SONY

Home Server

VGF-HS1 Series
User Guide

dlna
CERTIFIED

VAIO

WARNING

To prevent fire or shock hazard, do not expose the device to rain or moisture.

To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.

- Use your product only with the AC adapter supplied with the unit.
- To disconnect your product completely from the main voltage, unplug the AC adapter from the mains.
- The socket-outlet shall be installed near the equipment and shall be easily accessible.
- Opening or dismantling this equipment, for whatever reason, could lead to damages that are not covered by the guarantee.
- Sony is not responsible for any interference that you may experience or that may be caused when operating this device.
- Do not use or store this equipment in a location subject to heat sources, such as radiators or air ducts; direct sunlight; excessive dust; moisture or rain; mechanical vibration or shock; strong magnets or speakers that are not magnetically shielded; ambient temperature higher than 95ºF (35ºC) or less than 50ºF (10ºC); and high humidity.

Owner's record

The model number and serial number are located on the bottom of your Home Server.
Record the serial number in the space provided below. Refer to this number whenever you call your Sony dealer regarding this product.
Model No. VGF-HS1
Serial No. ⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯

For customers in the USA

FCC Notice

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

All cables used to connect peripherals must be shielded and grounded. Operation with cables connected to peripherals that are not shielded and grounded may result in interference to radio and television reception.
You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

If you have questions about this product, you can write to the Sony Customer Information Service Center at 12451 Gateway Blvd., Fort Myers, FL 33913, USA or find Sony Customer Service on the Web site at: http://esupport.sony.com/EN/VAIO/ for customers in the USA

Declaration of Conformity

Trade Name: SONY
Model No.: VGF-HS1
Responsible Party: Sony Electronics Inc.
Address: 16530 Via Esprillo
San Diego, CA 92127 USA
Telephone No.: 858-942-2230
(For FCC-related matters only).

This device complies with Part 15 of the FCC Rules.

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

WARNING

Battery may explode if mistreated.
Do not recharge, disassemble or dispose of in fire.

To change the backup battery, please contact your nearest Sony **Service Center**.

For the State of California, USA only

Perchlorate Material - special handling may apply, See
www.dtsc.ca.gov/hazardouswaste/perchlorate
Perchlorate Material: Lithium battery contains perchlorate.

For customers in Europe

This product complies with the following European Directives:
2006/95/EC (Low Voltage Directive)
2004/108/EC (EMC Directive)

This product complies with EN 55022 Class B and EN 55024 for use in the following areas: residential, commercial and light industrial.
This product has been tested and found compliant with the limits set out in the EMC Directive for using connection cables not longer than 3 meters (9.8 feet). The supplied interface cable must be used with the equipment in order to comply with the limits for a digital device pursuant to EN 55022.

Disposal of the internal backup memory battery

- Your VAIO product is equipped with an internal backup memory battery that should not have to be replaced during the lifetime of the product. When the battery needs to be replaced, please contact VAIO-Link.
- Danger of explosion if the battery is incorrectly replaced.
- Dispose of the battery properly at its end-of-life.
- In some areas the disposal of non-hazardous batteries in household or business waste may be prohibited.
- Please use the public collection system.

Disposal of Old Electrical & Electronic Equipment (Applicable in the European Union and other European countries with separate collection systems)

This symbol on the product or on its packaging indicates that this product shall not be treated as household waste. Instead it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. The recycling of materials will help to conserve natural resources. For more detailed information about recycling of this product, please contact your local Civic Office, your household waste disposal service or the shop where you purchased the product.

Safety Information

Data backup

Make backup copies of the content of your storage devices, including a hard disk drive. Sony assumes no liability for any damages arising out of loss or corruption of data caused by hard disk troubles or restoration of such data.

Power cord

A damaged power cord may cause a fire or an electric shock.
- Do not press the power cord between your Home Server and a wall or shelf.
- Do not modify or damage the power cord.
- Do not place a heavy object on the power cord or pull the cord with excessive force.
- Keep the power cord away from heat sources.
- Be sure to grab the plug when unplugging the power cord.

AC adapters

Do not use any AC adapters other than designated, as it may cause an electric shock or a failure.

Placement or location

Use of your Home Server under the conditions stated above or any environmental conditions other than described in this User Guide may cause a fire or an electric shock. Do not place your Home Server in a location subject to oily smoke, steam, humidity, and dust.

Liquid(s) or fine object(s)

If any liquid or fine objects enter the interior of your Home Server, turn off the Home Server and unplug the power cord and connection cables.

Disassemble or modification

Your Home Server contains high-voltage components. Disassembling or modifying the Home Server may cause a fire or an electric shock.

Weather prevention

Do not use your Home Server when a thunder storm is approaching. Lightning strikes may cause an electric shock. Unplug all connected cables including the power cord and the network (LAN) cable when a thunder storm is forecasted.

Network LAN port

Do not plug a telephone cable or an irrelevant network cable into the network (LAN) port on your Home Server. High electric current to the port may cause hardware failures, if the network (LAN) port is connected to telephone lines mentioned below:
Put Especially, never ... underneath the bulleted list.

- Network lines other than 10BASE-T, 100BASE-TX, and 1000BASE-T lines
- Public telephone subscriber line
- Digital jack of ISDN public telephone subscriber lines
- PBX (private branch exchange)
- Home (intercom speakerphone) or business-use telephone lines (multiline business telephone)
- Telephone lines other than those mentioned above.

Power plug

Keep wet hands away from the power plug. Plugging and unplugging with wet hands may cause an electric shock.

Before connecting

- Before connecting the power cord or any peripheral cables, turn off your Home Server and all peripheral devices and disconnect the power cords from power sources to avoid electric shock.
- Use of any power cord and connection cables other than specified in this User Guide and the Setup Guide may cause an electric shock.
- Do not wind the power cord or any connection cable around the AC adapter.
  This may break the cord or cable.

Air vents

Keep air vents unblocked. Do not block air-intake and -exhaust vents, as it may build up internal heat and cause a fire. To provide adequate air circulation, take care of the following:

- Place your Home Server at least 6.0 inches (15.0 cm) away from a wall.
- Do not push your Home Server into a closed, tight space.
- Do not place your Home Server on porous surfaces such as rugs or blankets.
- Do not bundle up your Home Server with a cloth.
- Do not place your Home Server upside down.

Rear cover

Firmly attach the rear cover. Unless the rear cover is firmly secured, applying some kind of force to the cables connected to the back of your Home Server may cause the cover to come off the Home Server; you may step on the cover and hurt your foot.

Surface placement

- Place your Home Server on a stable, flat surface and keep it upright so as to prevent the Home Server from falling and avoid personal injuries. Be sure to choose a place that is strong enough to support the weight of the Home Server.
- Place your Home Server in a flat position. Be sure to place your Home Server in a flat position, as it is not designed for upright placement. An attempt to place the Home Server in the upright position will cause it to roll and damage itself or surrounding objects.

Cleaning

Turn off your Home Server and unplug the power cord before cleaning. Cleaning your Home Server while it is turned on may cause an electric shock.

Moving your Home Server

Be sure to hold your Home Server on its both sides and keep the Home Server balanced before moving it. Do not grasp the front of the Home Server and the rear cover to lift the Home Server, as you may fail to hold the Home Server still and may drop it, resulting in personal injuries.

Top of the Home Server

- Do not place any products other than the following on top of your Home Server:
  — VGX-TP Series Personal Computer
  — VGF-HS1 Series Home Server
  Your Home Server is designed to hold only one unit of the above products on top of it. Placing more than one unit may cause the units to fall off, resulting in product failures or personal injuries. Note that double-stacking may cause discoloration on the surface of the Home Server.
- Place a designated product precisely onto the top of your Home Server.
  Inappropriate placement many cause the product to fall off, resulting in product failures or personal injuries.

Direct sunlight and heat sources

Keep your Home Server away from direct sunlight and heat sources. Placing and keeping your Home Server in such conditions may cause internal heat to build up, resulting in a fire.

Wireless LAN Security

Creating security settings for the Wireless LAN is extremely important. When your Home Server is connected to a wireless LAN without security settings, it can be accessed by unauthorized users. To protect the Home Server against such access, be sure to make appropriate security settings on your wireless LAN devices. Sony assumes no responsibility for any security problems that may arise from the use of the Wireless LAN.

About the illustrations and the screen captures used in this guide

The product illustrations and the screen captures used in this guide may appear different from the actual ones.

- This User Guide, the Setup Guide, the Quick Start Guide, and the information contained in the documents shall not be reproduced in whole or in part and shall not be lent to any third parties.
- The terms of warranty for this product are defined in the separate warranty certificate provided with your Home Server.
- The license agreement for the supplied software is defined in the software license agreement for each software application.
- Sony Corporation provides no warranty with regard to the supplied software. In no event shall Sony Corporation be liable for any incidental, consequential, or special damages, where based on tort, contract, or otherwise, arising out of or in connection with the supplied software.
- Sony Corporation reserves the right to make any modification to this product and the supplied software. The specifications of this product and the supplied software are subject to change without prior notice.
- Sony Corporation and the software vendors reserve the right to terminate or suspend the network services to the supplied software. In no event shall Sony Corporation be liable for inconvenience wholly or partially resulted from the termination or suspension of the services.
- Some information described in this User Guide, the Setup Guide, and the Quick Start Guide and/or in the help files on the supplied software may not be implemented due to restrictions imposed by using such software on this product. Sony Corporation assumes no liability for inconvenience resulted from the restrictions.

Trademarks

- , "Memory Stick," "Memory Stick Duo,"

  "MagicGate," "MagicGate Memory Stick,"
  "Memory Stick PRO," "Memory Stick PRO Duo,"
  "Memory Stick PRO-HG," and VAIO are
  trademarks or registered trademarks of Sony
  Corporation.
- Microsoft, Windows, Internet Explorer, and
  Windows Vista are registered trademarks of
  Microsoft Corporation in the United States and
  other countries.
- PLAYSTATION is a registered trademark of Sony
  Computer Entertainment Inc.
- iTunes is a trademark of Apple Inc., registered in
  the U.S. and other countries.

- The SD logo is a trademark.

- The SDHC logo is a trademark.

- CompactFlash is a trademark of SanDisk
  Corporation, registered in the United States and
  other countries.
- Adobe and Flash are registered trademarks of
  Adobe Systems Incorporated in the United States
  and other countries.
- Firefox is a registered trademark of Mozilla
  Foundation.
- Intel is a registered trademark of Intel Corporation.
- The Ricoh bitmap font, manufactured and sold by
  Ricoh Company, Ltd., is employed for indications
  on the display of this product.
- In this document, Windows Vista® Home Basic,
  Windows Vista® Home Premium, Windows Vista®
  Business, and Windows Vista® Ultimate are
  referred to as Windows Vista; Microsoft®
  Windows® XP Home Edition and Microsoft®
  Windows® XP Professional are referred to as
  Windows XP.
- All other names of systems and products, in
  general, are registered trademarks or trademarks of
  their respective manufacturers. In this document,
  the ™ and ® marks are not specified.

Table of Contents

Manuals

Your Home Server is provided with (1) Quick Start Guide, (2) Setup Guide, and (3) User Guide (this document). The Quick Start Guide helps you get your Home Server ready for operation. Please read the Quick Start Guide first to set up the Home Server and reference the Setup Guide and the User Guide for more information.

Software and Hardware Requirements

This product is a Home Server that is intended for use with personal computers and DLNA devices connected via the Internet or a home network.

To connect to this product, your personal computer must meet the following software and hardware requirements:

- Operating system
  - Microsoft® Window® XP Professional (Service Pack 2 or later)
  - Microsoft® Window® XP Home Edition (Service Pack 2 or later)
  - Microsoft® Windows Vista® Ultimate
  - Microsoft® Windows Vista® Business
  - Microsoft® Windows Vista® Home Premium
  - Microsoft® Windows Vista® Home Basic
- Network (LAN) port
- Accessibility to the Internet

To play AVC (Advanced Video Coding) content with the VAIO Media software, the following requirements must be met.

- Operating system
  - Microsoft® Window® XP Professional (Service Pack 2 or later)
  - Microsoft® Window® XP Home Edition (Service Pack 2 or later)
  - Microsoft® Windows Vista® Ultimate (32 bit)
  - Microsoft® Windows Vista® Business (32 bit)
  - Microsoft® Windows Vista® Home Premium (32 bit)
  - Microsoft® Windows Vista® Home Basic (32 bit)
- CPU
  Intel Core 2 Duo processor (operating frequency 2.33 GHz or faster)
- System memory
  512 MB or higher (1 GB or higher for Windows Vista operating system)

To use the Remote Home Access functions, your computer must meet additional requirements .

Notes

- The VAIO Media software supplied with your Home Server does not support the Windows Vista 64-bit operating system.
- If your VAIO personal computer supports the Windows Vista 64-bit operating system, you can use the pre-installed VAIO Media plus software to take advantage of your Home Server.

Locating Controls and Ports

Front
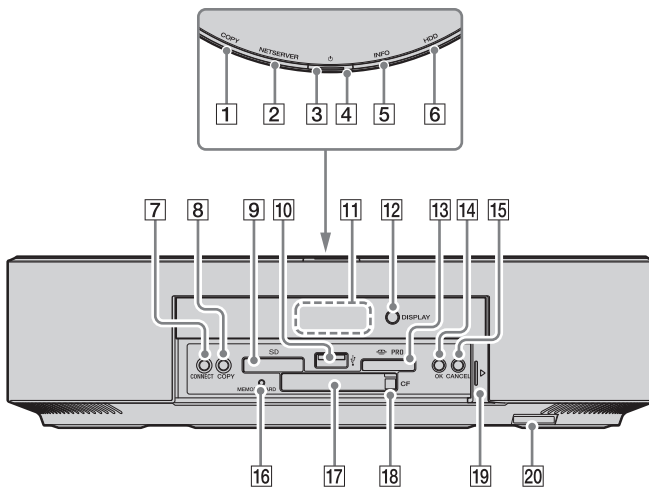
1 COPY indicator light (page 28, 29)
Indicates the state of a USB device or a
memory card and the status of data imported
from the device or card.

2 NETSERVER indicator light (page 42,
71)
Indicates the server test status or the state of
the Home Server.

3 ⏻ (POWER) indicator light (page 71)
Indicates the state of the power supply or the
state of the Home Server.

4 ⏻ (POWER) button
Press this button to turn on and off the
Home Server.

5 INFO indicator light (page 52, 71)
Indicates the state of the Home Server.

6 HDD indicator light (page 71)
Indicates the remaining capacity or the state
of the hard disk drive.

7 CONNECT button
Press this button to obtain a permission code
for adding a Data Sync (receiving) profile.

8 COPY button (page 28, 29)
Press this button to import data from a USB
device or a memory card.

9 SD (SD memory card) slot (page 29)
Insert an SD memory card.

10 ψ(USB) port (page 14, 28)
Connect a USB mass storage class device,
such as a digital still camera and a digital
camcorder. This port is also labeled as Front
USB on the Home Server Settings Page (page
20).

💡 About the indication lights
See page 14 for further information.

11 Display (page 16, 62)
Displays information on the Home Server.

12 DISPLAY button (page 16)
Press this button to turn on the display on the Home Server and select the required information.

13 Memory Stick slot (page 29)
Insert a "Memory Stick" media. This slot can also accommodate the Duo-type media without an adapter.

14 OK button (page 62)
Press this button to confirm the information displayed on the display.

15 CANCEL button (page 23)
Press this button to cancel the on-going operation. Additionally, you can press and hold this button for 10 seconds to clear the administrator registration and the IP address settings.

16 MEMORY CARD access indicator light (page 29)
Blinks while access to the memory card is in progress.

17 CF (CompactFlash) slot (page 29)
Insert a CompactFlash media.

18 CF (CompactFlash) media eject button (page 29)

19 Front door
To open the front door, put your fingertip on the left end of the door and slide it half way to the right. The door will automatically be retracted under the front panel. To close the door, slide it half way to the left. The door will keep sliding on its own and shut.

20 ID label
Shows the model name of the Home Server.

Back
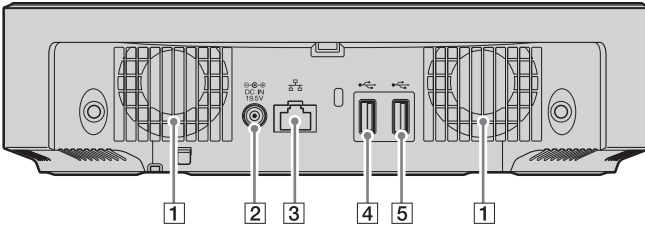
1. Air vents

2. DC IN port
   Connect to the AC adapter.

3. Network (LAN) port
   Connect a network (LAN) cable.

   Note

   Be sure not to connect any unsupported networks or any telephone lines to the Network port. At the time of delivery, this port is covered by a protective sticker to warn the users. Remove the sticker before connecting to the network.

4. (USB) port 1 (page 14, 28)
   Connect a USB mass storage class device, such as a digital still camera and a digital camcorder. This port is also labeled as Rear USB1 on the Home Server Settings Page (page 20).

5. (USB) port 2 (page 14, 28)
   Connect a USB mass storage class device, such as a digital still camera and a digital camcorder. This port is also labeled as Rear USB2 on the Home Server Settings Page (page 20).

About attaching/removing the rear cover
Refer to the Setup Guide.

Note

The air vents on the back of your Home Server and the rear cover may get warm while the Home Server is in operation. Keep this in mind before you touch them.

Bottom

NETSERVER

OFF ◦ ◦ ◦ ON

1
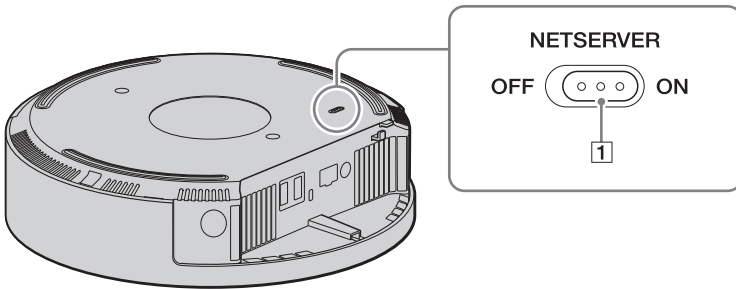
1   NETSERVER switch (page 42)
    Slide this switch to the ON position to allow
    access via the Internet.

    Turning on this switch will register the
    Home Server on the dynamic DNS server
    and enable the port forwarding capability of
    the network router to allow access via the
    Internet.

    To use the Remote Home Access functions
    (page 40), be sure to turn on this switch.

About the ᲈ(USB) ports

The USB ports on your Home Server is compliant with the USB 2.0 standards (High-speed, Full-speed, and Low-speed). The USB 2.0 standards are new Universal Serial Bus (USB) standards and provide faster data transfer than the USB 1.1 standards (Full-speed and Low-speed). The USB ports of the USB 2.0 standards are capable of accepting the USB 1.1 standard devices.

About the indicator lights

The indicator lights help you obtain various kinds of information on your Home Server.

