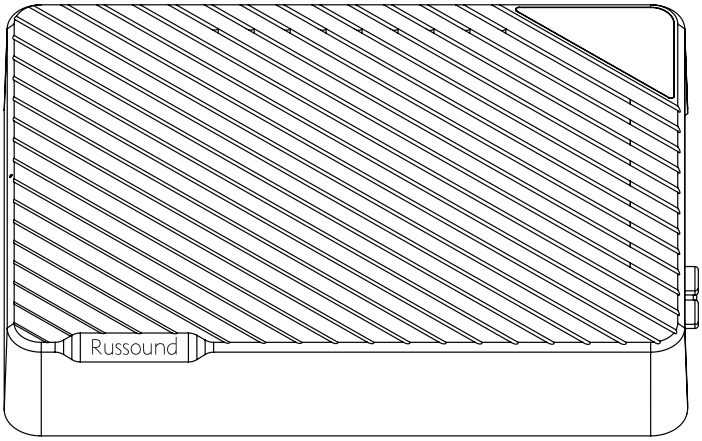
a sound relationship

Russound



AVA-Series Amplifiers

AVA2.1 & AVA3.1

INSTALLATION GUIDE

OVERVIEW

Russound's AVA-Series's are a game changer in the audio industry. Their built -in HDMI ARC input with CEC control means that these compact, powerful, low-profile AVA-Series can be used seamlessly with any modern television without the need for any remote control other than your native TV or cable-box/satellite remote that is already being used. If desired, their multiple inputs can be used to convert the AVA-Series into a mini-receiver supporting up to 4 total inputs (HDMI, Digital Optical, Line-Level Stereo, Bluetooth) and they include an external IR sensor and full-featured remote control.

WHAT'S IN THE BOX

(1) AVA-Series Amplifiers
(1) 6' (1.8m) Power Cord (US Version)
(3) 6' (1.8m) Power Cords: Euro, UK and AUS (International Version)
(1) Removable, Screw-Down Speaker Connector (accepts up to 14AWG wire, 4-pin or 6-pin depending on the model purchased)
(1) Mounting Bracket
(2) Mounting Screws - #8 1-1/4" (3.18 cm) Phillips
(1) External IR Sensor with 3' cable
(1) 3' (.91m) HDMI Cable
(1) Remote Control
(2) AA Alkaline Batteries
(1) Owner's Manual

WHAT YOU NEED FOR THE INSTALLATION

Flat Mini-screwdriver for the speaker connectors
#2 Philips Screwdriver for Wall-mounting (if desired)
Wire Strippers

INSTALLATION OPTIONS

The compact, low-profile design of the AVA-Series Amplifierss allows them to be installed out of view, minimizing any intrusion into the customers' living space. There are several options available to choose from to meet any need. Please keep in mind that the AVA-Series Amplifierss support Bluetooth Audio so that any audio content from a phone, tablet, or computer can be easily played. If planning on using the Bluetooth audio input, make sure to verify the Bluetooth functional range before finalizing a mounting location. Depending on the construction of the TV, wall-box, building materials, etc, the range of the internal Bluetooth receiver may be impacted.

TABLE-TOP MOUNTING

The AVA-Series mini-AVRs may be installed on a table-top or shelf.

WALL MOUNTING

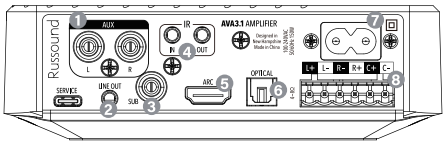
The AVA-Series mini-AVRs may be mounted on any wall or other surface using the included wall-mount bracket. Make sure to use suitable wall-anchors or secure the bracket to any wall stud.

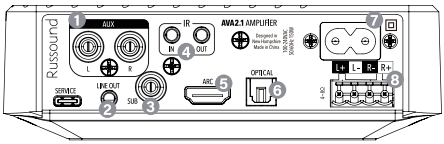
IN-WALL BOX MOUNTING

Many of today's TV accessories, including the AVA-Series mini-AVRs, are designed to be installed in in-wall mounting boxes hidden behind a television.

