

# **FURIO**

## **Robotic Dolly Systems**

### **Safety Guide**

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Our mission is to:

1. Provide a Superior Customer Experience
  - offer the best product quality and support
2. Make Cool Practical Technology
  - develop great products that customers love

Ross has become well known for the Ross Video Code of Ethics. It guides our interactions and empowers our employees. I hope you enjoy reading it below.

If anything at all with your Ross experience does not live up to your expectations be sure to reach out to us at [solutions@rossvideo.com](mailto:solutions@rossvideo.com).



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## Ross Video Code of Ethics

Any company is the sum total of the people that make things happen. At Ross, our employees are a special group. Our employees truly care about doing a great job and delivering a high quality customer experience every day. This code of ethics hangs on the wall of all Ross Video locations to guide our behavior:

1. We will always act in our customers' best interest.
2. We will do our best to understand our customers' requirements.
3. We will not ship crap.
4. We will be great to work with.
5. We will do something extra for our customers, as an apology, when something big goes wrong and it's our fault.
6. We will keep our promises.
7. We will treat the competition with respect.
8. We will cooperate with and help other friendly companies.
9. We will go above and beyond in times of crisis. *If there's no one to authorize the required action in times of company or customer crisis - do what you know in your heart is right. (You may rent helicopters if necessary.)*

# Furio Safety Guide

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- Release Date: January 17, 2025.

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# Important Safety Instructions

This document contains Important Safety Instructions about your Ross Robotics Furio systems, including Furio Studio, SkyDolly, and BlackBird S-Series. Before unpacking, assembling, using, or servicing any Furio product or any associated equipment, read and heed all the safety instructions in this document to avoid personal injury and to prevent product damage. Keep these safety instructions for future reference.

The Furio system includes several individual component products. The safety instructions in this document are intended to complement any safety instructions you may find in individual product manuals. Be sure to refer to, and heed, all safety instructions in such product manuals.

If you have any questions about these safety instructions, or about the safe use of any Furio equipment, contact Technical Support.

## Warning Statements

The following warning statements identify conditions or practices that can result in serious injury or death:

### **Dangerous Voltages**

Dangerous voltages are present within the Dolly enclosure and column drive motor cabling. Disconnect the mains power supply before servicing equipment or connecting/disconnecting the column motor drive cable. Do not service the equipment unless you are qualified and trained to do so.

### **Operate Only With Protective Panels in Place**

Do not operate your Furio system if any parts have been removed. Ensure all protective panels are in place before operating your Furio system.

### **Use in Suitable Locations Only**

Do not expose your Furio system to water, damp locations, extreme temperatures, dusty locations, or explosive environments.

The system must be installed on a uniform, practically flat tracking surface capable of supporting a total load of **155.4 kg** (comprising the Dolly and FRU at 48.5 kg, the Lift at 50.9 kg, the VR600 Head and Cradle at 26 kg, and a maximum allowable payload of 30 kg) without bending.

**Note:** Traction weights are generally unnecessary for newer Dollies equipped with StableTrac. However, if traction weights are used, they must not exceed the maximum payload of **30 kg**.

Tracks must be bolted to the floor following guidance in the ***Technical Manual for Furio Robotic Dolly Systems (5100DR-043-04)***.

It is highly recommended to get the final installation approved by a structural engineer to ensure the building can support the weight of the system and rails.

### **Do Not Use If Damage Is Suspected**

If the equipment fails or if you have reason to believe it may be damaged, do not use it. Turn off all power at the source and contact Technical Support.

### **Use Correct Fuses**

If you replace a fuse, ensure it is the exact type and rating as the original fuse. Incorrect fuses may cause equipment damage and possibly fire. If fuses fail repeatedly, contact Technical Support. Repeated failure of fuses may indicate a more serious problem.

Use a 12.5A, 250V, Fast-Acting, 5x20 mm Ceramic Cartridge Fuse (Part Number: 68-00011).

