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# Magic Leap 2

## Safety Guide and Regulatory Information

Last Revised: June 13, 2022  
Version: English 1.0



# Safety Guide

Carefully read our Quick Start Guide at [magicleap.com/ml2-quick-start-guide](https://magicleap.com/ml2-quick-start-guide) and this Safety Guide at [magicleap.com/ml2-safety-guide](https://magicleap.com/ml2-safety-guide) before using Magic Leap 2. Failure to do so and follow the instructions in this Safety Guide can result in serious injury, property damage, or damage to Magic Leap 2.

This Magic Leap 2 Safety Guide (our “**Safety Guide**”) is provided to reduce the risk of personal injury, physical discomfort, pain, health issues, and property damage relating to use of the Magic Leap 2 Headset, Compute Pack, or Controller (collectively “**Magic Leap 2**” or “**Device**”), as well as the Compute Pack charger, Controller charger, and other Magic Leap branded accessories sold by Magic Leap or its authorized resellers. Please ensure that all Magic Leap 2 users read and understand this Safety Guide before using the Device.

For a full description of our products (including the Device), user agreements, policies, and more, please visit [magicleap.com](https://magicleap.com).

## NOTICE

### Changes

Magic Leap may change or modify this Safety Guide from time to time to keep it accurate and complete. If we issue a new version of the Safety Guide, please only use the latest version available. We encourage you to review this Safety Guide and related information at [magicleap.com/ml2-safety-guide](https://magicleap.com/ml2-safety-guide) from time to time to ensure you are utilizing the latest version. Each version of the Safety Guide will include the revision date at the top of the document, to help you identify the most up-to-date version.

## WARNING

### Setting Up Your Device Before Use

**Instructions.** Prior to using Magic Leap 2, you should read and follow all setup and operating instructions provided with the Device and on the Device. For example, before using Magic Leap 2 for the first time, be sure to go through the Custom Fit flow, which can be found in the home menu via the applications or in the Perception Modal.

**Fit and Eye Calibration.** Please ensure that you have completed the “Fit” and “Eye” sections of the Custom Fit app on Device. When completing the “Fit” section in the Custom Fit app, pay special attention to following these instructions:

1. Adjusting the height of the Back Band of the Headset from your ears so that you can see the full display.
2. Pushing the Back Band together to ensure that the Headset fits secure, OR adding the Overhead Strap if the Back Band slips down.
3. Exchanging the Nose Pads and/or Forehead Pads if instructed by the Custom Fit App.

If when using Custom Fit App you receive a message that reads “**Sorry, something went wrong. You can use your Headset with reduced functionality...**”, please visit the Customer Care page at [care.magicleap.com](https://care.magicleap.com) for steps on how to resolve this.

For an optimal experience, we recommend that Magic Leap 2 is used by people with an interpupillary distance (the distance between your pupils, also known as “IPD”) between 54-76 millimeters. If you have an IPD outside that range, you may have a greater chance of experiencing visual pain or discomfort while using the Magic Leap 2, and you may not have full visibility of the Magic Leap 2 display. For information on how to determine your IPD, please visit [care.magicleap.com](https://care.magicleap.com).

**Volume.** Magic Leap 2 includes spatial audio features that enable audio playback. When you first use Magic Leap 2, start with the volume at a low level and increase it until you can hear sounds clearly and comfortably. Avoid turning the volume up rapidly, especially if it becomes uncomfortable. Background noise, as well as continued exposure to high volume levels, can make sounds seem quieter than they actually are. Do not listen at high volume for long periods. High sound pressure may damage your hearing. Due to the immersive nature of the mixed reality experience, do not use the Device with the sound at a high volume so that you can maintain awareness of your surroundings and reduce the risk of hearing damage.