IR SENSOR ACCESSIBILITY

The included external IR sensor has a 3' (91.4 cm) cable. Make sure to keep this in mind when locating the AVA-Series mini-AVR so that the IR sensor can be placed discreetly. The ideal location of the IR sensor is on the edge of the TV as the natural tendency of users is to point any remote control at the TV in the room. As with any IR sensor, keeping it out of direct sunlight is important.

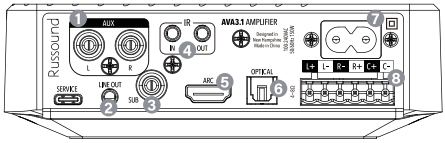


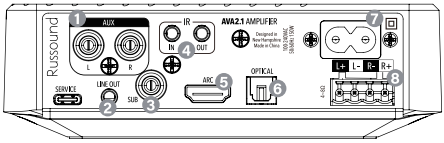


1. Aux Input – (Stereo RCA) Use this to connect any line-level audio source here
2. Line Out – (Stereo 3.5mm) Use this variable line-out connection to connect to an additional mini-AVR or other amplifier if desired
3. Sub Out - (Subwoofer RCA) Connect to a powered subwoofer to add extra bass
4. IR In/Out (Stereo, 3.5mm) Connect the included IR Sensor to "In". An optional additional cable can be connected to the "Out" to pass along all received IR inputs to an additional device
5. HDMI ARC – Connect to a TV's HDMI ARC or eARC connection. The ARC connection on the TV is required in order to allow for CEC control of the AVA-Series mini-AVR's power status and volume control functions.
6. Optical Input – Use this connection to add any compatible digital audio source
7. Power Connection – Connect the power cord here
8. Loudspeaker Connections – Removable, screw-down connector – Connect your loudspeakers here (4-pin for the AVA2.1 and 6-pin for the AVA3.1)

CONNECTING LOUDSPEAKERS

Note: All wiring connections must be made with the system powered off and the power cord disconnected from the electrical mains (unplugged from the wall outlet). The AVA-Series mini-AVR is stable to 4 ohms.





Loudspeakers should always connect directly to the AVA-Series mini-AVR. CL2-rated wire, or any specific wire specifications required by local electrical codes must be used when running wire within a home's walls. The loudspeaker connectors are designed to use up to 14ga wire.

When connecting the loudspeaker wires, be sure to observe proper polarity. The positive and negative terminals on the AVA-Series mini-AVR must correspond with the positive and negative terminals at both the left and right loudspeakers.

Strip 1/8" (about 3mm) from each of the conductors for both the left and right loudspeaker connections and insert them into the removable screw-down terminal, again making sure to match the proper polarity of each connection. Tighten the screw-down connections securely and make sure that there are no exposed strands that might cause a short-circuit. For the AVA-3.1, connect the center-channel loudspeaker the same way, matching the polarity at both ends of the wiring connection.

CONNECTING AUDIO SOURCES

There are four available inputs on your Russound AVA-Series mini-AVR:

- HDMI
- Line In (Aux)
- Digital Optical
- Bluetooth

HDMI - CONNECTING A TV OR OTHER HDMI AUDIO SOURCE

Connect the HDMI cable to the HDMI Port on the TV labeled HDMI (ARC or eARC) and to the rear HDMI port of your AVA-Series Amplifiers labeled "ARC". It is very important that you connect to the ARC or eARC HDMI connection on the TV. This enables the audio output of the TV through the HDMI connection and enables CEC control between the TV and the AVA-Series Amplifiers so that the TV remote control can control the mini-AVR without the need for any programming.

TV SETTINGS

Most televisions will require changing a settings menu to disable their internal speakers and enable the audio output through the HDMI ARC port of the television. Some may even require adjustments to the HDMI control to enable CEC operation. Please refer to the television owner's manual for those settings. For any HDMI ARC enabled product like the advanced AVA-Series Amplifiers, you'll need to make sure that these settings are configured on the connected television:

AUDIO OUTPUT

Make sure the TV's Audio Output is configured for the HDMI ARC or eARC port that is connected to the amplifier

TV SPEAKERS DISABLED

Do not use an "Automatic" setting if you want to use audio sources other than ARC when connected to your TV or your TVs internal speakers may turn on when not desired.