### **Ensure All Cables Are Properly Connected**

Before operating your Furio equipment ensure that all cables are properly connected, and that they have sufficient slack to allow the camera systems to operate throughout their range of motion without stretching or damaging any cables. Use only cables that are approved by Ross Video for use with your Furio system. Periodically check all cables for signs of wear.

Inspect and remove restraints on cables regularly so they do not present a tripping hazard.

## **Caution Statements**

The following caution statements identify conditions or practices that can result in damage to equipment or property:

### **Use Correct Power Source**

Do not connect your Furio equipment to power supplies that have ratings different than those provided or recommended by Ross Robotics. Do not modify the power supply or power cables in any way. Do not defeat the safety features of polarized and/or grounded connectors.

### **Handle Equipment With Care**

Handle all Furio equipment carefully. Avoid striking, shaking, or dropping equipment. Do not stack anything on top of Furio equipment. When transporting equipment or storing Furio equipment for prolonged periods, place it in protective cases. When disconnecting cables, pull gently on connectors, not on cables.

### **Turn off Equipment When Not In Use**

Turn off the SmartShell computer and the Furio camera systems when not in use.

### **Do not Modify Equipment**

Do not modify or customize Furio equipment. Use only accessories, attachments, and replacement parts that have been supplied or approved by Ross Robotics.

### **Do Not Change Configuration Via Web Interface**

Do not change configuration via the Web interface. Doing so may alter system limits and configuration and result in collisions, derailment, or wiredraw breakage.

### **Keep the Dolly on the Rails**

Always keep the dolly on the rails. Do not store it with the wheels on the floor.

### **Balance All Loads and Do Not Overload the Dolly**

Balance all loads and do not exceed the rated dolly capacity. Vertical and horizontal balance is important for stability and to avoid damaging the unit.

**CAUTION:** Head must be perfectly balanced at all times when the payload is installed.

**CAUTION:** Using the system with a load exceeding 30 kg in weight or a moment of inertia (MOI) greater than 7.5 kg/m<sup>2</sup> will compromise its safety.

**IMPORTANT:** Do not operate the Furio system without the anti-tipping safety features described in the *Technical Manual for Furio Robotic Dolly Systems (5100DR-043-04)*.

### Guide the Wiredraw Cable Into the Encoder

If you need to detach the lift wiredraw from the head or the track wiredraw from the dolly, slowly guide the cable back into the encoder. Do not let the cable snap back.

**Warning:** Do not let go of the wiredraw red wire/cable when disconnecting it from the system. Free spooling of the cable can cause severe injury.

### Trained Operators Only

Ensure all Furio system operators are fully trained. Restrict access and to the Furio system to essential personnel only.



### Risk of Electrocution

Disconnect system power cord from main supply source before opening the FRU doors giving access to hazardous voltages.

## Operation Checklist

Before operating the system always perform a visual inspection of the dollies and rails. Verify that:

- The track is free of obstacles.
- Cables are correctly plugged, free to move in the required range without being in the way of axis operation.
- Emergency brake floor reflectors are installed.
- The lift is not extended.
- Cable draw mechanical connections are secure and wire draw cables are in good condition.

Use one or more security cameras to provide a complete view of all tracks during operation.

**CAUTION:** Risk of impact due to freewheeling head.

Keep a safe distance and control the head during payload setup

**IMPORTANT:** The operator must have control of all people, objects, and structures in the immediate vicinity of the system when using it. A clearance of at least 1 meter is recommended from the maximum extension point of the system.

The operator must have carried out an appropriate risk assessment before using the system and be satisfied that all operations can be carried out safely.

## Safe Handling Guidelines

Best practices for handling payloads:

- **Ensure proper balance**  
Always make sure the payload is properly balanced to avoid equipment damage and tipping hazards. An imbalanced payload can affect the system's stability.
- **Perform regular checks**  
Periodically inspect and tighten all bolts that fasten the payload to ensure they are secure. Loose payloads can slip, leading to damage or injury.