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 WARNING

## Unsuccessful Eye Calibration

You may have an increased chance of experiencing visual discomfort if you do not successfully complete Eye Calibration. Magic Leap 2 relies on eye tracking to render content in a way that is designed to be comfortable for your eyes. Upon completing the “Eye” section in the Custom Fit app on Device, the Device will let you know if you were successful. If your Eye Calibration process is unsuccessful, visit [care.magicleap.com](https://care.magicleap.com) for further support.

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 WARNING

## Reasons to See a Doctor Before Use

Consult with a physician before using Magic Leap 2 if you: have any conditions that impair your vision (e.g., binocular vision disorder); have mobility issues; are pregnant or elderly; or have a heart condition or other serious medical condition such as seizures or migraines.

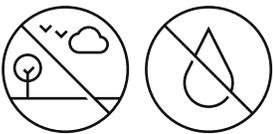
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 WARNING

## Intended Uses

**Operating the Device.** Magic Leap 2 is intended to provide a safe augmented reality experience. This intended use requires you to have an unimpaired sense of balance and motion. Do not use Magic Leap 2 while you are fatigued, ill, experiencing symptoms of illness, are under emotional or physical stress, or are under the influence of alcohol or drugs. Such unintended use of your Magic Leap 2 increases the likelihood of injury and property damage. Never use Magic Leap 2 while driving, cycling, operating heavy machinery, or operating any other moving vehicle. Do not use Magic Leap 2 if you have experienced discomfort while using other virtual and augmented reality devices.

**Virtual Objects.** Remember that some objects you see in your augmented reality environment do not exist in the physical world. Do not attempt to sit or stand on such objects or use them for support.



**Environment.** Use Magic Leap 2 only in a comfortable, safe environment. Magic Leap 2 is designed for indoor use only. To reduce the risk of fire or shock, do not use Magic Leap 2 near water or liquid. Magic Leap 2 should only be used in environments where the ambient temperature is between 10 °C and 30 °C (50 °F and 86 °F).

**Obstructions.** Magic Leap 2 produces an immersive augmented reality experience that may distract you from and partially block your view of your actual, physical surroundings. Some Device features may also specifically enhance your ability to see Device-generated AR content more clearly or easily by decreasing light and decreasing your visibility of the visible world in whole or in part. Always be aware of your surroundings when using your Magic Leap 2 and ensure you have enough space around you to safely use the Device. To reduce the risk of injury, property damage, or damage to the Device, only use Magic Leap 2 in indoor areas that are free of obstructions.

**Malfunction.** Failure to use Magic Leap 2 as intended may cause the Device to malfunction and potentially result in physical injury or property damage.

## Care Instructions

**Care.** Ensure that your Magic Leap 2 is cleaned before each use. Buildup of dirt, oils, makeup, and other debris can damage the Device and diminish your experience. In caring for your Device, **DO NOT:**

- Use flammable or abrasive cleaning agents on the Device.
- Steam or autoclave the Device.
- Submerge the Device in liquids or pour cleaning liquids over, into, or on the Device.
- Spill any liquid into, or oversaturate any system seams, ports, or perimeter of the lenses.
- Use abrasive products such as paper towels.

**Cleaning Instructions.** To clean your Device, follow these step-by-step instructions:

**Step 1 - Power Down:** Ensure the Device is powered off and cooled down.

**Step 2 - Remove Fit Kit accessories:** Remove the Nose Pad, Forehead Pad, and lens insert, if applicable.

**Step 3 - Using a wipe from these compatible products:** Super Sani Cloth or Cavi Wipes to perform step 4.

**Note:** Prior to using each new wipe, squeeze the excess fluid out of the wipe so that it is damp but not dripping.

**Caution:** Do not spill or oversaturate any system seams, ports, or perimeter of the lenses.

**Caution:** Do not use abrasive products such as paper towels.

**Step 4 - Cleaning:** Wipe all surfaces of the Device (including disassembled pieces and cables) to remove any dirt, debris, or residue.

**Note:** Use additional wipes as needed, remember to squeeze the excess fluid out of the wipe so that it is damp but not dripping.

