# ETC Installation Guide
ColorSource Fresnel V v1.1

Overview

The ColorSource Fresnel V is an affordable LED fixture that uses the RGBIL (red, green, blue, indigo, and lime) color system to provide a rich, bright light. The fixture features motorized zoom, and wireless configuration and control via NFC and the Set Light app. The ColorSource Fresnel V also can be purchased with wireless DMX via Multiverse®.
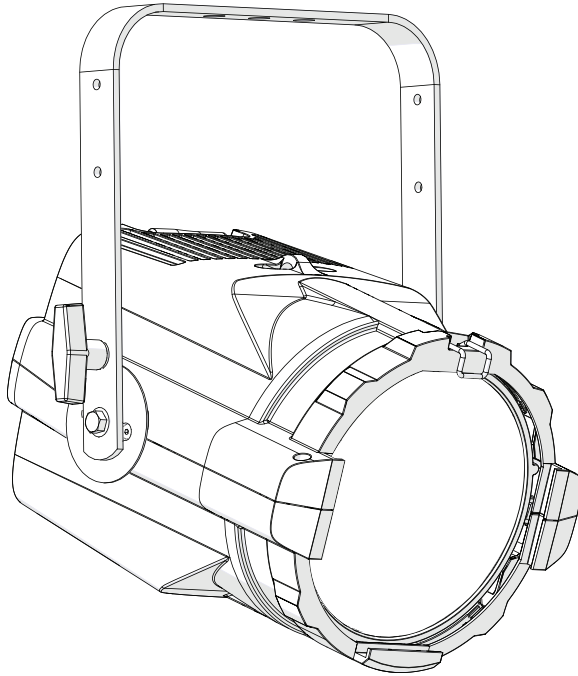
ⓘ **Note:** *Features described in this document require the latest version of software. For information on updating fixture software, see Update the Fixture Software on page 12.*

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Safety

For professional use only. Read the entire manual before using this equipment.

WARNING:
- **Risk of eye injury. Do not stare directly into the light.**
- **Do not mount the fixture on or near a flammable surface.**
- **When the fixture is mounted, the axis between the yoke attachment points must be parallel to the ground. Mounting the fixture in a non-parallel orientation risks property damage or bodily injury.**
- **Disconnect the fixture from power and DMX and allow it to cool before installing accessories or performing any cleaning and maintenance.**

AVERTISSEMENT :
- **Risque de lésion oculaire. Ne fixez pas directement la lumière.**
- **Ne pas installer le projecteur sur ou à côté d'une surface inflammable.**
- **Lorsque le luminaire est accroché, l'axe entre les points de fixation de la lyre doit être parallèle au sol. Le montage du luminaire dans une orientation non parallèle risque de causer des dommages matériels ou corporels.**
- **Débranchez le projecteur de son alimentation et du DMX et laissez-le refroidir avant d'installer des accessoires ou d'effectuer un nettoyage ou un entretien.**
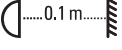
WARNING: RISK OF ELECTRIC SHOCK! The light source in this luminaire is not user-replaceable, and must be replaced only by a qualified technician. Contact ETC Customer Support for assistance.

AVERTISSEMENT : RISQUE DE DÉCHARGE ÉLÉCTRIQUE! La source lumineuse de ce projecteur n'est pas remplaçable par l'utilisateur et ne doit être remplacée seulement par un technicien qualifié. Contactez le service client ETC pour obtenir de l'assistance.

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The following symbols may appear on product labeling.

|		
0.1 m	The luminaire must be installed at least 0.1 m (4.0 in) away from all lighted objects.	Le luminaire doit être installé à au moins 0,1 m (4,0 po) de tout objet éclairé.
🗑	This product should not be discarded as unsorted waste but must be sent to separate collection facilities for recovery and recycling.	Ce produit ne doit pas être jeté avec les déchets ménagers mais doit être déposé dans une collecte de déchets électroniques ou dans un point de collecte.

Installation

Mounting

The ColorSource Fresnel V ships with a standard yoke for mounting with a clamp.