Indicator light		State
COPY	Lights in green	Indicates that the USB mass storage class device, such as a digital still camera, a digital camcorder, or a USB hard disk drive is connected or a memory card is inserted.
		ᯥ Tip If a USB port is specified for the Home Server backup operation (page 49), connecting a USB device to the port does not turn on this indicator light as the One Touch Copy function is disabled for the port.
	Blinks in green	Indicates that the One Touch Copy function is in operation.
	Unlit	Other than the above.
NETSERVER	Lights in green	Indicates that the Home Server is open to access via the Internet.
	Blinks in green	Indicates that the server test (page 42) is in progress.
	Unlit	Indicates that: • The previous server test (page 42) failed. • The NETSERVER switch is turned off.
⏻(POWER)	Blinks in orange	Indicates that the Home Server is turning on.
	Lights in green	Indicates that the Home Server is completely turned on and the hard disk drive is in operation.
	Lights in orange	Indicates that the Home Server is completely turned on, but in power saving mode. The internal hard disk drive is not in operation while the Home Server is in this mode. ᯥ Tip After about 30 minutes of inactivity following completion of the internal process, the Home Server stops the hard disk drive operation and enters power saving mode.
	Blinks in green	Indicates that the Home Server is turning off.
	Blinks alternately in green and orange	Indicates that the firmware update is in progress.
	Unlit	Indicates that the Home Server is turned off.

Indicator light		State
INFO	Blinks in blue	Indicates that a search for the Home Server was initiated by a personal computer via the network and in progress for device registration purposes. The indicator light will stop blinking when the Home Server is selected or canceled.
	Blinks in red	Indicates that an error occurred while the One Touch Copy function is active, the Wireless Digital Audio* is connected, or device registration for one of the Remote Home Access functions is in progress. * The VGF-WA1 Wireless Digital Audio may not be available, depending on the country or region of residency. ᄷ Tip The error description appears on the display. You can press the OK button to turn off this indicator light.
	Lights in red	Indicates that an error has occurred while the One Touch Copy function is NOT active, the Wireless Digital Audio* is NOT connected, or device registration for one of the Remote Home Access functions is NOT in progress. * The VGF-WA1 Wireless Digital Audio may not be available, depending on the country or region of residency. ᄷ Tip If an error occurs during the Back Up, Data Sync, Home Server backup, or Home Server restore operation, the error description will be displayed on the Home Server Settings Page. When you confirm the error, this indicator light automatically turns off.
	Lights in blue	Indicates that: • A new file was created or (a) file(s) was updated by one of the Remote Home Access functions in the last 24 hours. • The VAIO Update software has received an important message or downloaded a firmware update to the Home Server. ᄷ Tip When you confirm the message or the update on the Home Server Settings Page, this indicator light automatically stops blinking.
	Unlit	Other than the above.
HDD	Lights in green	Indicates that the remaining free space of the internal hard disk drive is at least 10% of the total capacity and access to the drive is in progress.
	Lights in orange	Indicates that the remaining free space of the internal hard disk drive is less than 10% of the total capacity and the drive is in operation.
	Blinks in orange	Indicates that the remaining free space of the internal hard disk drive is less than 1 MB.
	Blinks in green	Indicates that the internal hard disk drive is being formatted.
	Blinks alternately in green and orange	Indicates that the internal hard disk drive is not detected.
	Unlit	Other than the above.

15

About the Display indications

When the Home Server is not in operation, you can press the DISPLAY button to turn on the display and view the following information: the Home Server name, the IP address settings, the used space on the internal hard disk drive, the firmware version, the error message (if any), and the important message (if any). The display indication changes when you press the COPY or the CONNECT button.

💡 Tip
The display will go blank in 60 seconds after you press the DISPLAY button.

Hardware Installation and Connection

Your Home Server is intended for use on a network.
For detailed instructions on connecting the Home Server to a network, refer to the Setup Guide.

☼ Tip

In a stand-alone environment, the Home Server can provide:

- Access to the content of the Home Server from a DLNA device (page 40).
- Data import from the USB mass storage class device, such as a digital still camera and a digital camcorder, or a memory card (page 28).

Sharing your Home Server with 2 or more personal computers

You can access your Home Server from 2 or more personal computers as long as the Home Server and the computers are connected to the same network. In addition, you can install the PC Link software on each computer to use the Back Up function (page 32).

1 Connect the Home Server and the personal computers to the same network.

2 Install the PC Link software on each computer with the supplied CD-ROM disc and complete the initial setup of the software.
For further information on the initial setup, refer to the Setup Guide.

☼ Tip

If the Receive folder name for the Back Up function is not unique on the Home Server, a sequential number in parentheses, (2) or (3) for example, is automatically appended to the end of the folder name.

Precautions on the recovery after power failures

In case of a blackout, or when you unplug the power cord while your Home Server is still on, it will recover to its previous state. Please note it might take some time before you can use the user due to automatic file recovery.

Precautions on the NETSERVER switch

When the NETSERVER switch (page 13) is turned off, you cannot use the following Remote Home Access functions:

- VAIO Picture Lab
- Media Link
- Data Sync (receiving) from other Home Servers and personal computers.

About the Supplied Software

The CD-ROM disc provided with your Home Server contains the following software applications:

- **PC Link** (page 18)
  The PC Link software provides easy ways to keep folder data updated between a personal computer and a Home Server.

  > 💡 About the Restore Tool
  > The Restore Tool is installed along with the PC Link software.
  > Your Home Server is capable of copying files to the connected USB hard disk drive for backup purposes and copying them back to the Home Server for data restoration. The Restore Tool is an additional function that allows you to copy the backup files from the USB hard disk drive to a personal computer (page 50).

- **VAIO Media** (page 19)
  The VAIO Media software allows access to music, photo, and video contents of your Home Server from all personal computers on the home network.

To use the above software applications, you must install each software application on your personal computer with the supplied CD-ROM disc. If you already have the VAIO Media software installed on the computer, you may skip installation of this particular application depending on the software version. Refer to the Setup Guide and install the software application of your choice.

Notes
- The VAIO Media software supplied with your Home Server does not support the Windows Vista 64-bit operating system.
- If your VAIO personal computer supports the Windows Vista 64-bit operating system, you can use the pre-installed VAIO Media plus software to take advantage of your Home Server.

Using the PC Link software

What you can do with the PC Link software

The PC Link software has the following functions:

- **Back Up**
  You can create a Back Up profile on your personal computer and have the files in a specified folder automatically uploaded to your Home Server via your home network or the Internet (page 40).

  Note
  You must connect the computer and the Home Server to the home network before creating Back Up profiles.

  💡 Tip
  You can specify the following options in a Back Up profile:
  – Backup timing
  – Whether or not to delete files from the Home Server when the corresponding files are removed from the source folder
  – Whether or not to add information for the Music Channel Function to music files.

- **Data Sync**
  You can create a Data Sync profile on your personal computer and have the files in a specified folder sent to a destination device or received from a source device via the Internet. With this function, you can exchange data between your computer and Home Server for data synchronization.

  💡 Tip
  You can specify the schedule for sending files in Data Sync (transmitting) profiles.

- **Metadata analysis**
  If you want to upload a music file to a Home Server, PC Link can analyze it using VAIO Content Analyzer and add the results to the music file as metadata to make it compatible on the DLNA devices supporting the Music Channel Function. With the Music channels, you can play music according to your mood or situation.

  🔆 Tips
  - Metadata analysis can be applied to the files in MP3, ATRAC, and WMA format.
  - Metadata is data with content information. DLNA devices use this added metadata for file management and search.

Starting the PC Link software

1 Click "Start," "All Programs," "PC Link," and "PC Link."

The PC Link software starts and the main window appears on the desktop.

🔆 Tip
You can also, double-click the PC Link icon 🔘 on the taskbar to start the software.

Using the VAIO Media software

What you can do with the VAIO Media software
The VAIO Media software allows you to access music, photo, and video contents of your Home Server from all personal computers and DLNA devices on the home network.
For further information, refer to the software's help file. To open the help file, click "Start," "All Programs," "VAIO Media," "Help."

Notes
- The VAIO Media software supplied with your Home Server does not support the Windows Vista 64-bit operating system.
- If your VAIO personal computer supports the Windows Vista 64-bit operating system, you can use the pre-installed VAIO Media plus software to take advantage of your Home Server.

19

Customizing Your Home Server

You can use the Home Server Settings Page and change the default settings to customize your Home Server.

About the Home Server Settings Page

The Home Server Settings Page provides a tool to set up the functions of your Home Server that you can access with browser software on your personal computer.
To access the Home Server Settings Page, your computer must have one of the following software browsers installed:

- Microsoft Internet Explorer 6 (on personal computers with the Windows XP operating system)
- Microsoft Internet Explorer 7 (on personal computers with the Windows XP operating system SP2 or the Windows Vista operating system)
- Firefox 2

What you can do on the Home Server Settings Page

You can set up, view, and change the following functions.

Menu	Function	You can:
Server function	Basic Information	View or change the Home Server name and the work group name.
	Shared folders	Create or delete shared folders; or view or change the shared folder properties.
	User accounts	• Manage the administrator account and the user accounts; or view or change the account properties. • Create or delete user accounts.
	Web/Media Link	• View or change the properties of the folders used for the VAIO Picture Lab function or the Media Link function. • Add or remove the folders used for the VAIO Picture Lab function or the Media Link function. • Send e-mails that contain the URL addresses for the folders used for the VAIO Picture Lab function.
	DLNA device	• Accept or deny a connection to the Home Server from a DLNA device. • View the list of the devices permitted for connection to the Home Server and the list of devices that are waiting for permission.

Menu	Function	You can:
Remote Home Access	Back Up	• View Back Up profiles that include a Receive folder for files sent from a personal computer. • Change the Receive folder names, the description of the shared folders containing a Receive folder, or the description of the Receive folder. • Remove Back Up profiles.
	Data Sync (transmitting)	• View Data Sync (transmitting) profiles that include a Send folder. • Add or remove Data Sync (transmitting) profiles or change the transmission schedule specified in the profiles. • Manually start or stop transmissions.
	Data Sync (receiving)	• View Data Sync (receiving) profiles that include a Receive folder. • Change the Data Sync (receiving) profile names. • Add or remove Data Sync (receiving) profiles.
	Server test	• Start the server test. • Change the port number for the Media Link function or the VAIO Picture Lab function. • Change the options.
Advanced settings	Network	• View or change the IP address settings. • View or change the proxy server settings.
	Date and time	View, change, or adjust the clock settings on the Home Server.
	One Touch Copy	View or change the content type to be copied by the One Touch Copy function.
	VGF-WA1	• View the number of the Wireless Digital Audio units* registered on the Home Server. • Change the wireless LAN channel used. • Register the Wireless Digital Audio or remove the registration.
	Home Server backup	Create, view, or change the Home Server backup profile for copying data from the Home Server to the USB hard disk; or start the Home Server backup process.
	Home Server restore	Restore the backup copies to the Home Server from the USB hard disk drive.
	Firmware update	• View the firmware information of the Home Server. • Update the firmware.
	Reset	• Rebuild the database. • Rebuild the playlist. • Restore the factory default settings while keeping hard drive content. • Restore the factory default settings while deleting all hard drive content.

* The VGF-WA1 Wireless Digital Audio may not be available, depending on the country or region of your residency.

Opening the Home Server Settings Page

❑ To open from the folder

1 Click "Start" and "My Network Places" or "Network."

The My Network Places window or the Network window appears.

2 Double-click "MyStation" (the default name) or "(Home Server name)."

The window containing the list of the shared folders on the Home Server appears.

If the user name and the password are prompted, enter a temporary text string, "Sony" for example.

🔆 Tip

If you cannot find your Home Server name in the window displayed in step 2 or if double-clicking "MyStation" or "(Home Server name)" starts the Windows Media Player software, specify the Home Server name or change the work group name of the Home Server or the personal computer.

- To specify the Home Server name
  1 Press the DISPLAY button on the Home Server several times to display the Home Server name or the IP address on the display.
  2 Enter "\\(MyStation)," "\\(Home Server name)," or "\\(IP address of the Home Server)" in the address field at the upper part of the My Network Places or Network window, and then press the Enter key.
  If the address field is not displayed on the window, click "View," "Toolbars," and "Address Bar."
- To change the work group of the Home Server or the personal computer
  If the Home Server name is not displayed, the Home Server and the personal computer may not be assigned to the same work group.
  Change the work group name of the Home Server or the personal computer.
  — To change the work group name of the Home Server, go to the Basic Information page on the Home Server Settings Page and change the work group name.
  — To change the work group name of the personal computer, refer to the Windows Help and Support for detailed instructions.

3 Double-click "help" and "HomeServerSetting.html."

The Web top page appears in the browser software window.

4 Click "Home Server Settings Page."

The Home page is displayed.

🔆 Tips
- If a window appears, asking for the administrator name and password, enter your registered administrator name and password and click "Log in."
- The default name of your Home Server is "MyStation." You can change this default name on the Basic Information page on the Home Server Settings Page.

❑ To open from the PC Link software

1 Start the PC Link software (page 18).

The main window appears on the desktop.

2 Click the name of the Home Server for which you want to access the Home Server Settings Page.

The Web top page appears in the browser software window.

3 Click "Home Server Settings Page."

The Home page is displayed.

🔆 Tip
If a window appears, asking for the administrator name and the password, enter your registered administrator name and password and click "Log in."

❑ To open directly with the browser software

1 Press the DISPLAY button on the Home Server several times to display the Home Server name or the IP address on the display.

2 Start the browser software on the personal computer.

3 Enter "http://(Home Server name)/" or "http://(IP address)/" and press the Enter key.

The Web top page appears in the browser software window.

4 Click "Home Server Settings Page."

The Home page is displayed.

💡 Tip

If a window appears, asking for the administrator name and password, enter your registered administrator name and password and click "Log in."

Note

Accessing the Home Server Settings Page requires entering the administrator name and the password. If you cannot remember your administrator name and/or password, press the CANCEL button on the Home Server for 10 seconds or longer to clear the administrator registration and the password settings. For information on the state of your Home Server after you cleared the settings, see "State of the Home Server after Restoring the Home Server or the System" on page 56.

Changing the system settings of your Home Server

Access the Home Server Settings Page and change the settings.

If you want to:	Go to:
Change the IP address.	Network page
Use a proxy server.	
Change the work group name to which the Home Server belongs.	Basic Information page
Change the Home Server name on the network.	
Change the clock settings on the Home Server.	Date and time page

💡 Tip

For further information on each settings page, click "Help" at the top right corner of the page.

Notes

• If you exit the browser software while changing the setup, all modifications applied to the Home Server Settings Page will be discarded.
• Clicking the previous button on the browser software will not display the previous page, but the top page of the setup item.

Using Your Home Server as a Network Storage Device for Personal Computers

The following describes the default folder configuration and access privilege at the time of delivery and what your Home Server offers as a network storage device.

Default folder configuration and access privilege
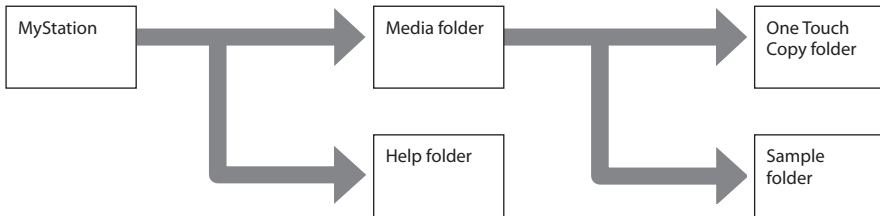
Folder name	Description	Access privilege
Media	The shared folder with content accessible from DLNA devices. You cannot block access from DLNA devices to this folder. Creating a Back Up profile on the personal computer will create a Receive folder for the profile in this shared folder.	All users can access these folders and read and write the content by default. To change the access privilege on the folders, access the Home Server Settings Page and go to the Shared folders page.
One Touch Copy	Using the One Touch Copy function will create a folder with the name of the import date and save the import data into the created folder.	
Sample	Contains sample music, photo, and video contents accessible from DLNA devices. **Note** Restoring the factory default settings of your Home Server will remove this Sample folder and you will not be able to restore the folder.	
Help	Contains the file that shows the URL address for the Home Server Settings Page.	You cannot modify the file or create a new file or folder in this folder. Additionally, you cannot change the access privilege on the Help folder.

Opening a shared folder

1 Click "Start" and "My Network Places" or "Network."

The My Network Places window or the Network window appears.

2 Double-click "MyStation" (the default name) or "(Home Server name)."

The window containing the list of the shared folders on the Home Server appears.

ϙ̆ Tips
- If MyStation or your Home Server name is not listed, see the tip in "To open from the folder" on page 22.
- If the Network window in the Windows Vista operating system in step 1 shows the message that network discovery and file sharing are disabled, follow the steps below:
  ① Click the message and select "Turn on network discovery and file sharing" from the menu.
     If the User Account Control window appears, read the information and click "Continue."
  ② On the Network discovery and file sharing window, click to select "No, make the network that I am connected to a private network."

If the Home Server has a global IP address and you have not completed administrator registration
Follow the steps below to register yourself as an administrator before opening a shared folder:

1 Double-click "help" and "HomeServerSetting.html."

The Web top page appears in the browser software window.

2 Click "Home Server Settings Page."

The security warning message is displayed.

3 Click "Continue."

The Administrator Registration page is displayed.

4 Enter an administrator account name of up to 10 characters in length in the Administrator name field.

ϙ̆ Tips
- The characters available for entry are:
  — Alphanumeric characters and spaces
  — ! # $ % & ' ( ) - . @ ^ _ ` { }
- You cannot enter an administrator account name that only consists of either periods or spaces.
- Spaces at the beginning and end of the entered administrator name will automatically be removed.

5 Enter a password from 5 to 14 characters in length in the Password field.

The entered password is displayed as a series of dots.

ϙ̆ Tips
- The characters available for entry are:
  — Alphanumeric characters and spaces
  — \ : , ; * < > | ' [ ] = + . ` ( ) ~ $ " / ?
- You cannot enter a password that only consists of spaces.

6 Enter the same password as in step 5 in the Password field.

7 Click "Register."

The DLNA device management page is displayed.

8 Confirm or change the settings.

For further information, click "Help" at the top right corner of the DLNA device management page.

9 Click "Next."

The Shared folder management page is displayed.

10 Confirm the settings.

For further information, click "Help" at the top right corner of the Shared folder management page.

Creating a shared folder

1 Access the Home Server Settings Page (page 22).

2 Click "Shared folders" in the left pane.

The Shared folders page is displayed in the right pane.

3 Click "Create a shared folder" and specify the necessary properties.

A new shared folder is created.

Note
You can create up to 20 shared folders.

ʰ̣ Tip
For further information, click "Help" at the top right corner of the Shared folders page.

To change the administrator registration and the IP address settings

1 Press and hold the CANCEL button on the Home Server for 10 seconds or longer.

The administrator registration and the IP address settings are cleared.

To register yourself as an administrator, see "If the Home Server has a global IP address and you have not completed administrator registration" on page 25.

ʰ̣ Tip
The IP address is automatically assigned to your Home Server.