### **Rebalance after adjustments**

If the payload has been adjusted or moved, always rebalance it before operating the system to maintain safety and functionality.

**CAUTION:** The system can tip over if not fully disassembled before transportation, relocation, or removal from its track.

## Furio Studio & BlackBird Systems

Safe lifting techniques include:

- **Lift the Furio dolly with assistance**  
Always have at least one other person help you when lifting the heavy dolly to avoid strain, injury, or mishandling of the equipment.
- **Lift only by designated lift points**  
Ensure that you lift the dolly only by the specified lift points to prevent damage to sensitive components like the payload or the lift column. Never attempt to lift the payload or the top section of the lift column.
- **Be cautious of the dolly's weight**  
The dolly is heavy, so take precautions to prevent tipping or dropping it. Follow workplace safety guidelines, and make sure you're positioned safely to maintain balance while lifting.
- **Use tools like wrenches and wooden prop blocks for stability**  
When removing or installing wheel units, use wrenches to secure the nuts and wooden prop blocks to stabilize the dolly. Always ensure that components are securely in place before lowering the dolly back onto the track.

## SkyDolly Systems

- **Use a Scissor Lift for Installation**  
During installation, use a scissor lift that accommodates two people, with ample space for moving large components. The lift must have a capacity of at least 250 kg (550 lbs) to safely handle the weight of SkyDolly components at height. Ensure that the lift can move freely beneath the entire length of the SkyDolly track and that the floor beneath is level and can support the lift's load.
- **Secure Truss Hardware**  
Ensure that all truss connections are secure and immobile after installation. Use only fixed mounting hardware—avoid temporary solutions like chains or clamps with wing nuts that can come loose. Confirm that hardware is rated to prevent horizontal or rotational movement along the pipe.
- **Remove Obstructions Near the Track**  
Ensure that the area surrounding the SkyDolly track is free from obstructions. Temporarily remove nearby lighting fixtures or objects during installation to provide clear access. No objects, such as lights or microphones, should be attached to any part of the SkyDolly system to prevent damage.

- **Inspection by Structural Engineer**

Due to the system's weight and ceiling-mounted nature, a structural engineer should inspect the final installation to confirm it meets building support requirements and all safety standards.

## Personal Protective Equipment (PPE)

The following PPE and safety precautions must always be observed when working with the Furio dolly system:

- **Safety Shoes:** Must be worn during installation, setup, troubleshooting, servicing, and operation of the system.
- **Qualified Personnel:** Only trained and qualified individuals may set up, operate, or maintain the system.
- **System Shutdown:** The system must be powered OFF, or the E-Stop button must be engaged, during setup, troubleshooting, servicing, or any task within the recommended safety distance.

## Finger and Hand Pinch, Crush, or Laceration Points

Moving parts may present a pinching hazard. Keep all personnel away from robots when they are operational. When a robotic head, dolly, or lift moves, fingers touching or near the unit or the payload may become pinched. Ensure that the system power is turned off when installing or adjusting the payload.

## Anti-Tipping Features

To ensure the Furio Studio, SkyDolly, and BlackBird Systems operate safely and remains stable, it is equipped with several anti-tipping measures. These include:

- **Balanced Payload**  
A properly balanced payload is crucial for preventing tipping hazards and ensuring smooth operation. Regularly check the balance of the payload and adjust it as necessary. If the payload is moved or modified, always rebalance it before continuing use.
- **Clean and Well-Maintained Tracks**  
Maintaining clean tracks is essential for smooth dolly operation and preventing any wobbling or instability. Use a dry foam brush to clean the dolly wheels and a water-dampened cloth to wipe down the tracks, ensuring they are free of dirt and debris.

### Furio Studio System

For Furio Studio, additional anti-tipping measures include:

- **Stability Arms**  
Installed on the sliding passive wheels for use on standard tracks (curved or straight). These arms prevent tipping, especially at higher speeds or in turns. Stability arms are not used with flush-mounted rails.
- **Stability Bars**  
Used with flush-mounted rails, providing additional coverage to prevent tipping in any direction.

