




## ● Others (continued)

<p><b>Problem with Web page display (no display; display is completely white; advertisements, logon, and other pop-ups are not displayed)</b></p>	<ul style="list-style-type: none"> <li>● In Windows XP, security functions have been strengthened with regard to Web contents. One of these is the “Pop-up Blocker,” which may prevent some Web pages from being displayed. If you have any problems with Web page displays (e.g., if a page cannot be displayed correctly on Internet Explorer), check the contents of the message window displayed below the address bar (called the “Information Bar”). The Information Bar shows the information that has been suppressed by Internet Explorer. <ul style="list-style-type: none"> <li>• If the message “Pop-up blocked” is displayed: Select the message, and select “Temporarily Allow Pop-ups.” The blocked Popup will be displayed temporarily.</li> <li>• If the message “This site might require the following ActiveX control...” is displayed: <ol style="list-style-type: none"> <li>1 Select the message, and select “Install ActiveX Control.”</li> <li>2 Check “Name” and “Publisher” on the [Security Warning] screen, and execute the installation.</li> </ol> </li> <li>• If you cannot find the Information Bar: If you need to display the page, select the Web page link while pressing <b>Ctrl</b>. The pop-up blocker function will be temporarily disabled.</li> </ul> </li> </ul>
<p><b>Images in HTML e-mail messages are not displayed in Outlook Express</b></p>	<ul style="list-style-type: none"> <li>● In Windows XP, there is a function that blocks image displays in HTML e-mail messages. To display images in HTML e-mail messages, it is necessary to access the sender’s server, and this may cause problems in the computer. Preventing these images from appearing can decrease the risk of attack from viruses etc. If you need to display images, select the segment where the message “Some pictures have been blocked?” is displayed. The images can be displayed temporarily.</li> </ul>
<p><b>Cannot read attachment file in Outlook Express (cannot save file)</b></p>	<ul style="list-style-type: none"> <li>● If a message received in Outlook Express has contained an attachment file with an extension such as “.exe” or “.scr” (potentially unsafe files), Windows XP blocks those files. If you need to read the files, select [Tools] - [Options] - [Security] and remove the check mark from [Do not allow attachments to be saved or opened that could potentially be a virus].</li> </ul>
<p><b>The message “Your computer might be at risk” is displayed</b></p>	<ul style="list-style-type: none"> <li>● This message is displayed by the “Security Center” function in Windows XP. The “Security Center” is a function that monitors the level of safety in Windows security settings in order to operate the computer safely, for example, with regard to antivirus measures. It checks the following three items regularly, and displays messages until the settings are made at an appropriate level of safety. <ul style="list-style-type: none"> <li>• Firewall: Is the Windows Firewall enabled?</li> <li>• Automatic Updates: Is the automatic Windows Update function enabled?</li> <li>• Virus Protection: Has antivirus software been installed, has the latest version of the antivirus software been installed, and is the real-time search function enabled (ON)?</li> </ul> </li> <li>● The message “Your computer might be at risk” is displayed by the “Security Center” function, and does not indicate an error or malfunction. The “Security Center” function checks the above three items to ensure that your computer can be used safely, and notifies the user if the settings are not at an appropriate level of safety. You can continue to use the computer even if these messages continue to be displayed, but we recommend that you follow the procedures below to minimize damage from viruses. <ol style="list-style-type: none"> <li>1 Read the message.</li> <li>2 Select  (red icon) on the taskbar.</li> <li>3 The [Windows Security Center] screen will be displayed. Select [Recommendations] in [Firewall] or [Virus Protection], or select [Turn on Automatic Updates] in [Automatic Updates]. If measures are not required, [Recommendations] or [Turn on Automatic Updates] will not be displayed.</li> <li>4 Execute the appropriate measures, following the instructions in the [Recommendation] screen.</li> </ol> </li> </ul>

# Dealing with Problems (Summary)

## ● Others (continued)

 (yellow icon) is displayed	<ul style="list-style-type: none"><li>● This message is displayed because the “Automatic Updates” setting in the “Security Center” is disabled or is not set. (Settings have not been made at the time of purchase.) “Automatic Updates” is a function that regularly checks whether high-priority update programs (security updates, etc.) have been provided to Windows Update, and automatically installs these programs to maintain Windows in its latest condition. You can continue using the computer even if these messages continue to be displayed, but we recommend that “Automatic Updates” is set as [Automatic] to maintain its latest condition.<ol style="list-style-type: none"><li>1 Read the message.</li><li>2 Select  (yellow icon) on the taskbar. The [Automatic Updates] screen will be displayed.</li><li>3 Select [More Options], and set the Automatic Updates to [Automatic].</li></ol></li></ul>
Some applications do not work properly	<ul style="list-style-type: none"><li>● Some software applications installed after the time of purchase are not compatible with Windows XP Service Pack 2. Refer to software maker’s homepage or other sources.</li><li>● If a network-used program is not compatible, also refer to “Cannot start a network-used program...” (☞ page 30)</li></ul>

# Reinstalling Software

When reinstallation procedure is performed, the contents of the hard disk will be erased. Be sure to back up any critical data on your hard disk to another media or to an external hard disk before running the reinstallation procedure.

The reinstallation procedure will return the computer to its original condition.