CEC CONTROL ENABLED

Most TVs will have CEC control enabled by default. Using CEC is recommended in order to allow your TV remote to control the AVA-Series amplifier.

AUX

Connect any audio source to the stereo RCA AUX input on the rear of your AVA-Series Amplifiers. The connected source may be selected by using the included remote control and pressing the input selection button on the top right of the remote control until you hear the desired source.

DIGITAL OPTICAL IN

Connect any digital audio source to the digital optical input on the rear of your AVA-Series Amplifiers. The connected source may be selected by using the included remote control and pressing the input selection button on the top right of the remote control until you hear the desired source.

USING BLUETOOTH

Before using Bluetooth, your phone, tablet, or computer must be paired with your AVA-Series Amplifiers.Pairing may be done by selecting the Pair button on the remote control until the front panel LED on your AVA-Series Amplifiers begins blinking blue. While blinking, the amplifier is in pairing mode and can be found by searching for AVA3.1 or AVA2.1 from your phone, tablet, or computer.

Once connected, you can use your phone's volume control to go from zero up to the current maximum volume of the AVA-Series Amplifiers. We recommend setting your phone to its highest volume and then adjusting the AVA-Series Amplifiers to the maximum desired level so that you can then easily control the volume using your phone's volume control.

Once your phone has been paired, you can connect and send audio to your AVA-Series Amplifiers at any time by selecting "Bluetooth" as the active source using the AVA remote control.

POWER CONNECTION

Once the source and loudspeaker connections have been made you can connect the power cable to the rear of mini-AVR.

USING THE REMOTE CONTROL

To use the included remote control, make sure to connect the included IR sensor to the "IR In" connection on the rear of the AVA-Series Amplifiers. All infrared commands are received through this sensor.

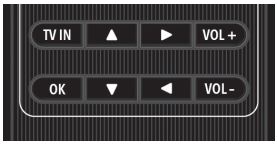
FUNCTIONS AVAILABLE:

- Volume +/-/Mute
- Direct Input Select (Bluetooth, ARC (HDMI), Digital Optical (OPT), Line In (Aux)
- Audio Adjustments – Bass +/-, Treble +/-, Mega Bass On/Off, Movie Mode, Music Mode, Voice Mode (to enhance dialog)
- Bluetooth Pairing Mode Activation (Pair)
- Play/Pause
- Skip Track Forward/Back
- Amplifier Power

TV CONTROL BUTTONS

If using the HDMI ARC input, there should be no need to use the TV infrared commands from the remote control, but they are available for use when connecting a TV to the amplifier's digital or Line In input connection.

The included remote control is a multi-function learning remote control. The top section of the remote control is designed to learn several of the most important TV commands from your TV remote.



To do this, press and hold the "Set" button in the top right of the remote control for 10 seconds or until the light turns a solid bright red.

With the red light illuminated, press the button on the top of the remote that you would like to teach, for example the TV Input "TV In" button. The red Set button LED will blink fast, indicating it is ready to learn the IR command.

Place your TV remote end to end with the Russound AVA remote control so that the front of both remote controls are within 1" (2.54 cm) of each other. Press the button that you want to teach, in our example, the TV Input button on your TV remote control until the red SET LED becomes solid again.

You may continue to teach other commands in any order by pressing the next button you wish to teach on the top section of the AVA remote control until the red Set button LED blinks fast, indicating it is ready to learn the IR command for that button and continuing the process, button by button.

When you have taught all commands, press the Set button one more time

until the LED turns off.

Verify the correct programming by testing all of the learned buttons with your TV. You can repeat the above steps to re-learn any particular button as needed.

CREATING A 5.1 OR 5.2 AUDIO SYSTEM

By combining a Russound AVA3.1 with an AVA2.1 or any stereo amplifier, it is possible to create a quick 5.1 surround (all stereo mode) system for any room.