**Note:** The stability arms and bars must be inspected before each use for loose or damaged parts. System shall not be operated if the anti-tipping features are damaged.

## Repairs and Installations

Furio systems contain many parts that require maintenance, replacement, or retrofitting.

Refer to the following documents for these procedures and their respective safety guidelines:

- ***Furio Cable Guard Installation Instructions (5100DR-003-01)***
- ***Furio Drive Wheel Replacement with StableTrac (5100DR-015-04)***
- ***Furio Drive Wheel Replacement (5100DR-099-01)***
- ***Furio Passive and Drive Wheel Replacement Guide (5100DR-098-01)***
- ***Furio Passive Wheel Replacement (5100DR-016-02)***
- ***Upgrading Furio Head to microSD Storage (5100DR-018-01)***
- ***Upgrading Furio Head to phyCORE (5100DR-024-02)***
- ***Applying Low-Friction Tape to Furio Tracks (5100DR-069-02)***
- ***StableTrac Retrofit Guide (5100DR-096-02)***
- ***BPS Upgrade Guide (5100DR-380-01)***
- ***BPS Emergency Repair Guide (5100DR-381-01)***
- ***SkyDolly BPS Upgrade Guide (5100DR-383-01)***

## System Startup

The following procedures detail how to safely start a Furio system.

### Furio Studio System

Ensure the lift is not extended before operating the system.

To turn the system on:

1. Power on the dolly.  
**Note:** The head is powered through the dolly via the head-to-ped cable and will power up automatically when the dolly is switched on.
2. Wait 10 seconds.

**Note:** If the power cable to the head is removed, you will need to manually power on the head. This applies to all power sequencing steps.

**Note:** The Thumbnail Server and SmartShell can be started or restarted at any time.

## System Shutdown or Restart

To turn the system off:

1. Lower the lift to the minimum height.
2. Power off the dolly.

To restart the system:

1. Power on the dolly.
2. Wait 10 seconds.

**Note:**

- You can turn the head off and on without affecting the dolly.
- If you turn the dolly off, you must turn off the head before turning the dolly back on.
- The Thumbnail Server and SmartShell can be started or restarted at any time.
- ★ Before powering off the head or dolly, ALWAYS lower the lift to the minimum height.



# Important Regulatory and Safety Notices to User and Service Personnel

Before using this product and any associated equipment, refer to the "**Important Safety Instructions**" listed in this document to avoid personnel injury and to prevent product damage. Product may require specific equipment, and/or installation procedures to be carried out to satisfy certain regulatory compliance requirements. Notices have been included in this publication to call attention to these specific requirements.

## Symbol Meanings



### Protective Earth:

This symbol identifies a Protective Earth (PE) terminal, which is provided for connection of the supply system's protective earth (green or green/yellow) conductor.



### Important:

This symbol on the equipment refers you to important operating and maintenance (servicing) instructions within the Product Manual Documentation. Failure to heed this information may present a major risk of damage or injury to persons or equipment.



### Warning:

The symbol with the word "Warning" within the equipment manual indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



### Warning Hazardous Moving Parts:

This symbol is intended to alert the user to the presence of hazardous mechanical moving parts that can cut and crush. User shall not remove cover and shall keep hands/objects clear at all times during operation to avoid serious injuries.



### Warning Hazardous Belt Drive:

This symbol is intended to alert the user to the presence of hazardous Belt Drive motion that can nip, snag, crush. User shall not remove cover and shall keep hands/objects clear at all times during operation to avoid serious injuries.



### Warning Impact Hazard:

This symbol is intended to alert the user to the presence of a collision/impact hazard from a descending platform and parts. Lift shall not be disassembled without being completely lowered and locked in place with the safety mechanical interlock Pin.

**CAUTION:**

The symbol with the word "Caution" within the equipment manual indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

**Warning Laser Hazard:**

This symbol is intended to alert the user to the presence of a hazardous laser beam that can cause skin and vision damage. User shall not remove Laser cover and shall not look directly at the laser component during operation to avoid serious injuries.