**Step 5 - Disinfection:** Using a new wipe, clean all surfaces of the Device (including disassembled pieces and cables) and ensure the proper disinfection contact time per label of the wipe. Use additional wipes as needed to maintain contact time. (the contact time for both Super Sani cloths and CaviWipes is 2 minutes)

**Step 6 - Rinse the Device** by wiping it with an isopropyl alcohol wipe or clean sterile lint free cloth dampened (not dripping) with isopropyl alcohol. Ensure to gently wipe over the cameras and display lenses of the headset and cameras of the control.

**Note:** Gently wipe over the cameras and display lenses of the Headset and cameras of the control.

**Step 7 - Rinse the Device** by wiping it with a clean, sterile, lint-free cloth dampened (not dripping) with utility (tap) water.

**Step 8 - Dry the Device** by wiping it with a sterile lint free cloth

**Storage.** When the Device is not in use, store it in the Magic Leap Carry Case or another storage case to minimize unintentional damage or exposure, in a room with temperatures between -20 °C to 45 °C (-4 °F to 113 °F). Do not leave your Magic Leap 2 in direct sunlight; direct sunlight can cause excessive heat which can damage the Device or other property. To reduce the risk of injury, keep the fan exhaust ports and all other vents on your Compute Pack free and clear of dust and other foreign objects. Covering the Device with materials that affect airflow may affect its performance and increase the chance of a fire or damage.

**Repair, Risk of Shock.** Do not use the Magic Leap 2 if it is damaged or not functioning properly. Do not attempt to open or repair any part of the Device yourself. Opening, disassembling, or altering the Device may lead to electrical shock, and may result in personal injury or death. Repairs should be made only by Magic Leap or its authorized service providers.



## Cables and Cords



Keep all Cables and cords away from children. The Cable attaching the Device to the Compute Pack may be a choking or tripping hazard. To reduce the risk of injury, do not wrap any Cables, cords, or wires around your neck; do not get entangled with them; and do not chew, abraid, or cut any of them.



## Unauthorized Equipment

Magic Leap recommends using only the Compute Pack charger and Controller charger sold or provided by Magic Leap with the Device. Magic Leap 2 is not designed for use with any unauthorized charger, accessory, software, or equipment. Use of an unauthorized charger, accessory, software, or equipment may result in injury to you or others, cause performance issues, or damage the device and other property.



## Excessive Heat



Magic Leap 2 may become warm during normal use. Comply with any thermal warnings and advisory messages that may appear on your Magic Leap 2. To reduce the risk of personal injury, if any part of your Magic Leap 2 is hot to the touch or overheats, immediately remove your Headset, stop use, and let it cool down before you continue. Visit our Customer Care page at [care.magicleap.com](https://care.magicleap.com) for steps you can take if your Magic Leap 2 overheats. To reduce the risk of discomfort and injury (including minor burns) ensure that the inside corners of your Headset (as pictured above in this section) do not come into contact with your skin during use and place the Forehead Pad and Nose Pad on your Headset before using it.



## Not for Children



Magic Leap 2 is not a toy and should not be used by children under the age of 14. The Device is not sized for children, and improper sizing can lead to pain, discomfort, or negative health effects. Adults should ensure the Device is kept out of reach from children under the age of 14.

Magic Leap 2 has not been tested on teenagers under the age of 18, meaning there may be an increased risk that the Device does not properly fit teenagers between 14 and 17 years old.

A parent or guardian should read this Safety Guide and all other documentation provided online and with Magic Leap 2 with teenagers aged 14 and older. A parent or guardian should also monitor teenagers aged 14 and older during and after use of Magic Leap 2 to ensure they only use Magic Leap 2 as recommended and do not experience any pain or discomfort, spend limited time using the Device, and take breaks during use to decrease the risk of discomfort or pain (including the types of discomfort stated in the section below titled “Warning: Discomfort”), or other adverse symptoms. Prolonged use by teenagers should be avoided.

