

ETC Installation Guide

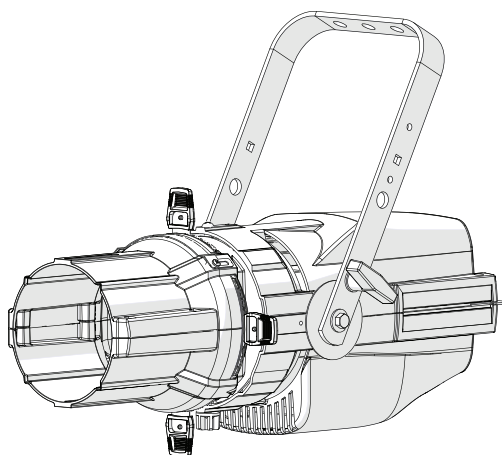
ColorSource Spot V 1.0

Overview

The ColorSource Spot 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 wireless configuration and control via NFC and the Set Light app. The ColorSource Spot V also can be purchased with wireless DMX via Multiverse®.

The ColorSource Spot V is UL924 listed as a Directly Controlled Luminaire for use in emergency lighting systems when used with the ETC DMX Emergency Bypass Controller (DEBC).

This light engine can be used with standard ETC shutter barrels, lens tubes, fresnel adapters, CYC adapters, and accessories.



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 13](#).



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subject to change. ETC intends this document to be provided in its entirety.
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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: The ColorSource Spot V is a Directly Controlled Luminaire suitable for use in emergency lighting applications in accordance with 2017 National Electrical Code section 700.24 when used with an ETC DMX Emergency Bypass Controller. Equipment intended for this purpose must be properly selected, installed, and maintained so that facility conformance can be obtained. Installation and servicing shall be performed by qualified service personnel.

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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 ÉLECTRIQUE! 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.

IMPORTANT SAFEGUARDS

When using electrical equipment, basic safety precautions should always be followed including the following:

READ AND FOLLOW ALL SAFETY INSTRUCTIONS

- Do not use outdoors.
- Do not let power supply cords touch hot surfaces.
- Do not mount near gas or electric heaters.
- Equipment should be mounted in locations and at heights where it will not readily be subjected to tampering by unauthorized personnel.
- The use of accessory equipment not recommended by the manufacturer may cause an unsafe condition.
- Do not use this equipment for other than intended use.

SAVE THESE INSTRUCTIONS

	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.
	Protective earth (ground)	Protection Classe I Mise à la terre

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Emergency Lighting Considerations

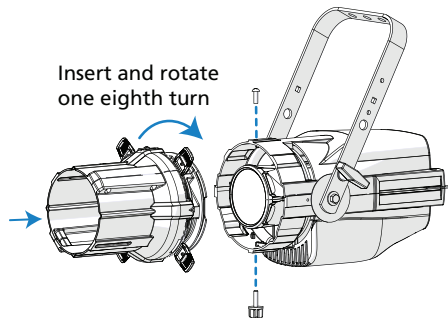
Luminaires that are used in emergency lighting applications must provide a minimum illumination level over the identified means of egress path in accordance with the Life Safety Code®, NFPA 101. A luminaire that is intended to serve this purpose must be mounted at a height where it will not readily be subjected to tampering by unauthorized personnel and where the minimum required illumination level over the egress path can be achieved. The ETC DMX Emergency Bypass Controller that is driving the luminaire upon loss of utility power must be programmed to drive the ColorSource Spot V to full illumination.

Installation

Install a Shutter Barrel

The ColorSource Spot V can be purchased with or without a shutter barrel. To install a shutter barrel you will need a #2 Phillips screwdriver (not provided).

The ColorSource light engine includes a barrel screw. The small screw used to secure the top of the shutter barrel is included with the shutter barrel.



1. Align the barrel to the front of the ColorSource Spot V and rotate it one eighth turn (45°) counter-clockwise before inserting.
2. Insert the shutter barrel into the front of the light engine and rotate clockwise until it is fully threaded onto the light engine.
3. Insert the barrel screw at the bottom of the light engine and tighten.
4. Insert the small screw into the top of the light engine and tighten using the Phillips screwdriver.

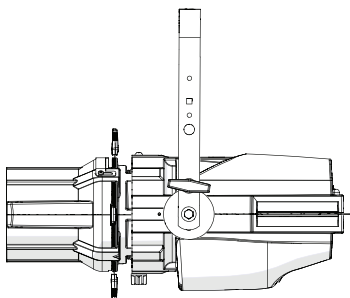
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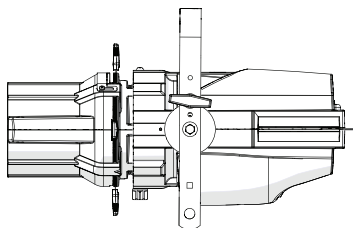
Mounting

The ColorSource Spot V ships with a standard yoke for mounting with a clamp. You can adjust the position of the yoke when necessary for low-clearance mounting.

