- Does the lamp connected to the L510 have its switch? Is this switch in the OFF position or Open? If so, consider re-wiring the lamp to remove this switch to prevent someone from turning off the switch in the future.

- The L510 is not configured correctly. Was it configured via EngINN/PC503? Have you tried to push the configuration from EngINN to L510 again and see if it allows L510 to turn ON/OFF as expected?

- How are you trying to turn on/off or control the L510?

  From a switch locally connected to the H4 4-pin socket on the L510?

  If so, verify the switch is working with a meter set to measure continuity. Is the switch shorting the input when closed? Is the switch fully/correctly connected to the L510 H4 header? Have you configured L510 via EngINN such that its low voltage input on the H4 RJ9 connection controls its local light output?

  From an Inncom switch inside the guest room such as a Modeva or Evora, pressing a button on this switch is supposed to turn on/off or dim up/down the light(s) connected to the L510?

  If so, have you verified the configuration of the Evora/Modeva is correct and is sending the correct/expected commands to the L510? Have you traced the in-room commands sent from the Evora/Modeva when you press the button and are they as expected?

2. The L510 is supposed to dim the lamp connected to it but is only turning full On or OFF.

Possible Reasons:

Are you sure the load/lamp connected to the L510 is dimmable? If it is, what was defined in the INNTool project for the particular L510? Is the INNTool project configuring the L510 as ON/Off only with no dimming?

Verify the settings in EngINN:

- Select the desired L510 in the particular room

- Click Configure > Advanced Configuration> Outputs.

- Find the "Enable Dimming" option. Is the checkbox cleared? If so, the configuration settings into the L510 from EngINN have dimming disabled. Change this option to enable dimming, update the room type the L510 is associated with, and then re-configure the L510 from EngIN.
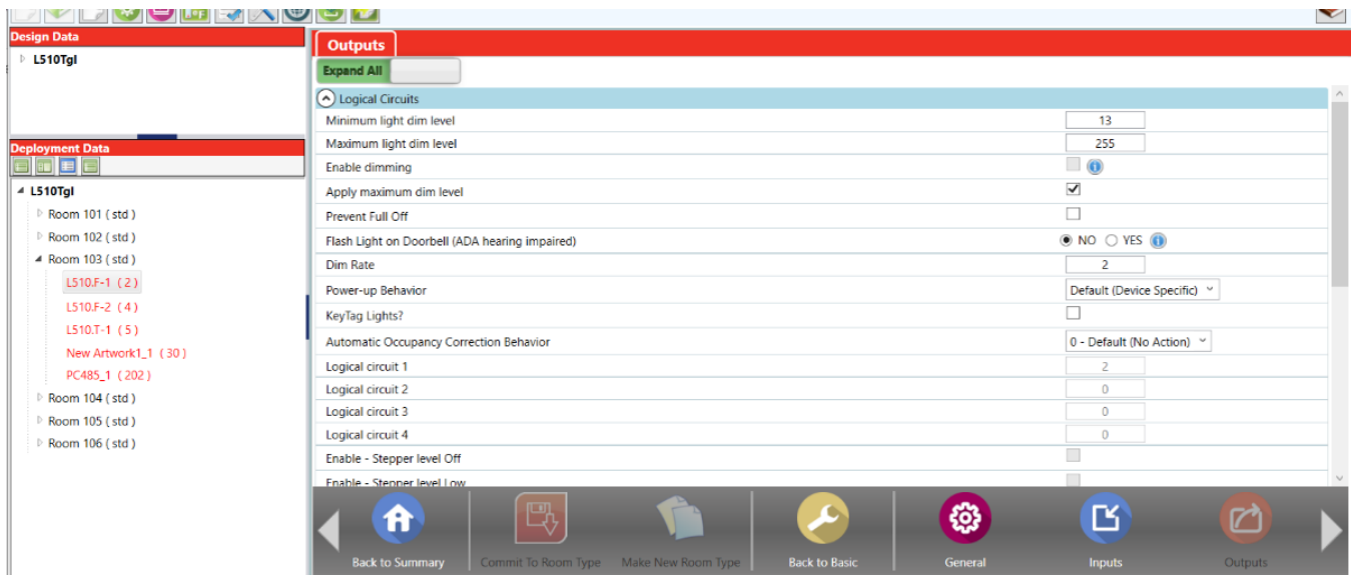

You can also send a dialog command to the L510 to check if dimming is enabled or disabled. CBL32 Registry 7:3:X:23 DimSetup (X typically is always 1) controls the Dimming control in the L510. The upper Bit 7 in the value stored in 7:3:1:23 is the "DE" Dimming Enable bit. It needs to be set for the L510 to be able to Dim its output.