To further reduce the risk of discomfort, pain, or injury, teenagers over the age of 14 should:

- First, complete the Custom Fit app on your device.  
If you need help, go to [care.magicleap.com](https://care.magicleap.com) for support.
- Immediately discontinue use if the teenager does not successfully complete the Custom Fit app or feels any pain or discomfort while completing the Custom Fit app.
- Immediately discontinue use if any discomfort (including eye aches) is experienced during use of the Device.

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**⚠ WARNING**

## Discomfort

You may experience some discomfort while using Magic Leap 2 including but not limited to: visual discomfort, eye-strain, dizziness, nausea, impaired eye-hand coordination, lightheadedness, impaired balance, excessive sweating, headache, fatigue, tingling, burning or stiffness, or numbness.

- If you are having trouble with the Headset slipping in the back, or excessive nose or forehead pressure discomfort, use the Overhead Strap.
- If you experience discomfort, immediately stop using Magic Leap 2. If you decide to resume use of the Device, before doing so, take a break and make sure you have properly set it up, to reduce your risk of discomfort.
- Your risk of discomfort may be heightened if: (i) you have never used Magic Leap 2 before; (ii) the Device is not properly set up prior to use; (iii) you use Magic Leap 2 for extended periods of time without a break; (iv) the Device is used to view content that has a high likelihood of inducing motion sickness or nausea (e.g., AR applications where you are moving through open areas or viewing heights); or (v) you have a history of motion sickness, nausea, dizziness, eye strain, or headaches.
- To minimize discomfort, consider slowly acclimating yourself to an augmented reality environment by: initially limiting your use of Magic Leap 2 to shorter sessions and taking breaks during use of the Device. Be mindful of the nature of the content that you were viewing if you experience discomfort. You may re-experience discomfort if you view that content again or view similar content, and persistent discomfort may increase the chance of an injury.
- If you have serious or persistent discomfort, please consult with your physician. Until you have fully recovered, do not drive, operate machinery, or participate in activities that are physically or visually demanding or require unimpaired balance or coordination.

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**⚠ WARNING**

## Charger and Battery Safety

The Compute Pack and Controller each contain a Lithium-Ion battery and come with battery chargers. Please follow the instructions in this section to reduce the risk of injury to you or others and to prevent damage to the Device and property. Failure to follow these instructions may result in a hazard (such as a fire, explosion, battery leakage, or electrical hazard), and may cause damage to the Device or other property:

- Do not try to change the battery inside the Device or open the Device to access the battery, it is not user replaceable or serviceable. There is a risk of explosion if the battery is replaced with an incorrect type.
- Only use the batteries, chargers, and Power Cables we provide you to power Magic Leap 2. Do not substitute them with other power sources (such as other power adapters or external battery packs), as other power sources may not be compatible with the Magic Leap 2.
- Do not use the batteries and chargers we provide you to power the Magic Leap 2 with any other products.
- Periodically inspect your connection cords and chargers for damage or signs of wear. Do not use your chargers if the prong(s), enclosure, connector port, or connector cable is damaged, cracked, or exposed.
- Do not try to charge or use the Device if: (i) it does not turn on after attempted charging; (ii) it overheats when it is used or charged; or (iii) the battery compartment is swollen, leaking liquid, or smoking.
- Keep chargers dry and avoid water or liquid intrusion. Even after the Device dries off after coming into contact with water, the battery could corrode and increase the risks stated in this Safety Guide. Also, do not touch the battery, chargers, or Cables with wet hands.
- To reduce the risk of leakage or an internal short-circuit in the battery, do not disassemble, pierce, crush, deform, drop, or put a high degree of pressure on the Compute Pack and Controller.

To reduce the risk of injury to you or others, if the battery or chargers leak, please do not allow the liquid to come into contact with your skin or eyes. If there is contact, thoroughly wash the area that came into contact with water and seek immediate medical attention.