Even if a hard disk backup area has been created, this backup area will be erased, and all the backed up data will be lost. (This is not the case when Windows is reinstalled in the first partition.)

- If you have created partitions for data, the data may be erased or become corrupt as a result of the reinstallation procedure.

## Before Reinstallation

### ● Preparing

- Product Recovery CD-ROM (included)
- Panasonic CD/DVD drive (optional: Confirm the latest information on optional products in catalogs, etc.)

### ● Important

- Before the reinstallation procedure, remove all peripherals (except for the CD/DVD drive).
- Be sure the AC adaptor is connected until the reinstallation procedure is completed.

## Reinstalling

- 1 Turn off the computer and insert the CD/DVD drive into the multimedia pocket. (Reference “Multimedia Pocket” in the Reference Manual)
- 2 Turn on the computer, and press **(F2)** while [Panasonic] boot screen is displayed.  
The Setup Utility will start up.  
If the password has been set, enter the Supervisor Password.
- 3 Write down all of the contents of the Setup Utility and then press **(F9)**.  
At the confirmation message, select [Yes] and press **(Enter)**.
- 4 Select [Boot] menu, then select [CD/DVD Drive] and press **(F6)** until [CD/DVD Drive] is at the top of the [Boot] menu.
- 5 Place the disc number one of the recovery CDs into the CD/DVD drive.
- 6 Press **(F10)**.  
At the confirmation message, select [Yes] and press **(Enter)**.  
The computer will restart, and this screen should appear.

```
-----  
Select a number  
-----  
1. [ Recovery ] Reinstall Windows.  
2. [ Erase HDD ] Erase the whole data on HDD for security.  
3. [ Backup ] Enable the Backup function.  
0. [ Cancel ] Cancel.  
-----
```

<When the hard disk backup function has been enabled>  
When the message [The Backup function has been enabled. If [Recovery] or [Erase HDD] is executed, the Backup function will be disabled, and your Backup data will be lost.] appears, press **(Y)**.

- 7 Press **(1)** to execute [1.[Recovery]].  
(You can cancel this operation by pressing **(0)**.)  
The License Agreement screen should appear.

- 8 Press **(1)** to select [1. Yes, I agree to the provisions above and wish to continue!].

This screen should appear.

```
-----  
Select a number  
-----
```

Reinstalling : Windows(R) XP Professional

1. Reinstall Windows to the whole HDD to factory default.
2. Make two partitions, for the operating system and data. And reinstall Windows to the operating system partition.  
(All existing partitions on HDD will be lost.)
3. Reinstall Windows to the first partition.

```
0. Cancel  
-----
```

# Reinstalling Software

9 Make a selection from the menu.

## NOTE

- When [2] is selected, the hard disk backup function cannot be enabled because the hard disk has been divided into partitions.

- When selecting [2], enter the basic partition size for the operating system installation and press **Enter**.

(The data partition size is the remainder after subtracting the basic partition size.)

- To select [3], the initial partition size must be 6 GB or more of the hard disk size. Reinstallation cannot be performed with a small partition size.

<When the hard disk backup function has been enabled>

If you select [1] or [2], the message [The Backup function has been enabled. If [Recovery] is executed, the Backup function will be disabled, and your Backup data will be lost.] appears. In this case, press **Y**.

If the message [Computer must be rebooted in order to execute [Recovery.]] appears, press **R**.

10 At the confirmation message, press **Y**.

The operation of reinstallation for the hard disk starts automatically. (The operations take about 15 minutes.)

## CAUTION

- Do not interrupt the reinstallation procedure before completion, for example by turning off the computer or pressing **Ctrl** + **Alt** + **Del**, as this may prevent Windows from starting up, or may cause data to be lost so that the reinstallation procedure cannot be executed.
- When a message appears instructing you to insert the next CD, insert the recovery CD showing the next number in the sequence, and then select [OK]. If the message [The media does not contain the correct file] appears, select [OK]. A message will appear instructing you to insert the next CD. Confirm that the proper recovery CD has been inserted by opening the cover of the CD/DVD drive and then close the cover, then select [OK].

11 After the reinstallation procedure completes, this screen should appear.

Remove the recovery CD, and then press any key.

The computer will be shut down.

[Recovery] is complete.  
Windows(R) XP Professional install wizard will start after reboot.  
Please remove the Product Recovery CD-ROM, and turn off the computer.

12 Remove the CD/DVD Drive.

13 Turn on the computer, and press **F2** while [Panasonic] boot screen is displayed.

The Setup Utility will start up.

If the password has been set, enter the Supervisor Password.

14 Press **F9**.

At the confirmation message, select [Yes] and press **Enter**. (The Setup Utility settings will return to their default values. Even the security settings with the exception of the password(s) will return to their default values.)

15 Select [Exit] and then select [Save Current Values], then press **Enter**.

At the confirmation message, select [Yes] and press **Enter**.

16 Turn the computer off by sliding the power switch.

## NOTE

- If additional instructions are included with the computer, be sure to read them. It may be necessary to perform additional operations during the following procedures.

17 Perform the first-time use operation (☞ page 12 step 6 - page 14 step 9).

18 Run the Setup Utility and change the settings where necessary.

## <Changing the drive letter>

You can change the drive letter for the CD/DVD drive or hard disk drive by the following steps.