Using your Home Server as a data storage device

You can import music, photo, and video contents to your Home Server from a digital still camera or a digital camcorder or data from a personal computer for storage purposes.

The import method depends on the source device.

Source device	Import timing	Import method
Digital still camera, Digital camcorder	• Manual (from the source device) • Manual (from a memory card)	A One Touch Copy function
Personal computer	Automatic	B Back Up function
	Manual	C Windows copy function
Another Home Server	Automatic	D Data Sync (receiving) function

A One Touch Copy function (page 28)
   The One Touch Copy function allows you to import content from connected device or memory card just by pressing the COPY button on your Home Server.
   Before pressing the COPY button, be sure to do either of the following:

   • Connect a USB device, such as a digital still camera or a digital camcorder, to the Home Server.

   • Insert a memory card, such as a "Memory Stick" media, an SD memory card, or a CompactFlash media, into an appropriate card slot.

   ⚙ Tip

   For viewing imported content, see page 30.

B Back Up function (page 32)
   Data will be automatically imported from a personal computer at the time of an upload by the Back Up function.

   ⚙ Tip
   If you select the option to add information for the Music Channel Function in the Back Up profile, the music content will be sorted automatically by genre. Then, you can play the content according to your mood or situation on a DLNA device that supports the Music Channel Function.

C Windows copy function (page 25)
   You can access the Home Server from a personal computer via the network and copy the content from the computer to shared folders on the Home Server.

   ⚙ Tips

   • To play imported content on a DLNA device, such as VGF-CP1, copy the content(s) into the One Touch Copy folder on the Home Server.

   • For opening or creating a shared folder, see page 25 or page 26, respectively.

D Data Sync (receiving) function (page 45)
   Data will automatically be imported at the time of a reception by the Data Sync (receiving) function from another Home Server.

Importing data with the One Touch Copy function

❏ To import from a USB device

Note

When the USB port on the digital still camera is in PTP or PictBridge mode, you cannot use the One Touch Copy function. Place the USB port into mass storage mode before proceeding with the following steps.

1 Connect a digital still camera or a digital camcorder to one of the Ψ(USB) ports on the Home Server with a USB cable.

The COPY indicator light on the Home Server turns on.

🔆 Tip

If no content has been updated since the previous import, the COPY indicator light will not turn on.

COPY indicator light
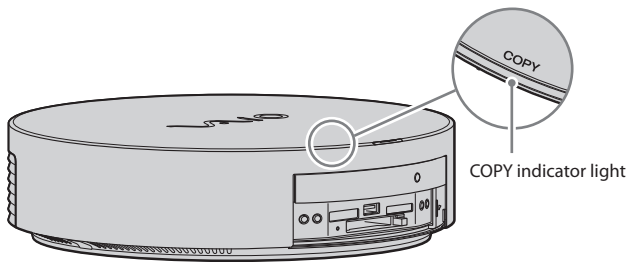
Note

If you connect a USB device to the USB port specified for Home Server backup (page 49), the content will not be imported to the Home Server.

2 Press the COPY button.

COPY button
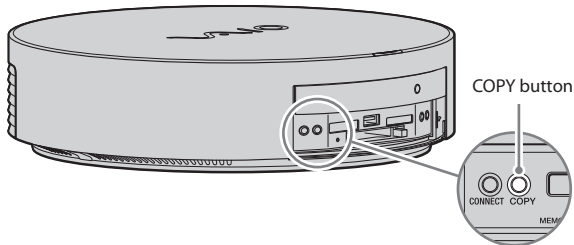
The message notifying the progress of the copy process appears on the display on your Home Server and the COPY indicator light blinks while the copy process is in progress.

Upon completion of the copy process, the completion message appears on the display and the COPY indicator light turns off.

For viewing the destination folder, see "To view the copied photo and video contents" on page 30.

3 Wait until the COPY indicator light turns off, and then unplug the USB cable.

About compatible file formats

When the option to import video and photo only is selected on the One Touch Copy page on the Home Server Settings Page, the files in the following formats will be imported.

USB device	File format
Digital still camera	DCF (photo)
Digital camcorder (DVD storage type*)	DCF (photo) DVD video (standard image quality) AVCHD (high definition image quality)
Digital camcorder (Hard disk storage type)	DCF (photo) MPEG2 (standard image quality) AVCHD (high definition image quality)

* DVD media must be finalized to be available for file importing.

Notes

- To allow playback of the imported content on a DLNA device, select the option to import video and photo only on the One Touch Copy page on the Home Server Settings Page.
- When a digital camcorder of the DVD storage type is connected to the Home Server, only video and photo contents will be imported even if the option to import all type of content is selected on the One Touch Copy page on the Home Server Settings Page.

❏ To import from a memory card

1 Insert a memory card into a memory card slot (page 10 and 11) on the front of the Home Server.

Be sure to select the memory card slot appropriate for the media you are using.

Insert the media until it clicks into place. The MEMORY CARD access indicator light (page 11) blinks and the COPY indicator light turns on.

Notes

- Be sure to insert the media in the correct orientation. To avoid damaging the memory card slot or the media, do not force the media into the slot.
- To avoid loss or corruption of the stored data, be sure NOT to:
  – Remove the media or turn off the Home Server while access to the media is in progress.
  – Use the media in a location subject to static electricity or electric noise.

💡 Tips

- Insert one memory card at a time even when you want to import data from multiple media cards.
- If no content has been updated since the previous import, the COPY indicator light will not turn on.

Operations

2 When the COPY indicator light turns on, press the COPY button.

The copy process notification message appears on the display and the COPY indicator light blinks while the copy process is in progress.

COPY button
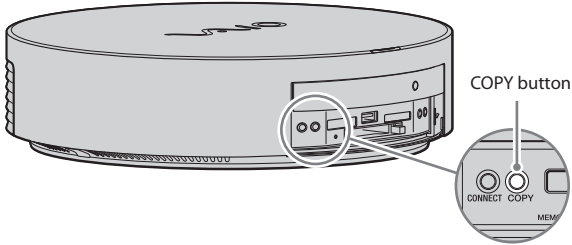
Once the copy process is complete, a completion message will appear on the display and the MEMORY CARD access indicator light and the COPY indicator light turns off.

For viewing the destination folder, see "To view the copied photo and video contents" on page 30.

3 Wait until both the MEMORY CARD access indicator light and the COPY indicator light are off, and then remove the media from the slot.

To remove the "Memory Stick" media or the SD memory card, push in and release the media, then pull it out. If you failed, repeat this action.

To remove the CompactFlash media, press the CF (CompactFlash) media eject button (page 11) and pull out the media.

To view the copied photo and video contents

- From a DLNA device
  Access the Recently Added folder or the Albums folder within the Photo folder. See "Folder configuration on the Home Server when accessed from a DLNA device" on page 39 for further information.
- When your Home Server is used as a network storage device
  Access the One Touch Copy folder. See "Default folder configuration and access privilege" on page 24 for further information.

About memory cards

Your Home Server supports the "Memory Stick" media, the SD memory card, and the CompactFlash media. The following describes the precautions on using individual types of media.

- "Memory Stick" media
  - You can use 5 types of the "Memory Stick" media on your Home Server:
  "Memory Stick," "Memory Stick Duo", "Memory Stick PRO", "Memory Stick PRO Duo", and "Memory Stick PRO-HG Duo."
  - The Memory Stick slot on your Home Server can accommodate both standard- and Duo-size media. You can insert the Duo-size "Memory Stick" media directly into the Memory Stick slot without using the adapter.
  - Do not insert the "Memory Stick" media and the "Memory Stick Duo" media into the Memory Stick slot at the same time, as it may damage the slot and/or the media.
  - The Memory Stick slot on your Home Server does not support the MagicGate feature of the "Memory Stick" media. This means that you cannot use copyright-protected data on the Home Server.

  ### ☼ About "MagicGate"
  MagicGate is the general name of the copyright protection technology developed by Sony. This technology ensures that the protected content is only transferred between a MagicGate compliant device and the "Memory Stick" media (authentication) and that the protected content is recorded and transferred in an encrypted format. Before playing the protected content, the MagicGate feature also checks for authenticity and decrypts the protected content only if authentication has succeeded in order to protect against playback of copyright-protected data on an unauthenticated device.

  - The Memory Stick slot on your Home Server does not support 8-bit parallel data transfer.
  - Your Home Server has been tested and found compatible with Sony branded "Memory Stick" media with a capacity of up to 16 GB that are available as of August 2008. However, not all "Memory Stick" media that meet the same specifications as the compatible media are guaranteed of compatibility.
- SD memory card
  Your Home Server has been tested and found compatible only with SD memory cards with a capacity of up to 2 GB and SDHC memory cards with a capacity of up to 16 GB available as of May 2008. However, not all memory card meet the same specifications.
- CompactFlash media
  Your Home Server supports the Type-I and II CompactFlash media. However, not all CompactFlash media meet the same specifications.

About the compatible file formats

When the option to import video and photo only is selected on the One Touch Copy page on the Home Server Settings Page, the files in the following format can be imported.

Memory card	File format
"Memory Stick," "Memory Stick Duo," "Memory Stick PRO," "Memory Stick PRO Duo," and "Memory Stick PRO-HG Duo"	DCF (photo) DVD video (standard image quality) AVCHD (high definition image quality)
SD/SDHC memory card	DCF (photo)
CompactFlash (Type-I and II compliant)	DCF (photo)

When the option to import all types of content is selected, there are no restrictions on the file formats.

Note

To play the imported content on a DLNA device, select the option to import video and photo only on the One Touch Copy page on the Home Server Settings Page.

To cancel the on-going import

Press the CANCEL button on your Home Server.

About the One Touch Copy settings

If you want to:
• Change the type of the content to be imported. (Video and photo only/All)

▼

Access the Home Server Settings Page and go to the One Touch Copy page.

💡 Tip

For further information on the One Touch Copy page, click "Help" at the top right corner of the page.

Using the Back Up function

What you can do with the Back Up function

The Back Up function provides a way to automatically upload files in the specified folder on a personal computer to your Home Server via your home network or the Internet in connection with the PC Link software.

In addition to starting an upload as you scheduled in the Back Up profile, you can manually start any backup at any time.

The Back Up function also provides metadata analysis that adds additional information to music content so that DLNA devices can use it for file management and searching. Additionally, Sony branded DLNA devices use this information to categorize the music files stored in the Release Year, Music channels, and Mood folders. You can select the option for this metadata analysis when adding or changing Back Up profiles on your computer with the PC Link software.

For further information on the Back Up function, refer to the help file on the PC Link software.

Notes

- To add or change Back Up profiles, you must connect the computer and the Home Server to your home network. Back Up uploading via the Internet has additional requirements. See page 42 for further information.
- Playback of the music files in the Music channels and the Mood folders can only be available on Sony branded DLNA devices.

About importing music content

To add metadata to music content at the time of an upload by the Back Up function, you must select the option to add information for the Music Channel Function to the music files on the Back Up properties window of the PC Link software.

The music content with added metadata information will be sorted as follows for playback on the destination DLNA devices.

- By released years (Release Year)
- By channels, such as general feelings and time zones (Music channels)
- By musical moods (Mood).

Adding a Back Up profile

Use the PC Link software on your personal computer.

Note

To add a Back Up profile, you must connect the computer and the Home Server to your home network. For information on network connection, consult the following section in the Setup Guide: Hardware connection and setup - Connecting to a network.

1 Click "Start," "All Programs," "PC Link," and "PC Link."

The PC Link software starts and the main window appears on the desktop.

💡 Tip

You can also, double-click the PC Link icon 🔵 on the taskbar to start the software.

For further instructions, refer to the help file on the PC Link software.

You can view the upload source device name and the upload source folder name on the Back Up page on the Home Server Settings Page.

About Back Up profiles

To view or change Back Up profiles, access the Home Server Settings Page or start the PC Link software.

If you want to:

- Accept or deny Back Up uploading to the Home Server.
- Change the Receive folder names, the description on shared folders, or the description of the Receive folders.

Access the Home Server Settings Page and go to the Back Up page.

💡 Tip

For further information on the Back Up page, click "Help" at the top right corner of the page.

Operations

- Create, view, or change Back Up profiles.
- Start a backup manually.
- Abort the on-going backup.
- Remove Back Up profiles.

▼

Start the PC Link software.

ϔ Tips

- Refer to the help file on the PC Link software for detailed instructions.
- Removing a Back Up profile does not delete the corresponding Receive folder on the Home Server. To delete this folder, remove the folder content first. Next, access the Home Server Settings Page, go to the Shared folders page, and delete the folder. For further information on the Shared folders page, click "Help" at the top right corner of the page.

- Remove Back Up profiles.

▼

Start the PC Link software or access the Home Server Settings Page.

ϔ Tips

- When using the PC Link software
  - Refer to the help file on the PC Link software for detailed instructions.
  - It is recommended that you use the PC Link software for removing Back Up profiles. Removing a Back Up profile on the software removes the corresponding Data Sync (receiving) profile on the Home Server as well.
- When using the Home Server Settings Page
  - Go to the Back Up page and click "Help" at the top right corner to see the detailed instructions.
  - Removing a Data Sync (receiving) profile does not delete the Receive folder.

Note

Removing a Data Sync (receiving) profile on the Home Server Settings Page does not remove the corresponding Back Up profile of the PC Link software on the personal computer.

Connecting from DLNA Devices

You can connect to your Home Server from DLNA devices, such as some TVs, Wireless Digital Audio*, and PLAYSTATION3, and access the Home Server content.

* The VGF-WA1 Wireless Digital Audio may not be available, depending on the country or region of your residency.

The prerequisites for connection depends on the IP address settings of your Home Server.

- **When the Home Server has a global IP address**
  Connection from a DLNA device requires DLNA device registration on the Home Server. Access the Home Server Settings Page and complete the registration.
- **When the Home Server has a private IP address**
  If your network is set up as described in the Setup Guide, you can connect your DLNA device and access the content.

Note

While the content of the Home Server are accessed from DLNA devices, doing one of the following may shut down the connections and stops the playback on the DLNA devices.

- Restoring the Home Server
- Restoring the system
- Pressing the CANCEL button on the Home Server for 10 seconds or longer

Playing the Home Server content on the DLNA device

1 Connect the DLNA device to the network.

For detailed instructions, refer to the manual that came with the device.

If the Home Server has a private IP address, the DLNA device will automatically be registered on the Home Server.
Proceed to step 3.

2 Register the Home Server on the DLNA device.

For detailed instructions, refer to the manual that came with the device.

3 Select a file in a shared folder on the Home Server and play the file.

Tip
For the folder configuration on the Home Server, see "Folder configuration on the Home Server when accessed from a DLNA device" on page 39.

About the DLNA device settings

If you want to:
• View the DLNA device names registered on the Home Server.
• Restrict access from DLNA devices.
• Permit or reject access from a DLNA device.

Access the Home Server Settings Page and go to the DLNA device page.

💡 Tip

For further information on the DLNA device page, click "Help" at the top right corner of the page.

Playing the Home Server content on the Wireless Digital Audio

When the Sony VGF-WA1* Wireless Digital Audio is registered on the Home Server, you can play the Home Server's music content on the Wireless Digital Audio via wireless LAN connection by connecting a Wireless Adapter to the Home Server. Additionally, if the Home Server is connected to the Internet, you can listen to the web radio.

* The VGF-WA1 Wireless Digital Audio may not be available, depending on the country or region of residency.

Connecting the Wireless Digital Audio to the Home Server for the first time

For detailed instruction, consult the following section in the Setup Guide: Letting DLNA devices to access audio/video content - To access the music content stored on your Home Server from a Wireless Digital Audio device.

Note

You can register up to 5 Wireless Digital Audio units.
To register additional Wireless Digital Audio units, you must remove the registration of all devices. See page 37 for the detailed instructions.

💡 Tip

Additionally you can also connect the Wireless Digital Audio to the Home Server via a wireless LAN access point. For detailed instructions, refer to the manual that came with your Wireless Digital Audio.

Playing music content

You play the Home Server's music content just by connecting a Wireless Adapter to the Home Server with the designated Wireless Adapter connection support cable.

Note

Accessing the music content on the Home Server from multiple Wireless Digital Audio units at the same time may interrupt the playback.

Tips

- When the display window on the Wireless Digital Audio shows the MAC address of the Home Server, you can press the CANCEL button on the Home Server to clear it.
- For the file formats compatible on the Wireless Digital Audio, refer to the manual that came with the Wireless Digital Audio.
- When the Home Server is connected to the Internet, you can listen to the web radio. If the Home Server is connected to the Internet via a proxy server, you must set up the proxy server on the Wireless Digital Audio. Refer to the manual that came with the Wireless Digital Audio for detailed instructions.

Removing registration of the Wireless Digital Audio

You can remove the registration of the Wireless Digital Audio by:
- Restoring the Home Server (page 54).
- Restoring the system (page 55).
- Removing the registration on the VGF-WA1 page on the Home Server Settings Page.

Follow the steps below to remove the registration on the VGF-WA1 page.

1 Access the Home Server Settings Page (page 22).

2 Click "VGF-WA1" in the left pane.

The VGF-WA1 page is displayed in the right pane.

3 Click "Remove all registrations."

4 On the confirmation page, click "OK."

Note

You cannot remove the registration of a particular Wireless Digital Audio unit.

About the Wireless Digital Audio settings

If you want to:

- View the number of the Wireless Digital Audio units and their device names and MAC addresses.
- Remove the registration of the Wireless Digital Audio units.

  Note

  You can only remove the registration of all Wireless Digital Audio units, but not the registration of a particular unit.

- Change the wireless LAN channel.

Access the Home Server Settings Page and go to the VGF-WA1 page.

Tip

For further information on the VGF-WA1 page, click "Help" at the top right corner of the page.

Folder configuration on the Home Server when accessed from a DLNA device

The following shows the folder configuration on the Home Server.

| Top layer	Second layer
Video	Albums The names of the folders containing videos are listed.
	Genre This folder appears only when the videos that have genre information added, are stored on the Home Server.
	Date
	All Videos
	Recently Added The content that has been imported within the last one week is listed.
	Data Sync The content received by the Data Sync function is listed.
Music	Playlists
	Artists
	Albums
	Genre
	Music Cannel
	Mood This folder is a hidden folder.
	Release Year
	All Music
	Recently Added The content that has been imported within a week before is listed.
	Jackets
	Data Sync The content received by the Data Sync function is listed.
Photo	Albums
	Date
	Tags The XMP tags added by the Windows Photo Gallery software are listed.
	All Photos
	Recently Added The content that has been imported within a week before is listed.
	Data Sync The content received by the Data Sync function is listed.
Recently Added	The content that has been imported within a week before is listed.
Data Sync	The content received by the Data Sync function is listed.

