List of Error Codes

When turning on the computer, if one of the following error codes or messages is displayed, follow the instructions shown below. If the problem persists, or if the error code or message displayed is not shown here, contact Panasonic Technical Support.

Error Code/Message	Action
0211: Keyboard error	● If an external keyboard or mouse is connected, disconnect these devices.
0251: System CMOS checksum bad - Default configuration used	An error has occurred in the memory that stores the Setup Utility settings. This error occurs when the memory content is changed through some inadvertent operation by a program or other function. ● Run the Setup Utility and load the default values, then change the settings to the appropriate values as needed. ● If the problem persists, the internal clock battery may need to be replaced. Contact Panasonic Technical Support.
0271: Check date and time settings	The data and time setting are incorrect. ● Run the Setup Utility and set the date and time correctly. ● If the problem persists, the internal clock battery may need to be replaced. Contact Panasonic Technical Support. (☞ page 44)
0280: Previous boot incomplete - Default configuration used	Startup has failed repeatedly, so the Setup Utility settings have been returned to their default values, and the computer has been restarted. ● Run the Setup Utility and load the default values, then change the settings to the appropriate values as needed.
02B0: Diskette drive A error	● Disconnect the floppy disk drive and reconnect it. Make sure the drive is secured correctly.
0613: Serial Port*1 configuration changed **0614: Serial Port*1 config. error - device disabled** ***1 The port name, such as A or B, is displayed, indicating the conflicting ports.**	I/O address and IRQ settings are in conflict. ● Run the Setup Utility and change the settings in [Advanced] menu so there is no port conflicts.
Press <F2> to Setup	● Write down the error details and press F2 to run the Setup Utility. Confirm the settings, and change the settings to the appropriate values as needed.
Operating System not found	The OS is not properly installed on the floppy disk or the hard disk that you are trying to boot from. ● If the computer cannot be booted from the floppy disk, check the floppy disk drive to ensure that the disk is in fact bootable, and change it to another if not. ● If the computer cannot be booted from the hard disk, confirm whether the hard disk is properly recognized in [Information] menu of the Setup Utility. • If the hard disk is recognized, perform the reinstallation procedure. • If not, contact Panasonic Technical Support. ● If a device is connected to the USB port, disconnect the device, or run the Setup Utility and set [Legacy USB Support] in [Advanced] menu to [Disable].
Extended RAM Module Failed	● If the extended RAM module has not been inserted properly, or if an extended RAM module other than one matching the specifications has been inserted, a beep will sound and the message "Extended RAM Module Failed" will be displayed when turning the power on. In this case, turn the power off, confirm that the extended RAM module meets the specifications, and reinsert it.

● To run the Setup Utility

1. Restart the computer.
2. Press F2 while [Panasonic] boot screen is displayed soon after the computer begins the startup procedure.

Dealing with Problems (Summary)

When a problem occurs, refer to this page. The "Reference Manual" also contains detailed information. If a problem appears to be related to a software application, read the software related manual. If you still cannot troubleshoot the problem, contact Panasonic Technical Support. You can use the PC Information Viewer to check the computer's usage status. (☞ Reference Manual "Dealing with Problems (Advanced)")