- Drive letters can only be changed when two or more partitions have been created on the hard disk drive. The name of the C: drive cannot be changed.

- We recommend that you make these changes before installing applications.

1 Select [start] - [Control Panel] - [Performance and Maintenance] - [Administrative Tools] - [Computer Management].

2 Select [Disk Management] from [Storage].

3 Right click on the partition of the hard disk or the name of the CD/DVD drive and select [Change Drive Letter and Paths...].

4 Select [Change].

5 Select [Assign the following drive letter] and the new drive letter, and then select [OK].

6 At the confirmation message, select [Yes].

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# Hard Disk Backup Function

The hard disk backup function creates a backup area (storage area) on the hard disk. This area is to back up (store) hard disk contents or restore backed up contents to their original locations.

By backing up the data on your hard disk to a backup area, you can protect your data from loss or damage resulting from operational errors or other factors. Also, you can back up or restore hard disk contents using this computer alone, without having to use other media or peripheral devices.

At the time of purchase, the hard disk backup function is disabled. If you follow the procedure below to create a backup area, the hard disk backup function will be enabled, and you will be able to back up your data. Note, that once the backup function has been enabled, you will have to perform the reinstallation procedure to disable it again (☞ page 33).

The hard disk backup function cannot back up or restore data properly if there is a problem with the hard disk when the data is backed up or restored. Note that if an error occurs while data is being restored, whether as a result of an unexpected malfunction, incorrect operation, or other reason, the data in the hard disk (data before restoration) may be lost.

Matsushita Electric Industrial Co., Ltd. will bear no responsibility for any damages suffered by the user (including loss of data) as a result of the use of this function.

## Preparing

- Product Recovery CD-ROM (included)
- Panasonic CD/DVD drive (optional: Confirm the latest information on optional products in catalogs, etc.)

## Before Using a Hard Disk Backup Function

- Disconnect or remove all peripheral devices (except for the CD/DVD drive), as the backup area may not be created properly while these devices are connected.
- Be sure the AC adaptor is connected to the computer.
- A backup area cannot be created if the hard disk is already divided into several partitions. Return the computer to its condition at the time of purchase (one partition only), and create the backup area.
- To divide the partition, make the selection when the backup area is created (☞ page 38 step 8).
- If the partition configuration is changed (partitions created, size changed, etc.) after the backup area has been created, it will no longer be possible to execute the backup function. To change the configuration, it is necessary to return the computer to its condition at the time of purchase, and then create the backup area again.
- The hard disk backup function will only work for the internal hard disk. This function does not work with an external hard disk or the second hard disk (optional).
- Backup and restore functions will not operate if the hard disk has been damaged.
- Do not use the NTFS file system compression function, as this may result in insufficient capacity of the backup area.
- If the hard disk malfunctions, it will be impossible to read the data stored on it. We recommend that you also back up important data to a location other than the hard disk (an external hard disk or other media).
- Execute a disk error check using the following procedure.
  - 1 Select [Local Disk(C:)] with the right button in [start] - [My Computer], and select [Properties].
  - 2 Select [Check Now] from [Tools].
  - 3 In [Check Disk], select [Start] without adding a check mark beside any of the items.  
If a message is displayed indicating that there is an error in the disk, display [Check Disk], and add a check mark for [Automatically fix file system errors] and [Scan for and attempt recovery of bad sectors], select [Start], and check for disk errors again.
- The hard disk backup function does not accommodate dynamic disks. Do not convert the hard disk to a dynamic disk.

# Hard Disk Backup Function

## NOTE

- Regarding backup area
  - Requires availability of at least half of the entire hard disk. Without sufficient space available, the backup area cannot be created.
  - When the backup area is created, the usable hard disk capacity will be reduced to less than half.
  - The backup area cannot be accessed from Windows. For this reason, backed up data cannot be copied to CD-R or other removable disk media.
  - When the hard disk backup function is executed, data in the backup area will be overwritten. If newly created or edited data is backed up later, data stored previously in the backup area will be lost.

## Create a Backup Area

- 1 Turn off the computer and insert the CD/DVD drive into the multimedia pocket. (☞ Reference Manual “Multimedia Pocket”)
- 2 Turn on the computer, and press **(F2)** while [Panasonic] boot screen is displayed. The Setup Utility will then start.  
If a password has been set, enter the Supervisor Password. You cannot register [Boot] menu with a User Password.
- 3 Select [Boot] menu, then select [CD/DVD Drive] and press **(F6)** until [CD/DVD Drive] is at the top of the [Boot] menu.
- 4 Place the disk number one of the recovery CDs into the CD/DVD drive.
- 5 Press **(F10)**.  
At the confirmation message, select [Yes] and press **(Enter)**.  
The computer will restart. If [Enter Password] is displayed during the following procedures, input the Supervisor Password or the User Password.  
This screen should appear.