Operations

39

Using the Remote Home Access Functions

You can use the Remote Home Access functions to share content on your Home Server with your family and friends in distant locations via the Internet. Additionally, you can keep the data updated between your Home Server and a personal computer or the Home Server at your family's or friend's home by exchanging the data periodically or manually.
The Remote Home Access functions include:

- **VAIO Picture Lab function**
  You can use your Home Server as a Web server and let other users view the photo content in a specified shared folder on your Home Server with Web browser software.
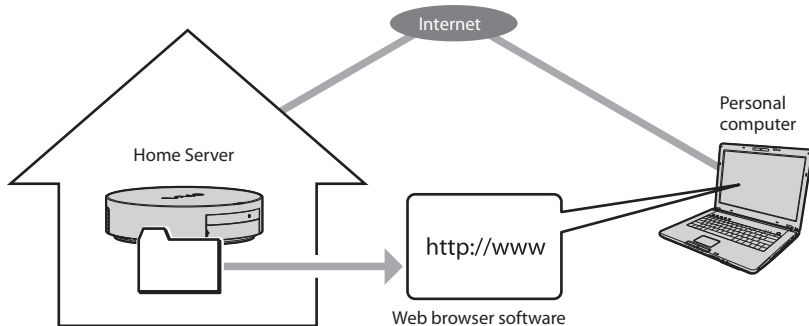

- **Media Link function**
  You can use the Media Link function and allow the use of the registered Media Link devices, Digital Photo Frame VGF-CP1 for example, view the photo content in the specified shared folder on your Home Server.
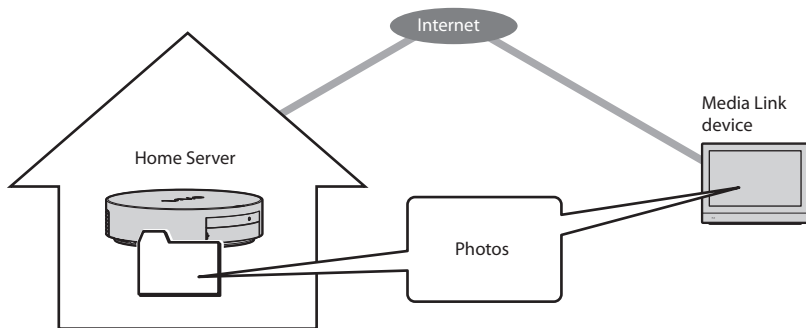
• **Data Sync function**
  You can use the Data Sync function to keep the folder content updated between your Home Server and a personal computer or another Home Server at your family's or friend's home by exchanging the content periodically or manually.
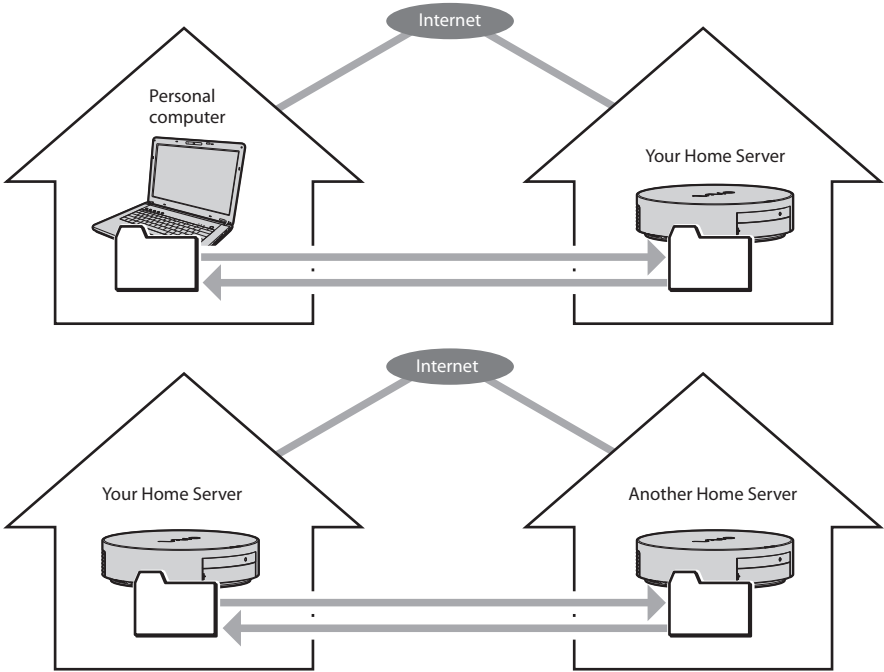
• **Back Up function**
  Once you have created a Back Up profile, you can use the Back Up function via the Internet. See page 32 for further information on the Back Up function.
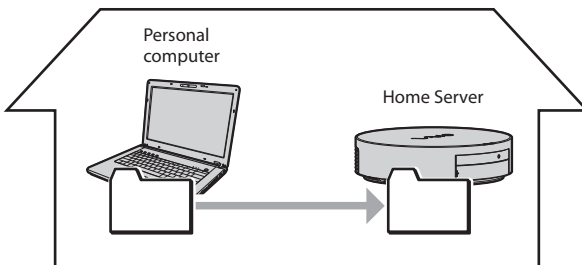
Network requirement for the Remote Home Access functions

To use the Remote Home Access functions, your Home Server must be connected to a home network that is accessible from the Internet. To meet this requirement, you must have a UPnP compliant network router.

If your network router is not UPnP compliant
You may be able to allow access via the Internet by enabling the port forwarding capability of your network router. Port forwarding setting requires the following steps:

1 Disable "UPnP (automatic router setup)" of the Home Server.

Uncheck "Use UPnP (automatic router setup)" in Options settings for the Server (NETSERVER) test on the Home Server Settings Page.

2 Set IP address fixed for the Home Server.

Change the network connection setting on the Settings pages to "IP address (manual)" and set the IP address for the Home Server fixed.

3 Set up the port forwarding for the router.

Set the protocol type as TCP and the port number as configured for Remote Home Access, and specify the port number configured for VAIO Picture Lab.
(For port numbers for Remote Home Access and VAIO Picture Lab, see the Server (NETSERVER) test page of the Home Server Settings Page.)
For details, refer to the instruction manual of your router.

Enabling the Remote Home Access functions

Follow the steps below to enable the Remote Home Access functions:

1 Turn off the Home Server.

2 Check if the NETSERVER switch (page 13) on the bottom of the Home Server is turned on.

This switch is turned on at the time of delivery.

3 Turn on the Home Server.

4 Check if the NETSERVER indicator light becomes green.

It will take some time for the NETSERVER indicator light to turn on after you turn on the Home Server.
If the NETSERVER indicator light stays unlit for 5 minutes or longer, run the server test (page 42).

Starting the server test

1 Access the Home Server Settings Page (page 22).

2 Click "Server test" in the left pane.

The Server (NETSERVER) test page is displayed in the right pane.

3 Click "Run."

The server test begins.
Upon completion, the test results will be displayed in another browser window.

4 Follow the on-screen instructions.

If you are using a network router that is not UPnP compliant, see "If your network router is not UPnP compliant" on page 42.

Using the VAIO Picture Lab function

The VAIO Picture Lab function lets the registered users access the folder containing photos via the Internet. You can use this function to create a Web page that shows the folder content and let the users view the content by entering the URL address for the Web page on Web browser software. Additionally, you can set a password for viewing the content to protect against unauthorized access.

Note

Except for your personal use, it is against the copyright law to copy products of copyright holders without prior consent from the respective copyright holders. Keep this in mind when moving or copying files to a shared folder.

Requirements on the personal computer to access the content

The personal computer must have Adobe Flash Player 9.0 or later and one of the following software browser installed:

- Microsoft Internet Explorer 6 (on computers with the Windows XP operating system)
- Microsoft Internet Explorer 7 (on computers with the Windows XP operating system SP2 or the Windows Vista operating system)
- Firefox 2

Making the photos open to users

Add a shared folder to be used for the VAIO Picture Lab function on the Home Server Settings Page and share the URL address of the shared folder by e-mail.

1 Access the Home Server Settings Page (page 22).

2 Click "Web/Media Link" in the left pane.

The Web/Media Link page is displayed in the right pane.

3 Click "Add" for VAIO Picture Lab settings.

The Add page is displayed. Click "Help" at the top right corner of the page and follow the instructions on adding a shared folder in the help file.

4 Click "Start" and "My Network Places" or "Network."

The My Network Places window or the Network window appears.

5 Double-click "MyStation" (the default name) or "(Home Server name)."

6 Double-click the folder that you added in step 3 to open the folder and copy the desired photo files into the folder.

7 Let the users know the URL address of the shared folder.

Click "Help" at the top right corner of the page and follow the instructions in "Sending an e-mail that contains information on the shared folder used for the VAIO Picture Lab function."

The users can view the content by entering the notified URL address on Web browser software.

About the VAIO Picture Lab settings

If you want to:

- Change the shared folder used for the VAIO Picture Lab function.
- Select whether or not to prompt password entry for accessing the shared folder.
- Change the password for accessing the shared folder.
- Preview the content of the shared folder used for the VAIO Picture Lab function.
- View or change the settings.
- Remove the shared folder registration.

Access the Home Server Settings Page and go to the VAIO Picture Lab page through the Web/Media Link page.

💡 Tip

For further information on the VAIO Picture Lab page, click "Help" at the top right corner of the page.

Using the Media Link function

This function lets the users who are registered to share data, access the folder content via the Internet.

Note

Except for your personal use, it is against the copyright laws to copy products of copyright holders without prior consent from the respective copyright holders. Keep this in mind when moving or copying a file to a shared folder.

Making the content open to users

1 Access the Home Server Settings Page (page 22).

2 Click "Web/Media Link" in the left pane.

The Web/Media Link page is displayed in the right pane.

3 Click "Add" for Media Link settings.

The Add page is displayed. Click "Help" at the top right corner of the page and follow the instructions on adding a shared folder in the help file.

4 Click "Start" and "My Network Places" or "Network."

The My Network Places window or the Network window appears.

5 Double-click "MyStation" (the default name) or "(Home Server name)."

6 Double-click the folder that you added in step 3 to open the folder and copy the desired music, photo, and video contents into the folder.

About the Media Link settings

▼

Access the Home Server Settings Page and go to the Media Link settings page through the Web/Media Link page.

💡 Tip
For further information on the Media Link settings page, click "Help" at the top right corner of the page.

Operations

Transferring data to a personal computer or a Home Server outside your home (Data Sync)

You can periodically and manually transfer data from the specified folder on your Home Server to a computer or another Home Server.

Note
You can create only one Data Sync profile for a single destination or source device.

Creating Data Sync profiles

You can create Data Sync (transmitting) and Data Sync (receiving) profiles. The tool that you use for profile creation depends on the type of the source or destination device.

Source device	Destination device	Tool
Personal computer	Your Home Server	• Home Server Settings Page (on your Home Server) • PC Link software (on the computer)
Your Home Server	Personal computer	• Home Server Settings Page (on your Home Server) • PC Link software (on the computer)
Your Home Server	Another Home Server	Home Server Settings Page (on your Home Server)

Data Sync profile creation involves device registration between the personal computer and your Home Server or between your Home Server and the other Home Server.

Software required on the personal computer
To create Data Sync profiles on the personal computer, the computer must have the PC Link software installed. If not, visit the support Web site at the following URLs and download the software:
http://esupport.sony.com/EN/VAIO/ for customers in the USA.
http://www.vaio-link.com/ for customers in Europe.

❏ To add a Data Sync (transmitting) profile with the Home Server on the personal computer

1 Start the PC Link software (page 18).

2 Click "Settings" in the Data Sync (Transmitting) section on the main window.

The Data Sync (transmitting) settings window appears.

3 Add a Data Sync (transmitting) profile.

For detailed instructions, refer to the help file of the PC Link software.

4 Click "Start" and "My Network Places" or "Network."

The My Network Places window or the Network window appears.

5 Double-click "MyStation" (the default name) or "(Home Server name)."

6 Double-click the source folder you specified in a profile in step 3 to open the folder and copy the desired data into the folder.

The copied data will be sent from the folder to your Home Server according to the Data Sync (transmitting) profile.

❏ To add a Data Sync (transmitting) profile to a personal computer or Home Server on your Home Server

1 Access the Home Server Settings Page (page 22).

2 Click "Data Sync (transmitting)" in the left pane.

The Data Sync (transmitting) page is displayed in the right pane.

3 Click "Add transmission."

The Add transmission page is displayed. Click "Help" at the top right corner of the page and follow the instructions on adding a profile in the help file.

4 Click "Start" and "My Network Places" or "Network."

The My Network Places window or the Network window appears.

5 Double-click "MyStation" (the default name) or "(Home Server name)."

6 Double-click the source folder you specified in a profile in step 3 to open the folder and copy the desired data into the folder.

The copied data will be sent from the folder to the destination personal computer or Home Server according to the Data Sync (transmitting) profile.

About the Data Sync profiles

If you want to:

- Create, view, or change Data Sync (transmitting/receiving) profiles on the personal computer.
- Start a transmission manually on the personal computer.
- Remove Data Sync (transmitting/receiving) profiles on the personal computer.

Start the PC Link software.

Tips

- Refer to the help file on the PC Link software for detailed instructions.
- Removing a Data Sync profile does not delete the corresponding Receive folder on the Home Server. To delete this folder, remove the folder content first. Next, access the Home Server Settings Page, go to the Shared folders page, and delete the folder. For further information on the Shared folders page, click "Help" at the top right corner of the page.

If you want to:

- View, add, or remove a Data Sync (transmitting) profile on your Home Server.
- Change the transmission schedule or the destination device name on your Home Server.
- Start the transmission manually on your Home Server.
- Abort the on-going transmission on your Home Server.

Access the Home Server Settings Page and go to the Data Sync (transmitting) page.

Tips

- For further information on the Data Sync (transmitting) page, click "Help" at the top right corner of the page.
- Removing a Data Sync (transmitting) profile does not delete the corresponding shared folder (the Send folder) on the Home Server. To delete this folder, remove the folder content first. Next, access the Home Server Settings Page, go to the Shared folders page, and delete the folder. For further information on the Shared folders page, click "Help" at the top right corner of the page.

Operations

- View, add, or remove a Data Sync (receiving) profile on your Home Server.
- Change Data Sync (receiving) profile names on your Home Server.

Access the Home Server Settings Page and go to the Data Sync (receiving) page.

💡 Tips

- For further information on the Data Sync (receiving) page, click "Help" at the top right corner of the page.
- To remove a Data Sync (receiving) profile on your Home Server, it is recommended that you remove the corresponding Data Sync (transmitting) profile on the source device. Removing the Data Sync (transmitting) profile on the source device will automatically remove the corresponding Data Sync (receiving) profile on your Home Server.
- Removing a Data Sync (receiving) profile does not delete the corresponding shared folder (the Receive folder) on the Home Server. To delete this folder, remove the folder content first. Next, access the Home Server Settings Page, go to the Shared folders page, and delete the folder. For further information on the Shared folders page, click "Help" at the top right corner of the page.

Note

Deleting a Data Sync (receiving) profile on the Home Server Settings Page does not delete the corresponding Data Sync (transmitting) profile on the source device.

Making Backup Copies

You can make two types of backup copies.

- **Copying the data on the Home Server to a USB hard disk drive**
  You can create a Home Server backup profile on a per -folder basis on the Home Server Settings Page and make a backup copy of each folder on a USB hard disk drive connected to your Home Server. Next, you can restore the backup data to your Home Server from the USB hard disk drive. Then, with the PC Link software, you can copy the backup data from the USB hard disk drive to your personal computer.
- **Copying the data on the personal computer to the Home Server**
  You can use the PC Link software to create Home Server backup profiles and upload the data to your Home Server for backup purposes.

Copying the data on the Home Server to a USB hard disk drive

Making a backup copy

Access the Home Server Settings Page.

1 Connect a USB hard disk drive to the Home Server.

2 Access the Home Server Settings Page (page 22).

3 Click "Home Server backup" in the left pane.

The Home Server backup page is displayed in the right pane. Click "Help" at the top right corner of the page and follow the instructions on creating a Home Server backup profile and starting the backup process.

Note

Your Home Server supports USB hard disk drive in FAT32 format, but not those in NTFS format.

Tips

- About the backup destination folders
  Creating a Home Server backup profile on the Home Server Settings Page creates the backup folder with the name, "HomeServer - [MAC-ADDRESS]," on the USB hard disk drive. Starting the Home Server backup process will create another folder with the name, which you specified in the Home Server backup profile, within the backup folder and make a backup copy of the backup source folder.
- On the Home Server backup page on the Home Server Settings Page, you can:
  – Create Home Server backup profiles.
  – View Home Server backup profiles.
  – Change the backup schedule in a Home Server backup profile.
  – Delete Home Server backup profiles.
  – Start the Home Server backup process manually.

Operations

- You can create up to 10 Home Server backup profiles.
- If a USB hard disk drive is not connected to the Home Server at the time of starting the Home Server backup process, the Home Server backup process will not begin.
- If a Home Server backup process is in progress at the time of starting another process, the second Home Server backup process will begin as soon as the first one completes. If multiple Home Server backup processes are scheduled to start at the same time, the processes will begin in a random order.
- If a restore process is in progress at the time of starting a Home Server backup process, the Home Server backup process will begin as soon as the restore process is completed.
- When the USB hard disk drive has multiple partitions in FAT32 format, backup files will be created in the partition with the first partition number.
- If the same backup file name is specified in more than one Home Server backup profile, starting a Home Server backup process will overwrite the backup data that was created by the previous process.
- Starting the Home Server backup process for a deleted folder will remove the backup data that was created by the previous process.
- If the backup source folder contains a file with the size of over 4 GB, it will be divided into pieces of 4 GB. Starting a Home Server backup process for such a folder will create the folder with the same name as the 4 GB file and stores the divided files and the division information before making a backup file.

Restoring the backup data

You can restore the backup data to your Home Server or copy it to your personal computer.

❏ To restore the backup data to the Home Server
Access the Home Server Settings Page.

1 Connect the USB hard disk drive with the backup data to the Home Server.

2 Access the Home Server Settings Page (page 22).

3 Click "Home Server restore" in the left pane.

The Home Server restore page is displayed in the right pane. Click "Help" at the top right corner of the page and follow the instructions in the help file.

❏ To restore the backup data to a personal computer
Start the PC Link software.

1 Connect the USB hard disk drive with the backup data to a personal computer.

2 Click "Start," "All Programs," "PC Link," and "Restore Tool."

3 Click "Restore."

The USB hard drive Restore window appears.

4 Select the restore source folder and the restore destination folder and click "Restore."

The restore process begins.

5 On the completion window, click "Continue" or "Close."

You cannot start a restore process while a Home Server backup process is in progress.

Copying the data from a personal computer to your Home Server

You can use the PC Link software to create a Home Server backup profile and send a copy of the data to the Home Server (page 32).

Updating the Firmware

You can update the firmware of your Home Server with the automatically downloaded update files or by accessing the support Web site.

Note

Do not update the firmware while a Home Server backup process to the USB hard disk drive is in progress or the One Touch Copy function is active.

Updating the firmware with the automatically downloaded update files

When a firmware update file is downloaded to your Home Server via the Internet, the INFO indicator light turns on in blue.
Follow the steps below to update the firmware.

1 Access the Home Server Settings Page (page 22).

2 Click "Firmware update" in the left pane.
The Firmware update page is displayed in the right pane.

3 Confirm that the message "New firmware version is available" is displayed to the right of the Status in the Automatic Update section.