● Starting Up

The power indicator or battery indicator is not lit	● Check the cable connection for the AC adaptor. ● Check to see if a fully charged battery is properly installed. ● Remove the battery pack and disconnect the AC adaptor, then connect them again.
The computer does not operate when a USB device is connected	● The computer may not operate when certain USB devices are connected. Disconnect the USB device, or set [Legacy USB Support] to [Disable] in [Advanced] menu of the Setup Utility.
[Enter Password] is displayed	● Input your Supervisor Password or User Password. If you have forgotten it, contact Panasonic Technical Support. (☞ page 44)
POST Startup Error(s) is displayed	☞ page 25
Windows startup, or an operation is extremely slow	● Press F9 in the Setup Utility (☞ Reference Manual "Setup Utility"). This will restore the Setup Utility's settings to their default values (except the password settings). Then, the Setup Utility must be run once again for you to input the appropriate operating environment settings. (The processing speed depends on the application software used, so this operation may not cause the processing speed to increase.) ● If you install resident software after purchasing this computer, disable the resident software.
The date and time are incorrect	● You can set the date and time using the following menu. [start] - [Control Panel] - [Date, Time, Language, and Regional Options] - [Date and Time] ● If you continue to experience problems, the internal battery maintaining the clock may need to be replaced. Contact Panasonic Technical Support. ● When the computer is connected to a LAN, confirm the date and time of the server. ● This computer will not correctly recognize the date and time starting from the year 2100 A.D.
When resuming from the standby or hibernation mode, [Enter Password] does not appear even if a password has been set in the Setup Utility	● Even when a password has been set in the Setup Utility, [Enter Password] does not appear when the computer resumes from the standby or hibernation mode. If you want to use the security function when using the standby or hibernation mode, use the Windows password as follows: **1** Select the account to change in [start] - [Control Panel] - [User Accounts] and set the password. **2** Add the check mark for [Prompt for password when computer resumes from standby] in [Control Panel] - [Performance and Maintenance] - [Power Options] - [Advanced].
When the administrator password is forgotten	● If you have created a password reset disk (☞ page 15), a message is displayed when you fail to correctly enter the password. Follow the message's instructions and set the password again by using the password reset disk. If you have not created a password reset disk, after reinstalling, setup Windows and then set the password again.
When "Remove disks or other media. Press any key to restart" (or a similar message) is displayed	● This means a floppy disk that does not contain system startup information has been left in the floppy disk drive. Remove the floppy disk, and press any key. ● This message may appear when certain USB devices are connected. Remove the USB device, or set [Legacy USB Support] in [Advanced] menu of the Setup Utility to [Disable]. ● If the message still appears even after trying the above two measures, this may be an indication that some type of hard disk failure has occurred. Contact Panasonic Technical Support.
[Executing Battery Recalibration] screen is displayed	● This screen appears because the Battery Recalibration was canceled before Windows was shut down last. To start up Windows, turn off the computer by sliding the power switch, and then turn it back on again.

Starting Up (continued)

When the previous item is not the cause	● Press F9 in the Setup Utility (☞ Reference Manual "Setup Utility"). This will restore the Setup Utility's settings to their default values (except the password settings). ● Try removing all peripheral devices. ● Check a disk error using the following procedure. **1** Select [Local Disk(C:)] with the right button in [start] - [My Computer], and select [Properties]. **2** Select [Tools] - [Check Now]. **3** Select [Start] after selecting required items in [Check disk options]. ● At startup, hold down F8 when [Panasonic] boot screen disappears*1, and release your finger when the Windows Advanced Options Menu is displayed. Start the computer in Safe Mode, and confirm the details of the error. *1 When [Password on boot] is set to [Enable], [Enter Password] appears after the [Panasonic] boot screen disappears. Hold down F8 soon after inputting the password and pressing Enter.

Display

No display after powering on	● When there is no display to an external display, • Check your cable connection to the external display. • Confirm your display is powered on. • Check the settings for your external display. ● The display destination may be set to the external display. Try changing the display destination by pressing Fn + F3. If you want to switch the display destination repeatedly by pressing Fn + F3, make sure that the display destination has switched completely each time before pressing Fn + F3 again. ● Press Fn + F2 and adjust the brightness.
The power has not been turned off, but after a certain period of time, there is no display	● Has the computer been set to the power-saving mode? To resume operation of your computer from the condition the power of the display is off (for energy conservation purposes), press any key unrelated to the direct triggering of a selection, like Ctrl. ● To save power, your computer may have automatically entered the standby mode (power indicator blinks green) or hibernation mode (power indicator turns off). In such cases, slide the power switch.
When the battery pack is used, the screen is darker than when the AC adaptor is connected	● Press Fn + F2 and adjust the brightness. Note, however, that when the brightness is increased, the battery running time will become shorter. Brightness can be set to separate levels for when the AC adaptor is connected and when it is disconnected.
An afterimage appears (e.g., green, red, and blue dots remain on the display) or there are dots not displaying the correct colors	● If an image is displayed for a prolonged period of time, an afterimage may appear. This is not a malfunction. The afterimage will disappear when a different screen is displayed. ● High-precision and advanced technologies are necessary in the production of color liquid crystal displays (color LCDs). Therefore, if 0.002% or less of the picture elements either fail to light or remain constantly lit (that is, more than 99.998% of elements are functioning properly), no defect is considered to exist.
The screen becomes disordered	● The screen display may become distorted if the resolution or number of colors is changed, or if an external display is connected or disconnected while the computer is operating. Restart the computer.
The external display no longer displays properly	● When an external display not compatible with the power saving mode is used with the computer, the display may not function correctly when the computer enters the power saving mode. In such cases, turn off the power to the external display.
When you want to display the fonts or icons at a larger size	● Change the size of the icons, etc. using "Icon Enlarger" (☞ Reference Manual "Icon Enlarger"). ● To enlarge a part of the screen, use Loupe Utility (☞ Reference Manual "Loupe Utility").