**Warning Hazardous Voltages:**

This symbol is intended to alert the user to the presence of uninsulated "Dangerous voltage" within the product enclosure that may be of sufficient magnitude to constitute a risk of shock to persons.

**Warning Hazardous Robot motion:**

This symbol is intended to alert the user to the presence of impact, crush and collision hazards that can occur when a safety distance is not maintained during system operation or servicing.










**ESD Susceptibility:**

This symbol is used to alert the user that an electrical or electronic device or assembly is susceptible to damage from an ESD event.








# Important Safety Instructions





## A. Robotics Safety Measures

### Impact/Collision Risk management & reduction

1.  **Warning:** This equipment must be operated by trained personnel only. This equipment must be operated in a controlled and restricted-access environment only.
2.  **Warning:** This equipment must be operated or maintained by trained personnel only. This equipment must be operated in a controlled and restricted-access environment only. This system must only be used by operators with extensive prior knowledge of remote-controlled systems, they must have undergone special training approved by Ross Video Ltd.
3.  **Warning:** The operator must have control of all people, objects, and structures in the immediate vicinity of the system when using it. A safety clearance distance of at least 1m is recommended from the maximum extension point of the system in any direction.
4.  **Warning:** The operator must have carried out an appropriate risk assessment before using the system and be satisfied that all operations can be carried out safely.
5.  **Caution:** It is recommended to get the final installation inspected by a structural engineer to make sure the building can support the system weight.
6.  **Caution:** System can tip over if not fully disassembled before transportation or relocation.
7.  **Caution:** Imbalanced payloads may cause equipment damage and may present a tipping hazard. Ensure payloads are properly balanced. If you adjust a payload, always rebalance it.
8.  **Caution:** Loose payloads may slip, causing equipment damage and injury. Periodically check all bolts that fasten the payload, to ensure that they are tightened to specified torque. If the payload is loose or slips, ensure that it is properly balanced and fastened before operating the robot.
9.  **Caution:** Risk of impact due to freewheeling head. Keep a safe distance and control of the head during payload setup.

## Additional Robot Safety Notices

10.  **Caution:** Serious injuries can result from people tripping over equipment, such as cables.
- Methods of reducing such risks include, but are not limited to, the following:
- Inspect and remove restraints on cables regularly so they do not present a tripping hazard.
  - Erecting signs at studio entrances to remind people about tripping hazards and other studio hazards.
  - Training personnel in safety procedures and proper cable management techniques.
  - Showing personnel and guests the locations of cables equipment and explaining that robotic cameras and cables attached to them may move at any time.
  - Escorting guests at all times while in the studio.
  - Ensuring adequate lighting when working in the studio.
  - Marking safe paths and/or restricted areas, to keep people away from moving robots and potential tripping hazards.
11.  **Important:** Ensure that proper cable management techniques are always used:
- Bundle and wrap cables neatly and provide adequate strain relief and slack where necessary.
  - Test your cable installation by slowly moving the robotic units through their entire range of motion and observing the cables, to ensure that they do not become taut, or snag on anything.
  - Avoid running cables along floors in places where they may present a tripping hazard.
  - Clearly mark areas where cables may present a tripping hazard and keep personnel away from such areas.
  - Inspect cables periodically for damage, and to ensure that proper cable management is maintained.
12.  **Important:** Safety Shoes must be worn while working on or near the system.
-  (Installation, Setup, Troubleshooting, Servicing, Operation)
13.  **Important:** Only qualified and trained servicing personnel are allowed to remove covers and access internal system areas.
14.  **Warning:** E-Stop button must be engaged if the system is ON, and performing setup, troubleshooting, servicing, or any other task within the recommended safety distance.
15.  **Warning:** System must be powered OFF when servicing motors, belts, high voltage circuits and installing or adjusting the payload.