4 Check the version in the New version field.

5 Click "Start update" in the New version section.
The Start update page is displayed.

6 Thoroughly read the terms and conditions of the end user license agreement and click "I Agree."
The firmware update begins and the ⏻ (POWER) indicator light on the Home Server blinks alternately in green and orange.
When the ⏻ (POWER) indicator light stops blinking, the Home Server restarts.
The new firmware will be activated after the restart.

Updating the firmware by accessing the support Web site

When the firmware update files are not downloaded on your Home Server, follow the steps below to update the firmware.

1 From the personal computer connected to the Home Server via the home network, access the support Web site at:
http://esupport.sony.com/EN/VAIO/ for customers in the USA.
http://www.vaio-link.com/ for customers in Europe.

2 Download the latest update program of VGF-HS1 Series Home Server.

3 Access the Home Server Settings Page (page 22).

4 Click "Firmware update" in the left pane.
The Firmware update page is displayed in the right pane.

5 Click "Browse..." to the right of the Firmware file field in the Manual update section.

6 Select the downloaded firmware file and click "Open."

7 Click "Start update" in the Manual update section.
The firmware update begins and the power indicator light on the Home Server blinks alternately in green and orange.
When the ⏻ (POWER) indicator light stops blinking, the Home Server restarts.
The new firmware will be activated after the restart.

ϔ **Tip**
Updating the firmware may change the IP address of the Home Server Settings Page. Proceed with either of the following procedures to access the Home Server Settings Page.
- Accessing from the PC Link software
  ① Start the PC Link software (page 18).
  ② On the main window, click the server name of your Home Server in the Back Up section.
- Accessing by entering the IP address
  ① Press the DISPLAY button several times until the IP address appears on the display on the Home Server.
  ② Start your browser software on the personal computer and enter the IP address in the URL address field.

Others

Restoring Your Home Server

You can restore the factory default settings while keeping hard drive content. For information on the state of your Home Server after restoring your Home Server, see "State of the Home Server after Restoring the Home Server or the System" on page 56.

1 Access the Home Server Settings Page (page 22).

2 Click "Reset" in the left pane.

The Reset page is displayed in the right pane.

3 Click "Restore defaults."

On the confirmation page, click "OK."
The Rebooting page is displayed and the Home Server restarts.
The ⏻ (POWER) indicator light on the Home Server blinks in orange until the restoring process is completed.
Upon completion, the ⏻ (POWER) indicator light stays lit in green.

💡 Tip

Restoring the Home Server may change the IP address of the Home Server Settings Page. Proceed with either of the following procedures to access the Home Server Settings Page:

- Accessing from the PC Link software
  ① Start the PC Link software (page 19).
  ② On the main window, click the server name of your Home Server in the Back Up section.
- Accessing by entering the IP address
  ① Press the DISPLAY button several times until the IP address appears on the display on the Home Server.
  ② Start your browser software on the personal computer and enter the IP address in the URL address field.

Restoring Your System

You can restore the factory default settings while deleting all hard drive content and restore the state of the Home Server at the time of delivery. For information on the state of your Home Server after restoring your system, see "State of the Home Server after Restoring the Home Server or the System" on page 56.

Notes

- You cannot restore the firmware.
- Restoring system will also delete the sample content from the Media folder. To restore the sample content, copy the content from the Sample folder on the supplied CD-ROM.

1 Access the Home Server Settings Page (page 22).

2 Click "Reset" in the left pane.

The Reset page is displayed in the right pane.

3 Click "Restore system."

On the confirmation page, click "OK."
The Rebooting page is displayed and the Home Server restarts. The Restoration and hard disk format process start.
The ⏻ (POWER) indicator light on the Home Server blinks in orange until both processes are completed.
Upon completion, the ⏻ (POWER) indicator light stays lit in green.

💡 Tip

Restoring the system may change the IP address of the Home Server Settings Page. Proceed with either of the following procedures to access the Home Server Settings Page:

- Accessing from the PC Link software
  ① Start the PC Link software(page 19).
  ② On the main window, click the server name of your Home Server in the Back Up section.
- Accessing by entering the IP address
  ① Press the DISPLAY button several times until the IP address appears on the display on the Home Server.
  ② Start your browser software on the personal computer and enter the IP address in the URL address field.

Others

State of the Home Server after Restoring the Home Server or the System

The following shows the state of your Home Server after restoring the Home Server or the system.

Item to be affected		At the time of delivery	Operation executed on the Home Server Settings Page		After the COPY button has been pressed for 10 seconds (The administrator and IP settings are cleared).
			Restore system	Restore defaults	
Administrator	Administrator name	Reset administrator name			
	Password	Reset password			
Server name		MyStation			Not affected
Work group		WORKGROUP			Not affected
IP address		Automatically obtained			
Proxy server		Reset proxy settings			Not affected
Users		Users deleted. If necessary, add users.			Not affected
Shared folders	Media	Access privilege: Full privilege granted to all users	• Access privilege: Access privilege is fully granted to all users • The folder content is deleted.	Not affected	Not affected
	One Touch Copy	Empty folders	• Access privilege: Access privilege is fully granted to all users • The folder content is deleted.	Not affected	Not affected
	Sample	Sample content*	All sample content is deleted.	Not affected	Not affected
	Help	Access privilege: Read privilege granted to all users		Not affected	Not affected
	Shared folder created using the Home Server Settings Page	None		• All empty shared folders are deleted. • The folders with content are renamed to "share" with a sequential number and access privilege is fully granted to all users.	Not affected
Clock	NTP** Automatic synchronization	On			Not affected
	Server	time.windows.com			Not affected
DLNA device registration	Device registration	None			Not affected
Back Up	Registration	None			Not affected
Data Sync	Registration	None			Not affected
One Touch Copy	Target content	Video and photo only			Not affected
Wireless Digital Audio***	Registration	None			Not affected
	Used channels	6 channels			Not affected

* The sample content is stored in the Sample folder on the supplied CD-ROM.

** NTP means network time protocol.

*** The VGF-WA1 Wireless Digital Audio may not be available, depending on the country or region of your residency.

Precautions

Handling your Home Server

- Do not expose your Home Server to any physical shocks or drop the Home Server, as it may cause loss of data or a malfunction.
- Do not place your Home Server in a location subject to direct sunlight or heat sources where the ambient temperature rises, as it may cause a malfunction.
- Do not put any small metal objects, such as paperclips, into your Home Server.
- Do not use your Home Server on an unstable surface or a place subject to vibration.
- Your Home Server is a high-precision device. Do not use the Home Server in a place subject to dust, as it may cause a malfunction.
- Do not use your Home Server in a place subject to high humidity.
- Do not use your Home Server in a place with poor ventilation.
- Do not use your Home Server in close proximity of magnetic sources, as it may cause a malfunction.

Moisture condensation

Exposing your Home Server to a sudden temperature rise, such as bringing the Home Server suddenly from a cold place to a warmer place or using it in a heated room on a winter morning, will cause moisture condensation on the surface or in the interior of the Home Server, which may result in a malfunction.
When you find moisture condensation on your Home Server, wipe it off with tissue paper, preferably. When the LCD tubes and surface are cold, moisture condensation will form again after you wipe it off. Leave the Home Server for about 1 hour without turning it on until it warms up to the ambient temperature.

Handling the hard disk drive

Your Home Server includes a hard disk drive (a storage device for applications and data). When the hard disk drive fails for some reason, Sony assumes no liability for restoring data stored on the hard disk drive. To avoid loss of data, observe the following:

- Do not use your Home Server on an unstable surface or a place subject to vibration.
- Do not move your Home Server while powered.
- Do not expose your Home Server to any physical shocks.
- Do not turn off or restart your Home Server while data writing or reading is in progress.
- Do not use your Home Server in a place with sudden changes of 50ºF (10ºC) or more in temperature.
- Keep any objects with magnetic fields, such as a TV, speakers, a magnet, and a magnetic bracelet, away from your Home Server.
- Do not remove the built-in hard disk drive from your Home Server.

Making backup copies of the hard disk drive

The hard disk drive is capable of storing an extremely large amount of data, but can easily be damaged and can lose the data. To avoid losing critical data, it is recommended that you make backup copies of the hard disk data on a regular basis. For detailed instructions on making and restoring backup data, see "Making Backup Copies" on page 49. Sony assumes no liability for loss of data.

57

Handling the "Memory Stick" media

To protect data stored in the "Memory Stick" media, observe the following:

- Do not touch the "Memory Stick" media connector with your fingers or metal objects.
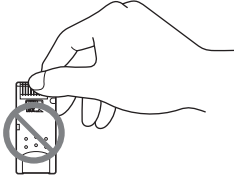
- Use only the adhesive label supplied with the "Memory Stick" media as a label.
- Be sure to adhere the supplied label on the designated area on the "Memory Stick" media.
- Use the storage case supplied with the Memory Stick media for carrying around or for storage.
- Do not bend, drop, or apply strong shock to the "Memory Stick media."
- Do not disassemble or modify the "Memory Stick" media.
- Do not expose to the "Memory Stick" media to water.
- Do not use the "Memory Stick" media in a location subject to:
  - Extremely high temperatures, such as in a car parked in the sun.
  - Direct sunlight.
  - High humidity.
  - Corrosive substances.

Using the "Memory Stick Duo" media

- Do not use a fine-tipped pen to write on the label that is adhered to the "Memory Stick Duo" media. Exerting pressure on the media may damage internal components.
- Be sure to insert the "Memory Stick Duo" media in the correct orientation. Forcing the media in a wrong orientation into the Memory Stick slot may damage the slot or the media.
- Do not insert the "Memory Stick" media and the "Memory Stick Duo" media into the Memory Stick slot at the same time, as it may damage the slot and/or the media.

Using the "MagicGate Memory Stick" media
The Memory Stick slot on your Home Server does not support the MagicGate feature of the "Memory Stick" media. You cannot use copyright-protected files, such as music files, on the Home Server. An attempt to access such files in the "MagicGate Memory Stick" media with the file management software, the Windows Explorer for example, may disable use of the files.
Be sure to use the device compatible with the "MagicGate Memory Stick" media, a "Memory Stick" Walkman for example, and the designated software for handling copyright-protected files.
Do not use the Memory Stick slot on your Home Server for handling such files.

Using the AC adapter

- Be sure to use the AC adapter supplied with your Home Server for your safety.
- Do not use any AC adapter with a broken cable for your safety.

Illegal software copying

The software applications supplied with your Home Server are provided under a license or royalty agreement. Copying the supplied software without consent is against the law. It is also against the law to lend the software to a third person or make a copy of the rented software. Be sure to read the End User License Agreement thoroughly before using the supplied software.

Playing digital data

You can make and store backup copies of digital data, such as digital broadcast recordings and video content, on your Home Server but cannot play the copies. To play such digital data, you must restore it to the original device.

Cleaning your Home Server

- Be sure to turn off your Home Server and disconnect the power cord before cleaning.
- Use a dry cloth to wipe off dust.
- Be sure to use a dry, soft cloth to clean your Home Server. If you find it difficult to clean, blow on the spot and rub with a dry cloth; or wipe with a slightly moistened cloth and then use a dry cloth to wipe away the moisture.
- Do not use any solvents, such as benzene, acetone, alcohol, or thinner, as it will damage the finish on your Home Server.
- Be sure to read the instructions before using a chemical cloth.

Unplug the power cord and connection cables before moving your Home Server.

Moving your Home Server with the power cord and other cables connected may damage the cables, resulting in a fire or an electric shock. It may also cause personal injuries by knocking down devices connected to your computer. Take extra care not to drop your computer.

Make sure that connectors are firmly plugged.

- Do not drop metal debris into a receptacle, as it may cause a short circuit, resulting in a fire.
- Plug a connector straight into a receptacle to avoid a short circuit and a possible fire.
- If the connector is equipped with tabs or screws for securing, be sure to tighten them to avoid loose connection.

Before Disposing of Your Home Server

Before disposing of your Home Server, be sure to erase your valuable data.

The Home Server Settings Page provides a way to restore the state of the Home Server at the time of delivery. You can click "Restore system" on the Reset page to restore the system settings and delete all the data you previously stored. This process, however, only changes the management data on the hard disk drive to make the stored data disabled for access from the operating system, Linux for example, and does not really erase the data. If you dispose of your Home Server in this state, therefore, a third person could access and restore your data with special software; and then use it for unethical purposes.

It is crucial that you completely erase your data on the hard disk drive at your own risk before disposing of your Home Server to avoid information leaks.

To completely erase your data, expose the hard disk drive to magnetic fields to destroy the data on the drive and then physically destroy the drive.

Others

59

Getting Help

The following provides information on how to get help and support from Sony and troubleshooting tips for your Home Server.

Sony support options

Sony provides several support options for your Home Server. When you have questions about your Home Server or the software, refer to the following:

❑ This **User Guide** explains how to use your Home Server.

For customers in the United States

❑ **Sony Online Support** provides instant access to information on commonly encountered problems. You can search the Knowledge Database for the corresponding solutions online.
Visit Sony Online Support at:
http://www.esupport.sony.com/EN/VAIO/

❑ **The Sony Customer Information Service Center** offers information about your Home Server and other Sony products that work with your Home Server. To contact the Sony Customer Information Service Center, call 1-888-4SONYPC (1-888-476-6972).

For customers in Europe

❑ VAIO-Link. For addresses and telephone numbers, refer to
http://www.vaio-link.com/

For further service support information, refer to Warranty sheet or Guarantee and Service Support booklet (depending on the country or region of residency).

Specifications

Interface

USB ports:	Type-A receptacles (3) (USB 2.0 compliant)
Network (LAN) port:	10Base-T/100Base-TX/ 1000Base-T compliant port (1) (Auto-MDIX compliant)
Memory card slots:	"Memory Stick"/"Memory Stick Duo" compatible slot (1) SD memory card slot (1) CompactFlash slot (1)

Hard disk drive

Capacity: Approx. 1 TB*

* Calculated where one gigabyte equals to one billion bytes. 3 GB is reserved for the system.

Power supply

Input: AC 100 - 240 V, 50/60 Hz
Output: DC 19.5 V

Power consumption

(with no USB device connected)
28 W (in normal mode),
12 W (in power-saving mode)

Operating temperature

50ºF to 95ºF (10ºC to 35ºC)
(temperature gradient less than 18ºF (10ºC)/hour)

Operating humidity

40% to 80% (not condensed), provided that humidity is less than 65% at 95ºF (35ºC)
(hygrometer reading of less than 84ºF (29ºC))

Storage temperature

-4ºF to 140ºF (-20ºC to 60ºC) (temperature gradient less than 18ºF (10ºC)/hour)

Storage humidity

10% to 90% (not condensed), provided that humidity is less than 20% at 140°F (60°C)
(hygrometer reading of less than 95°F (35°C))

Dimensions
Approx. 10.6 x 2.8 inches (270 x 71 mm)
(Diameter x Height)

Mass
Approx. 6.8 lb. (3.1 kg)

Supported devices
- Personal computer with Windows XP operating system SP2 or later installed
- Personal computer with Windows Vista operating system installed
- DLNA Guidelines-compliant device (DLNA HNv1 compliant)

Accessories
Refer to the supplied Setup Guide.

DLNA support
You can enjoy content from DLNA devices on the home network.

Design and specifications are subject to change without notice.

Error Messages

The following table lists the error messages displayed on the display of your Home Server and the measures to cope with the problems. Be sure to read or write down the error code and/or the error message before pressing the OK button.

Error message	Causes/measures
20 DLNA devices already registered. Press OK	→ You cannot connect another DLNA device because 20 DLNA devices have already been registered. Go to the DLNA device page on the Home Server Settings Page and delete unnecessary devices.
5 devices already registered. Press OK	→ An attempt to register the sixth VGF-WA1 Wireless Digital Audio unit was made. To register a new unit, go to the DLNA device page on the Home Server Settings Page and delete the registration of all Wireless Digital Audio units.
Cannot create Data Sync receive folder Press OK	→ The number of shared folders has already reached the limit. Go to the Shared folders page on the Home Server Settings Page (page 22) and delete unnecessary shared folders.
Cooling Fan failure	→ The cooling fan on your Home Server is not working. Check the exhaust air vent on the back (page 12) for any obstacles.
Data Sync device already registered Press OK	→ There already is a Data Sync (transmitting) profile on the destination device. Use the specified folder on the destination device or delete the profile to add a new one.
Data Sync setup failed Press OK	→ A session to create a new profile for the Remote Home Access functions failed. Start the session all over again.
Data Sync setup timed out Press OK	→ A session to change a Data Sync (transmitting) profile timed out. Start the session all over again.
Data Sync Updated	→ A new file was created or an existing file was updated on your Home Server by the Data Sync (receiving) function. This message will automatically disappear in 24 hours.
Defective USB device connected	→ A defective USB device is connected. Check the device for performance.
Device registration failed. Press OK	→ Device registration for the Remote Home Access functions failed. Start the registration all over again.
Error during copying. Press OK	→ Data import with the One Touch Copy function failed. Check your data for corruption.

Error message	Causes/measures
Error: YY Error during Data Sync (receiving)	→ A reception by the Data Sync (receiving) function failed. The source device might not be turned on or connected to the Internet. Check the device for the power status and the network connection (page 9 and 42).
Error: YY Error during Data Sync (transmitting)	→ A transmission by the Data Sync (transmitting) function failed. The destination device might not be turned on or connected to the Internet. Check the device for the power status and the network connection (page 9 and 42).
Error: YY Error during Home Server backup	→ The Home Server backup process to the USB hard disk drive failed. Start the process all over again. → Access was made from a personal computer to the folder or files under the Home Server backup process. Do not access the folder or files while being copied for backup.
Error: YY Error during Home Server restore	→ The Home Server restore process from the USB hard disk drive failed. Start the process all over again. → Access was made from a personal computer to the folder or files under the Home Server restore process. Do not access the folder or files while being copied for restoration.
Error: YY Error during PC Link Back Up	→ An upload by the Back Up function from a personal computer failed. The computer might not be turned on or connected to the network. Check the computer for the power status and the network connection (page 42).
Error: YY Home Server was not properly shut down	→ The Home Server has once been forced to turn off due to a power failure, such as a blackout, but now is in normal operation. If this error message keeps appearing, check the power cord for proper connection.
Files already copied	→ The content of the connected device has already been imported. Capture new photos or videos first and then use the One Touch Copy function.
Global IP Must be registered as an administrator	→ Your Home Server has a global IP address and unknown devices could access the Home Server from the outside of your network. Go to the User accounts page on the Home Server Settings Page and register yourself as an administrator. In addition, it is recommended that you restrict access from DLNA devices and access to the shared folders on your Home Server.
Hard drive needs formatting	→ Access the Home Server Settings Page and restore your Home Server (page 54).
In progress Please wait	→ An attempt to start a new process was made while another process is in progress. Wait until the on-going process completes.