Magic Leap 2 can only be charged using the Compute Pack and Controller charger provided by Magic Leap with the Device. The Device is not designed for use with any unauthorized charger, accessories, software, or equipment. Use of an unauthorized charger, accessory, software, or equipment may result in injury to you or others, cause performance issues, or damage the Device and other property.

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 WARNING

## Disposal Information



For European Union residents: This symbol on the product means that when the Device (and the batteries inside it) reach their end of life, they should be disposed of separately from household waste. Instead, please dispose of them in compliance with local laws and guidelines. For more information on disposal and recycling of the Device, please visit [magicleap.com/recycle](https://magicleap.com/recycle).

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 WARNING

## Seizures

Light flashes or patterns on Magic Leap 2 may trigger seizures, loss of awareness, involuntary movements, disorientation, altered vision, eye or muscle twitching, other muscular or visual abnormalities, severe dizziness, or other conditions causing blackouts or loss of consciousness, even if the user has never had a seizure or has no history of seizures or epilepsy.

**Immediately stop using Magic Leap 2 if you experience any of these symptoms, and consult your physician before resuming use of the Device.**

If you have a history of, or have been diagnosed with symptoms linked to an epileptic condition, consult your physician prior to using Magic Leap 2.

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 WARNING

## Repetitive Motions

Using the Controller can make your muscles or joints hurt. If any part of your body becomes tired or sore while using Magic Leap 2, or if you feel symptoms such as tingling, numbness, burning, or stiffness, stop and rest for several hours before using the Device again.

If you continue to have any of the above symptoms or other discomfort during or after use, stop using the Device and see your physician.

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 WARNING

## No Eye Protection

Magic Leap 2 is not intended to provide eye protection against impact, debris, chemicals, UV light, or other harmful lights, particles, projectiles, or other physical hazards.

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 WARNING

## California Proposition 65

WARNING: Magic Leap 2 can expose you to carbon black, which is known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](https://www.P65Warnings.ca.gov).



## Medical Device Radio Interference

Magic Leap 2 contains magnets or electronic components that emit radio waves, which could affect the operation of nearby electronics, including cardiac pacemakers, hearing aids, defibrillators, and other medical devices. If you have a pacemaker or other implanted medical device, do not use Magic Leap 2 without first consulting your physician or the manufacturer of your medical device.



## Radio Frequency (RF) Energy

Magic Leap 2 contains radio transmitters and has been designed, manufactured, and tested to meet the Federal Communications Commission (FCC) and Innovation, the Science and Economic Development (ISED) Canada RF exposure and Specific Absorption Rate (SAR) regulatory requirements.

To ensure that your exposure to RF energy generated by the Wi-Fi and Bluetooth radios does not exceed the exposure limits set forth by these guidelines, orient the Device according to our Quick Start Guide available at [magicleap.com/ml2-quick-start-guide](http://magicleap.com/ml2-quick-start-guide) and any other instructions Magic Leap makes available.



## Laser - Use of Controls

Use of controls, adjustments, or performance of procedures other than those specified herein may result in hazardous radiation exposure.



## Contains a Laser

Magic Leap 2 contains a laser.



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## Manufacturer Information

Magic Leap, Inc., 7500 W. Sunrise Blvd. Plantation, FL 33322 USA

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## Applicable Standards and Procedures

EN/IEC 60825-1:2014 Safety of Laser Products  
CLASS 1 LASER PRODUCT

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## Laser Specifications

This laser product is designated as Class 1 during all procedures of intended use and operation.