Safety Cable

A safety cable (or other approved safety device) must be attached to the fixture. The attachment loop is on the top of the fixture. Leave as little slack as possible in the safety cable to avoid catching the yoke of the fixture.

Safety cable attachment loop
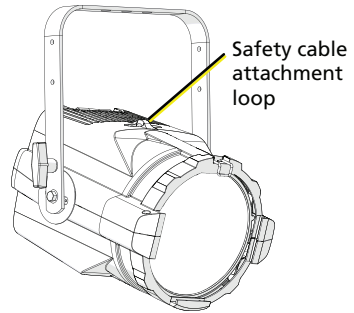
Connectors

- **Power:** Two powerCON® TRUE1® connectors for power in and thru
- **Data (DMX512/RDM):** Two five-pin XLR connectors for data in and thru

ℹ️ **Note:** *The ColorSource Fresnel V is not self terminating. You must terminate the last fixture in line with a 120 Ohm resistor. To purchase a terminator, please contact ETC customer service and request part number SGE1507 (XLR terminator).*

Set Up the Fixture

1. Plug the power cord into the powerCON TRUE1 In connector on the rear of the fixture.
2. Make any power-thru cable connections prior to applying a power source.
3. Make any DMX connections, and if the fixture is the last in a DMX line, terminate the fixture. See *Connectors above*.
4. Plug the power cord into the power source.

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Power Up

Press any button to wake the display. The display shows the DMX address. See *Set the DMX Address on the facing page*.

You can press the **Mode** button to access the Presets/Sequences menu. See *Play Presets and Sequences on page 10*.

You can press the **Zoom** encoder to enter Focus mode and adjust the zoom. See *Adjust the Zoom and Focus the Fixture below*.

Adjust the Tilt

The fixture can be tilted up and down and rotated (panned) as needed.

1. Loosen, but do not remove the yoke locking knob.
2. Tilt the fixture to the desired angle.
3. Tighten the yoke locking knob.

Adjust the Zoom and Focus the Fixture

1. Press the **Zoom** encoder to enter Focus mode. All LEDs turn on at full, and the display shows **Foc**.
2. Turn the **Zoom** encoder to adjust the zoom between flood and spot. Turn the encoder clockwise to adjust toward flood, or counterclockwise to adjust toward spot.
3. Press the **Zoom** encoder again to exit Focus mode. (Focus mode will end automatically after 5 minutes if you do not exit the mode.)

Zoom encoder
• Turn to adjust zoom
• Press to enter Focus mode

ZOOM /

Yoke locking knob

ColorSource **FRESNEL V**
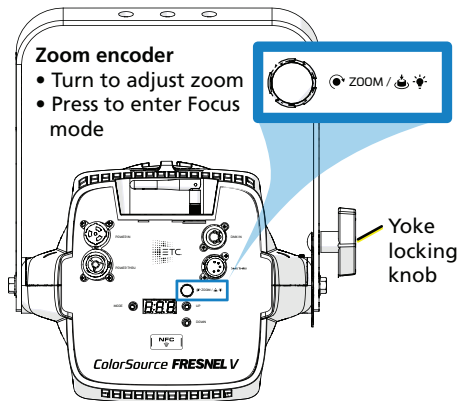
Note: *The* **Zoom** *encoder only adjusts the zoom when the fixture is in Focus mode.*

Accessories

You can insert two 7.5 in accessories in the accessory slot. For available accessories, see the ColorSource Fresnel V datasheet at etcconnect.com.

You can attach a ColorSource Relay to the yoke. See etcconnect.com for more information about ColorSource Relay.

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Set the DMX Address

1. Press any button to wake the display. The display shows the DMX address.
2. Use the **Up** and **Down** buttons to select the DMX address for the fixture.

You can also set the DMX address using RDM or using the Set Light app. See *RDM Values on page 15* or *Configure Fixtures Using the Set Light App on page 10*.

Change the DMX Control Mode

You can set the DMX control mode for the fixture to one of four available mode options.