63

Error message	Causes/measures
LAN cable not connected	➔ The network cable is not properly connected. Connect the cable properly. Refer to the Setup Guide and see "Connecting to a network."
Nothing to copy. Press OK	➔ There are no files to be imported with the One Touch Copy function on the connected device. Capture new photos or videos first and then use the One Touch Copy function. ➔ You might have pressed the COPY button without connecting a copy source device. Connect your device.
NOTICE: Firmware update ready	➔ A firmware update was downloaded. Access the Home Server Settings Page and update your Home Server (page 52).
NOTICE: Important message	➔ An important message was downloaded. Check the Home Server Settings Page (page 20) for the message.
Obtaining Confirmation code failed. Press OK	➔ A confirmation code was not obtained during the course of creating a Data Sync (transmitting) profile. Check your Home Server for Internet access (page 42).
Obtaining Permission code failed. Press OK	➔ A permission code was not obtained during the course of creating a Data Sync (transmitting) profile. Check your Home Server for Internet access (page 42).
Scanning Hard drive…	➔ A hard disk failure has occurred and the checking is now in progress. Wait until the checking completes without turning off your Home Server.
Shared folder maximum reached Press OK	➔ The number of shared folders has already reached the limit. Go to the Shared folders page on the Home Server Settings Page (page 22) and delete unnecessary shared folders.
Unit temp. too high	➔ Heat is building up inside your Home Server. Place the Home Server in a place with good ventilation. Refer to the Setup Guide and see "Precautions on placement" as well.

Troubleshooting

If you have any problems with your Home Server, follow the steps below to search for a solution to your problem before consulting our service contacts. If an error code and/or an error message is present, write it down for your problem solving or later consultation.

1 Search this "Troubleshooting" for a solution.

You might want to search other sections of this User Guide as well. There may be tips and notes in the instructions that might help you solve your problem.

2 Visit the support Web site at the following URLs:

http://esupport.sony.com/EN/VAIO/ for customers in the USA.
http://www.vaio-link.com for customers in Europe.
You could find the latest support information and frequently asked questions and answers there.

3 If you still cannot solve your problem, see page 60 to find out more about getting help or consult your sales representative.

Home Server

DLNA devices

Problem	Causes/measures
The VAIO Media software does not indicate the sound type (stereo, etc). when you play the video content stored on the Home Server with a DLNA device.	→ The sound type indication is part of the software function and is not supported on the DLNA device.
The VAIO Media software shows the message notifying of a failure to display a photo list when you try to view the photo content stored on the Home Server with a DLNA device.	→ When large photo content is stored on the Home Server, it takes some time before a photo list appears. Move the content to another folder to exclude it from the list. In addition, wait a while before viewing the content when the photo list is displayed.
While you are playing the content stored on the Home Server with a DLNA device, a communication error occurs and the playback stops.	→ Connecting or removing a Wireless Adapter for the VGF-WA1 Wireless Digital Audio* while the playback process from a DLNA device is in progress, restarts the DLNA server function of the Home Server. Retry the playback on the DLNA device.

Problem	Causes/measures
You cannot play the content you imported to the Home Server with the One Touch Copy function with a DLNA device.	➜ To make imported content from an HDD Handycam or a "Memory Stick" Handycam available for viewing with DLNA devices, select the option to only import the video and photo content of the One Touch Copy page on the Home Server Settings Page. If the option to import all types of content is selected, you cannot play the imported content from an HDD Handycam or a "Memory Stick" Handycam with a DLNA device.
You cannot access the Home Server or the Home Server name is not displayed.	➜ The IP address is not correct. Check if the Home Server has obtained an IP address from your network router or Internet service provider. Press the DISPLAY button several times to display the IP address of the Home Server. If it begins with "169.," it is not the IP address obtained from the network router or the Internet service provider. Check the network devices, including cables and network hubs for appropriate connection. ➜ Press and hold the CANCEL button on the Home Server for 10 seconds or longer to clear the administrator registration and the IP address settings.
You do not see any music entries on the Music channels.	➜ The music content on the Home Server has not been analyzed by VAIO Content Analyzer. Start the PC Link software and select the option to add metadata to the music content at the time of Back Up uploading. Then, upload the music content once again.

* The VGF-WA1 Wireless Digital Audio may not be available, depending on the country or region of residency.

Network storage devices

Problem	Causes/measures
While the text string of the shared folder name includes two or more consecutive spaces, the Explorer shows only one space.	➔ This is the way the Explorer shows the text strings.
While the text string of the shared folder name includes upper-case letters, the Explorer shows only lower-case letters.	➔ Upper and lower case letters are not distinguished on the Home Server.
You cannot delete large files on the Home Server from a personal computer with Windows Vista operation system installed.	➔ Restart the personal computer or log off and on to the computer before deleting such files.
The files copied from a personal computer are corrupt.	➔ File transfer may have failed due to a power supply failure or a network connection failure. Copy the files once again.
You cannot access a shared folder with access restriction that you previously accessed with another user account.	➔ Log off or restart the personal computer and log on to the computer with another user account, and then access the shared folder.
You cannot access a shared folder with access restriction after you restarted the Home Server while access from the personal computer to the video or music content in the shared folder was in progress.	➔ Restart the Home Server or log off and on to the personal computer. Then, log onto the computer and access the shared folder.
While a shared folder on the Home Server should be accessible from all users, you cannot change the folder content from your personal computer.	➔ Write privileges are not granted to your user account. Access the Home Server Settings Page from your personal computer, create another user account, and grant write privileges to the account.
While a shared folder on the Home Server should be accessible from all users, you cannot access the shared folder from your personal computer.	➔ When the user account of the personal computer does not match the Home Server account name, you may not be able to access shared folders on the Home Server. On the Home Server, create a user account with the same user name and password as those used on the computer.

Problem	Causes/measures
The network window on your personal computer does not show the Home Server.	➔ The work group name of the personal computer does not match the one used on the Home Server. Assign the Home Server to the same work group as the computer on the Basic Information page on the Home Server Settings Page. ➔ The IP address is not correct. Check if the Home Server has obtained an IP address from your network router or Internet service provider. Press the DISPLAY button several times to display the IP address of the Home Server. If it begins with "169.," it is not the IP address obtained from the network router or the Internet service provider. Check the network devices, including cables and hub devices for appropriate connection. ➔ Press and hold the CANCEL button on the Home Server for 10 seconds or longer to clear the administrator registration and the IP address settings.

One Touch Copy

Problem	Causes/measures
You cannot copy the video content captured with a camcorder ("Memory Stick," DVD, or HDD Handycam) to the Home Server.	➔ The information file required for import to the Home Server, the "INDEX.BDM" file on the "Memory Stick Duo" media for example, has been deleted or renamed. Copy the content to a personal computer first, and then copy them to the Home Server.
Connecting a USB flash drive to one of the USB ports on the Home Server does not turn on the COPY indicator light.	➔ The USB flash drive may have been formatted in a format type other than FAT32. Be sure to use a compatible USB device. Use of the USB flash drive is not supported on the Home Server. ➔ The used USB port is reserved for the Home Server backup function and you cannot use it for the One Touch Copy function. Try another USB port.
You cannot find the files that you have copied with the One Touch Copy function.	➔ The file should be imported on the Home Server. Search other folders for the file. To copy the same file again, select the option to import all types of content on the One Touch Copy page on the Home Server Settings Page.

Shared folder

Problem	Causes/measures
You see the message that you cannot delete the shared folder because it contains files when you try to delete the shared folder on the Home Server.	→ The shared folder contains a hidden temporary folder used for file transfer by the Data Sync function. Change the folder view on your personal computer to show hidden files and delete the temporary file in the Data Sync folder.

Back Up

Problem	Causes/measures
The INFO indicator light lights in red and the display shows "Error during PC Link Back Up."	→ Back Up uploading may fail if the Home Server is heavily loaded with multiple processes, such as simultaneous content playbacks by multiple personal computers. Quit the playback to unload the Home Server and restart the Back Up uploading. The Back Up uploading will eventually complete and the INFO indicator light will turn off.

Data Sync

Problem	Causes/measures
When you change the Home Server name, the on-going Data Sync transmission fails.	→ Do not change the Home Server name. While a Data Sync transmission is in progress, changing the Home Server name aborts the transmission.
Data Sync transmissions from the Home Server, which is connected to an xDSL network, to other Home Servers fail.	→ The network traffics on the xDSL bandwidth may be congested. Start the transmissions some other time or change their profiles to manual transmission and start one transmission at a time.
You cannot create a Data Sync (transmitting) profile and you are notified that the destination device already has one Data Sync (transmitting) profile.	→ A Data Sync (transmitting) profile with the destination device already exists. **When the destination device is another Home Server:** Ask the owner of the Home Server to delete the corresponding Data Sync (receiving) profile on the Data Sync (receiving) page on the Home Server Settings Page. Then, create a Data Sync (transmitting) profile on your Home Server. **When the destination device is a personal computer:** Ask the owner of the computer to delete the corresponding Data Sync (receiving) with the PC Link software. Then create a Data Sync (transmitting) profile on your Home Server.

Troubleshooting

Home Server backup

Problem	Causes/measures
Backup copies are made on an unexpected USB device.	→ Your Home Server is not capable of distinguishing USB device types. Check the device name.
The Home Server backup process fails.	→ The backup source folder may have been accessed while the Home Server backup process was in progress. Do not access the source folder while the process is in progress.

Home Server restore

Problem	Causes/measures
The Home Server restore process fails.	→ The destination folder may have been accessed while the Home Server restore process was in progress. Do not access the destination folder while the process is in progress.

Wireless Adapter*

* The VGF-WA1 Wireless Digital Audio may not be available, depending on the country or region of residency.

Problem	Causes/measures
You cannot register your VGF-WA1 Wireless Digital Audio on your Home Server.	→ Check if the AUTO INSTALL switch on the Wireless Adapter is in the OFF position. → You may have connected the Wireless Adapter while your Home Server is turned off. Be sure to turn on the Home Server before connecting the Wireless Adapter. → You may have connected multiple Wireless Adapter units. You can connect only one Wireless Adapter unit. → Your Home Server may be executing another process, such as Back Up uploading. Wait until the process completes. → The Wireless Digital Audio may have been configured to connect via an access point. Change the network settings to connect the Wireless Digital Audio via the Wireless Adapter.

Problem	Causes/measures
You have registered the Wireless Digital Audio on the Home Server without specifying the device name, but cannot find the Wireless Digital Audio on the VGF-WA1 page on the Home Server Settings Page.	➜ You may have connected or removed the Wireless Adapter while you were registering the Wireless Digital Audio. Place the Wireless Digital Audio into standby mode, turn on the Home Server and register the device once again.

Others

Problem	Causes/measures
You cannot access the Home Server Settings Page.	➜ The IP address is not correct. Check if the Home Server has obtained an IP address from your network router or Internet service provider. Press the DISPLAY button several times to display the IP address of the Home Server. If it begins with "169.," it is not the IP address obtained from the network router or the Internet service provider. Check the network devices, including cables and hub devices for appropriate connection. ➜ Press and hold the CANCEL button on the Home Server for 10 seconds or longer to clear the administrator registration and the IP address settings.

Indicator lights

Problem	Causes/measures
The NETSERVER indicator light is blinking.	➜ Your Home Server is getting ready for access from the Internet. If the indicator light stays unlit for 5 minutes or longer, run the server test on the Home Server Settings Page (page 42).
The NETSERVER indicator light does not turn on.	➜ Access from the Internet is disabled. Your network router may not be UPnP compliant or has not been assigned a global IP address. Run the server test on the Home Server Settings Page (page 42).
The HDD indicator light lights in orange.	➜ The remaining free space on the hard disk drive of your Home Server is less than 10%. Delete unnecessary data.
The HDD indicator light is blinking in orange.	➜ The remaining free space on the hard disk drive of your Home Server is 1 MB or less. Delete unnecessary data.
The HDD indicator light is blinking alternately in green and orange.	➜ The hard disk drive on your Home Server is not accessible. Restore your Home Server on the Home Server Settings Page (page 54).

Problem	Causes/measures
The INFO indicator light is blue.	➜ An important message has been downloaded to your Home Server. Check the Basic Information page on the Home Server Settings Page for the message.
The INFO indicator light is red.	➜ An error has occurred on your Home Server. Check the Basic Information page on the Home Server Settings Page for the error description.
The INFO indicator light is blinking in red.	➜ An error has occurred while file transfer by the One Touch Copy function is in progress, the Wireless Digital Audio is connected, or device registration for one of the Remote Home Access functions is in progress. Press the CANCEL button.
The ⏻(POWER) indicator light is blinking in orange.	➜ Your Home Server is in the process of turning on or off. If the indicator light stays blinking for 10 minutes or longer, unplug the power cord to shut down the power supply. Then plug the cord back in and turn on the Home Server.
The ⏻(POWER) indicator light is blinking alternately in orange and green.	➜ The firmware update is in progress. If the indicator light stays blinking for 10 minutes or longer, unplug the power cord to shut down the power supply. Then plug the cord back in and turn on the Home Server.

PC Link software

Problem	Causes/measures
You are notified that the selected Home Server already has 5 registered devices and cannot register your device.	➜ You can register up to 5 devices for Back Up uploading on a single Home Server. Go to the Back Up page on the Home Server Settings Page and delete unnecessary profiles.
You are notified that the folder where you attempted to create the Send folder for a Data Sync transmission already includes the Receive folder for a Data Sync reception and cannot create a new Data Sync (transmitting) profile.	➜ The folder that you specified as the source folder for a Data Sync transmission has already been specified as the destination folder for a Data Sync reception. Specify the folder that has not been specified as the destination folder for any Data Sync reception.
You are notified that the folder where you attempted to create the Receive folder for a Data Sync reception already includes the Send folder for a Data Sync transmission and cannot create a new Data Sync (receiving) profile.	➜ You cannot specify the folder that includes the source folder for a backup upload or a Data Sync transmission as the destination folder for a Data Sync reception. Specify the folder that does not include the source folder for a backup upload or a Data Sync transmission.

Problem	Causes/measures
You are notified of unavailability of the selected folder and cannot create a Back Up profile or a Data Sync profile.	➜ You cannot specify the Windows system folder as the source folder for Back Up uploading or the source/destination folder for a Data Sync transmission/reception. Specify any folder other than the Windows system folder.
You are notified that the number of Back Up profiles created for the selected Home Server has already reached the maximum and cannot create a new Back Up profile.	➜ This message may appear when you uninstall or install the PC Link software on the personal computer where you have previously created profiles for Back Up uploading and/or Data Sync transmission/reception with the PC Link software. Go to the Back Up page on the Home Server Settings Page and delete all profiles created on the computer.
The Home Server was not found in the search for the registered Home Servers.	➜ Your anti-virus software may have interrupted the search. ➜ If your personal computer is connected to the Home Server via a network router on a network, you cannot find the Home Server on the network. Refer to the Setup Guide and see "Restrictions on access to a network with multiple network routers" in "Connecting to a network." ➜ Your personal computer is not connected to the Home Server via a network. Check the network devices, including cables and network hubs for appropriate connection.
You are notified that the selected Home Server has already been specified in another Back Up profile or a Data Sync profile on your personal computer and cannot create a new Back Up profile.	➜ The Home Server already has a Back Up profile with your personal computer specified as the source device. Go to the Back Up page on the Home Server Settings Page and delete the profile for the failed upload, and then create a Back Up profile once again.
You are notified that the selected Home Server has already been specified in a Back Up profile or another Data Sync profile on your personal computer and cannot create a new Data Sync (transmitting) profile.	➜ The Home Server already has the corresponding Data Sync (receiving) profile. Go to the Data Sync (receiving) page on the Home Server Settings Page and delete the profile for the failed Data Sync transmission, and then create a Data Sync (transmitting) profile once again.

End User License Agreement

For customers in the USA

END USER LICENSE AGREEMENT FOR SONY SOFTWARE

YOU SHOULD CAREFULLY READ THE FOLLOWING AGREEMENT BEFORE USING THE SOFTWARE INCLUDED WITH THIS PRODUCT. USING THIS SOFTWARE INDICATES YOUR ACCEPTANCE OF THE AGREEMENT.

IMPORTANT-READ CAREFULLY:

This End-User License Agreement ("License") is a legal agreement between you and Sony Electronics Inc. ("SONY"), the manufacturer of your Sony device ("DEVICE"). All Sony software and third party software included with your DEVICE , shall be referred to herein as the SOFTWARE. This License covers only the SOFTWARE. The SOFTWARE includes DEVICE software, any associated media, any printed materials, and any "on-line" or electronic documentation, as well as Sony-supplied or authorized updates/upgrades thereto. By installing, copying, downloading or otherwise using the SOFTWARE, you agree to be bound by the terms of this License. If you do not agree to the terms of this License, SONY is unwilling to license the SOFTWARE to you. In such event, you may not use or copy the SOFTWARE, and you should promptly contact SONY for instructions on return of the entire DEVICE and included SOFTWARE for a refund of the purchase price of the DEVICE.

SOFTWARE LICENSE

The SOFTWARE is protected by copyright laws and international copyright treaties, as well as other intellectual property laws and treaties. The SOFTWARE is licensed, not sold.

GRANT OF LICENSE

This License grants you right to use the SOFTWARE on the DEVICE solely for its intended purpose. This SOFTWARE and the related documentation are licensed to you by SONY. The SOFTWARE is licensed as single product and may not be separated for your personal use. You may install and use the SOFTWARE (1) on the DEVICE or (2) in conjunction with the DEVICE by (i) downloading the SOFTWARE onto your personal computer and (ii) subsequently uploading the SOFTWARE onto the DEVICE by accessing the designated SOFTWARE set-up page.

DESCRIPTION OF OTHER RIGHTS AND LIMITATIONS

Limitation on Reverse Engineering, Decompilation and Disassembly. You may not modify, reverse engineer, decompile, or disassemble the SOFTWARE in whole or in part.

Use Restriction. The SOFTWARE is considered a single integrated product that may only be used with the DEVICE except as specifically described in documentation provided with the SOFTWARE.

Data Files. The SOFTWARE may create data files automatically for use with the SOFTWARE. Any such data files will be deemed as part of the SOFTWARE.

Rental. You may not rent or lease the SOFTWARE.

Software Transfer. You may permanently transfer all of your rights under this License only as part of a sale or transfer of the DEVICE, provided you retain no copies, transfer all of the SOFTWARE (including all copies, component parts, the media and printed materials, all versions and any upgrades of the SOFTWARE and this License), and the recipient agrees to the terms of this License.

Termination. Without prejudice to any other rights, SONY may terminate this License if you fail to comply with the terms and conditions of this License. In such event, you must destroy all copies of the SOFTWARE and all of its component parts.

Dependent Software. The software, network services or other products other than the SOFTWARE upon which the SOFTWARE's performance depends on might be interrupted or discontinued at the discretion of the suppliers (software suppliers, service providers, or Sony). Sony and its suppliers do not warrant that those software, network services or other products will continue to be available, or will operate without interruption or modification.

COPYRIGHT

All title and copyrights in and to the SOFTWARE (including but not limited to any images, photographs, animation, video, audio, music, text and "applets," incorporated into the SOFTWARE), and any copies of the SOFTWARE, are owned by SONY or its suppliers. All rights not specifically granted under this License are reserved by SONY.