Use a stereo 3.5mm to RCA cable (not included) to connect from the Line Out of the AVA3.1 to the audio input of the AVA2.1 or other amplifier. When using a Russound AVA2.1 as the additional amplifier, a second subwoofer can be connected to the AVA2.1 subwoofer out to create up to a 5.2 stereo system. Select Aux as the audio input on the AVA2.1. The AVA2.1 will play the audio sent from the AVA3.1 to create the 5.1 or 5.2 system.

FRONT PANEL LED STATUS

The front panel LED will indicate the status of the AVA mini-AVR as indicated in this table.

LED COLOR

LED COLOR	SELECTED SOURCE
White	ARC (HDMI) input is selected
Green	Optical input is selected
Blue	Bluetooth input is selected
Cyan	Analog input is selected

LED	STATUS
3 Blinks	IR command received
Fast Blink	Volume has reached maximum or minimum setting
Slow Blink	Audio is muted
Blue (Blinking)	Bluetooth pairing mode is active
Red (Solid)	Standby mode

AUDIO DSP ADJUSTMENTS USING THE REMOTE CONTROL

MEGA BASS

This setting is recommended when there is no dedicated subwoofer. Pressing this button toggles an increase in the bass levels by approximately 10% from 50-100Hz.

BASS +/-

This is a broad bass change across the range of 80Hz to 500Hz by approximately 1% for every button press, up to 10. When the limit is reached in either direction, the front panel LED will blink quickly

TREBLE +/ -

This is a broad treble change across the range of 1kHz to 20kHz, by approximately 1% for every button press, up to 10. When the limit is reached in either direction, the front panel LED will blink quickly

RESET BUTTON

This button will reset all audio settings back to factory defaults.

VOICE (DIALOG)

This button will enable a high pass filter at 100Hz and a low pass filter at 12KHz to allow for more dialog detail and clarity. In this mode, you may also customize the bass and treble or enable Mega Bass as desired.

MOVIE

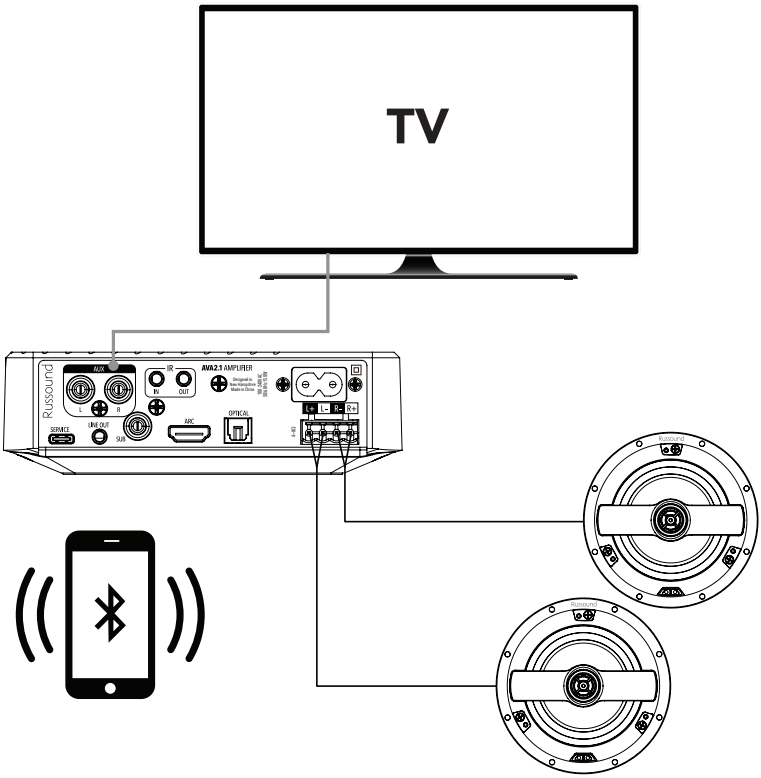
This button will enable a high pass filter at 35Hz, and a Box EQ at 240Hz (-4dB) and 860Hz (-3dB) to allow for dynamic response in movies and films. In this mode, you may also customize the bass and treble or enable Mega Bass as desired. Movie mode is the default acoustic mode of the AVA-Series amplifier.