1. Press any button to wake the display. The display shows the DMX address.
2. Press and hold the **Mode** button for 3 seconds. The display shows *ctL* (Control).
3. Press the **Mode** button. The display shows the current DMX control mode.
4. Press the **Up** button or **Down** button to change the DMX control mode. (The currently saved mode is indicated by a decimal point at the end of the mode name.)
   - *Stn*: Standard mode (intensity, red, green, blue, strobe, zoom, and fan). This is the default mode.
   - *dir*: Direct emitter control (intensity, red, green, blue, indigo, lime, strobe, zoom, and fan).
   - *lch*: 1-channel mode controls the intensity of preset 1 (defaults to 3200 K White).
   - *rgb*: RGB mode (red, green, blue, and zoom).
5. Press the **Mode** button to confirm your selection. The display shows *ctL* (Control).
6. Navigate to the *rtn* (Return) option to return to the DMX address display.

The display will automatically return to the DMX address after 10 seconds of inactivity, and edits to the DMX control mode will not be saved. This cancels unsaved changes.

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DMX Control Channels

DMX Channel	5ᵗⁿ Standard	d ir Direct	Iᶜʰ 1 Channel	ᵣ9ᵇ RGB
1	Intensity	Intensity	Intensity	Red
2	Red	Red		Green
3	Green	Green		Blue
4	Blue	Blue		Zoom
5	Strobe*	Indigo		
6	Zoom*	Lime		
7	Fan*	Strobe*		
8		Zoom*		
9		Fan*		

DMX Parameter Values

Parameter	DMX Value	Description	Comments
Fan	0–9	Auto	As fixture temperature increases, the fan speed increases to accommodate it.
	10–19	Off	When the fixture gets too hot, the fixture reduces the intensity instead of turning on the fan.
	20	Slow	Minimum fan speed
	21–248	Linear Increase in Speed	Fan speed remains constant, and intensity is reduced as needed when the fixture gets too hot.
	249	Fast	Maximum fan speed (100%)
	250–255	Auto	

Parameter	DMX Value	Description	Comments
Strobe	0	No Strobe	Shutter open
	1–40	Dark Strobe	Range is 1–40 Hz.
	41–80	Bright Strobe	Range is 1–40 Hz.
	81–120	Pulse Strobe	Strobe includes a fade up and fade down on each pulse.
	121–160	Random Strobe	Strobe pulses at random intervals.
	161–200	Flicker Effect	Strobe pulses at random intervals and at random intensity levels.
	201–240	No Strobe	Shutter open
	241–254	LEDs Off	Shutter closed
	255	No Strobe	Shutter open
Zoom	0	Full Spot	
	1–254	Linear Change from Spot to Flood	
	255	Full Flood	

Data Loss Behavior

When DMX data is lost, the fixture does one of the following actions:

- If you selected a preset or sequence, that preset or sequence automatically plays.
- If no preset or sequence is active in the background, the fixture goes dark and the DMX start address flashes on the user interface. The fixture stays at the last setting for the zoom position, and the fan speed is set to Auto.

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Use Wireless Control

Set Up Multiverse Wireless Communication

This section applies only to the ColorSource Fresnel V fixture with the optional Multiverse wireless DMX feature.

You can use a City Theatrical Multiverse® transmitting device to wirelessly configure and control the fixture. For information on using Multiverse products, see the documentation provided with the products.

Note: *For additional guidance and troubleshooting resources when setting up your wireless system, download the Multiverse Wireless Setup Information Guide at* etcconnect.com.

To use Multiverse wireless communication, configure the Multiverse settings on the fixture.

1. With the display showing the DMX address, press and hold the **Mode** button for 3 seconds. The display shows **ctL** (Control).
2. Press the **Up** button or **Down** button until the display shows **rAd** (Radio), and then press the **Mode** button to display the Multiverse settings.
3. Use the **Up** button or **Down** button to navigate to the Multiverse setting that you want to change (see table that follows). Press the **Mode** button to select the setting, use the **Up** button and **Down** button to modify it, and then press the **Mode** button again to return to the Multiverse settings. (The currently saved setting is indicated by a decimal point at the end of the setting name.)

