch [Unallocated] (the shrunk space in the step ④) and touch [New Simple Volume...].
- ⑥ Follow the on-screen instructions to make the settings, and touch [Finish].
Wait until formatting is completed.

NOTE

- You can create an additional partition using remaining unallocated space or newly creating unallocated space.
- To delete a partition, long touch the partition and touch [Delete Volume...] in the step ③.

Turning On / Turning Off

Turning On

Press and hold the power switch  (→ page 4) until the power indicator  (→ page 4) lights.

NOTE

- Do not press the power switch repeatedly.
- The computer will forcibly be turned off if you press and hold the power switch for four seconds or longer.
- Once you turn off the computer, wait for ten seconds or more before you turn on the computer again.
- Do not perform the following operation until the drive indicator  turns off.
 - Connecting or disconnecting the AC adaptor
 - Pressing the power switch
 - Touching the screen or external mouse/keyboard

Turning Off

- ① Shut down the computer.
Touch  (Start) - [Shut down].

Precaution against Starting Up/Shutting Down

- Do not do the following
 - Connecting or disconnecting the AC adaptor
 - Pressing the power switch
 - Touching the screen or external mouse/keyboard

NOTE

- To conserve power, the following power saving methods are set at the time of purchase.
 - The screen automatically turns off after:
 - 10 minutes (when AC adaptor is connected) of inactivity
 - 5 minutes (when operating on battery power) of inactivity
 - The computer automatically enters sleep^{*1} after:
 - 20 minutes (when AC adaptor is connected) of inactivity
 - 15 minutes (when operating on battery power) of inactivity

^{*1} Refer to  *Reference Manual* “Sleep or Hibernation Functions” about resuming from sleep.

Handling and Maintenance

Operation environment

- Place the computer on a flat stable surface not subject to shock, vibration, and danger of dropping. Do not place the computer upright or turn it over. If the computer is exposed to an extremely strong impact, it may become damaged.
- Operating environment
 - Temperature: Operation : 5 °C to 35 °C
Storage : -20 °C to 60 °C
 - Humidity: Operation : 30% to 80% RH (No condensation)
Storage : 30% to 90% RH (No condensation)Even within the above temperature/humidity ranges, operation for a long time in extreme environments, smoking nearby, or operation in places where oil is used or where there is a lot of dust will result in the product deterioration and will shorten the product life.
- Do not place the computer in the following areas, otherwise the computer may be damaged.
 - Near electronic equipment. Image distortion or noise may occur.
 - In extremely high or low temperature.
- As the computer can become hot during operation, keep it away from items that are sensitive to heat.

Handling cautions

This computer is designed to minimize shock to parts such as the LCD and the flash memory drive, but no warranty is provided against any trouble caused by shock. Be extremely careful when handling the computer.

- When carrying the computer:
 - Turn off the computer.
 - Remove all external devices, cables, Smart Cards and other protruding objects.
 - Do not drop or hit the computer against solid objects.
 - Do not grip the display part.
- When you board an airplane, take the computer with you and never put it in your checked luggage. When using the computer on airplane, follow the airline's instructions.
- Avoid any harmful substances such as oil from getting into the touchscreen. The pointer may not work correctly.
- Be careful not to get injured by dropping or getting hit when carrying the computer.

■ When the battery indicator does not light on

The battery indicator may not light on even if the AC adaptor is correctly connected to the computer, due to the following reasons.

- The AC adaptor's protection function may be working. In this case, pull out the AC cord and wait for more than 1 minute before reconnecting the AC cord.

■ When using peripheral devices

Follow these instructions and the Reference Manual to avoid any damage to the devices. Carefully read the instruction manuals of the peripheral devices.

- Use the peripheral devices conforming to the computer's specifications.
- Connect to the connectors in the correct direction.
- If it is hard to insert, do not try forcibly but check the connector's shape, direction, alignment of pins, etc.
- If screws are included, fasten them securely.
- Remove the cables when you carry the computer. Do not pull the cables forcibly.

■ Preventing your computer from unauthorized use via wireless LAN/Bluetooth

<Only for model with wireless LAN/Bluetooth>

- Before using wireless LAN/Bluetooth, make the appropriate security settings such as data encryption.

■ Battery Recalibration

- The battery recalibration may take a long time due to the large battery capacity. This is not a malfunction.

<When performing "Battery Recalibration" after shutting down Windows>

- Full charge: Approximately 2.5 hours
- Complete discharge: Approximately 2 hours

When performing "Battery Recalibration" without shutting down Windows, it may take more time to charge / discharge.

■ Sensors

This computer is equipped with four sensors (acceleration sensor, gyro sensor, magnetic sensor, ambient light sensor), and you can use these sensors with any software that is compatible.

As the accuracy of each sensor output is dependent on the operating environment and other conditions, the results should only be used as a reference.

The acceleration sensor, gyro sensor, and magnetic sensor are located at the bottom left of the LCD. The detection results of each sensor may vary depending on how you are holding the computer, the application software you are using, and other factors.

● Automatic brightness adjustment

The computer is equipped with an automatic brightness adjustment function that adjusts the display screen based on the ambient light sensor. You can configure the automatic adjustment function as follows.

- ① Touch  (Start) - [Control Panel] - [Hardware and Sound] - [Power Options].
- ② Touch [Change plan settings] for the power plan currently used.
- ③ Touch [Change advanced power settings] and double-touch [Display].
- ④ Double-touch [Enable adaptive brightness], make necessary settings, and touch [OK].
Set each item to ON, and the brightness of the screen display will adjust automatically.