Standard yoke position



Low-clearance yoke position

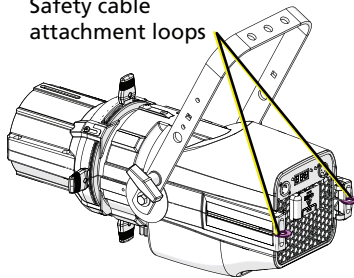


You can attach a ColorSource Relay to the yoke. See etcconnect.com for more information about ColorSource Relay.

Safety Cable

A safety cable (or other approved safety device) must be attached to the fixture. Attachment loops are on the rear of the fixture. Leave as little slack as possible in the safety cable to avoid catching the yoke of the fixture.

Safety cable attachment loops



Connectors

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



Note: *The ColorSource Spot 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).*

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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 on the previous page](#).
4. Plug the power cord into the power source.

Power Up

Press any button to wake the display. The display shows the DMX address. See [Set the DMX Address below](#).

You can press the **Mode** button to access the Presets/Sequences menu. See [Play Presets and Sequences on page 11](#).

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 knobs.
2. Tilt the fixture to the desired angle.
3. Tighten the yoke locking knobs.

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](#).

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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 **c t l** (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, and fan). This is the default mode.
 - **d ir**: Direct emitter control (intensity, red, green, blue, indigo, lime, strobe, and fan).
 - **lch**: 1-channel mode controls the intensity of preset 1 (defaults to 3200 K White).
 - **r9b**: RGB mode (red, green, and blue).
5. Press the **Mode** button to confirm your selection. The display shows **c t l** (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.

DMX Control Channels

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

* See [DMX Parameter Values below](#) for the DMX values that set these parameters.

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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	
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

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.

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Use Wireless Control

Set Up Multiverse Wireless Communication

This section applies only to the ColorSource Spot 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 mode is indicated by a decimal point at the end of the mode name.)



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

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 i	Universe	001 – 999	Set the Universe value.
id	SHoW ID	100 – 359	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. This value must match the SHoW ID value on the Multiverse transmitting device.
PAS	SHoW Key	000 – 500	Set the SHoW Key value. This value must match the SHoW Key value on the Multiverse transmitting device.
Str	Radio Strength	- Off (oFF) 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
9AL	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 i	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.

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 app

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

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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 next 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

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

Pre-configured Sequences

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

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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 (**lch**), you cannot re-record presets.

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

See [Change the DMX Control Mode on page 7](#).

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 =** followed by either an intensity level from **0- 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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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 Spot 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.*

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 **Update** 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 **Update** and **Copy** to indicate the percentage complete while required data is copied.
 - The display alternates between **Update** 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.

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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).

Specifications and Reference

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

Environment

- Maximum recommended ambient operating temperature: $T_a = 40^{\circ}\text{C}$ (104°F)
- Maximum anticipated external surface temperature at 40°C ambient: $T_{\text{max}} = 80^{\circ}\text{C}$ (176°F)
- External temperatures after 5 minutes of full-brightness operation at 25°C (77°F) ambient: 30°C (86°F)
- External Temperature (steady state achieved) at 25°C (77°F): 37°C (99°F)

Electrical

- Operates between 100 V and 240 VAC at a frequency of 50/60 Hz, or at 208 VAC L-L.
- Maximum power consumption is 245 W.
- Up to 7 luminaires (15 A max) may be linked via power thru connector (8 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: 55 A (first half-cycle)
 - 240 V: 59 A (first half-cycle)

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Typical Power Consumption

	100 V		120 V		208 V		230 V	
	Power	Current	Power	Current	Power	Current	Power	Current
Idle	2.1 W	0.07 A	2.1 W	0.08 A	2.1 W	0.11 A	2.1 W	0.10 A
Direct at Full	198.5 W	2.00 A	196.5 W	1.65 A	193.8 W	0.98 A	193.7 W	0.90 A

RDM Values

Parameter	Value	Description
Manufacturer ID	0x6574	Electronic Theatre Controls
Model ID	0x0290	ColorSource Spot V with Multiverse
	0x0291	ColorSource Spot 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 Spot V fixture with the optional Multiverse wireless DMX.

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FCC Compliance

ColorSource Spot 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)

Licensed Software

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