USE OF SOFTWARE WITH COPYRIGHTED MATERIALS

The SOFTWARE is capable of being used by you to store, process and use content created by you and third parties. Such content may be protected by copyright, other intellectual property laws, and/or agreements. You agree to use the SOFTWARE only in compliance with all such laws and agreements that apply to such content. You agree that SONY may take appropriate measures to protect copyright of content stored, processed or used by the SOFTWARE. Such measures include, but are not limited to, counting the frequency of your backup and restoration through certain SOFTWARE features, refusal to accept your request to enable restoration of data through certain SOFTWARE features and termination of this License in the event of your improper use of the SOFTWARE.

HIGH RISK ACTIVITIES

The SOFTWARE is not fault-tolerant and is not designed, manufactured or intended for use or resale as on-line control equipment in hazardous environments requiring fail-safe performance, such as in the operation of nuclear facilities, aircraft navigation or communication systems, air traffic control, direct life support machines, or weapons systems, in which the failure of the SOFTWARE could lead directly to death, personal injury, or severe physical or environmental damage ("High Risk Activities"). SONY and its suppliers specifically disclaim any express or implied warranty of fitness for High Risk Activities.

PROHIBITION ON EXPORT. EXCEPT FOR EXPORT TO CANADA FOR USE IN CANADA BY CITIZENS OF THE UNITED STATES OR CANADA, THE SOFTWARE AND ANY UNDERLYING TECHNOLOGY MAY NOT BE EXPORTED OUTSIDE THE UNITED STATES OR TO ANY FOREIGN ENTITY OR "FOREIGN PERSON" AS DEFINED BY U.S. GOVERNMENT REGULATIONS, INCLUDING WITHOUT LIMITATION, ANYONE WHO IS NOT A CITIZEN, NATIONAL OR LAWFUL PERMANENT RESIDENT OF THE UNITED STATES. BY USING THE SOFTWARE, YOU ARE AGREEING TO THE FOREGOING AND YOU ARE WARRANTING THAT YOU ARE NOT A "FOREIGN PERSON" OR UNDER THE CONTROL OF A FOREIGN PERSON.

U.S. GOVERNMENT RESTRICTED RIGHTS

The SOFTWARE is provided with RESTRICTED RIGHTS. Use, duplication, or disclosure by the United States Government is subject to restrictions as set forth in subparagraph (c)(1) and (2) of the Commercial Computer Software-Restricted Rights at 48 CFR 52.227-19, as applicable. Manufacturer is Sony Electronics Inc., 16530 Via Esprillo, San Diego, CA 92127.

LIMITED WARRANTY ON MEDIA

In situations where a back-up copy of the SOFTWARE is furnished on media, SONY warrants that for a period of ninety (90) days from the date of its delivery to you the media on which the back-up copy of the SOFTWARE is furnished to you will be free from defects in materials and workmanship under normal use. This limited warranty extends only to you as the original licensee. SONY's entire liability and your exclusive remedy will be replacement of the media not meeting SONY's limited warranty and which is returned to SONY with proof of purchase in the form of a bill of sale (which is evidence that the media is within the warranty period). SONY will have no responsibility to replace a disk damaged by accident, abuse or misapplication. ANY IMPLIED WARRANTIES ON THE MEDIA, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED IN DURATION TO NINETY (90) DAYS FROM THE DATE OF DELIVERY. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THESE LIMITATIONS MAY NOT APPLY TO YOU. THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE.

EXCLUSION OF WARRANTY ON SOFTWARE

You expressly acknowledge and agree that use of the SOFTWARE is at your sole risk. The SOFTWARE is provided "AS IS" and without warranty of any kind and SONY and SONY's licensors (In this Section, SONY and SONY's licensors shall be collectively referred to as "SONY") EXPRESSLY DISCLAIM ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. SONY DOES NOT WARRANT THAT THE FUNCTIONS CONTAINED IN THE SOFTWARE WILL MEET YOUR REQUIREMENTS, OR THAT THE OPERATION OF THE SOFTWARE WILL BE ERROR FREE. FURTHERMORE, SONY DOES NOT WARRANT OR MAKE ANY REPRESENTATIONS REGARDING THE USE OR THE RESULTS OF THE USE OF THE SOFTWARE IN TERMS OF ITS CORRECTNESS, ACCURACY, RELIABILITY, OR OTHERWISE. NO ORAL OR WRITTEN INFORMATION OR ADVICE GIVEN BY SONY OR A SONY AUTHORIZED REPRESENTATIVE SHALL CREATE A WARRANTY OR IN ANY WAY INCREASE THE SCOPE OF THIS WARRANTY. SHOULD THE SOFTWARE PROVE DEFECTIVE. YOU (AND NOT SONY OR A SONY AUTHORIZED REPRESENTATIVE) ASSUME THE ENTIRE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION. SOME JURISDICTIONS DO NOT ALLOW THE EXCLUSION OF IMPLIED WARRANTIES, SO THE ABOVE EXCLUSION MAY NOT APPLY TO YOU.

Without limiting the foregoing, you specifically acknowledge that the SOFTWARE is not designed or intended for use on a DEVICE other than the DEVICE. You expressly understand that any other DEVICE hardware, software or data could be damaged by the installing or using the SOFTWARE on such other DEVICE and that SONY is not responsible for any such damage. You expressly acknowledge and agree that all use of the SOFTWARE is at your sole risk and you are solely responsible for installation of the SOFTWARE and use of the SOFTWARE on your DEVICE.

LIMITATION OF LIABILITY

IN THIS SECTION, SONY AND SONY'S LICENSOR'S SHALL BE COLLECTIVELY REFERRED TO AS "SONY." SONY SHALL NOT BE LIABLE FOR ANY INDIRECT, SPECIAL, INCIDENTAL, PUNITIVE OR CONSEQUENTIAL DAMAGES FOR BREACH OF ANY EXPRESS OR IMPLIED WARRANTY, BREACH OF CONTRACT, NEGLIGENCE, STRICT LIABILITY OR ANY OTHER LEGAL THEORY RELATED TO THE SOFTWARE OR THIS DEVICE. SUCH DAMAGES INCLUDE, BUT ARE NOT LIMITED TO, LOSS OF PROFITS, LOSS OF REVENUE, LOSS OF DATA, LOSS OF USE OF THE PRODUCT OR ANY ASSOCIATED EQUIPMENT, DOWN TIME AND PURCHASER'S TIME, EVEN IF SONY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. IN ANY CASE, SONY'S ENTIRE LIABILITY UNDER ANY PROVISION OF THIS LICENSE SHALL BE LIMITED TO THE AMOUNT ACTUALLY PAID BY YOU ALLOCABLE TO THE SOFTWARE. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF CERTAIN TYPES OF DAMAGES, SO THE ABOVE EXCLUSION OR LIMITATION MAY NOT APPLY TO YOU.

SOFTWARE DATA COLLECTION AND MONITORING

The SOFTWARE contains features which may allow SONY and/or third parties to collect data from, control and/or monitor the DEVICE and other devices running or interacting with the SOFTWARE. You hereby consent to such activities. SONY's current privacy policy is located at http://products.sel.sony.com/ SEL/legal/privacy.pdf. Please contact applicable third parties for privacy policies related to their software and services.

AUTOMATIC UPDATE FEATURE

From time to time, SONY or third parties may automatically update or otherwise modify the SOFTWARE, for example, but not limited to, for purposes of enhancement of security functions, error correction and improvement of functions. Such updates or modifications may delete or change the nature of features or other aspects of the SOFTWARE, including functions you may rely upon. You hereby agree that such activities may occur at SONY's sole discretion and that SONY may condition continued use of the SOFTWARE upon your complete installation or acceptance of such update or modifications.

GOVERNING LAW AND JURISDICTION, JURY TRIAL WAIVER
This License shall be governed by the laws of the State of California, United States of America, without regards to conflict of laws provisions. Any dispute arising out of this License shall be subject to the exclusive venue of the state and federal courts of San Diego County, California, and the parties hereby consent to the venue and jurisdiction of such courts. THE PARTIES HERETO WAIVE TRIAL BY JURY WITH RESPECT TO ANY MATTERS ARISING UNDER OR RELATING TO THIS LICENSE.

SEVERABILITY

If any part of this License is held invalid or unenforceable, the other parts will remain valid.

THIRD PARTY BENEFICIARY

For all purposes of this License, each of Sony's third party licensors of any of the SOFTWARE shall be expressly deemed an intended third party beneficiary of this License and shall have the right to enforce the terms and conditions of this License.

Should you have any questions concerning this license or this limited warranty, you may contact SONY by writing to SONY at Sony Technical Response Center, 12451 Gateway Boulevard, Fort Myers, Florida 33913.

For customers in Europe

This End User Software License Agreement (the "EULA") is a legal agreement between you and Sony Corporation (hereinafter referred to as "SONY"), a corporation organized under Japanese Law, the manufacturer of your SONY hardware system (the "SONY HARDWARE") and each of Sony's third party licensors of any of the SONY SOFTWARE ("THIRD PARTY LICENSORS"). Please read this EULA carefully before installing or using the Sony software and any third party software distributed together with this EULA (the "SONY SOFTWARE"), or clicking on the "ACCEPT" button or similar button or links as may be designated by SONY. By installing and using the SONY SOFTWARE, or clicking on the "ACCEPT" button or similar button or links as may be designated by SONY, you agree to be bound by the terms of this EULA. You may use the SONY SOFTWARE only in connection with the use of the SONY HARDWARE. SONY SOFTWARE is licensed and not sold.

Notwithstanding the foregoing, software distributed together with separate End User Software License Agreement (the "Third Party EULA") shall be covered by the Third Party EULA.

If you do not agree to the terms of this EULA, you must not use it.

1. License. This SONY SOFTWARE and the related documentation are licensed to you by SONY. The SONY SOFTWARE is licensed as single product and may not be separated for your personal use. You may install and use the SONY SOFTWARE (1) on the SONY HARDWARE or (2) in conjunction with the SONY HARDWARE by (i) downloading the SONY SOFTWARE onto your personal computer and (ii) subsequently uploading the SONY SOFTWARE onto the SONY HARDWARE by accessing the designated SONY SOFTWARE set-up page.

2. Restrictions. The SONY SOFTWARE contains copyrighted material and other proprietary material. In order to protect them, and except as permitted by applicable law, you may not decompile, reverse engineer or disassemble the SONY SOFTWARE in whole or in part. Except for the transfer of the SONY SOFTWARE together with the SONY HARDWARE and prior agreement of the recipient to be bound by the terms and conditions of this EULA, you may not sell or rent the SONY SOFTWARE and its copy to any third party.

3. Limited Warranty. SONY warrants the media on which the SONY SOFTWARE is recorded to be free from physical defects for a period of ninety (90) days from the date of purchase as evidenced by a copy of the receipt. During the applicable warranty period, SONY will replace free of charge such media that proved to be defective. SONY will have no responsibility to replace media damaged by accident, abuse, or misapplication.

The above limited warranty replaces all other representations, conditions and warranties, whether express or implied, by statute or otherwise and SONY AND ITS THIRD PARTY LICENSORS EXPRESSLY DISCLAIM ALL OTHER WARRANTIES AND ALL CONDITIONS INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES AND/OR CONDITIONS OF SATISFACTORY QUALITY AND FITNESS FOR A PARTICULAR PURPOSE. The terms of this limited warranty do not affect or prejudice your statutory rights as an ultimate consumer, neither do they limit or exclude any liability for death or personal injury caused by the negligence of SONY.

4. Automatic Update Feature. From time to time, SONY may automatically update or otherwise modify the SONY SOFTWARE, for example for purposes of enhancement of security functions, error correction and improvement of updating functions at such time as you interact with SONY's or SONY's designee's server(s). Any such updates/modifications shall be deemed to constitute part of the SONY SOFTWARE for purposes of this EULA. By acceptance of this EULA, you consent to such update/modification.

5. Limitation of Liability. NEITHER SONY NOR ITS THIRD PARTY LICENSORS SHALL BE LIABLE FOR ANY INDIRECT, SPECIAL, INCIDENTAL, PUNITIVE OR CONSEQUENTIAL DAMAGES FOR BREACH OF ANY EXPRESS OR IMPLIED WARRANTY, BREACH OF CONTRACT, NEGLIGENCE, STRICT LIABILITY OR ANY OTHER LEGAL THEORY RELATED TO THE SONY SOFTWARE OR THE SONY HARDWARE. SUCH DAMAGES INCLUDE, BUT ARE NOT LIMITED TO, LOSS OF PROFITS, LOSS OF REVENUE, LOSS OF DATA, LOSS OF USE OF THE PRODUCT OR ANY ASSOCIATED EQUIPMENT, DOWN TIME AND PURCHASER'S TIME, EVEN IF SONY OR ITS THIRD PARTY LICENSORS HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. IN ANY CASE, SONY'S AND ITS THIRD PARTY LICENSORS' ENTIRE LIABILITY UNDER ANY PROVISION OF THIS AGREEMENT SHALL BE LIMITED TO THE AMOUNT ACTUALLY PAID BY YOU ALLOCABLE TO THE SOFTWARE. SOME JURISDICTIONS DO NOT ALLOW THE EXCLUSION OR LIMITATION OF CERTAIN TYPES OF DAMAGES, SO THE ABOVE EXCLUSION OR LIMITATION MAY NOT APPLY TO YOU.

6. Termination. This EULA is effective until terminated. You may terminate this EULA at any time by destroying the SONY SOFTWARE, related documentation, and all copies thereof. This EULA will terminate immediately without notice from SONY, if you fail to comply with any provision of this EULA. Upon termination you must destroy the SONY SOFTWARE, related documentation, and all copies thereof.

7. Governing Law. This EULA shall be governed by and construed in accordance with the laws of Japan.

Should you have any questions concerning this EULA or this limited warranty, please refer to the Customer Service Guide on how to contact VAIO-Link.

GNU GPL/LGPL-applicable Software Notices

This product includes the software packages to which the GNU General Public License (referred to as "GPL" hereinafter) or the GNU Lesser General Public License (referred to as "LGPL" hereinafter) is applied. Sony hereby informs you that you have the right to obtain, modify, and redistribute the software source codes in accordance with the GPL or LPGL.

Package List
bash
busybox
e2fsprogs
gcc
wireless-tools
linux-kernel
mdadm
xfsprogs
iptables
net-tools
rsync
samba
pump-autoip
Linux-PAM
util-linux
procps
glibc
dmapi
Linux-PAM
util-linux
libqrencode

The source codes are available on the Web site at http://www.sony.net/Products/Linux but Sony assumes no liability for answering technical inquires about the source codes. The original text of the GNU GENERAL PUBLIC LICENSE is as follows:

GNU GENERAL PUBLIC LICENSE

Version 2, June 1991

Preamble

The Licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public License is intended to guarantee your freedom to share and change free software-- to make sure the software is free for all its users. This General Public License applies to most of the Free Software Foundation's software and to any other program whose authors commit to using it. (Some other Free Software Foundation software is covered by the GNU Lesser General Public License instead). You can apply it to your programs, too.

When we speak of free software, we are referring to freedom, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish), that you receive source code or can get it if you want it, that you can change the software or use pieces of it in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions that forbid anyone to deny you these rights or to ask you to surrender the rights. These restrictions translate to certain responsibilities for you if you distribute copies of the software, or if you modify it.

For example, if you distribute copies of such a program, whether gratis or for a fee, you must give the recipients all the rights that you have. You must make sure that they, too, receive or can get the source code. And you must show them these terms so they know their rights.

We protect your rights with two steps: (1) copyright the software, and (2) offer you this license which gives you legal permission to copy, distribute and/or modify the software.

Also, for each author's protection and ours, we want to make certain that everyone understands that there is no warranty for this free software. If the software is modified by someone else and passed on, we want its recipients to know that what they have is not the original, so that any problems introduced by others will not reflect on the
original authors' reputations.

Finally, any free program is threatened constantly by software patents. We wish to avoid the danger that redistributors of a free program will individually obtain patent licenses, in effect making the program proprietary. To prevent this, we have made it clear that any patent must be licensed for everyone's free use or not licensed at all.

The precise terms and conditions for copying, distribution and modification follow.

TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License applies to any program or other work which contains a notice placed by the copyright holder saying it may be distributed under the terms of this General Public License. The "Program", below, refers to any such program or work, and a "work based on the Program" means either the Program or any derivative work under copyright law: that is to say, a work containing the Program or a portion of it, either verbatim or with modifications and/or translated into another language. (Hereinafter, translation is included without limitation in the term "modification"). Each licensee is addressed as "you".

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running the Program is not restricted, and the output from the Program is covered only if its contents constitute a work based on the Program (independent of having been made by running the Program). Whether that is true depends on what the Program does.

1. You may copy and distribute verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and give any other recipients of the Program a copy of this License along with the Program.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Program or any portion of it, thus forming a work based on the Program, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

    a) You must cause the modified files to carry prominent notices stating that you changed the files and the date of any change.

    b) You must cause any work that you distribute or publish, that in whole or in part contains or is derived from the Program or any part thereof, to be licensed as a whole at no charge to all third parties under the terms of this License.

    c) If the modified program normally reads commands interactively when run, you must cause it, when started running for such interactive use in the most ordinary way, to print or display an announcement including an appropriate copyright notice and a notice that there is no warranty (or else, saying that you provide a warranty) and that users may redistribute the program under these conditions, and telling the user how to view a copy of this License.
    (Exception: if the Program itself is interactive but does not normally print such an announcement, your work based on the Program is not required to print an announcement).

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Program, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Program, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Program.

In addition, mere aggregation of another work not based on the Program with the Program (or with a work based on the Program) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may copy and distribute the Program (or a work based on it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you also do one of the following:
    a) Accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,
    b) Accompany it with a written offer, valid for at least three years, to give any third party, for a charge no more than your cost of physically performing source distribution, a complete machine-readable copy of the corresponding source code, to be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,
    c) Accompany it with the information you received as to the offer to distribute corresponding source code. (This alternative is allowed only for noncommercial distribution and only if you received the program in object code or executable form with such an offer, in accord with Subsection b above).

The source code for a work means the preferred form of the work for making modifications to it. For an executable work, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the executable. However, as a special exception, the source code distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable. If distribution of executable or object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place counts as distribution of the source code, even though third parties are not compelled to copy the source along with the object code.

4. You may not copy, modify, sublicense, or distribute the Program except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense or distribute the Program is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.
5. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Program or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Program (or any work based on the Program), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Program or works based on it.
6. Each time you redistribute the Program (or any work based on the Program), the recipient automatically receives a license from the original licensor to copy, distribute or modify the Program subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties to this License.
7. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Program at all. For example, if a patent license would not permit royaltyfree redistribution of the Program by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Program.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system, which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

8. If the distribution and/or use of the Program is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Program under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.

9. The Free Software Foundation may publish revised and/or new versions of the General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Program specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Program does not specify a version number of this License, you may choose any version ever published by the Free Software Foundation.