The ambient light sensor is located at the top of LCD.

The ambient light cannot be detected properly if this area is obstructed or dirty.

Handling and Maintenance

● Magnetic sensor

The magnetic sensor on the computer operates by detecting geomagnetism. Therefore, the magnetic sensor may not function properly and its readings may be inaccurate, especially in the following environments.

- Inside or near steel structures such as buildings or bridges
- Inside or near automobiles, or near train power lines
- Near metallic furniture or appliances
- When the AC adaptor or other peripheral devices are brought closer to the computer
- Near magnets, speakers, or other objects with strong magnetic fields

The magnetic directions indicated by the magnetic sensor may not be accurate immediately after purchase or in environments with poor magnetic fields.

In such cases, turn on the computer and move it as follows.

- ① Hold the computer so that its screen side is facing upward and level.
- ② While keeping the computer level, rotate it 90 degrees or more clockwise.
- ③ Return the computer to position ①, and rotate it 90 degrees or more counterclockwise.
- ④ Return the computer to position ①.
- ⑤ Tilt the computer 90 degrees or more to the left so that the left side of the computer tilts down.
- ⑥ Return the computer to position ①, and tilt it 90 degrees or more to the right so that the right side of the computer tilts down.

CAUTION

- Hold the computer firmly when moving it. Strong shocks from dropping the computer may result in damage.

Maintenance

If drops of water or other stains get on the surface of the LCD panel, wipe them off immediately. Failure to do so may result in staining.

To clean the LCD panel

Use the soft cloth included with the computer. (For further information, refer to “Suggestions About Cleaning the LCD Surface” →  *Reference Manual* “Screen Input Operation”.)

To clean areas other than the LCD panel

Wipe with a soft dry cloth such as gauze. When using detergent, dip a soft cloth in water-diluted detergent and wring it thoroughly.

CAUTION

- Do not use benzene, thinner, or rubbing alcohol since it may adversely affect the surface causing discoloration, etc. Do not use commercially-available household cleaners and cosmetics, as they may contain components harmful to the surface.
- Do not apply water or detergent directly to the computer, since liquid may enter inside of the computer and cause malfunction or damage.

Dispose of Computer

<For Europe and U.S.A./Canada>

Attention Customers

Don't remove the battery by yourself. The battery must be removed by qualified professionals. When disposing of this product, be sure to contact qualified professionals to remove the battery.

Attention Qualified professionals to remove the battery

Dispose of this product correctly in accordance with the local regulations after removing the battery as shown in the following procedure.

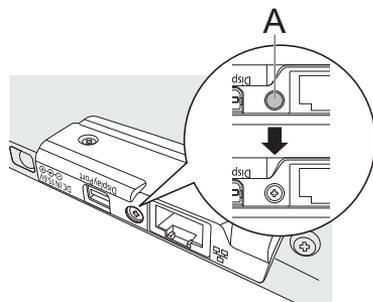
■ Preparation

- Remove all peripherals (SD memory card, etc.).
- Erase the stored data. (→  *Reference Manual* "Erasing Flash Memory Data")

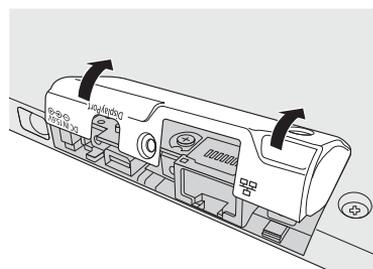
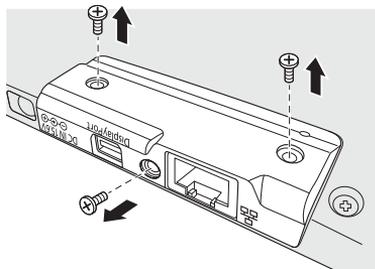
CAUTION

- Never disassemble the computer except before disposal.
- Refer to "Safety Precautions and Regulatory Information" for precautions when disposing of the computer.

1. Turn off the computer completely. (→ page 9)
 - Do not use sleep/hibernation.
2. While connecting the AC adaptor, press both volume buttons (+  and  -) at the same time for more than ten seconds.
The built-in battery's power output stops.
 - Disconnect the AC adaptor, and press the power button for 1 second or longer and confirm the computer does not start up.
3. Turn over the computer, and peel off the seal (A) on the side of Interface cover with a thin pointed tool.