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## Laser Parameters

Wavelength: 850nm  
Laser Power for classification: <2.45 mW  
Mode of operation: Pulsed  
Pulse Width: 3.49 and 4.98 nSec  
Pulse Frequency: 80.32 and 60.24 MHz  
Peak Power: 600mW  
Illumination Cone: 59 H x 45 V

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## Labels and Label Placement

The Certification label is located on the Headset's inner right temple. It reads as follows:

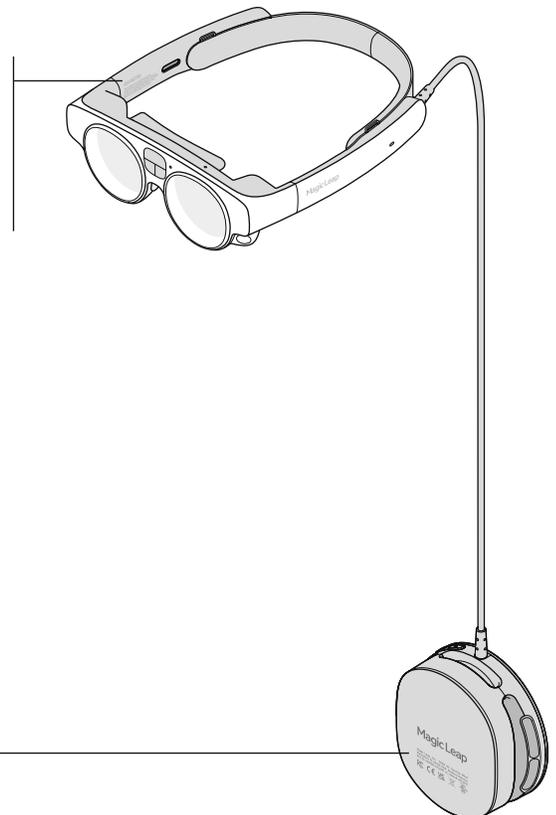
Class 1 Laser Product

EN/IEC 60825-1:2014. Complies with FDA performance standards for laser products except for deviations pursuant to Laser Notice No. 56, dated May 8, 2019.

**Note:** Explanatory label does not appear on Device. Full label reproduction appears in this Safety Guide.

Class 1 Laser Product  
EN/IEC 60825-1:2014

Complies with FDA performance standards for laser products except for deviations pursuant to Laser Notice No. 56, dated May 8, 2019



Magic Leap, Inc. FL USA Made in Mexico

The Manufacturer Identification label is located on the back of the Compute Pack clip. Turn your Compute Pack over to see it. It reads as follows:

7500 W. Sunrise Blvd., Plantation, FL 33322, USA, Assembled in Mexico.

**Note:** the date of manufacture is traceable by unique serial number. The serial number and model number are located under the rear fit pad on the inside of the Headset adjustment band.

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# Magic Leap 2

## Regulatory Information

### REGULATORY MARKS

Regulatory information, certification, and compliance marks for Magic Leap 2 are available on the Device itself and/or its packaging.

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### FEDERAL COMMUNICATION COMMISSION COMPLIANCE STATEMENT

Magic Leap 2 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. The Device 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 use or installation. If the Device does cause harmful interference to radio or television reception, which can be determined by turning the Device off and on, the user is encouraged to try to correct the interference by one of the following measures:

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

**FCC Caution:** Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the Device.

The Device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (i) the Device may not cause harmful interference, and (ii) this Device must accept any interference received, including interference that may cause unintended use or operation.

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### INDUSTRY CANADA COMPLIANCE STATEMENT

The Device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (i) this Device may not cause interference, and (ii) the Device must accept any interference, including interference that may cause undesired operation of the Device. This Class B digital apparatus complies with CAN ICES-3(B)/NMB-3(B). The operation in the band 5150–5250MHz is only for indoor use to reduce the potential for harmful interference to co-channel mobile satellite systems. Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes: (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement." Cet appareil numérique de la classe B est conforme à la norme CAN ICES-3(B)/NMB-3. La bande 5150 – 5250MHz est réservée uniquement pour une utilisation à l'intérieur afin de réduire les risques de brouillage préjudiciable aux systèmes de satellites mobiles utilisant les mêmes canaux.