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The command to read is 0018C07030117. In the image below, the reply to this command was 0001000000014080. The first two characters are the value of 7:3:1:23 in Hexadecimal, or 00, so the DE bit 7 is cleared. It should have been 80 (0x80 hex is 1000 0000 binary), so that Bit 7 DE was set.
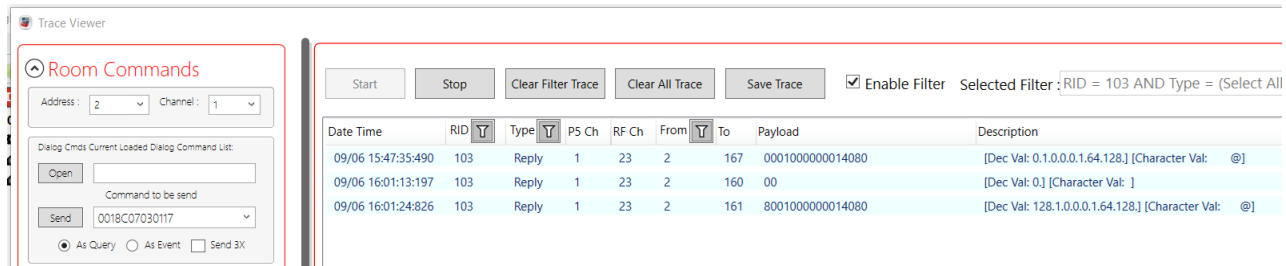
You need to send command 0018D0703011780 to set offset 23 to value 0x80 to set the DE bit, then read it back with the 0018C07030117 to verify it changed.
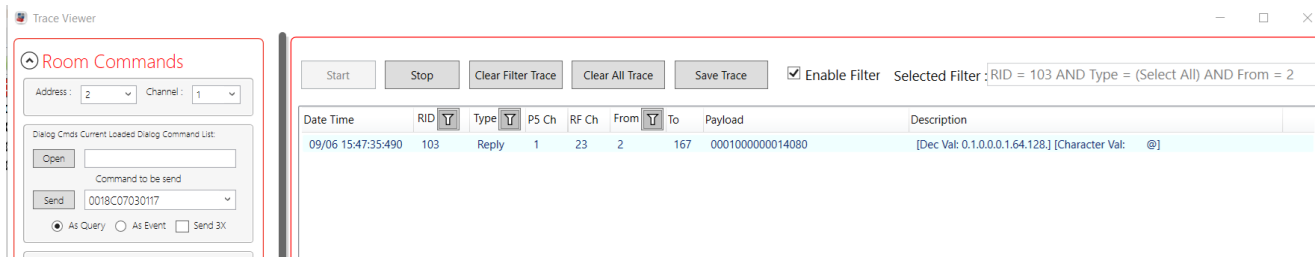
Now test if you can dim L510. If so, you need to update INNTool, so that it enables the dimming in L510.

3. The light fixture connected to the L510 is flickering.

Possible Reasons:

The L510 type (.F or FET or.T or Triac) being used does not match the requirements of the lamps/bulbs being controlled. What kind of light lamp/bulb is being controlled, and does the manufacturer of the lamp/bulb recommend Forward or Reverse phase control. If the lamp/bulb fixture manufacturer recommends using a "Reverse Phase FET based "dimmer, an L510.F should be used. If the lamp/light fixture manufacturer recommends using a "Forward Phase Triac based" dimmer, an L510.T should be used.

In general:

- Incandescent bulbs: Can be controlled by either forward or reverse phase dimmers, so either the L510.F or L510.T can be used.