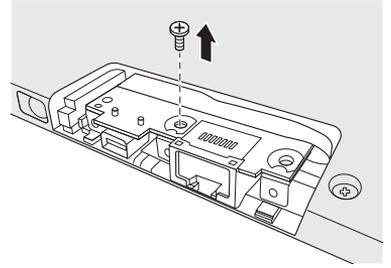


4. Remove the screws (3), and lift up Interface cover to remove.

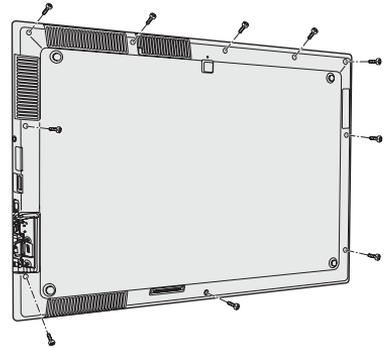


Handling and Maintenance

5. Remove the silver screw.

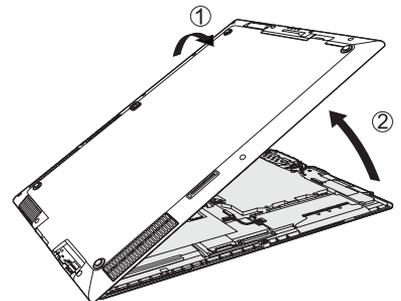


6. Remove the screws (10).



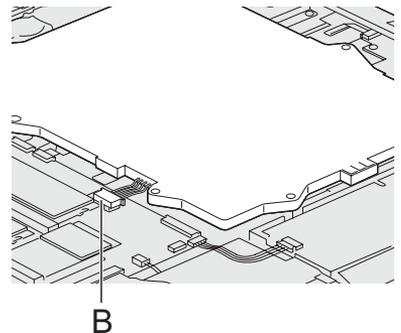
7. Unhook the claws on the upper part of the cover (①), and open the cover from the right side (②).

- The left side of the cover is connected to the computer with the cord. Do not pull the cord.

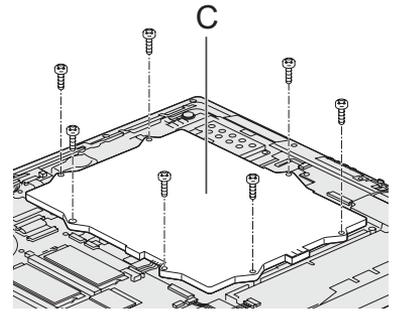


8. Disconnect the connector (B).

Insulate the connectors on the built-in battery by covering them with plastic tape, for example.



9. Remove the screws (7) that secures the built-in battery (C), and remove the built-in battery (C).



Installing Software

Installing software will return the computer to the default condition. When you install the software, the flash memory data will be erased.

Back up important data to other media or an external hard disk before installation.

CAUTION

- Do not delete the Recovery Partition on the flash memory. The Recovery Partition is not available to store data.

To check the Recovery Partition, perform the following methods.

- ① Touch  (Start) and long touch [Computer], then touch [Manage].
 - A standard user needs to enter an administrator password.
- ② Touch [Disk Management].

NOTE

- You can use the following buttons instead of the keyboard.

 — : ↓ key

+  : ↑ key

 : Enter key

 : F2 key (Default setting)

- Connect the AC adaptor and do not remove it until installation is complete.

Flash memory Recovery

You can reinstall the OS that was pre-installed at the time of purchase.

Preparation

- Remove all peripherals.

1 Turn on the computer, and touch the top left corner of the screen several times while [Panasonic] boot screen is displayed.

The Setup Utility starts up.

- If the [Panasonic] boot screen is not displayed, turn on the computer while touching the top left corner of the screen.
- If the password is requested, enter the Supervisor Password.

2 Write down all of the contents of the Setup Utility and touch [Exit] and double-touch [Load Default Values].

At the confirmation message, touch [Yes].

3 Touch [Exit] and double-touch [Save Values and Reboot].

At the confirmation message, touch [Yes].

Computer will restart.

4 Touch the top left corner of the screen several times while [Panasonic] boot screen is displayed.

The Setup Utility starts up.

- If the password is requested, enter the Supervisor Password.

5 Select the [Exit] menu, then double-touch [Recovery Partition].

6 Touch [Next].

7 Touch [Reinstall Windows.] and touch [Next].

The License Agreement screen appears.

8 Touch [Yes, I agree to the provisions above and wish to continue!] and touch [Next].

9 Touch [Next].

If the option is displayed, select the setting and touch [Next].

- [Reinstall Windows to the whole Disk to factory default.]

Select this option when you want to install Windows to the factory default. After installation, you can create a new partition. For how to create a new partition, refer to “To change the partition structure” (→ page 8).

- [Reinstall to the OS related partitions.]¹

Select this option when the flash memory has already been divided into several partitions. For how to create a new partition, refer to “To change the partition structure” (→ page 8).

You can keep the partition structure.

¹ This does not appear if Windows cannot be installed to the recovery partition and the area usable by Windows.

10 At the confirmation message, touch [YES].

11 Select language and touch [OK].

To cancel the recovery procedure, touch [CANCEL], and touch the **x** mark that appears at the top right corner of the screen.

12 At the confirmation message, touch [OK].

Installation starts according to the instructions on the screen. (It will take approximately 15 minutes.)

- Do not interrupt installation, for example by turning off the computer or other operation. Otherwise installation may become unavailable as Windows may not start up or the data may be corrupted.

13 When Ending process screen is displayed, touch [OK] to turn off the computer.

14 Turn on the computer.

- If the password is requested, enter the Supervisor Password.

15 Perform the “First-time Operation”, starting from step 4, “Setup Windows” (→ page 7).

16 Start the Setup Utility and change the settings as necessary.

17 Perform Windows Update.

Installing Software

■ Using Recovery Disc

Use the Recovery Disc in the following conditions.

- You have forgotten the administrator password.
- Installation is not complete. The recovery partition in the flash memory may be broken.

Preparation

- Prepare the following items:
 - Recovery Disc (➔  *Reference Manual* “Recovery Disc Creation Utility”)
 - USB DVD drive (optional) (refer to recent catalogs and other sources for information about the products available)
- Remove all peripherals (except for the USB DVD drive).

1 Connect the DVD drive to the USB port.

2 Start the Setup Utility.

Turn on the computer, and touch top left of the screen while [Panasonic] boot screen is displayed.