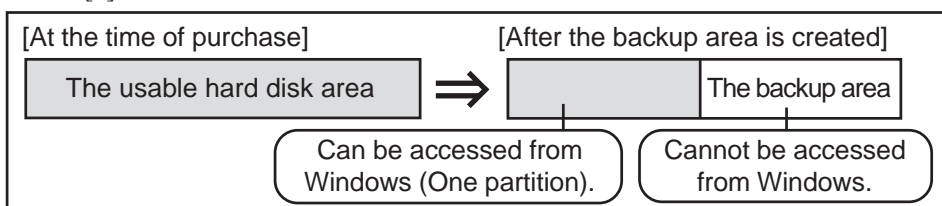
```
-----  
Select a number  
-----  
1. [ Recovery ] Reinstall Windows.  
2. [ Erase HDD ] Erase the whole data on HDD for security.  
3. [ Backup   ] Enable the Backup function.  
-----  
0. [ Cancel   ] Cancel.  
-----
```

- 6 Press **(3)** to execute [3.Backup].

## CAUTION

- When dividing the hard disk into partitions  
Do not execute [1. Recovery] to divide the hard disk into partitions. The hard disk backup function cannot be enabled after the hard disk has been partitioned. Use procedure 8 to divide the hard disk.

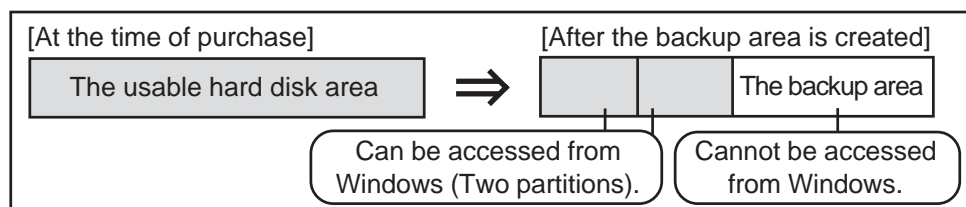
- 7 At the confirmation message, press **(Y)**.
- 8 Select how to divide the hard disk from the menu.  
<To create a backup area and enable the backup function without dividing the hard disk>  
Select [1].





<To create a backup area and divide hard disk into two partitions, for OS and data>  
Select [2], enter the partition size (GB), and press **Enter**.

- You can cancel this operation by pressing **0**.
- The data partition size will be the maximum settable size less the number entered above. The maximum settable size will differ depending on models.



- 9 When the confirmation message is displayed, press **Y**.  
The backup area is then created.
- 10 When the message [You must reboot in order to enable the Backup function] appears, remove the recovery CD, and press any key to restart the computer. The computer is restarted, then the backup process will begin.
- 11 When the message [[Backup] is complete] appears, press **Ctrl** + **Alt** + **Del** to restart the computer.

#### CAUTION

- Do not press **Ctrl** + **Alt** + **Del** until the message is displayed.

- 12 After logging on to Windows, a message will appear advising that a new device has been installed and that the computer must be restarted to enable the settings. Select [Yes] to restart the computer.

#### NOTE

- The [Boot] menu in the Setup Utility is set to start up from the CD/DVD drive. Change this setting if necessary.
- The next time the backup or restore functions are executed, follow the procedure for [Backing Up and Restoring Data] (☞ below).

## Backing Up and Restoring Data

#### CAUTION

- Before executing the backup function, execute a disk error check (☞ page 37).
- Do not interrupt the backup or restore functions before completion, for example by turning off the power or pressing **Ctrl** + **Alt** + **Del**, as this may prevent Windows from starting up, or may cause data to be lost so that the backup and restore functions cannot be executed.

- 1 Turn the computer on, and press **F2** while [Panasonic] boot screen is displayed. The Setup Utility will start up.  
If a password has been set, enter the Supervisor Password or the User Password.
- 2 Select [Exit] menu, then select [Hard Disk Backup / Restore] and press **Enter**.  
At the confirmation message, select [Yes] and press **Enter**.

# Hard Disk Backup Function

### 3 Select the operation to be executed from the menu.

<To back up hard disk contents to the backup area>

① Press **(1)** to execute [1. [Backup]].

(When dividing the hard disk into two partitions, select the backup method at next screen.)

② At the confirmation message, press **(Y)**.

The backup process will begin.

<To restore backed up contents to the hard disk>

① Press **(2)** to execute [2. [Restore]].

(When data is backed up in two partitions, select the restore method at next screen.)

② At the confirmation message, press **(Y)**.

The restore process will begin.

#### NOTE

- The time required to complete the backup or restore process differs depending on the data volume.

### 4 When the message [[Backup] is complete] or [[Restore] is complete] is displayed, press

**(Ctrl)** + **(Alt)** + **(Del)** to restart the computer.

- If the backup or restore process was interrupted before completion, for example if the power was turned off, execute the process again.
- After logging on to Windows, when a new device is installed and a message appears advising that the computer must be restarted to enable the settings, select [Yes] to restart the computer.

#### CAUTION

- When the hard disk backup function has been enabled, the backed up data will not be erased even if a commercial data erasing utility or similar software is used to erase all data from user-accessible area. You can use the hard disk data erase utility included in this computer (☞ page 41) to erase all data on the hard disk, including backed up data. Use this hard disk data erase utility before disposing of or transferring ownership of this computer.
- Occasionally, the message [#1805 cannot write image file] will be displayed, and the backup function will be interrupted. If this error occurs, execute the backup function again. After this, if the backup function is completed properly, then there is no problem in the hard disk.

### ● To disable the hard disk backup function

Perform the reinstallation procedure. All data in the backup area and the hard disk will be erased.