MUSIC

This button will remove audio filters so that the EQ is flat from 20Hz to 20kHz for clear, uncluttered detail in all musical genres. In this mode, you may also customize the bass and treble or enable Mega Bass as desired.

Note: *All changes to the audio settings will reset to defaults if the AVA is disconnected from AC power.*

BLUETOOTH MOBILE AUDIO & VIDEO SETUP



SPECIFICATIONS

Model	AVA2.1	AVA3.1
Number of Channels	2.1	3.1
Power Output - 4 ohm	50W /Channel, 1kHz	50W /Channel, 1kHz
Power Output - 8 ohm	25W /Channel, 1kHz	25W /Channel, 1kHz
Freq Response	20Hz to 20kHz +/-3dB at 1W output into 4 or 8 Ohms	20Hz to 20kHz +/-3dB at 1W output into 4 or 8 Ohms
Input Sensitivity	1000mV for 50W at 1kHz, 4 Ohm	1000mV for 50W at 1kHz, 4 Ohm
Input Impedance	>22k ohms Line Input	>22k ohms Line Input
Signal to Noise Ratio , 4Ω	>94dB A-weighted	>93dB A-weighted
Signal to Noise Ratio , 8Ω	>96dB A-weighted	>97dB A-weighted
Inputs	HDMI (ARC), Line In (RCA), Optical, Bluetooth	HDMI (ARC), Line In (RCA), Optical, Bluetooth
Bluetooth Version	5.0	5.0
Bluetooth Range	Up to 100 feet (30m)	Up to 100 feet (30m)
Remote Control	Included	Included
IR Input/Output	3.5mm	3.5mm
IR Sensor Included	Yes	Yes
Speaker Connectors	Detachable Screw-down, up to 14AWG	Detachable Screw-down, up to 14AWG
Line Out	3.5mm Stereo	3.5mm Stereo
Subwoofer Out	RCA	RCA
Operating Temperature	32°F to 104°F (0°C to 40°C)	32°F to 104°F (0°C to 40°C)
Altitude	0 to 9,843' (3,000m)	0 to 9,843' (3,000m)
Power Requirements - North American Model	100-120VAC, 60Hz (150W Max)	100-120VAC, 60Hz (150W Max)
Power Requirements - International Model (-i)	220-240VAC, 50Hz (150W Max)	220-240VAC, 50Hz (150W Max)

	WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.
	CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE THE COVER. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED PERSONNEL.
	The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated dangerous voltage within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.
	The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

1. Read Instructions - All the safety and operating instructions should be read before the appliance is operated.
2. Retain Instructions - The safety and operating instructions should be retained for future reference.
3. Heed Warnings - All warnings on the appliance in the operating instructions should be adhered to.
4. Follow Instructions - All operating and user instructions should be followed.
5. Water and Moisture - The appliance should not be used near water; for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool. The apparatus shall not be exposed to dripping or splashing liquids and no objects filled with liquids, such as vases, shall be placed on the apparatus. Do not touch the appliance with wet hands. Do not handle the appliance or power cord with wet or damp hands. If water or any other liquid enters the appliance cabinet, take it to qualified service personnel for inspection.
6. Cleaning - The appliance should be cleaned only as recommended by the manufacturer. From time to time you should wipe off the front and side panels and the cabinet with a soft cloth. Do not use rough material, thinners, alcohol or other chemical solvents or cloths since this may damage the finish or remove the panel lettering.