- If the [Panasonic] boot screen is not displayed, turn on the computer while touching top left of the screen.
- If the password is requested, enter the Supervisor Password.

3 Write down all of the contents of the Setup Utility and touch [Exit] and double-touch [Load Default Values].

At the confirmation message, touch [Yes].

4 Check the [UEFI Boot] setting of the Setup Utility.

When the recovery disc for Windows 7 is used: [Disabled]

5 Set the Recovery Disc into the DVD drive.

6 Touch [Exit] and double-touch [Save Values and Reboot].

At the confirmation message, touch [Yes].
The computer will restart.

7 Press (Rotation lock) button while [Panasonic] boot screen is displayed.

The Setup Utility starts up.

- If the password is requested, enter the Supervisor Password.

8 Touch [Exit], then double-touch your DVD drive in [Boot Override].

The computer will restart.

9 Touch [Next].

10 Touch [Reinstall Windows.] and touch [Next].

11 At the License Agreement screen, touch [Yes, I agree to the provisions above and wish to continue!] and touch [Next].

12 Select the setting and touch [Next].

- [Reinstall with HDD recovery partition.]
Standard recovery method.
You can use recovery from Recovery Partition.
- [Reinstall without HDD recovery partition.]
Increase usable HDD size.
You can NOT use recovery from Recovery Partition.
When this option is selected, you can no longer create Recovery Disc(s) after the recovery operation.

CAUTION

- Carefully choose above item because you cannot change it later.

- 13 Touch [Next].**
- 14 At the confirmation message, touch [YES].**
- 15 Select language and touch [OK].**

To cancel the recovery procedure, touch [CANCEL], and touch the  mark that appears at the top right corner of the screen.
- 16 At the confirmation message, touch [OK].**

Installation starts according to the instructions on the screen. (It will take approximately 60 minutes.)

 - Do not interrupt installation, for example by turning off the computer.
Otherwise installation may become unavailable as Windows may not start up or the data may be corrupted.
- 17 When Ending process screen is displayed, remove the Recovery Disc and DVD Drive.**
- 18 Touch [OK] to turn off the computer.**
- 19 Turn on the computer.**
 - If the password is requested, enter the Supervisor Password.
- 20 Perform the “First-time Operation”, starting from step 4, “Setup Windows” (→ page 7).**
- 21 Start the Setup Utility and change the settings as necessary.**
- 22 Perform Windows Update.**

Troubleshooting (Basic)

Follow the instructions below when a problem has occurred. There is also an advanced troubleshooting guide in the “Reference Manual”. For a software problem, refer to the software’s instruction manual. If the problem persists, contact Panasonic Technical Support. You can also check the computer’s status in the PC Information Viewer

(→  *Reference Manual* “Troubleshooting (Advanced)”).

■ Starting Up

<p>Cannot start up. The power indicator or battery indicator is not lit.</p>	<ul style="list-style-type: none"> ● Connect the AC adaptor. ● Remove the AC adaptor, and then connect it again. ● If a device is connected to the USB port, disconnect the device, or set [USB Port] or [Legacy USB Support] to [Disabled] in the [Advanced] menu of the Setup Utility. ● Check the [UEFI Boot] setting of the Setup Utility. [UEFI Boot] should be set to [Disabled].
<p>You have forgotten the password.</p>	<ul style="list-style-type: none"> ● Supervisor Password or User Password: Contact Panasonic Technical Support. ● Administrator password: <ul style="list-style-type: none"> • If you have a password reset disk, you can reset the administrator password. Set the disk and enter any wrong password, then follow the on-screen instructions and set a new password. • If you do not have a password reset disk, install (→ page 16) and set up Windows, and then set a new password.
<p>“Remove disks or other media. Press any key to restart” or a similar message appears.</p>	<ul style="list-style-type: none"> ● If a device is connected to the USB port, disconnect the device, or set [USB Port] or [Legacy USB Support] to [Disabled] in the [Advanced] menu of the Setup Utility. ● If the problem persists after removing the disk, it may be a flash memory failure. Contact Panasonic Technical Support.
<p>Windows startup and operation is slow.</p>	<ul style="list-style-type: none"> ● Start the Setup Utility (→  <i>Reference Manual</i> “Setup Utility”) to return the Setup Utility settings (excluding the passwords) to the default values. Start the Setup Utility and make the settings again. (Note that the processing speed depends on the application software, so this procedure may not make Windows faster.) ● If you installed a resident software after purchase, turn off the residence.
<p>The date and time are incorrect.</p>	<ul style="list-style-type: none"> ● Make the correct settings. <ol style="list-style-type: none"> ① Open the Control Panel. ② Touch [Clock, Language, and Region] - [Date and Time]. ③ Touch [Change time zone...]. ④ Select the time zone, then touch [OK]. ⑤ Touch [Change date and time...], then set the date and time. ● If the problem persists, the internal clock battery may need to be replaced. Contact Panasonic Technical Support. ● When the computer is connected to LAN, check the date and time of the server. ● The 2100 A.D. or later year will not be correctly recognized on this computer.
<p>[Executing Battery Recalibration] screen appears.</p>	<ul style="list-style-type: none"> ● The Battery Recalibration was canceled before Windows was shut down last time. To start up Windows, turn off the computer by the power switch, and then turn on.