Dealing with Problems (Summary)

Display (continued)

During simultaneous display, one of the screens becomes disordered	● Try changing the display by pressing Fn + F3. ● If you continue to experience problems, try changing the display destination in the following menu. [start] - [Control Panel] - [Other Control Panel Options] - [Intel(R) Extreme Graphics 2 M] - [Devices] ● When the [Command Prompt] is set to "Full Screen" by pressing Alt + Enter, the picture is displayed on one of the screens only. When the window display is restored by pressing Alt + Enter, the picture is displayed on both screens.
When an a moving picture such as an MPEG file is being played with Media Player, the display destination cannot be switched using Fn + F3	● The display destination cannot be switched while a moving picture such as an MPEG file is playing. Stop playing the moving picture before switching the display destination.

Shutting Down

Windows cannot be shut down or restarted	● If a USB device is connected, try removing it. ● It may take one or two minutes to shutdown.

Battery Indicator

The red indicator lights.	● The battery level is very low (the charge is approx. 9% or less). Connect the AC adaptor. You can use the computer when the battery indicator light is orange. If you do not have an AC adaptor, save your data and power off your computer. After replacing the battery pack with a fully charged one, turn your computer on.
The red indicator blinks	● Quickly save your data and power off your computer. Remove the battery pack and disconnect the AC adaptor, then connect them again. If the problem persists, contact Panasonic Technical Support. (☞ page 44) The battery pack or charging circuit may be defective.
The green indicator blinks	● In high temperature mode, the battery is discharging to the level that corresponds to an 80%*1 charge for normal temperature mode. (☞ Reference Manual "Battery Power") Do not remove the battery pack while the battery indicator is blinking green. *1 In high temperature mode, the level that corresponds to an 80% charge for normal temperature mode is displayed as [100%].
The battery indicator blinks green and orange alternately	● Warming up the system to prevent hard disk drive malfunctions at low temperature. Leave your computer as is. Once the allowable temperature range requirement is satisfied, your computer will start automatically.
The orange indicator blinks	● Battery cannot be recharged temporarily because the internal temperature of the battery pack is outside of the acceptable temperature range for recharging. Once the allowable range requirement is satisfied, charging begins automatically. Your computer can be used normally in this state.

Touch Pad / Touchscreen (only for models with touchscreen)

The cursor cannot be controlled properly	● If you are using an external mouse, ensure that the external mouse has been connected correctly. ● Restart the computer by using the keyboard (Press [⊞], [U], and select [Restart] with [R]). ● If the computer does not respond to keyboard commands, read "No response" (☞ page 30).
The cursor does not move in scrolling area of the touch pad	● When the Microsoft® IntelliMouse™ Wheel mode or the original mode is set for the touch pad, only scroll operations are possible for the right part or bottom part of the touch pad. In this case, cursor operations are possible by using the work surface excluding the right part or bottom part. When no mode is set, the entire surface of the touch pad can be used for cursor operations.
Unable to input using the touch pad	● Has the Setup Utility been used to set [Touch Pad] to [Enable]? ● When external mouse drivers are installed (e.g., Intellimouse), the touch pad may not be used. ● Has the touch pad driver been properly installed?
Unable to point correctly with the stylus included with the computer	● As a result of the physical characteristics of the touchscreen, sometimes the position of the stylus does not match the position of the cursor on the screen. This is not a malfunction. Perform [Calibration] (☞ page 13).
Unable to input by touching the display	● Has the Setup Utility been used to set [Touchscreen] to [Enable]? ● When mouse drivers are installed (i.e. IntelliMouse), the touchscreen is unable to be used. ● Has the touchscreen driver been properly installed?