16.  **Warning:** Keep all personnel away from the system when operational.
17.  **Important:** When servicing or moving equipment, always observe safe handling practices. Get help to move heavy items. Use safe lifting techniques. Follow all safety rules of your workplace.
18.  **Important:** Loose or overtightened bolts may cause equipment damage. When servicing, tighten bolts to specified torque.
19.  **Warning:** DO NOT perform maintenance or adjustments without proper precautions, training and without following proper procedures. Lift Gas Struts store potential energy. Uncontrolled release can cause serious injury or damage.

## B. Laser Safety Measures

20. Before using this product and any associated equipment, refer to the sections below so as to avoid personnel injury and to prevent product damage. For further safety information when using laser products, consult the following publications:

- IEC 60825-1:2014, Safety of Laser Products - Part 1: Equipment classification and requirements (for use outside of the U.S.A.)
- ANSI Z136.1, Safe Use of Lasers (for use in the U.S.A.)

Products may require specific equipment, and /or installation procedures be carried out to satisfy certain regulatory compliance requirements.



**Notice** - CLASS 1 LASER PRODUCT IEC 60825-1:2014



**Caution** - AVOID EXPOSURE TO THE BEAM

22. During normal operation of this product, read the following safety measures:

- Do not stare at, or into, broken, or damaged, laser optical window.
- Do not remove the cover.
- Only properly trained and authorized personnel shall be permitted to operate laser products.
- Ensure that appropriate labels are displayed in plain view and in close proximity to the optical port on the protective housing/access panel of the terminal equipment.






**Notice** - Before operating or servicing this product, all personnel should be familiar with laser safety.






23. Laser scanner is not intended to be customer-serviced and should be returned to the factory for replacement.



**Warning** - Do not use optical equipment, such as a microscope or an eye loupe, to stare at the energized fiber end. Doing so may damage your eyes

## C. General Safety Measures

24.  **Warning:** Read these instructions.
25. Keep to these instructions.
26. Heed all warnings.
27. Follow all instructions
28. Do not use this apparatus near water.
29. Clean only with a dry cloth.
30. Do not block any ventilation openings.  
Install in accordance with manufacturer's instructions.
31. Do not install near heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
32. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
33. Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
34. Only use attachments/accessories specified by the manufacturer.
35. Unplug this apparatus during lightning storms or when unused for long periods of time.
36. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as when the power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
37. Do not expose this apparatus to dripping or splashing, and ensure that no objects filled with liquids, such as vases, are placed on the apparatus.
38. To completely disconnect this apparatus from the AC Mains, disconnect the power supply cord plug from the AC receptacle.
39. The mains plug of the power supply cord shall remain readily operable.
40.  **Warning:** Indoor Use Only: To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.
41.  **Warning:** This equipment is not suitable for use in locations where children are likely to be present.
42. The safe operation of this product requires that a protective earth connection be provided. A grounding conductor in the equipment's supply cord provides this protective earth. To reduce the risk of electrical shock to the operator and service personnel, this ground conductor must be connected to an earthed ground.

43.  **Warning:** This apparatus, when equipped with multiple power supplies, can generate high leakage currents. To reduce the risk of electric shock, ensure that each individual supply cord is connected to its own separate branch circuit with an earth connection.
44.  **CAUTION:** These service instructions are for use by qualified service personnel only. To reduce the risk of injury, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.
45. Service barriers within this product are intended to protect the operator and service personnel from hazardous voltages and moving parts. For continued safety, replace all barriers after servicing.
46. Certain parts of this equipment still present a safety hazard with the power switch in the OFF position. To avoid electrical shock, disconnect all A/C power cords from the chassis' rear appliance connectors before servicing.
47. This product contains safety critical parts, which, if incorrectly replaced, may present a risk of fire or electrical shock. Components contained within the product's power supplies and power supply area are not intended to be customer-serviced and should be returned to the factory for repair.
48. To reduce the risk of fire, replacement fuses must be the same type and rating.
49. Use only power cords specified for this product and certified for the country of use.
50. The safe operation of this equipment requires that the user heed and adhere to all installation and servicing instructions contained within the equipment's Setup Manuals.
51.  **Warning:** This product includes "Ethernet Ports " which allow this product to be connected to local area networks (LAN). Only connect to networks that remain inside the building. Do not connect to networks that go outside the building.
52.  **CAUTION:** This apparatus contains a Lithium battery, which if replaced incorrectly, or with an incorrect type, may cause an explosion. Replace only with a CR2032 coin type lithium battery.  
Dispose of used batteries according to the manufacturer's instruction by qualified service personnel.
53. For use at an altitude of 2000m or lower.
54. For use in non-tropical locations.
55.  **CAUTION:** Do not make mechanical or electrical modifications to the equipment or add metallic items, such as metallic foil labels, to the printed circuit boards. Modifications can impair regulatory compliance, or performance and may void your warranty.