Note: *To disable wireless communication on the fixture, set the Radio Strength (***Str***) to Off (***oFF***). Off is the default setting.*

4. When you have finished configuring the Multiverse settings, navigate to the **rtn** (Return) option to return to the **rAd** (Radio) option, and then navigate to the **rtn** (Return) option to return to the DMX address display.

Connection Status

The dot between the second and third digit on the 7-segment display indicates the current status:

- **On solid:** Connected to a transmitter and receiving data
- **On flashing:** Connected to a transmitter, but not receiving data
- **Off:** Not connected to a transmitter

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Display	Setting	Values	Description
Un ı	Universe	001 – 999 (Default = 001)	Set the Universe value.
ıd	SHoW ID	100 – 359 (Default = 100)	Set the value of the final three digits of the Show ID (the prefix "24" is not displayed). For example, for the SHoW ID 24200, set the value to 200. For NEO SHoW IDs, the display alternates between **nEO** and the ID value. This value must match the SHoW ID value on the Multiverse transmitting device.
PAS	SHoW Key	000 – 500 (Default = 000)	Set the SHoW Key value. This value must match the SHoW Key value on the Multiverse transmitting device.
Str	Radio Strength	• Off (Default) • 1 – 4	Set the value to the minimum level required for successful communication between transmitters and fixtures. Excess power output can cause reflections and can degrade performance. Off = Turns off power to the Multiverse radio. Use this setting to disable wireless communication on the fixture. 1 = Low 2 = Medium 3 = High 4 = Maximum
qAL	Signal Quality	1 – 100	Display of the signal quality. Values above 50% are good signal quality, and above 80% are excellent. This value can be helpful when troubleshooting wireless performance.
SS ı	Signal Strength	-20 – -120	Display of RSSI (Received Signal Strength indicator) in dBm, ranging from -20 (strongest) to -120 (weakest). (Note that the negative symbol does not display on the fixture.) A display of "---" indicates that there's no connection.
rtn	Return		Return to the **rAd** option.

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Configure Fixtures Using the Set Light App

Download the Set Light app to a smartphone with NFC functionality, use the app to set fixture parameters, and then tap the smartphone to the NFC tag on the fixture to configure it wirelessly—even when the fixture is not powered on. Or, after you configure the Multiverse settings on the fixture, use the Set Light app to configure one fixture or multiple fixtures wirelessly from a smartphone or tablet.

Set Light

Visit etcconnect.com/Apps or scan the code for more information about the Set Light app.

Play Presets and Sequences

The fixture has twelve factory-configured presets and five factory-configured sequences. When you play a preset or sequence on a fixture:

- The same preset number or sequence number plays on any connected fixtures that are not receiving DMX.
- If you power down the fixture, the preset or sequence resumes when you power it on again.

You can re-record presets and sequences through an RDM device or manually on the fixture. See *Re-record Presets on the facing page*.

1. Press the **Mode** button to activate the Presets/Sequences menu. The last active preset or sequence plays automatically. (If DMX data is present, the current preset or sequence plays in the background and DMX data continues to take priority.)
2. Press the **Up** button or **Down** button as needed to scroll through the available presets and sequences.
3. To stop the selected preset or sequence, press the **Mode** button a second time. The display will revert to show the DMX start address.

Pre-configured Presets

Zoom is set to 50% for all presets, but you can change this value via RDM or manually on the fixture. See *Adjust the Zoom of Presets on page 12*.

Preset	Name
1	3200 K White
2	5600 K White
3	Red
4	Green
5	Blue
6	Cyan

Preset	Name
7	Magenta
8	Yellow
9	Orange
10	Light Yellow
11	Light Blue
12	Light Pink

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Pre-configured Sequences

Sequence	Name
1	Rainbow Fast
2	Rainbow Slow
3	Warm Colors Fast
4	Cool Colors Fast
5	Random

Re-record Presets

1. Using DMX, set the desired levels for the new preset.
2. Press the **Mode** button to access the Presets/Sequences menu.
3. Press the **Up** button or **Down** button to navigate to the preset number that you want to re-record.
4. Press and hold the **Mode** button for 3 seconds to confirm the preset selection. The user interface will show a 3-second countdown. The preset number blinks once to confirm that the preset has been recorded.

