



Sun Storage Regulatory and Safety

Compliance Manual

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Sun Storage

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Sun Microsystems, Inc.
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Summary of Changes

EC	Date	Revision	Description
000694	August 2008	A	Initial release.

Preface

This *Regulatory and Safety Compliance Manual* is intended for users of Sun Storage or Sun StorageTek equipment; including customers, operators, and service representatives.

■ Organization

This manual contains the following information:

- [Chapter 1: Regulatory Statements](#)
- [Chapter 2: Safety Compliance Statements](#)
- [Chapter 3: General Product and Personal Safety](#)

■ Symbols

The following symbols may appear in this manual and other Sun documentation:



Caution: *Personal injury:* There is a risk of personal injury and equipment damage. Follow the instructions.



Caution: *ESD sensitive components and assemblies:* Follow the instructions to prevent ESD damage to equipment.



Caution: *Personal injury:* To reduce the risk of back injury, follow the instructions.



Caution: *Hot surface:* Avoid contact. Surfaces are hot and may cause personal injury if touched. Follow all instructions.



Caution: *Tipping hazard:* Follow all instructions.



Caution: *Keep away from heat:* Follow all instructions.



Caution: *Keep dry:* Follow all instructions.



Warning: *Hazardous voltages are present:* To reduce the risk of electric shock and danger to personal health, follow the instructions.



Warning: *Laser Hazard:* Follow all instructions.

Chapter 1:

Regulatory Statements

Sun Storage products are marked to indicate the compliance class:

- Federal Communications Commission (FCC) — USA
- Industry Canada Equipment Standard for Digital Equipment (ICES-003)—Canada
- Voluntary Control Council for Interference (VCCI) — Japan
- Bureau of Standards Metrology and Inspection (BSMI) — Taiwan
- California Perchlorate Regulation

Please read the appropriate section that corresponds to the marking on your product before attempting to install it.



Caution: *Potential equipment damage:* Cables that connect peripherals must be shielded and grounded; refer to descriptions in the cable instruction manuals. Operation of this equipment with cables that are not properly shielded and not correctly grounded may cause interference to other electronic equipment and result in violation of Class A legal requirements.

Changes or modifications to this equipment that are not expressly approved in advance by Sun Microsystems will void the warranty. In addition, changes or modifications to this equipment might cause it to create harmful interference.

■ FCC Class A Notice

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.
2. This device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy, and if it is not installed and used in accordance with the instruction manual, it may cause harmful interference to radio communications.

Operation of equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

Modifications: Any modifications made to this device that are not approved by Sun Microsystems, Inc. may void the authority granted to the user by the FCC to operate equipment.

■ ICES-003 Class A Notice—Avis NMB-003, Classe A

This Class A digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

■ Japanese Compliance Statement

The following Japanese compliance statement pertains to VCCI EMI regulations:

この装置は、情報処理装置等電波障害自主規制協議会（VCCI）の基準に基づくクラスA情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。

English translation: This is a Class A product based on the Technical Requirement of the Voluntary Control Council for Interference by Information Technology (VCCI). In a domestic environment, this product may cause radio interference, in which case the user may be required to take corrective actions.

■ Taiwan Warning Label Statement

The following warning label (in Kanji) pertains to BSMI regulations in Taiwan, R.O.C.:

警告使用者：這是甲類的資訊產品，在居住的環境中使用時，可能會造成射頻干擾，在這種情況下，使用者會被要求採取某些適當的對策

English translation: This is a Class A product. In a domestic environment, this product may cause radio interference, in which case, the user may be required to take adequate measures.

■ California Regulation

Perchlorate¹ Material: This product may contain a lithium battery which may contain perchlorate. Special handling may apply.

For more information, refer to: www.dtsc.ca.gov/hazardouswaste/perchlorate

1. Perchlorates are the salts derived from perchloric acid (HClO₄) that occur both naturally and through manufacturing. They have been used as thyroid medicine, as an oxidizer in rocket fuel, and can be found in airbags, fireworks, fertilizers and in pyrotechnics.

Chapter 2:

Safety Compliance Statements

Read this section before beginning any procedure. The following text provides safety precautions to follow when installing a Sun Storage product.