Conduct steps **1-8** for [Reinstalling Software] (☞ page 33). Select [1] or [2] to execute the reinstallation at the screen for executing the reinstallation.

- When [1] is selected, the hard disk backup function can be disabled.
- When [2] is selected, the hard disk backup function can be disabled, but in this case, because the hard disk has been divided into partitions, the hard disk backup function cannot be re-enabled (☞ page 24).
- When [3] is selected, the hard disk backup function cannot be disabled.

# Hard Disk Data Erase Utility

This computer is equipped with a utility for erasing hard disk data.

When disposing of or transferring ownership of this device, erase all data on the hard disk in order to prevent the theft of hard disk data by following the steps below.

The hard disk data erase utility erases data using an “overwriting” method, but there is a possibility that due to malfunctions or other operational errors, data may not be completely erased. There are also specialized devices that may be able to read data that has been erased using this method. If you need to erase highly confidential data, we recommend that you contact a company that specializes in this process. Matsushita Electric Industrial Co., Ltd. will bear no responsibility for losses or damages suffered as a result of the use of this utility.


## Preparing

- Product Recovery CD-ROM (included)
- Panasonic CD/DVD drive (optional: Confirm the latest information on optional products in catalogs, etc.)

### NOTE

- Be sure the AC adaptor is connected until the procedure is completed.
- This utility can only be used for internal hard disk. It cannot be used to erase data from external hard disks or the second hard disk (optional).
- This utility cannot erase data from damaged disk.
- This utility cannot erase data for specific partitions.
- After executing this utility, the computer cannot be booted from the hard disk.
- The backup area and the data in the backup area will be erased.

## Procedure

- 1 Turn off the computer.
- 2 Insert the CD/DVD drive into the multimedia pocket.  
( Reference Manual “Multimedia Pocket”)
- 3 Turn on the computer, and press **(F2)** while [Panasonic] boot screen is displayed.  
The Setup Utility will start up.  
If the password has been set, enter the Supervisor Password.
- 4 Select [Boot] menu, then select [CD/DVD Drive] and press **(F6)** until [CD/DVD Drive] is at the top of [Boot] menu.
- 5 Place the disc number one of the recovery CDs into the CD/DVD drive.
- 6 Press **(F10)**.  
At the confirmation message, select [Yes] and press **(Enter)**.  
The computer will restart, and this screen should appear.  

Select a number		
1.	[ Recovery ]	Reinstall Windows.
2.	[ Erase HDD ]	Erase the whole data on HDD for security.
3.	[ Backup ]	Enable the Backup function.
-----		
0.	[ Cancel ]	Cancel.

  
<When the hard disk backup function has been enabled>  
When the message [The Backup function has been enabled. If [Recovery] or [Erase HDD] is executed, the Backup function will be disabled, and your Backup data will be lost.] appears, press **(Y)**.
- 7 Press **(2)** to execute [2. [Erase HDD]].  
(You can cancel this operation by pressing **(0)**.)  
<When the hard disk backup function has been enabled>  
When the message [The Backup function has been enabled. If [Erase HDD] is executed, the Backup function will be disabled, and your Backup data will be lost.] appears, press **(Y)**.  
When the message [Computer must be rebooted in order to execute [Erase HDD.]] appears, press **(R)**.
- 8 At the confirmation message, press **(Y)**.
- 9 When [<<<Start Menu>>>] is displayed, press **(Enter)**.
- 10 The approximate time required for erasing data will be displayed.  
Press **(Space)**.
- 11 At the confirmation message, press **(Enter)**. The operation of erasing the hard disk will start.  
(If necessary, the “hard disk data erase” operation can be cancelled after it has begun by pressing **(Ctrl) + (C)**. If the operation is cancelled before being completed, a part of data will not be erased.)
- 12 After the operation is complete:  
Under normal conditions, the message [Hard disk data has been deleted.] will be displayed.  
If a problem occurred during the operation, an error message will be displayed.
- 13 Remove the recovery CD, and then press any key to turn off the computer.