ⓘ **Note:** *When the fixture is in Direct mode (*$d\,ir$*) or 1-channel mode (*Ich*), you cannot re-record presets.*

When you re-record presets with the fixture in RGB mode ($r9b$*), the intensity is set to full and the strobe is turned off.*

Adjust the Intensity of Presets

1. Ensure that DMX data is not present.
2. Press the **Mode** button to access the Presets/Sequences menu, and then press the **Up** button or **Down** button to select the preset that you want to edit.
3. Press and hold the **Mode** button for 3 seconds. The display shows $L\colon$ followed by either an intensity level from $0\text{-}99$ or FL for full.
4. Press the **Up** button or **Down** button to change the intensity level of the preset in real time.
5. Press the **Mode** button to confirm your selection and return to the Presets/Sequences menu. (If you don't press the **Mode** button, the display returns to the Presets menu after 10 seconds without saving your changes.)

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Adjust the Zoom of Presets

1. Ensure that DMX data is not present.
2. Press the **Mode** button to access the Presets/Sequences menu, and then press the **Up** button or **Down** button to select the preset that you want to edit.
3. Press and hold the **Zoom** encoder for 3 seconds. The display shows **F:** followed by either a zoom level from **0-99** or **FL** for full.
4. Press the **Up** button or **Down** button to change the zoom level of the preset in real time.
5. Press the **Zoom** encoder to confirm your selection and return to the Presets/Sequences menu. (If you don't press the **Zoom** encoder, the display returns to the Presets/Sequences menu after 10 seconds without saving your changes.)

Troubleshooting

Lock the User Interface

After you have set up the fixture, you can lock the user interface to prevent additional changes.

1. Press and hold the **Up** button and **Down** button simultaneously for 3 seconds. The display will show **Loc** to indicate that the user interface is locked.
2. To unlock the user interface, press and hold the **Up** button and **Down** button simultaneously for 3 seconds.

Update the Fixture Software

ETC recommends using UpdaterAtor software to manage software updates. For information on UpdaterAtor, see the *UpdaterAtor Software Quick Guide* and the *UpdaterAtor Software Release Note*, which you can download from etcconnect.com.

You can push newer software versions from a connected fixture to other ColorSource Fresnel V fixtures of the same type.

Note: *If you have other types of fixtures in your DMX run, you do not need to disconnect them before pushing the updated fixture software. The update process will ignore any other fixture types in the DMX run.*

Note: *Not sure what version of fixture software is installed? The version number appears on the display when the fixture powers up.*

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1. Remove power and DMX In from the fixture that is running the software version that you want to push to other fixtures.
2. Press and hold the **Up** button and **Down** button simultaneously while restoring power.
3. The display shows **Udt rdY** to indicate the update mode is selected.
4. Press the **Mode** button to start the update process.
    - The first time that you push an updated software version, additional required files must be copied before the update can begin. The display alternates between **Udt** and **c=HH** to indicate the percentage complete while required data is copied.
    - The display alternates between **Udt** and the percentage complete while updating the connected fixtures.
    - The display blinks once to indicate that the update is complete.
5. Reconnect DMX In on the fixture.

Restore Factory Defaults

Press and hold the **Mode** button, **Up** button, and **Down** button simultaneously for 5 seconds. The DMX start address will blink once to confirm that defaults have been restored.

Error Codes

These error codes may display on the user interface.

- **CAL** : Screen toggles between **CAL** and **Err** to indicate a problem with the color calibration. The fixture will need to be returned to the ETC factory; contact your local dealer to set up a repair.
- **OtP**: Screen toggles between **OtP** and **Err** to indicate that the fixture has gone into over-temperature protection mode to avoid damaging the fixture. If the error does not clear, contact ETC Technical Support (visit etcconnect.com/contactETC).
- **no APP**: Screen toggles between **no** and **APP** to indicate that the upgraded fixtures have a software issue. Reload software to clear the error. If the error persists, contact ETC Technical Support (visit etcconnect.com/contactETC).
- **LnS**: Indicates a motor power fault or a motor motion error. If the error occurs regularly after a power cycle, contact ETC Technical Support (visit etcconnect.com/contactETC).