Safety Precautions

For your protection, observe the following safety precautions when setting up the equipment:

- Follow all cautions and instructions marked on the equipment.
- Ensure that the voltage and frequency of your power source match the voltage and frequency inscribed on the equipment's electrical rating label.
- Never push objects of any kind through openings in the equipment. Dangerous voltages may be present. Conductive foreign objects could produce a short circuit that could cause fire, electric shock, or damage to the equipment.

Power Switches

Depending on the type of power switch your device has, one of the following symbols may be used:

-  **On** – Applies AC power to the system.
-  **Off** – Removes AC power from the system.
-  **Standby** – The On/Standby switch is in the standby position.

Modifications to Equipment

Do not make mechanical or electrical modifications to the equipment. Sun Microsystems is not responsible for regulatory compliance of a modified product.

EN60950-1 Statement



The following statements pertain to products that require a ground connection at the wall outlet:

Norway: Apparatet må tilkoples jordet stikkontakt.

Finland: Laite on liitettävä suojamaadoituskoskettimilla varustettuun pistorasiaan

Sweden: Apparatens skall anslutas till jordat uttag

Denmark: For tilslutning af de øvrige ledere, se medfølgende installationsvejlednin

Location of a Product



Caution: Do not block or cover the openings of a product. Never place a product near a radiator or heat register. Failure to follow these guidelines can cause overheating and affect the reliability of the product.

Power Connections



Caution: Sun Storage products are designed to be connected only to a grounded mains circuit outlet.

Do not defeat the plug grounding pin and do not plug these products into a non-grounded main power circuit.



Caution: Not all power cords have the same current ratings. Do not use the power cord provided with your equipment for any other products or use. Household extension cords do not have overload protection and are not meant for use with computer systems. Do not use household extension cords with your Sun product.



注意 - 添付の電源コードを他の装置や用途に使用しない
添付の電源コードは本装置に接続し、使用することを目的として設計され、その安全性が確認されているものです。決して他の装置や用途に使用しないでください。火災や感電の原因となる恐れがあります。



Caution: The power switch on this product functions as a standby type device only.

The power cord serves as the primary disconnect device for the system.

Be sure to plug the power cord into a grounded power outlet that is nearby the system and is readily accessible.

Do not connect the power cord when the power supply has been removed from the system chassis.



Caution: For products with multiple power cords, all power cords must be disconnected to completely remove power from the system.

Battery Warning



Caution: There is danger of explosion if batteries are mishandled or incorrectly replaced. On systems with replaceable batteries, replace only with the same manufacturer and type or equivalent type recommended per the instructions provided in the product service manual.

Do not disassemble batteries or attempt to recharge them outside the system. Do not dispose of batteries in fire.

Dispose of batteries properly in accordance with the manufacturer's instructions and local regulations.

System Unit Cover

If instructed to remove the cover of a Sun product to add cards, memory, or internal storage devices, make sure to replace the cover securely before restoring power to the product.



Caution: Do not operate Sun products without cover in place. Failure to take this precaution may result in personal injury and system damage.

Rack Safety Precautions

The following precautions apply to Racks and Rack Mounted systems.

- Equipment should always be loaded from the bottom up and preferably with the heaviest items near the bottom to prevent an unstable condition causing the rack to tip.
- To prevent the rack from tipping, any side outriggers and/or stabilizing brackets provided must be installed.
- More than one person may be required to install equipment into the rack or remove equipment from the rack.

Rack Safety Precautions (continued)

- Take adequate precautions when moving a rack or library that contains rack-installed equipment. The weight of some rack equipment may have altered the rack or library center of gravity and could cause an overbalance/tip condition during a move.
- Ensure that equipment installed in a rack is adequately cooled. The internal temperature of the rack should not exceed the recommended operating temperature. Consider power dissipation within the rack space as well as the room ambient conditions to determine if additional cooling is needed.
- Locate the equipment so that it does not block or hinder any ventilation openings in the rack area or the installed equipment.
- Ensure that the equipment to be installed in a rack has UL Listing, CSA Certification or C-UL Listing and CE Compliance.
- Ensure that equipment installed in a rack has a reliable earth ground, whether the equipment is connected directly to the branch circuit or to a power distribution strip.
- Ensure that the combination of the product with other equipment in a rack does not create an overcurrent condition, whether the equipment is connected directly to the branch circuit or to a power distribution strip.