# Specifications

## ● Main Specifications

<b>Model No.</b>		CF-29HTLGZBM CF-29JTLGZBM	CF-29HTQGZBM CF-29JTQGZBM	CF-29H3LGZBM CF-29J3LGZBM
<b>CPU</b>		Intel® Pentium® M Processor 738 (1.40 GHz, 2 MB*1 L2 cache, 400 MHz FSB)		
<b>Memory</b>		256 MB*1 (1280 MB*1 Max.)	512 MB*1 (1536 MB*1 Max.)	256 MB*1 (1280 MB*1 Max.)
<b>Video Memory</b>		UMA (64 MB*1 Max.)*2		
<b>LCD</b>	<b>Type</b>	13.3 XGA type (TFT) with Touchscreen		13.3 XGA type (TFT)
	<b>Displayed Colors*3</b>	65,536/16,777,216 colors (800 x 600 dots/1024 x 768 dots)		65,536/16,777,216 colors (800 x 600 dots/1024 x 768 dots)
<b>External Display</b>		65,536/16,777,216 colors (800 x 600 dots/1024 x 768 dots/1280 x 1024 dots/1600 x 1200 dots)*4		
<b>Hard Disk Drive</b>		60 GB*5	80 GB*5	60 GB*5
<b>Keyboard</b>		87 keys		
<b>Floppy Disk Drive</b>		720 KB/1.44 MB (two-mode)		
<b>Slot</b>	<b>PC Card Slot</b>	Two Type I or Type II, or one Type III		
	<b>Allowable current (total for two slots)</b>	3.3 V: 400 mA 5 V: 400 mA		
	<b>RAM Module Slot*6</b>	200 pin, 2.5 V, SO-DIMM, DDR SDRAM, PC2700 Compliant		
<b>Interface</b>	<b>Parallel Port</b>	Dsub 25-pin female		
	<b>External Display Port</b>	Mini Dsub 15-pin female		
	<b>Serial Port</b>	Dsub 9-pin male		
	<b>Microphone Jack*7</b>	Miniature jack, 3.5 DIA		
	<b>Headphone Jack</b>	Miniature jack, 3.5 DIA, Impedance 32 Ω, Output Power 4 mW x 2		
	<b>Expansion Bus Connector</b>	Dedicated 80-pin female		
	<b>USB Port</b>	4-pin x 2, USB 2.0		
	<b>Modem</b>	RJ-11 jack, Data: 56 kbps (V.92 & K56flex*8) FAX:14.4 kbps		
<b>LAN</b>	RJ-45 jack, IEEE 802.3 10Base-T, IEEE 802.3u 100Base-TX			
	<b>External Antenna Connector</b>	Dedicated 50 Ω coaxial connector		
<b>Pointing Device</b>		Touch Pad Touchscreen (Anti-Reflection, Stylus (included) touch capable)		Touch Pad
<b>Sound</b>		WAVE and MIDI playback, Monaural Speaker (built in)		

\*1 1 MB = 1,024 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 A 16,777,216 color display is achieved by using the dithering function.

\*4 Maximum resolution depends on the specifications of the external display.

\*5 1GB = 1,000,000,000 bytes. Your operating system or some application software will report as fewer GB.

\*6 Only a RAM card designed for PC2700 can be added.

\*7 Use only a monaural condenser microphone.

\*8 The settings for the K56flex modem need to be changed according to the AT command.

## ● Main Specifications

<b>Model No.</b>	CF-29HTLGZBM CF-29JTLGZBM	CF-29HTQGZBM CF-29JTQGZBM	CF-29H3LGZBM CF-29J3LGZBM
<b>Battery Pack</b>	Li-ion 11.1 V, 6.6 Ah		
<b>Operating Time<sup>*9</sup></b>	Main battery: Approx. 5 hours - 8 hours <sup>*10</sup> (Approx. 7 hours <sup>*11</sup> ) Main battery + Second battery: Approx. 8 hours - 13.5 hours <sup>*10</sup> (Approx. 10.5 hours <sup>*11</sup> )		
<b>Charging Time<sup>*9</sup></b>	<b>Power On</b>	Main battery: Approx. 7 hours Main battery + Second battery: Approx. 11 hours	
	<b>Power Off</b>	Main battery: Approx. 4 hours Main battery + Second battery: Approx. 7 hours	
<b>Clock Battery</b>	Coin type lithium battery 3.0 V		
<b>AC Adaptor<sup>*12</sup></b>	<b>Input</b>	100 V - 240 V AC, 50 Hz/60 Hz	
	<b>Output</b>	15.6 V DC, 5.0 A	
<b>Power Consumption<sup>*13</sup></b>	Approx. 35 W <sup>*14</sup> / Approx. 60 W (maximum when recharging in the ON state)		
<b>Environment</b>	<b>Operation</b>	<b>Temperature</b>	5 °C to 35°C {41 °F to 95 °F}
		<b>Humidity</b>	30% to 80% RH (No condensation)
	<b>Storage</b>	<b>Temperature</b>	-20 °C to 60 °C {-4 °F to 140 °F}
		<b>Humidity</b>	30% to 90% RH (No condensation)
<b>Physical Dimensions (W x H x D)</b>	302 mm x 64.3 mm x 273 mm (excluding protrusion) {11.9 " x 2.6 " x 10.7 "}		
<b>Weight (including the carrying handle)</b>	Approx. 3.62 kg {Approx. 7.98 lb.}		Approx. 3.49 kg {Approx. 7.7 lb.}

<sup>\*9</sup> Varies depending on the usage conditions, CPU speed, etc.

<sup>\*10</sup> Measured using BatteryMark™ Version 4.0.1 (LCD brightness: Maximum - Minimum)

<sup>\*11</sup> Measured using MobileMark™ 2002 (LCD brightness: 60 cd/m<sup>2</sup>)

<sup>\*12</sup> <Only for North America>

The AC adaptor is compatible with power sources up to 240 V AC adaptor. The computer is supplied with a 125 V AC compatible AC cord.

<sup>\*13</sup> Approx. 0.9 W when the battery pack is fully charged (or not being charged) and the computer is off.

Approx. 1.5 W when the Wake up from LAN function has been enabled.