10. If you wish to incorporate parts of the Program into other free programs whose distribution conditions are different, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

NO WARRANTY

11. BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

12. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Programs
If you develop a new program, and you want it to be of the greatest possible use to the public, the best way to achieve this is to make it free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<one line to give the program's name and an idea of what it does.>
Copyright (C) <year> <name of author>

This program is free software; you can redistribute it and/or modify it under the terms of the GNU General Public License as published by the Free Software Foundation; either version 2 of the License, or (at your option) any later version.

This program is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU General Public License for more details.

You should have received a copy of the GNU General Public License along with this program; if not, write to the Free Software Foundation, Inc., 59 Temple Place - Suite 330, Boston, MA 02111-1307, USA.

Also add information on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice like this when it starts in an interactive mode:

Gnomovision version 69, Copyright (C) year name of author
Gnomovision comes with ABSOLUTELY NO WARRANTY; for details
type `show w'. This is free software, and you are welcome to redistribute it under certain conditions; type `show c' for details.

The hypothetical commands `show w' and `show c' should show the appropriate parts of the General Public License. Of course, the commands you use may be called something other than `show w' and `show c'; they could even be mouse-clicks or menu items--whatever suits your program.

You should also get your employer (if you work as a programmer) or your school, if any, to sign a "copyright disclaimer" for the program, if necessary. Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the program `Gnomovision' (which makes passes at compilers) written by James Hacker.

<signature of Ty Coon>, 1 April 1989
Ty Coon, President of Vice

This General Public License does not permit incorporating your program into proprietary programs. If your program is a subroutine library, you may consider it more useful to permit linking proprietary applications with the library. If this is what you want to do, use the GNU Lesser General Public License instead of this License.

GNU LESSER GENERAL PUBLIC LICENSE

Version 2.1, February 1999
Copyright (C) 1991, 1999 Free Software Foundation, Inc.
59 Temple Place, Suite 330, Boston, MA 02111-1307 USA Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.

[This is the first released version of the Lesser GPL. It also counts as the successor of the GNU Library Public License, version 2, hence the version number 2.1.]

Preamble
The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public Licenses are intended to guarantee your freedom to share and change free software--to make sure the software is free for all its users.

This license, the Lesser General Public License, applies to some specially designated software packages--typically libraries--of the Free Software Foundation and other authors who decide to use it. You can use it too, but we suggest you first think carefully about whether this license or the ordinary General Public License is the better strategy to use in any particular case, based on the explanations below.

When we speak of free software, we are referring to freedom of use, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish); that you receive source code or can get it if you want it; that you can change the software and use pieces of it in new free programs; and that you are informed that you can do these things.

To protect your rights, we need to make restrictions that forbid distributors to deny you these rights or to ask you to surrender these rights. These restrictions translate to certain responsibilities for you if you distribute copies of the library or if you modify it.

For example, if you distribute copies of the library, whether gratis or for a fee, you must give the recipients all the rights that we gave you. You must make sure that they, too, receive or can get the source code. If you link other code with the library, you must provide complete object files to the recipients, so that they can relink them with the library after making changes to the library and recompiling it. And you must show them these terms so they know their rights.

We protect your rights with a two-step method: (1) we copyright the library, and (2) we offer you this license, which gives you legal permission to copy, distribute and/or modify the library.

To protect each distributor, we want to make it very clear that there is no warranty for the free library. Also, if the library is modified by someone else and passed on, the recipients should know that what they have is not the original version, so that the original author's reputation will not be affected by problems that might be introduced by others.

Finally, software patents pose a constant threat to the existence of any free program. We wish to make sure that a company cannot effectively restrict the users of a free program by obtaining a restrictive license from a patent holder. Therefore, we insist that any patent license obtained for a version of the library must be consistent with the full freedom of use specified in this license.

Most GNU software, including some libraries, is covered by the ordinary GNU General Public License. This license, the GNU Lesser General Public License, applies to certain designated libraries, and is quite different from the ordinary General Public License. We use this license for certain libraries in order to permit linking those libraries into nonfree programs.

When a program is linked with a library, whether statically or using a shared library, the combination of the two is legally speaking a combined work, a derivative of the original library. The ordinary General Public License therefore permits such linking only if the entire combination fits its criteria of freedom. The Lesser General Public License permits more lax criteria for linking other code with the library.

We call this license the "Lesser" General Public License because it does Less to protect the user's freedom than the ordinary General Public License. It also provides other free software developers Less of an advantage over competing non-free programs. These disadvantages are the reason we use the ordinary General Public License for many libraries. However, the Lesser license provides advantages in certain special circumstances.

For example, on rare occasions, there may be a special need to encourage the widest possible use of a certain library, so that it becomes a de-facto standard. To achieve this, non-free programs must be allowed to use the library. A more frequent case is that a free library does the same job as widely used non-free libraries. In this case, there is little to gain by limiting the free library to free software only, so we use the Lesser General Public License.

In other cases, permission to use a particular library in non-free programs enables a greater number of people to use a large body of free software. For example, permission to use the GNU C Library in non-free programs enables many more people to use the whole GNU operating system, as well as its variant, the GNU/Linux operating system.

Although the Lesser General Public License is Less protective of the users' freedom, it does ensure that the user of a program that is linked with the Library has the freedom and the wherewithal to run that program using a modified version of the Library.

The precise terms and conditions for copying, distribution and modification follow. Pay close attention to the difference between a "work based on the library" and a "work that uses the library". The former contains code derived from the library, whereas the latter must be combined with the library in order to run.

TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License Agreement applies to any software library or other program which contains a notice placed by the copyright holder or other authorized party saying it may be distributed under the terms of this Lesser General Public License (also called "this License"). Each licensee is addressed as "you".

A "library" means a collection of software functions and/or data prepared so as to be conveniently linked with application programs (which use some of those functions and data) to form executables.

The "Library", below, refers to any such software library or work which has been distributed under these terms. A "work based on the Library" means either the Library or any derivative work under copyright law: that is to say, a work containing the Library or a portion of it, either verbatim or with modifications and/or translated straightforwardly into another language. (Hereinafter, translation is included without limitation in the term "modification").

"Source code" for a work means the preferred form of the work for making modifications to it. For a library, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the library.

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running a program using the Library is not restricted, and output from such a program is covered only if its contents constitute a work based on the Library (independent of the use of the Library in a tool for writing it). Whether that is true depends on what the Library does and what the program that uses the Library does.

1. You may copy and distribute verbatim copies of the Library's complete source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and distribute a copy of this License along with the Library.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Library or any portion of it, thus forming a work based on the Library, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:
   a) The modified work must itself be a software library.
   b) You must cause the files modified to carry prominent notices stating that you changed the files and the date of any change.
   c) You must cause the whole of the work to be licensed at no charge to all third parties under the terms of this License.
   d) If a facility in the modified Library refers to a function or a table of data to be supplied by an application program that uses the facility, other than as an argument passed when the facility is invoked, then you must make a good faith effort to ensure that, in the event an application does not supply such function or table, the facility still operates, and performs whatever part of its purpose remains meaningful.

   (For example, a function in a library to compute square roots has a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots).

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Library, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Library, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Library.

In addition, mere aggregation of another work not based on the Library with the Library (or with a work based on the Library) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may opt to apply the terms of the ordinary GNU General Public License instead of this License to a given copy of the Library. To do this, you must alter all the notices that refer to this License, so that they refer to the ordinary GNU General Public License, version 2, instead of to this License. (If a newer version than version 2 of the ordinary GNU General Public License has appeared, then you can specify that version instead if you wish). Do not make any other change in these notices.

Once this change is made in a given copy, it is irreversible for that copy, so the ordinary GNU General Public License applies to all subsequent copies and derivative works made from that copy.

This option is useful when you wish to copy part of the code of the Library into a program that is not a library.

4. You may copy and distribute the Library (or a portion or derivative of it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange.

If distribution of object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place satisfies the requirement to distribute the source code, even though third parties are not compelled to copy the source along with the object code.

5. A program that contains no derivative of any portion of the Library, but is designed to work with the Library by being compiled or linked with it, is called a "work that uses the Library". Such a work, in isolation, is not a derivative work of the Library, and therefore falls outside the scope of this License.

However, linking a "work that uses the Library" with the Library creates an executable that is a derivative of the Library (because it contains portions of the Library), rather than a "work that uses the library". The executable is therefore covered by this License. Section 6 states terms for distribution of such executables.

When a "work that uses the Library" uses material from a header file that is part of the Library, the object code for the work may be a derivative work of the Library even though the source code is not. Whether this is true is especially significant if the work can be linked without the Library, or if the work is itself a library. The threshold for this to be true is not precisely defined by law.

If such an object file uses only numerical parameters, data structure layouts and assessors, and small macros and small inline functions (ten lines or less in length), then the use of the object file is unrestricted, regardless of whether it is legally a derivative work. (Executables containing this object code plus portions of the Library will still fall under Section 6).

Otherwise, if the work is a derivative of the Library, you may distribute the object code for the work under the terms of Section 6. Any executables containing that work also fall under Section 6, whether or not they are linked directly with the Library itself.

6. As an exception to the Sections above, you may also combine or link a "work that uses the Library" with the Library to produce a work containing portions of the Library, and distribute that work under terms of your choice, provided that the terms permit modification of the work for the customer's own use and reverse engineering for debugging such modifications.

You must give prominent notice with each copy of the work that the Library is used in it and that the Library and its use are covered by this License. You must supply a copy of this License. If the work during execution displays copyright notices, you must include the copyright notice for the Library among them, as well as a reference directing the user to the copy of this License. Also, you must do one of these things:

a) Accompany the work with the complete corresponding machine-readable source code for the Library including whatever changes were used in the work (which must be distributed under Sections 1 and 2 above); and, if the work is an executable linked with the Library, with the complete machine-readable "work that uses the Library", as object code and/or source code, so that the user can modify the Library and then relink to produce a modified executable containing the modified Library. (It is understood that the user who changes the contents of definitions files in the Library will not necessarily be able to recompile the application to use the modified definitions).

b) Use a suitable shared library mechanism for linking with the Library. A suitable mechanism is one that (1) uses at run time a copy of the library already present on the user's computer system, rather than copying library functions into the executable, and (2) will operate properly with a modified version of the library, if the user installs one, as long as the modified version is interface-compatible with the version that the work was made with.

c) Accompany the work with a written offer, valid for at least three years, to give the same user the materials specified in Subsection 6a, above, for a charge no more than the cost of performing this distribution.

d) If distribution of the work is made by offering access to copy from a designated place, offer equivalent access to copy the above specified materials from the same place.

e) Verify that the user has already received a copy of these materials or that you have already sent this user a copy.

For an executable, the required form of the "work that uses the Library" must include any data and utility programs needed for reproducing the executable from it. However, as a special exception, the materials to be distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

It may happen that this requirement contradicts the license restrictions of other proprietary libraries that do not normally accompany the operating system. Such a contradiction means you cannot use both them and the Library together in an executable that you distribute.

7. You may place library facilities that are a work based on the Library side-by-side in a single library together with other library facilities not covered by this License, and distribute such a combined library, provided that the separate distribution of the work based on the Library and of the other library facilities is otherwise permitted, and provided that you do these two things:
    a) Accompany the combined library with a copy of the same work based on the Library, uncombined with any other library facilities. This must be distributed under the terms of the Sections above.
    b) Give prominent notice with the combined library of the fact that part of it is a work based on the Library, and explaining where to find the accompanying uncombined form of the same work.

8. You may not copy, modify, sublicense, link with, or distribute the Library except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense, link with, or distribute the Library is void, and will automatically terminate your rights under this License.
    However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

9. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Library or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Library (or any work based on the Library), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Library or works based on it.

10.Each time you redistribute the Library (or any work based on the Library), the recipient automatically receives a license from the original licensor to copy, distribute, link with or modify the Library subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties with this License.

11.If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Library at all. For example, if a patent license would not permit royalty-free redistribution of the Library by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Library.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply, and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

12. If the distribution and/or use of the Library is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Library under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.

13. The Free Software Foundation may publish revised and/or new versions of the Lesser General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Library specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Library does not specify a license version number, you may choose any version ever published by the Free Software Foundation.

14. If you wish to incorporate parts of the Library into other free programs whose distribution conditions are incompatible with these, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

NO WARRANTY

15. BECAUSE THE LIBRARY IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE LIBRARY, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE LIBRARY "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE LIBRARY IS WITH YOU. SHOULD THE LIBRARY PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

16. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE LIBRARY AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE LIBRARY (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE LIBRARY TO OPERATE WITH ANY OTHER SOFTWARE), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Libraries

If you develop a new library, and you want it to be of the greatest possible use to the public, we recommend making it free software that everyone can redistribute and change. You can do so by permitting redistribution under these terms (or, alternatively, under the terms of the ordinary General Public License).

To apply these terms, attach the following notices to the library. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<one line to give the library's name and an idea of what it does.>
Copyright (C) <year> <name of author>

This library is free software; you can redistribute it and/or modify it under the terms of the GNU Lesser General Public License as published by the Free Software Foundation; either version 2.1 of the License, or (at your option) any later version.

This library is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU Lesser General Public License for more details.

You should have received a copy of the GNU Lesser General Public License along with this library; if not, write to the Free Software Foundation, Inc., 59 Temple Place, Suite 330, Boston, MA 02111-1307 USA

Also add information on how to contact you by electronic and paper mail.

You should also get your employer (if you work as a programmer) or your school, if any, to sign a "copyright disclaimer" for the library, if necessary. Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the library `Frob' (a library for tweaking knobs) written by James Random Hacker.

signature of Ty Coon, 1 April 1990
Ty Coon, President of Vice

That's all there is to it!

NetBSD Software Notices

OpenSSL Software Notices

This product includes the OpenSSL software (including the Original SSLeay libraries) that Sony uses under the license agreement with the copyright holder of the software. In response to the request from the copyright holder, Sony is obliged to inform you of the following terms and conditions. Please read them thoroughly.

OpenSSL License
Copyright (c) 1998-2007 The OpenSSL Project. All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.

2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

3. All advertising materials mentioning features or use of this software must display the following acknowledgment: "This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit. (http://www.openssl.org/)"

4. The names "OpenSSL Toolkit" and "OpenSSL Project" must not be used to endorse or promote products derived from this software without prior written permission. For written permission, please contact openssl-core@openssl.org.

5. Products derived from this software may not be called "OpenSSL" nor may "OpenSSL" appear in their names without prior written permission of the OpenSSL Project.

6. Redistributions of any form whatsoever must retain the following acknowledgment: "This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit (http://www.openssl.org/)"

THIS SOFTWARE IS PROVIDED BY THE OpenSSL PROJECT ``AS IS" AND ANY EXPRESSED OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE OpenSSL PROJECT OR ITS CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

This product includes cryptographic software written by Eric Young (eay@cryptsoft. com). This product includes software written by Tim Hudson (tjh@cryptsoft.com).

Original SSLeay License

AES Notices

Copyright (c) 2003, Dr Brian Gladman, Worcester, UK. All rights reserved.

LICENSE TERMS

The free distribution and use of this software in both source and binary form is allowed (with or without changes) provided that:

1. distributions of this source code include the above copyright notice, this list of conditions and the following disclaimer;
2. distributions in binary form include the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other associated materials;
3. the copyright holder's name is not used to endorse products built using this software without specific written permission.

ALTERNATIVELY, provided that this notice is retained in full, this product may be distributed under the terms of the GNU General Public License (GPL), in which case the provisions of the GPL apply INSTEAD OF those given above.

DISCLAIMER

This software is provided 'as is' with no explicit or implied warranties in respect of its properties, including, but not limited to, correctness and/or fitness for purpose.

MD5 Notices

md5.c
RSA Data Security, Inc. MD5 Message Digest Algorithm
Created: 2/17/90 RLR
Revised: 1/91 SRD,AJ,BSK,JT Reference C Version

Copyright (C) 1990, RSA Data Security, Inc. All rights reserved.

License to copy and use this software is granted provided that it is identified as the "RSA Data Security, Inc. MD5 Message Digest Algorithm" in all material mentioning or referencing this software or this function.

License is also granted to make and use derivative works provided that such works are identified as "derived from the RSA Data Security, Inc. MD5 Message Digest Algorithm" in all material mentioning or referencing the derived work.

RSA Data Security, Inc. makes no representations concerning either the merchantability of this software or the suitability of this software for any particular purpose. It is provided "as is" without express or implied warranty of any kind.

These notices must be retained in any copies of any part of this documentation and/or software.

TAILQ Macro Notices

$NetBSD: queue.h,v 1.41 2005/05/29 21:14:40 christos Exp $

Copyright (c) 1991, 1993
The Regents of the University of California. All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:
1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
3. Neither the name of the University nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE REGENTS AND CONTRIBUTORS ``AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE REGENTS OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

@(#)queue.h   8.5 (Berkeley) 8/20/94

JPEG Notices

The engineering results of the Independent JPEG Group are employed in part of this product.

In plain English:
1. We don't promise that this software works. (But if you find any bugs, please let us know!)
2. You can use this software for whatever you want. You don't have to pay us.
3. You may not pretend that you wrote this software. If you use it in a program, you must acknowledge somewhere in your documentation that you've used the IJG code.

In legalese:
The authors make NO WARRANTY or representation, either express or implied, with respect to this software, its quality, accuracy, merchantability, or fitness for a particular purpose. This software is provided" AS IS", and you, its user assume the entire risk as to its quality and accuracy.

This software is copyright (c) 1991-1998, Thomas G. Lane.

All Rights Reserved except as specified below.

Permission is hereby granted to use, copy, modify, and distribute this software (or portions thereof) for any purpose, without fee, subject to these conditions:

(1) If any part of the source code for this software is distributed, then this README file must be included, with this copyright and no-warranty notice unaltered; and any additions, deletions, or changes to the original files must be clearly indicated in accompanying documentation.

(2) If only executable code is distributed, then the accompanying documentation must state that "this software is based in part on the work of the Independent JPEG Group".

(3) Permission for use of this software is granted only if the user accepts full responsibility for any undesirable consequences; the authors accept NO LIABILITY for damages of any kind.

These conditions apply to any software derived from or based on the IJG code, not just to the unmodified library. If you use our work, you ought to acknowledge us.

Permission is NOT granted for the use of any IJG author's name or company name in advertising or publicity relating to this software or products derived from it. This software may be referred to only as" the Independent JPEG Group's software".

We specifically permit and encourage the use of this software as the basis of commercial products, provided that all warranty or liability claims are assumed by the product vendor.

lighttpd Software Notices

prototype.js Notices

Copyright (c) 2005-2008 Sam Stephenson

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

sha1.js Notices

Copyright (c) 1998 - 2008, Paul Johnston & Contributors All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

Neither the name of the author nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

Spry Software Notices

For customer support information, visit the following website:
http://esupport.sony.com/EN/VAIO/ for customers in the USA,
http://www.vaio-link.com/ for customers in Europe.

Printed on 70% or more recycled paper
using VOC (Volatile Organic Compound)-
free vegetable oil based ink.

http://www.sony.net/

3 - 2 9 8 - 3 6 0 - 1 1