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Specifications and Reference

For current and complete compliance and specifications, see the ColorSource Fresnel V datasheet at etcconnect.com.

Environment

The ColorSource Fresnel V operates in ambient temperatures of 0°C– 40°C, has a variable-speed fan, and is for indoor use only.

- Maximum recommended ambient operating temperature: Ta = 40°C (104°F)
- Maximum anticipated external surface temperature at 40°C ambient: Tmax = 57°C (134°F)
- External temperatures after 5 minutes of full-brightness operation at 25°C (77°F) ambient: 36°C (97°F)
- External Temperature (steady state achieved) at 25°C (77°F): 42°C (107°F)

Electrical

- Operates between 100 V and 240 VAC at a frequency of 50/60 Hz.
- Maximum power consumption is 170 W.
- Up to 8 luminaires (15 A max) may be linked via power thru connector (9 luminaires total per circuit) when used with an R20 Relay Module or Unison Echo Relay Panel. Consult breaker trip curves when used with other equipment. Requires power from a non-dimmable source.
- Inrush:
    - 120 V: 36 A (first half-cycle)
    - 240 V: 57 A (first half-cycle)

Typical Power Consumption

	100 V		120 V		230 V	
	Power	Current	Power	Current	Power	Current
Idle	6.09 W	0.1 A	6.26 W	0.1 A	5.35 W	0.13 A
Direct at Full	149.5 W	1.52 A	148.4 W	1.28 A	147.0 W	0.70 A

RDM Values

Parameter	Value	Description
Manufacturer ID	0x6574	Electronic Theatre Controls
Model ID	0x0281	ColorSource Fresnel V with Multiverse
	0x0282	ColorSource Fresnel V
DMX Start Address	0x00F0	Range = 1–512
DMX Personality	0x00E0	1 = Standard 2 = Direct 3 = 1 Channel 4 = RGB
Output Frequency	0x8123	0 = Standard (5 kHz) 1 = High (25 kHz)
Multiverse Universe*	0x8C05	Set the Universe value.
Multiverse SHoW ID*	0x8C00	Set the SHoW ID value. This value must match the SHoW ID value on the Multiverse transmitting device.
Multiverse SHoW Key*	0x8C03	Set the SHoW Key value. This value must match the SHoW Key value on the Multiverse transmitting device.
Multiverse Radio Strength (Enable)*	0x8C04	0 = Off 1 = Low 2 = Medium 3 = High 4 = Maximum

*Multiverse parameters are applicable only to the ColorSource Fresnel V fixture with the optional Multiverse wireless DMX.

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FCC Compliance

ColorSource Fresnel V

(For any FCC matters):

Electronic Theatre Controls, Inc.
3031 Pleasant View Road
Middleton, WI 53562
+1 (608) 831-4116
etcconnect.com

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. Visit etcconnect.com/products for current and complete compliance information including FCC compliance.

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 not installed and used in accordance with the instructions, may cause harmful interference to radio communications. Any modifications or changes to this product not expressly approved by Electronic Theatre Controls, Inc. could void the user's authority to operate the product. 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 their own expense.*

This device contains a wireless module with the following identification numbers:

FCC ID: VU65995

ISED Compliance

This device contains a license-exempt transmitter/receiver that complies with Innovation, Science, and Economic Development Canada's license-exempt RSSs. Operation is subject to the following two conditions:

1. This device may not cause interference.
2. This device must accept any interference, including interference that may cause undesired operation of the device.

Contains IC ID: 7480A-5995

CAN ICES-005 (A)

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Conformité ISDE

Cet appareil contient un émetteur/récepteur conforme aux CNR d'Innovation, Sciences et Développement économique Canada (ISDE) applicables aux appareils radio exempt de licence. Son fonctionnement est soumis aux deux conditions suivantes:

1. L'appareil ne doit pas produire d'interférences.
2. L'utilisateur de l'appareil doit accepter toute interférence, même si l'interférence est susceptible d'en compromettre le fonctionnement.

Contient ID IC: 7480A-5995

CAN NMB-005 (A)

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