■ Starting Up

<p>[Enter Password] does not appear when resuming from sleep/hibernation.</p>	<ul style="list-style-type: none"> ● Select [Enabled] in [Password On Resume] in the [Security] menu of the Setup Utility (→  Reference Manual "Setup Utility"). ● The Windows password can be used instead of the password set in the Setup Utility. <ol style="list-style-type: none"> ① Open the Control Panel. Touch  (Start) - [Control Panel]. ② Touch [System and Security] - [Power Option] - [Require a password on wakeup] and add a check mark for [Require a password].
<p>Cannot resume.</p>	<ul style="list-style-type: none"> ● One of the following operations may have been carried out. Press the power switch to turn on the computer. Data not saved will be lost. <ul style="list-style-type: none"> • In sleep mode, the AC adaptor was disconnected, or a peripheral was connected or disconnected. • The power switch was pressed for four seconds or longer to forcibly turn off the computer. ● An error may occur when the computer automatically enters the sleep or hibernation mode while the screensaver is active. In this case, turn off the screensaver or change the pattern of the screensaver.
<p>Other startup problems.</p>	<ul style="list-style-type: none"> ● Start the Setup Utility (→  Reference Manual "Setup Utility") to return the Setup Utility settings (excluding the passwords) to the default values. Start the Setup Utility and make the settings again. ● Remove all peripheral devices. ● Check to see if there was a disk error. <ol style="list-style-type: none"> ① Remove all peripheral devices including an external display. ② Open "Computer". Touch  (Start) - [Computer]. ③ Long touch [Windows (C:)], and touch [Properties]. ④ Touch [Tools] - [Check now...]. <ul style="list-style-type: none"> • A standard user needs to enter an administrator password. ⑤ Select the option in [Check disk options] and touch [Start]. ⑥ Touch [Schedule disk check] and restart the computer. ● Connect the external keyboard and start the computer in Safe Mode, then check the error details. When the [Panasonic] boot screen disappears^{*1} at startup, press and hold F8 until the Windows Advanced Options Menu is displayed. Select the Safe Mode and press Enter. <p>^{*1} When [Password On Boot] is set to [Enabled] in the [Security] menu of the Setup Utility, [Enter Password] appears after the [Panasonic] boot screen disappears. As soon as you enter the password and press Enter, press and hold F8.</p>

Troubleshooting (Basic)

■ Entering Password

<p>Even after entering the password, password input screen is displayed again.</p>	<p><Only if the external keyboard is connected></p> <ul style="list-style-type: none"> ● The computer may be in ten-key mode. Disable the ten-key mode, and then input. ● The computer may be in Caps Lock mode. Disable the Caps Lock mode, and then input.
<p>Cannot log on to Windows. ("The user name or password is incorrect." is displayed.)</p>	<ul style="list-style-type: none"> ● The user name (account name) includes an "@" mark. <ul style="list-style-type: none"> - If another user account name exists: Log on to Windows using another user account name, and delete the account name that includes "@". Then create a new account name. - If no other account name exists: You need to reinstall Windows (→ page 16).

■ Shutting down

<p>Windows does not shut down.</p>	<ul style="list-style-type: none"> ● Remove the USB devices. ● Wait one or two minutes. It is not a malfunction.
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■ Display

<p>No display.</p>	<ul style="list-style-type: none"> ● The external display may be selected. Operate on the external display by using the external keyboard/mouse. <ol style="list-style-type: none"> ① Right-click the desktop, and then click [Screen resolution]. ② Select the operating mode in [Multiple displays]. ③ Click [Apply]. ④ Click [Keep changes]. ⑤ Click [OK]. ● When using an external display, <ul style="list-style-type: none"> • Check the cable connection. • Turn on the display. • Check the settings of external display. ● The display is turned off by the power-saving function. To resume, touch the screen. ● The computer entered sleep or hibernation by the power-saving function. To resume, press the power switch.
<p>The screen is dark.</p>	<ul style="list-style-type: none"> ● The screen is darker when the AC adaptor is not connected. Open the Dashboard for Panasonic PC and adjust the brightness. As you increase the brightness, battery consumption increases. You can separately set the brightness for when the AC adaptor is connected and when not connected. ● Under factory default settings, the brightness of the display screen will adjust automatically based on the ambient light detected by the ambient light sensor. You can adjust the settings for this sensor (→ page 11).

■ Display

The screen is disordered.	<ul style="list-style-type: none"> ● Changing the number of display colors and resolution may affect the screen. Restart the computer. ● Connecting/disconnecting an external display may affect the screen. Restart the computer.
The external display does not work normally.	<ul style="list-style-type: none"> ● If the external display does not support the power saving function, it may not work normally when the computer enters the power saving mode. Turn off the external display.
Cannot rotate the display.	<ul style="list-style-type: none"> ● The application program currently running may not support the image rotation. Quit the program, and then try to rotate the image. This can ameliorate the status. ● When the automatic rotation is off, screen display does not rotate automatically. ● When an external display is connected to the computer and the computer is rotated while in the [Extend] mode: The screen display on the external display does not rotate. The screen display on the internal LCD remains landscape, and does not rotate.