<sup>\*14</sup> Rated power consumption

## ● Wireless LAN

<b>Model No.</b>	CF-29HTLGZBM/CF-29HTQGZBM/ CF-29H3LGZBM	CF-29JTLGZBM/CF-29JTQGZBM/ CF-29J3LGZBM
<b>Data transfer rates</b>	IEEE802.11a: 54/48/36/24/18/12/9/6 Mbps (automatically switched)	—
	IEEE802.11b: 11/5.5/2/1 Mbps (automatically switched)	—
	IEEE802.11g: 54/48/36/24/18/12/9/6 Mbps (automatically switched)	—
<b>Standards supported</b>	IEEE802.11a/IEEE802.11b/IEEE802.11g	—
<b>Transmission method</b>	OFDM system, DSSS system	—
<b>Wireless channels used</b>	IEEE802.11a: Channels 36 to 64, 149 to 165	—
	IEEE802.11b/IEEE802.11g: Channels 1 to 11	—
<b>RF frequency band</b>	IEEE802.11a: 5.18~5.32 GHz, 5.725~5.825 GHz	—
	IEEE802.11b/IEEE802.11g: 2412~2462 MHz	—

## ● Software

<b>Operating System</b>	Microsoft® Windows® XP Professional Service Pack 2 with Advanced Security Technologies (NTFS File System)	
<b>Utility Programs</b>	Setup Utility DMI Viewer Adobe Reader Intel® PROSet/Wireless Software <sup>*15</sup> Panasonic Hand Writing PC Information Viewer	Hard Disk Backup Utility <sup>*16</sup> Hard Disk Data Erase Utility <sup>*16</sup> Icon Enlarger Loupe Utility Hotkey Settings

<sup>\*15</sup> Only for models with wireless LAN

<sup>\*16</sup> The Product Recovery CD-ROM is required.

# LIMITED WARRANTY

**For U.S.A.**

## PANASONIC PERSONAL COMPUTER AND PERIPHERALS LIMITED WARRANTY

Panasonic Computer Solutions Company (referred to as "Panasonic") will repair this product (other than software, which is covered by a separate warranty) with new or rebuilt parts, free of charge in the U.S.A. for three (3) years from the date of original purchase in the event of a defect in materials or workmanship. This warranty includes the AC adaptor but excludes the batteries and all other options and accessories which are covered for a period of one (1) year from the date of purchase.

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.

This warranty only covers failures due to defects in materials or workmanship which occur during normal use. It does not cover damage which occurs in shipment or failures which are caused by products not supplied by Panasonic, or failures which result from alteration, accident, misuse, introduction of liquid or other foreign matter into the unit, abuse, neglect, installation, maladjustment of consumer controls, improper maintenance, modification or service by anyone other than a Factory Service Center or authorized Panasonic Service Dealer, or damage that is attributable to acts of God.

### **Limits and Exclusions:**

There are no other express warranties except as listed below.

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 MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE LIMITED TO THE APPLICABLE WARRANTY PERIOD SET FORTH ABOVE. Some states do not allow the exclusion or limitation of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the above limitations or exclusions may not apply to you.

This limited warranty gives you specific legal rights, and you may also have other rights which vary from state to state. If a problem with your product develops during or after the warranty period, you may contact our representatives at 1-800-LAPTOP5. If the problem is not handled to your satisfaction, then write to the Consumer Affairs Division at the address indicated below.

## SOFTWARE LIMITED WARRANTY

Panasonic Computer Solutions Company (referred to as "Panasonic") warrants to you only that the disk(s) or other media on which the Programs are furnished will be free from defects in materials 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, in the United States, of any defective disk or other media which is returned to Panasonic's Authorized Service Center, together with a copy of the purchase receipt, within the aforesaid warranty period.

Anything in the foregoing to the contrary notwithstanding, Panasonic shall have no obligation for any defects in the disk(s) or other media on which the Programs are furnished resulting from your storage thereof, or for defects that have been caused by operation of the disk(s) or other media otherwise than on the Product or in environmental conditions other than those specified by Panasonic by alteration, accident, misuse, abuse, neglect, mishandling, misapplication, installation, maladjustment of consumer controls, improper maintenance, modification of damage that is attributable to acts of God. In addition, Panasonic shall have no obligation for any defects in the disk(s) or other media if you have modified, or attempted to modify any Program.

DURATION OF IMPLIED WARRANTIES, IF ANY, IS LIMITED TO SIXTY (60) DAYS.

PANASONIC ASSUMES NO RISK OF AND SHALL NOT IN ANY CASE BE LIABLE FOR ANY DAMAGES, INCLUDING, WITHOUT LIMITATION, ANY SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR PUNITIVE DAMAGES ARISING FROM BREACH OF WARRANTY OR CONTRACT, NEGLIGENCE OR ANY OTHER LEGAL THEORY, INCLUDING, WITHOUT LIMITATION LOSS OF GOODWILL, PROFITS OR REVENUE, LOSS OF USE OF THE PROGRAMS OR PRODUCTS OR ANY ASSOCIATED EQUIPMENT, COST OF CAPITAL, COST OF ANY SUBSTITUTE EQUIPMENT, FACILITIES, SERVICES, DOWNTIME COSTS, OR CLAIMS OF ANY PARTY DEALING WITH YOU FOR SUCH DAMAGES.

Some states do not allow the exclusion or limitation of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the above limitations or exclusions may not apply to you.

This limited warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

This Limited Warranty will be governed by the laws the State of New York, without regard to its conflict-of-laws rules.

\* \* \*

To obtain service or technical assistance within the continental U.S.A. and Alaska.