Reference Manual

The Reference Manual is not displayed	● Is Adobe Reader installed? If you have uninstalled Adobe Reader, install using the following procedures. **1** Select [start] - [Run], input [c:\util\reader\AdbeRdr60_enu_full.exe], then select [OK]. Install Adobe Reader by following the instructions on the screen. **2** Update Adobe Reader to its latest version. If your computer is connected to the Internet, start up Adobe Reader and select [Help] - [Update]. If your computer is not connected to the Internet, select [start] - [Run], input [c:\util\reader\Acro-Reader_6.0.2_Update.exe], then select [OK].

Fast User Switching function

Some applications may not work properly	● When switching to a different user with the Fast User Switching function, the following problems may occur. • Some applications may not work properly. • Key combinations with the Fn key may not work. • It may not be possible to set the settings of the display. • A serial mouse may not work. • <Only for models with wireless LAN> Wireless LAN may not work. In this case, log off all users without using Fast User Switching function, and try the operation once more. If the problem persists, restart the computer.

Others

No response	● Press Ctrl + Shift + Esc to open Task Manager and close the software application which is not responding. ● Is there an input screen (e.g., password input screen at startup) hidden behind another window? Use Alt + Tab to check for other windows being displayed. ● After shutting down by sliding the power switch for more than four seconds, slide the power switch to power on and open the application again. If the program no longer works normally, delete the program using the following menu. Then reinstall the program. [start] - [Control Panel] - [Add or Remove Programs]
When trying to play back video files using Windows® Media Player, the message [Codec required] appears, and the file cannot be played back	● Some video files use a Codec that is not installed as a standard. In these cases, if you play back the video file after connecting to the Internet, the Codec may be downloaded automatically, allowing you to play back the file.
Cannot start a network-used program, or cannot share files or printers	● If you cannot start up a program or share files, this may be because the "Firewall (Windows Firewall)" in the "Windows Security Center" is set to be enabled. If this function is set to be enabled, damage from viruses and other attacks is reduced, but some programs and functions cannot be operated. To use the program or to share files or printers: You can use programs or other functions without the effects of the Windows Firewall by registering them as an exception in the Windows Firewall settings (it is not necessary to disable the Windows Firewall). Note, however, that if a program is registered as an exception, there is a risk of damage from viruses or other attacks. Before registering a program as an exception, confirm the program's safety with the manufacturer or other reliable source. **1** Select [start] - [Control Panel] - [Security Center] - [Windows Firewall]. **2** Select [Exceptions]. **3** To register a network game or other programs as an exception: Select [Add Program], select the program, and select [OK]. To set access through a specified port as an exception: Select [Add Port], set the port, and select [OK]. To set a file or printer as an exception: Add the check mark for [File and Printer Sharing]. **4** Confirm that there is a check mark for the item to be set as an exception, and select [OK].
Is it necessary to enable the Windows Firewall?	● The Windows Firewall is a security function designed to protect your computer from unauthorized access via the Internet and other external networks. The firewall regulates the data exchanged between the computer and the external network, so that only approved data can pass through. We recommend that you use your computer with the Firewall enabled to minimize damage from viruses and other malicious attacks. ● When installing additional commercially available firewall software, we recommend that you disable the Windows Firewall settings, as the new software may interfere with the Windows Firewall functions. For details, refer to the manual accompanying the firewall software to be installed.
When "Automatic Updates" is enabled, will all updates be downloaded (or installed)?	● Only Windows Update programs with a high level of priority will be automatically downloaded (or installed). Update programs with a comparatively low level of importance will not be downloaded (or installed) automatically. Check regularly whether new update programs have become available.
Security Center warning function does not operate	● The Security Center warning function will not operate if you are using a network domain, for example at a company.