■ Screen

The pointer does not work.	<ul style="list-style-type: none"> ● When using the external mouse, connect it correctly. ● Restart the computer using the external keyboard/mouse. ● If the computer does not respond to external keyboard/mouse commands, read “No response” (→ page 24).
The touchscreen does not work properly.	<ul style="list-style-type: none"> ● Make sure that the grounding of the AC plug is connected properly. ● If a device that emits strong radio waves near this product, should be kept away. ● When the computer enters Safe Mode, please operate it with an external mouse. ● The problem may be improved by adjusting the sensitivity using the following application software. <ul style="list-style-type: none"> ① Touch  (Start) - [All Programs] - [ELAN] - [Touch Screen Control Panel]. Follow the instructions on the screen.
Want to disable touch operation.	<ul style="list-style-type: none"> ● Using the following application software disables touchscreen operation. <ul style="list-style-type: none"> ① Touch  (Start) - [All Programs] - [Panasonic] - [Touch Screen Switch Utility]. Follow the instructions on the screen.

■ On-screen Manual

“This page cannot be displayed” or “Script Error” displayed.	<ul style="list-style-type: none"> ● Touch other page in on-screen manual. ● Quit and restart the on-screen manual.
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Troubleshooting (Basic)

■ Others

No response.	<ul style="list-style-type: none">● Open Task Manager and close the software application that is not responding.● An input screen (e.g., password input screen at startup) may be hidden behind another window. Touch the application icons at the bottom of the screen to check.● Press the power switch for four seconds or longer to shut down the computer, and then press the power switch to turn it on. If the application program does not work normally, uninstall and reinstall the program. To uninstall,<ol style="list-style-type: none">① Open the Control Panel.<ol style="list-style-type: none">1. Touch  (Start) - [Control Panel].② Touch [Programs] - [Uninstall a program].● When connecting a peripheral device to use with this computer for the first time, updating the driver may take a few minutes. Please wait it is completed.● By a strong radio waves noise from the outside, touchscreen may not work properly.<ul style="list-style-type: none">• If a device that emits strong radio waves near this product, should be kept away.• Make sure that the grounding of the AC plug is connected properly.• If source of the radio waves cannot be kept away, please operate it with an external mouse.
Cannot connect to a network.	<ul style="list-style-type: none">● Set the device ([Wireless LAN] / [Bluetooth] of [Wireless Configuration]) to [Enabled] in the [Advanced] menu of the Setup Utility (Wireless Configuration).

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Specifications

This page provides the specifications for the basic model.
The model number is different according to the unit configuration.

- To check the model number:
Check the bottom of the computer or the box the computer came in at the time of purchase.
- To check CPU speed, memory size and the flash memory drive size:
Run the Setup Utility (→  *Reference Manual* "Setup Utility") and select [Information] menu.
[Processor Speed]: CPU speed, [Memory Size]: Memory size, [Hard Disk]: Flash Memory drive size

■ Main Specifications

Model No.	UT-MA6027HMZ	
CPU	Intel® Core™ i7-3687U vPro™ Processor (4 MB ¹ cache, up to 3.30 GHz) with Intel® Turbo Boost Technology	
Chipset	Mobile Intel® QM77 Express Chip set	
Video controller	NVIDIA® QUADRO® K1000M	
Memory ¹	16 GB	
Video Memory ^{1*2}	2 GB dedicated VRAM	
Storage ³	Flash memory drive: 256 GB	
	Approx. 25 GB is used as a partition with flash memory recovery tools. (Users cannot use this partition.) Approx. 1 GB is used as a partition with system tools. (Users cannot use this partition.)	
Display Method	20" IPSα, 230ppi, Aspect ratio 15:10	
Internal LCD	16,777,216 colors (3840 × 2560 dots)	
External Display ⁴	DisplayPort™ ⁵	16,777,216 colors (3840 × 2160 dots Max.)
	HDMI ⁶	16,777,216 colors (1920 × 1200 dots Max.)
Wireless LAN	Intel® Centrino® Advanced-N 6235 (a/b/g/n) (→ page 28)	
LAN	IEEE 802.3 10Base-T/IEEE 802.3u 100Base-TX/IEEE 802.3ab 1000Base-T	
Bluetooth ⁷	→ page 29	
Sound	Speaker	WAVE and MIDI playback, Intel® High Definition Audio subsystem support, Stereo speaker
	Microphone	Internal mic for camera
Security Chip	TPM (TCG V1.2 compliant) ⁸	
Camera	Front	1280 × 720 dots, 30 fps (Video)
	Rear	1280 × 720 dots, 30 fps (Video) / 2592 × 1944 dots (Still)
Sensor	Ambient light sensor	Equipped
	Magnetic sensor	
	Gyro sensor	
	Acceleration sensor	
Card Slot	Smart Card ⁹	x 1
	SD Memory Card ¹⁰	x 1
Interface	USB port 3.0 × 1 ¹¹ , LAN port (RJ-45), Mini DisplayPort™, Expansion Bus Connector, Headphone (Miniature jack, 3.5 DIA / Impedance 32 Ω, Output Power 4 mW × 2, Stereo)	

Specifications

■ Main Specifications

Model No.		UT-MA6027HMZ	
Pointing Device		Capacitive Multi touch screen (up to 10 touch)/ Electronic Touch Pen (optional)	
Power Supply		AC adaptor or internal battery	
AC Adaptor ^{*12}		Input: 100 V to 240 V AC, 50 Hz/60 Hz, Output: 15.6 V DC, 7.05 A	
Internal Battery		Li-ion 11.1 V, 4770 mAh (typ.), 4590 mAh (min.) (Not replaceable by user)	
Operating Time ^{*13}		Approx. 2.5 hours	
Charging Time ^{*14}	Power on	Approx. 4.0 hours	
	Power off	Approx. 2.5 hours	
Power Consumption ^{*15}		Approx. 65 W ^{*16} / Approx. 105 W (maximum when recharging in the ON state)	
Physical Dimensions (W × D × H)		475 mm × 334 mm × 12.5 mm (without protruding parts)	
Weight		Approx. 2.54 kg	
Environment	Operating	Temperature	5 °C to 35 °C
		Humidity	30% to 80% RH (No condensation)
	Storage	Temperature	-20 °C to 60 °C
		Humidity	30% to 90% RH (No condensation)