## D. EMC Notices

### United States of America - FCC Part 15

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 not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

Operation of this 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.



**Important:** Changes or modifications to this equipment not expressly approved by Ross Video Limited could void the user's authority to operate this equipment.

### Canada

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

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

### Korea - Class A Statement

이 기기는 업무용 환경에서 사용할 목적으로 적합성 평가를 받은 기기로서 가정용 환경에서 사용하는 경우 전파간섭의 우려가 있습니다.

This device has been evaluated for conformity for use in a business environment. When used in a home environment, there is a danger of interference.

### Europe

This equipment is in compliance with the essential requirements and other relevant provisions of **CE Directive 93/68/EEC**.

### International

This equipment has been tested to CISPR 32:2015 along with amendments AMD1:2019, and found to comply with the limits for a Class A Digital device.



**Important:** This is a Class A product. In domestic environments, this product may cause radio interference, in which case the user may have to take adequate measures.

### General Handling Guidelines

- Careful handling, using proper ESD precautions, must be observed.
- Power down the system before PCB removal.

## A Word About Static Discharge

Throughout the many procedures in this manual, please observe all static discharge precautions.



**CAUTION:** Avoid handling circuit boards in high static environments such as carpeted areas, and when synthetic fiber clothing is worn. Touch the frame to dissipate static charge before removing boards from the frame, and exercise proper grounding precautions when working on circuit boards.

Exercise proper grounding precautions when working on circuit boards.

## E. Environmental Information

### Waste Electrical and Electronic Equipment Directive (WEEE Directive)

**The equipment that you purchased required the extraction and use of natural resources for its production. It may contain hazardous substances that could impact health and the environment.**

To avoid the potential release of those substances into the environment and to diminish the need for the extraction of natural resources, Ross Video encourages you to use the appropriate take-back systems. These systems will reuse or recycle most of the materials from your end-of-life equipment in an environmentally friendly and health-conscious manner.

The crossed-out wheeled bin symbol invites you to use these systems.



If you need more information on the collection, reuse, and recycling systems, please contact your local or regional waste administration.

You can also contact Ross Video for more information on the environmental performances of our products.

### Use of Hazardous Substances in Electrical and Electronic Products (China RoHS)

Ross Video Limited has reviewed all components and processes for compliance to:

“Management Methods for the Restriction of the Use of Hazardous Substances in Electrical and Electronic Products” also known as China RoHS.

The “Environmentally Friendly Use Period” (EFUP) and Hazardous Substance Tables have been established for all products. We are currently updating all of our Product Manuals.

The Hazardous substances tables are available on our website at:

<http://www.rossvideo.com/about-ross/company-profile/green-practices/china-rohs.html>

## 电器电子产品中有害物质的使用

Ross Video Limited 按照以下的标准对所有组件 和流程进行了审查：

" 电器电子产品有害物质限制使用管理办法 " 也 被称为中国 RoHS 。

所有产品都具有 " 环保使用期限 " (EFUP ) 和有害物表。目前，我们正在更新我们所有的产品手册

有害物质表在我们的网站：

<http://www.rossvideo.com/about-ross/company-profile/green-practices/china-rohs.html>