● Others (continued)

Problem with Web page display (no display; display is completely white; advertisements, logon, and other pop-ups are not displayed)	● 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. • If the message "Pop-up blocked" is displayed: Select the message, and select "Temporarily Allow Pop-ups." The blocked Popup will be displayed temporarily. • If the message "This site might require the following ActiveX control..." is displayed: **1** Select the message, and select "Install ActiveX Control." **2** Check "Name" and "Publisher" on the [Security Warning] screen, and execute the installation. • If you cannot find the Information Bar: If you need to display the page, select the Web page link while pressing Ctrl. The pop-up blocker function will be temporarily disabled.
Images in HTML e-mail messages are not displayed in Outlook Express	● 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.
Cannot read attachment file in Outlook Express (cannot save file)	● 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].
The message "Your computer might be at risk" is displayed	● 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. • Firewall: Is the Windows Firewall enabled? • Automatic Updates: Is the automatic Windows Update function enabled? • 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)? ● 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. **1** Read the message. **2** Select (red icon) on the taskbar. **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. **4** Execute the appropriate measures, following the instructions in the [Recommendation] screen.

● Others (continued)

(yellow icon) is displayed	● 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. ***1*** Read the message. ***2*** Select (yellow icon) on the taskbar. The [Automatic Updates] screen will be displayed. ***3*** Select [More Options], and set the Automatic Updates to [Automatic].
Some applications do not work properly	● 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. ● If a network-used program is not compatible, also refer to "Cannot start a network-used program..." (☞ page 30)

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 Manual "Multimedia Pocket")

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
----------------------------------------------------------------
```

Troubleshooting

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.
-----------------------------------------------------------------
```

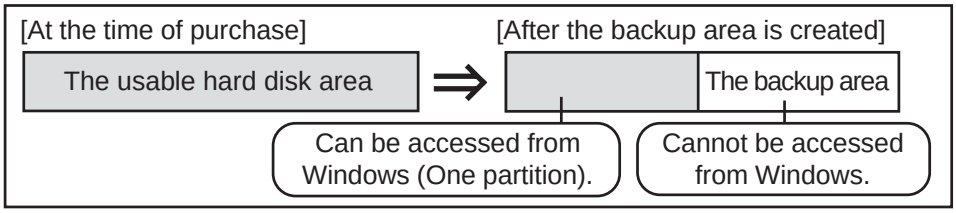
6 Press 3 to execute [3.Backup].

CAUTION

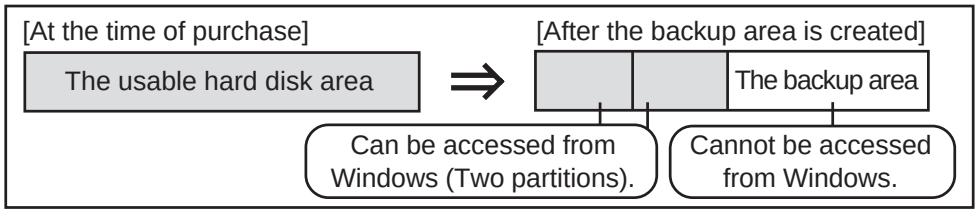
- When dividing the hard disk into partitions
  Do not execute [1. Recovery] to divide the hard disk into partitions. The hard disk backup function cannot be enabled after the hard disk has been partitioned. Use procedure ***8*** to divide the hard disk.

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.

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

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

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

*9 Varies depending on the usage conditions, CPU speed, etc.
*10 Measured using BatteryMark™ Version 4.0.1 (LCD brightness: Maximum - Minimum)
*11 Measured using MobileMark™ 2002 (LCD brightness: 60 cd/m^2)
*12 <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.
*13 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.
*14 Rated power consumption

Wireless LAN

Model No.	CF-29HTLGZBM/CF-29HTQGZBM/ CF-29H3LGZBM	CF-29JTLGZBM/CF-29JTQGZBM/ CF-29J3LGZBM
Data transfer rates	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)	—
Standards supported	IEEE802.11a/IEEE802.11b/IEEE802.11g	—
Transmission method	OFDM system, DSSS system	—
Wireless channels used	IEEE802.11a: Channels 36 to 64, 149 to 165	—
	IEEE802.11b/IEEE802.11g: Channels 1 to 11	—
RF frequency band	IEEE802.11a: 5.18~5.32 GHz, 5.725~5.825 GHz	—
	IEEE802.11b/IEEE802.11g: 2412~2462 MHz	—

Software

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

*15 Only for models with wireless LAN
*16 The Product Recovery CD-ROM is required.

LIMITED WARRANTY

For U.S.A.

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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.

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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.

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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.

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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.

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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

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Memo

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Printed in Japan

FJ1204-0
DFQX5492ZA