■ Software

Base OS	Windows® 8.1 Pro 64-bit ^{*17}
Installed OS ^{*18}	Windows® 7 Professional 64-bit Service Pack 1 ^{*19}
Pre-installed Software ^{*18}	PC Information Viewer, Battery Recalibration Utility, Hand Writing Utility, Infineon TPM Professional Package [®] ^{*20} , Dashboard for Panasonic PC, Recovery Disc Creation Utility, Power Plan Extension Utility, Camera Utility, Manual Selector, Wireless Switch Utility, Intel® PROSet/Wireless Software, Bluetooth Stack for Windows by Toshiba, Touch Screen Control Panel, Touch Screen Switch Utility Aptio Setup Utility ^{*21} , PC-Diagnostic Utility, Hard Disk Data Erase Utility ^{*22}

■ Wireless LAN

Data Transfer Rates	IEEE802.11a: 54/48/36/24/18/12/9/6 Mbps (automatically switched) ^{*23} IEEE802.11b: 11/5.5/2/1 Mbps (automatically switched) ^{*23} IEEE802.11g: 54/48/36/24/18/12/9/6 Mbps (automatically switched) ^{*23} IEEE802.11n ^{*24} : (HT20) GI ^{*25} = 400ns: 150/130/115/86/72/65/57/43/28/21/14/7 Mbps (automatically switched) ^{*23} GI ^{*25} = 800ns: 130/117/104/78/65/58/52/39/26/19/13/6 Mbps (automatically switched) ^{*23} (HT40) GI ^{*25} = 400ns: 300/270/240/180/150/135/120/90/60/45/30/15 Mbps (automatically switched) ^{*23} GI ^{*25} = 800ns: 270/243/216/162/135/121/108/81/54/40/27/13 Mbps (automatically switched) ^{*23}
Standards Supported	IEEE802.11a / IEEE802.11b / IEEE802.11g / IEEE802.11n

■ Wireless LAN

Transmission method	OFDM system, DSSS system
Wireless Channels Used	IEEE802.11a: Channels 36/40/44/48/52/56/60/64/100/104/108/112/116/120/124/128/132/136/140 IEEE802.11b / IEEE802.11g: Channels 1 to 13 IEEE802.11n: Channels 1-13/36/40/44/48/52/56/60/64/100/104/108/112/116/120/124/128/132/136/140
RF Frequency Band	IEEE802.11a: 5.18 GHz - 5.32 GHz, 5.5 GHz - 5.7 GHz IEEE802.11b / IEEE802.11g: 2.412 GHz - 2.472 GHz IEEE802.11n: 2.412 GHz - 2.472 GHz, 5.18 GHz - 5.32 GHz, 5.5 GHz - 5.7 GHz

■ Bluetooth*7

Bluetooth Version	4.0
	Classic mode / Low Energy mode
Transmission method	FHSS system
Wireless Channels Used	Channels 1 to 79 / Channels 0 to 39
RF Frequency Band	2.402 GHz - 2.480 GHz

*1 1 MB = 1,048,576 bytes/1 GB = 1,073,741,824 bytes

*2 A segment of the main memory is allotted automatically depending on the computer's operating status. The size of the Video Memory cannot be set by the user.

*3 1 MB = 1,000,000 bytes/1 GB = 1,000,000,000 bytes. Your operating system or some application software will report as fewer GB.

*4 Selectable resolution depends on the specifications of the external display. Display may be impossible using some connected external displays.

*5 Use the DisplayPort cable with a ferrite core.

*6 Only when connected to Cradle (optional).

The Duplicate mode is not available. DRM(Digital Rights Management) contents are not available through HDMI connector of Cradle.

*7 Does not guarantee operation of all Bluetooth peripherals.

*8 Only for model with TPM.

Double-touch [Manual Selector] on the desktop, and select "Installation Manual for Trusted Platform Module (TPM)".

*9 Only for model with Smart Card slot.

*10 Operation has been tested and confirmed using Panasonic SD Memory Card with a capacity of up to 2 GB, Panasonic SDHC Memory Card with a capacity of up to 32 GB, and Panasonic SDXC Memory Card with a capacity of up to 64 GB.

Operation on other SD equipment is not guaranteed.

*11 Does not guarantee operation of all USB-compatible peripherals.

*12 The AC adaptor is compatible with power sources up to 240 V AC adaptor.

*13 Measured at LCD brightness: 60 cd/m²

Varies depending on the usage conditions, or when an optional device is attached.

*14 Varies depending on the usage conditions.

*15 Approx. 0.5 W when the battery is fully charged (or not being charged) and the computer is OFF.

Even when the AC adaptor is not connected to the computer, power is consumed (Max. 0.3 W) simply by having the AC adaptor plugged into an AC outlet.

*16 Rated power consumption^{23-E-1}

*17 Contact Panasonic Technical Support about upgrading the OS.

*18 Operations of this computer are not guaranteed except for the pre-installed OS and the OS which is installed by using the flash memory recovery and the recovery disc.