7. Ventilation - The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings, or placed in a built-in installation, such as a bookcase or cabinet that may impede the flow of air through the ventilation openings. Place the unit in a well-ventilated location, leaving at least 2 inches (5 cm) of clearance on all sides, top and rear of unit for air flow. If ventilation is blocked, the unit may overheat and malfunction.
8. Heat - The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including AVA-Series) that produce heat.9. Grounding or Polarization - Precaution should be taken so that the grounding or polarization means of an appliance is not defeated.
10. Power Cord Protection - Power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, receptacles, and the point where they exit from the appliance.
11. Power Sources - The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.
12. Main Power Disconnect - The main power plug is used as the disconnect device and shall remain readily operable. When installing the product, ensure that the plug is easily accessible.
13. Non-Use Periods - The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.
14. Attachments - Only use attachments/accessories specified by the manufacturer.
15. Location of the Mini-AVR - Do not mount this unit under a kitchen cabinet. Do not expose the mini-AVR to direct sunlight or heating units as the mini-AVR internal components' temperature may rise and shorten the life of the components.
16. Avoid damp and dusty places.
17. Object and Liquid Entry - Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through the openings.
18. Servicing - The user should not attempt to service the appliance beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.
19. Damage Requiring Service - The appliance should be serviced by qualified service personnel when: A. The power supply cord or the plug has been damaged; B. Objects have fallen, liquid has been spilled into the appliance; C. The appliance has been exposed to rain; or D. The appliance does not appear to operate normally; or E. The appliance has been dropped or the enclosure is damaged.

LIMITED WARRANTY

The Russound AVA2.1 and AVA3.1 are guaranteed for two (2) years from the date of purchase against all defects in materials and workmanship. During this period Russound will replace any defective parts and correct any defect in workmanship without charge for either parts or labor. For this warranty to apply, the unit must be installed and used according to its written instructions. If service is necessary, it must be performed by Russound. Russound assumes no responsibility for defects resulting from abuse or servicing performed by an agency or person not specifically authorized in writing by Russound. Damage to or destruction of components due to improper use voids the warranty. In these cases, the repair will be made at the owner's expense. Accidental damage and shipping damage are not considered defects under the terms of the warranty. To return for repairs, the unit must be shipped to a repair facility designated by Russound at the owner's expense, along with a Return Authorization number and documentation explaining the nature of the service required. Any product returned without prior written permission will be returned to sender. Russound sells products only through authorized Dealers and Distributors to ensure that customers obtain proper support and service. Any Russound product purchased from an unauthorized dealer or other source, including retailers, mail order sellers and online sellers will not be honored or serviced under existing Russound warranty policy. Any sale of products by an unauthorized source or other manner not authorized by Russound shall void the warranty on the applicable product.

WARRANTY ADDRESS

Russound
Attn: RA# (Insert your RA number here)
1955 Wehrle Dr
Williamsville NY 14221

email: tech@russound.com

FCC Statement

This equipment 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.
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. However,
there is no guarantee that interference will not occur in a particular installation.
If this equipment does

cause harmful interference to radio or television reception, which can be

determined by turning the equipment off and on,

the user is encouraged to try to correct the interference by one or

more of the following measures:

-- Reorient or relocate the receiving antenna.

-- Increase the separation between the equipment and receiver.

-- Connect the equipment into an outlet on a circuit different from that to which the receiver isconnected.

-- Consult the dealer or an experienced radio/TV technician for help.
This device complies with part 15 of the FCC Rules. Operation is subject to the following twoconditions:(1) This device may not cause harmful interference, and (2) this device must accept any interference receivedincluding interference that may cause undesired operation.

Any Changes or modifications not expressly approved by the party responsible

for compliance could void the user's authority to operate the equipment.

This equipment complies with FCC radiation exposure limits set forth for an

uncontrolled environment. This equipment should be installed

and operated with minimum distance 20cm between the radiator & your body.

IC Warning

This device complies with Industry Canada license-exempt RSS standard(s).

Operation is subject to the following two conditions:

(1) This device may not cause interference, and

(2) This device must accept any interference including interference that may cause undesired operation of the device

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.

Changes or modifications not expressly approved by the party responsible for compliance could void the user’ s authority to operate the equipment.
This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Cet équipement est conforme aux limites d'exposition au rayonnement ISED établies pour un environnement non contrôlé Cet équipement doit être installé et utilisé à une distance minimale de 20 cm entre le radiateur et votre corps.

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Specifications are subject to change without notice REV5