**DIAL TOLL FREE: 1-800-LAPTOP5**

Correspondence requesting product information should be sent to: Panasonic Computer Solutions Company, 50 Meadowlands Parkway, Panazip 2F-5, Secaucus, NJ 07094

## For Canada

### PANASONIC COMPUTER AND PERIPHERALS LIMITED WARRANTY

**Coverage** – Panasonic Canada Inc. (“PCI”) warrants to you, the first end user customer, this computer product (excluding software media), when purchased from PCI or from a PCI authorized reseller, to be free from defects in materials and workmanship under normal use, subject to the terms set forth below, during the period of warranty coverage specified.

Scope of Coverage	Period of Coverage	Type of Failure Coverage
Whole Product (except Batteries), AC adaptor and CD-ROM (if factory installed)	Three (3) Years from Date of Original End User Customer Purchase	Defective Materials or Workmanship
Batteries, CD-ROM (unless factory installed), Port Replicator, Extra Memory Modules and all other Peripherals, Options and Accessories	One (1) Year from Date of Original End User Customer Purchase	Defective Materials or Workmanship

**Remedy** – In the event of a warranty claim, contact PCI’s representatives within the applicable warranty period, identifying the nature of the defect claimed, at 1-800-668-8386 between 9:00 A.M. and 5:00 P.M., Eastern Time Zone, Mon. – Fri. (excluding holidays) for instructions on how to obtain service. A purchase receipt or other proof of date of original purchase is required before warranty service is performed. Defective parts covered by this Limited Warranty will be repaired or replaced with new or comparable rebuilt parts on an exchange basis. Warranty replacement or repair is subject to the terms of this Limited Warranty for the balance of the original period of warranty coverage.

**No Coverage** – This Limited Warranty does not cover products purchased outside Canada. Neither does it cover damage to, failure of, or defects in a product or accessory through mishandling, improper installation, abnormal use, misuse, neglect, accident, introduction of liquid or other foreign matter into the product, alteration or servicing by anyone not authorized by PCI, or act of God.

#### IF YOU SHIP THE PRODUCT FOR WARRANTY SERVICE

Carefully pack the product, preferably in the original carton. Include details of defect claimed and proof of date of original purchase. No liability is assumed for loss or damage to the product while in transit, if you chose your own transportation carrier.

### SOFTWARE MEDIA LIMITED WARRANTY

**Coverage** – Panasonic Canada Inc. (“PCI”) warrants to you, the first end user customer, that the disk(s) or other media on which software program(s) is/are supplied will be free from defects in materials and workmanship under normal use in Canada for a period of sixty (60) days from date of receipt as evidenced by your purchase receipt for your Panasonic Computer product.

THIS IS THE ONLY WARRANTY THAT PCI MAKES RESPECTING THE SOFTWARE MEDIA. PCI does not warrant the software. Please refer to the software licensor’s written warranty (accompanying the copy of the software) for any software warranty claim.

**Claim Procedure** – In the event of a defect in material or workmanship in the media during the sixty (60) day warranty period, and you return it, transportation costs prepaid, to Panasonic Canada Inc., Computer Products Marketing, at the above address, within the warranty period, together with a copy of your purchase receipt, and an explanation of the suspected defect, PCI will replace in Canada the defective disk(s) or other media.

**Remedy** – PCI’s entire liability, and your only remedy for any breach of this software media warranty is limited to replacement of the media only. It does not cover any other damages, including, but not limited to, loss of use or profit loss, or special, indirect or consequential damages, or other claims, whether or not of similar character.

**No Coverage** – This limited warranty does not apply if the disk(s) or other media has been used in other than a Panasonic product, or in environmental conditions other than those specified by PCI or the manufacturer, or if subjected to misuse, neglect, mishandling, modification or attempted modification of the program, or if damaged by accident or act of God. PCI is not responsible for damage to or loss of any program, data or removable storage media.

### GENERAL

NO OTHER WARRANTIES – PCI DISCLAIMS ALL OTHER WARRANTIES, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WITH RESPECT TO THE SOFTWARE, SOFTWARE MEDIA, COMPUTER PRODUCT, OPTIONS AND ACCESSORIES.

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IN ANY EVENT, PCI’S MAXIMUM LIABILITY FOR ANY BREACH SHALL NOT EXCEED THE AMOUNT ACTUALLY PAID BY YOU FOR THE COMPUTER PRODUCT.

NO ACTION, REGARDLESS OF ITS BASIS, MAY BE BEGUN AGAINST PCI MORE THAN TWO (2) YEARS AFTER THE CAUSE OF ACTION AROSE.

**Statutory Warranties** – Some jurisdictions do not allow these limitations or exclusions, so they may not apply to you.

# Memo







As an ENERGY STAR® Partner, Matsushita Electric Industrial Co., Ltd. has determined that this product meets the ENERGY STAR® guidelines for energy efficiency.

**Outline of the International ENERGY STAR® Office Equipment Program**

The international ENERGY STAR® Office Equipment Program is an international program that promotes energy saving through the use of computers and other office equipment. The program backs the development and dissemination of products with functions that effectively reduce energy consumption. It is an open system in which business proprietors can participate voluntarily. The targeted products are office equipment such as computers, displays, printers, facsimiles, and copiers. Their standards and logos are uniform among participating nations.

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