*19 This system is preinstalled with Windows 7 Professional software and also comes with a license for Windows 8.1 Pro software.

You may only use one version of the Windows software at a time. Switching between versions will require you to uninstall one version and install the other version.

*20 Must be installed before use.

*21 In this manual, the "Aptio Setup Utility" is referred to as "Setup Utility".

*22 Perform on the recovery disc. Alternatively perform on the flash memory recovery.

*23 It does not correspond to IEEE802.11a+b+g+n standards.

Actual speeds may differ.

*24 Available when set to "WPA-PSK", "WPA2-PSK" or "none".

*25 Only available when HT40 enabled by the computer and access point which associated supports HT40.

Standard Limited Warranty

For Europe

Panasonic System Communications Company Europe

Panasonic System Communications Company Europe (referred to as “Panasonic”) will repair this product (other than software, which is treated in a different section of this warranty) with new or refurbished parts, from the date of original purchase in the event of a defect in materials or workmanship. This warranty only applies to new Panasonic Toughbooks purchased in the EEA and Switzerland and Turkey.

Panasonic (or its authorised Service Provider) target to repair your equipment within 48 hours from its receipt in our service centre.

Additional charges may apply for shipment to countries outside of the European Union. Panasonic will use all reasonable endeavours to ensure this service.

This warranty only covers failures due to defects in materials or workmanship which occur during normal use for the applicable Service Agreement Period listed below. In the event that any product (or part thereof) is replaced, Panasonic shall transfer ownership of the replacement product (or part) to the customer and the customer shall transfer ownership of the replaced product (or part) to Panasonic.

Service Agreement Period - from original date of purchase

- Toughbooks (and every accessory included in the original packaging except the battery) - 3 years
- Toughpads (and every accessory included in the original packaging except the battery) - 3 years
- Accessories included in the original package - 3 years
- Additional peripherals manufactured by Panasonic (including media bay devices such as CD-Rom drives) - 1 year
- Batteries - 6 months. Panasonic Warranty covers the battery for six months. A battery is considered good if it maintains 50% of its charge capacity during the warranty period. If a battery is returned under this contract and testing determines that it has charge capacity greater than 50%, the battery will be returned with an invoice for the retail purchase price of a new battery.

This warranty is extended solely to the original purchaser. A purchase receipt or other proof of date of original purchase will be required before warranty performance is rendered.

Limits and Exclusions:

This warranty does not cover and shall be void for:

- Broken or cracked LCD screen.
- Defective pixel in notebook displays and LCD screens within 0.002%
- Damage that is attributable to fire, theft or acts of God.
- Damage caused by environmental influences (electrical storms, magnetic fields, etc.).
- Damage which has not been caused during normal operation
- Repair of damage that is cosmetic only or does not affect product functionality such as wear and tear, scratches and dents.
- Failures caused by products not supplied by Panasonic.
- Failures resulting from alteration, accidental damage, casualty, misuse, abuse or neglect.
- Introduction of liquid or other foreign matter into the unit.
- Improper installation, operation or maintenance.
- Improper connections with peripherals.
- Maladjustment of consumer controls such as function settings.
- Modification or service by anyone other than Panasonic or its approved Service Providers.
- Products used as short term rental or leased equipment.
- Products whose serial number has been removed making the unit warranty condition impossible to clearly determine.

THIS PRODUCT IS NOT INTENDED FOR USE AS, OR AS PART OF, NUCLEAR EQUIPMENT/ SYSTEMS, AIR TRAFFIC CONTROL EQUIPMENT/SYSTEMS, OR AIRCRAFT COCKPIT EQUIPMENT/SYSTEMS. PANASONIC WILL NOT BE RESPONSIBLE FOR ANY LIABILITY RESULTING FROM THE USE OF THIS PRODUCT ARISING OUT OF THE FOREGOING USES.

There are no other express warranties except as listed above.

We strongly recommend that customers backup their data before sending back their unit to an Authorised Service Provider.

Panasonic shall not be liable for loss of data or other incidental or consequential damages resulting from the use of this product, or arising out of any breach of this warranty. All express and implied warranties, including the warranties of satisfactory quality and fitness for a particular purpose are limited to the applicable warranty period set forth above. Panasonic shall not be liable for any indirect, special or consequential loss or damage (including without limitation any loss of profits) arising from the use of this product or for any breach of this warranty.

This limited warranty gives you specific legal rights, and you may have other rights that vary from country to country. You must consult the applicable country laws for a full determination of your rights. This limited warranty is in addition to, and does not affect any rights arising out of any contract of sale or by statute.

Panasonic System Communications Company Europe

Data Storage Media

Data Storage Media is the media on which the Operating System, drivers and programs originally installed by Panasonic on the main unit are stored. This media is originally provided with the unit.

Panasonic warrants to you only that the disc(s) or other media on which the Programs are furnished will be free from defects in material and workmanship under normal use for a period of sixty (60) days from the date of delivery thereof to you, as evidenced by your purchase receipt.

This is the only warranty Panasonic makes to you. Panasonic does not warrant that the functions contained in the Programs will meet your requirements or that the operation of the Programs will be uninterrupted or error free.

Panasonic's entire liability and your exclusive remedy under this warranty shall be limited to the replacement of any defective disk or other media which is returned to Panasonic's authorized Service Centre, together with a copy of the purchase receipt, within the aforesaid warranty period.

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