Fiber-Optic Safety



Warning: Possible physical injury. Laser hazard. Never look directly into fiber-optic cable, a fiber-optic connector, or a laser transceiver module. Hazardous conditions may exist from laser power levels that are capable of causing injury to the eye.

Be careful when using optical instruments with equipment. Such instruments might increase the likelihood of and eye injury.

The laser transceivers in fiber-optic equipment can pose dangers to personal safety. Ensure that anyone who works with this Sun Storage product understands these dangers and follows safety procedures. Ensure that the optical ports of every laser transceiver module are terminated with an optical connector, a dust plug or a cover.

Each fiber-optic interface in this Sun Storage equipment contains a laser transceiver that is a Class I Laser Product.

The following warnings apply to Sun Storage products that contain a laser or LED device as defined in EN60825-1 and Section 21 CFR 1040 of the Food and Drug Administration (FDA) regulations.



Warning: Use of controls, adjustment or executing procedures other than those specified herein might result in a hazardous laser radiation exposure.

CLASS 1 LASER PRODUCT
LASER KLASSE 1
APPAREIL A LASER DE CLASSE 1
COMPLIES WITH 21 CFR 1040.10 AND 1040.11

The following is a translation for users in Finland and Sweden who wish to identify laser safety and classification:

CLASS 1 LASER
LUOKAN 1 LASERLAITE
KLASSE 1 LASER APPARAT

Chapter 2: Safety Compliance Statements

Chapter 3:

General Product and Personal Safety

Read this section before beginning any procedure. The following text provides safety precautions to follow when installing a Sun Storage product.

Electric Discharge Damage Prevention

Before touching any components, precautions against electrostatic discharge (ESD) must be taken.



Caution: Components are sensitive to static electricity. Even a small electrostatic discharge can damage an electrical component that is inside this product.

A damaged component might not fail immediately, but over time it will become worse and might eventually cause an intermittent problem.

Make sure that you touch an unpainted metal surface before touching any components or subassemblies in a Sun Storage product.

Before you touch any internal components:

1. With your finger, touch an unpainted metal surface of the product, such as the frame or a bolt in the frame.
2. Keep your body movement to a minimum as you touch any components or subassemblies of the product.

Note: Antistatic wrist straps that have clip-on ends are commercially available.

Lifting Techniques



Lifting, regardless of how much or how little, can create serious back stress.

If you follow these guidelines, you can reduce the risk of back injury:

- Do not twist your body to pick up something or to put it down. Twisting puts extreme pressure on your back, especially when you lift or carry objects. Instead of twisting, make the task two separate moves; first lift, and then use your feet to turn your body.
- Plan the lift; first examine the object and then determine how it should be lifted and where it will be placed.
- Place your feet shoulder-width apart, and place one foot a little behind the other. Keep your back straight because even light loads can significantly increase pressure on your spine when you lean forward.
- Choose the appropriate lifting technique. Examine the weight, size, location, frequency and direction of the lift. Plan to avoid awkward postures and determine if material-handling aids are needed.
- Whenever you can, grip the load with your whole hand, and use two hands.
- Carry objects at elbow height and close to your body. The farther away you hold an object, the more force it puts on your lower back.

- Lift with your legs instead of your back. Leg muscles are some of the strongest in the body. When you squat and lift with your legs, you can lift more weight safely.
- Alternate lifting tasks with tasks that are less stressful to the same muscles. This technique ensures that your muscles have some recovery time.

Shoulder, Elbow, Wrist, and Hand Safety

Follow these guidelines to minimize the possibility of injury to your shoulders, elbows, wrists, and hands.

- Work within your safety zone—the area between shoulder level and knuckle level of your lowered hands. You face less chance of injury when you work or lift in this area.
- Keep your elbows bent to keep loads close to your body and to decrease the amount of force necessary to do the job. If you use this posture, you will put less weight and pressure on your shoulder.
- Be sure to keep your wrists straight. Avoid bending, extending, or twisting your wrists for long periods of time.
- Do not use a pinch grip to lift large or heavy loads because the way you lift also can affect the tendons in your hand. When you grasp an object between your thumb and fingers, you put a lot of tension on hand and wrist tendons. Use both hands—use one for a while, and then use the other—to give them rest.

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