- LED bulbs: Can be controlled by either forward or reverse phase dimmers. Generally, it will perform better in the reverse phase because of the characteristics of LED drivers. You will likely get better dimming performance using the L510.F.

- MLV (Magnetic Low Voltage): Can only be controlled by forwarding phase dimmers due to potential component damage from "kickback" voltage when current is interrupted in the reverse phase, so the L510.T should be used.

- ELV (Electronic Low Voltage): Can only be controlled by reverse phase dimmers due to the characteristics of electronic transformers, where the forward phase could result in poor performance, so the L510.F should be used.

However, you should always follow the recommendations /requirements of the lamp/bulb manufacturer.

4. If the flickering only occurs when the L510 output dims to a low light output level, you can try increasing the L510 Minimum Dim Level setting. This setting limits how low the Triac/FET output of the L510 is allowed to be dimmed down.

To use EngINN:

1. In the Deployment Data section, select the desired room (102 in this example), then select the desired L510 (L510.F with Address 2 in this example) and click the Configure button.
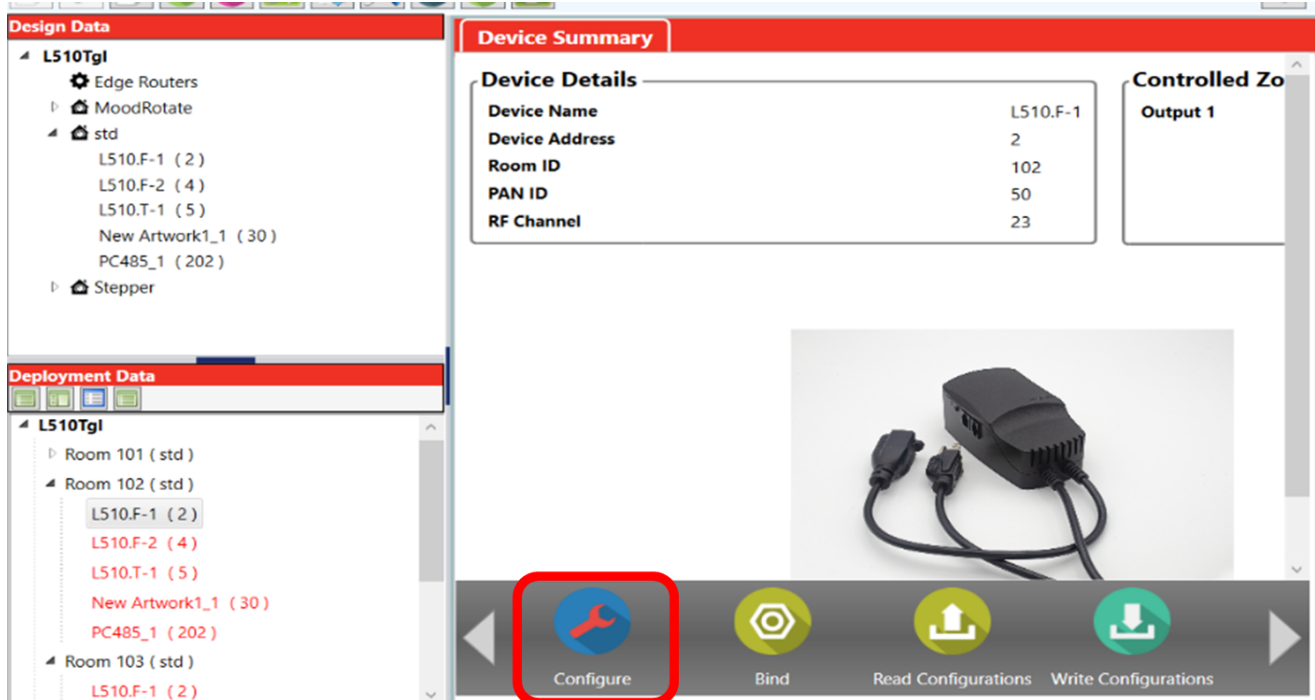
2. Expand the Light Output Configuration to view the details. The current Minimum Dimming level in% that is supposed to be set in the device is displayed in the Dimming section. It is 5% in the below example.
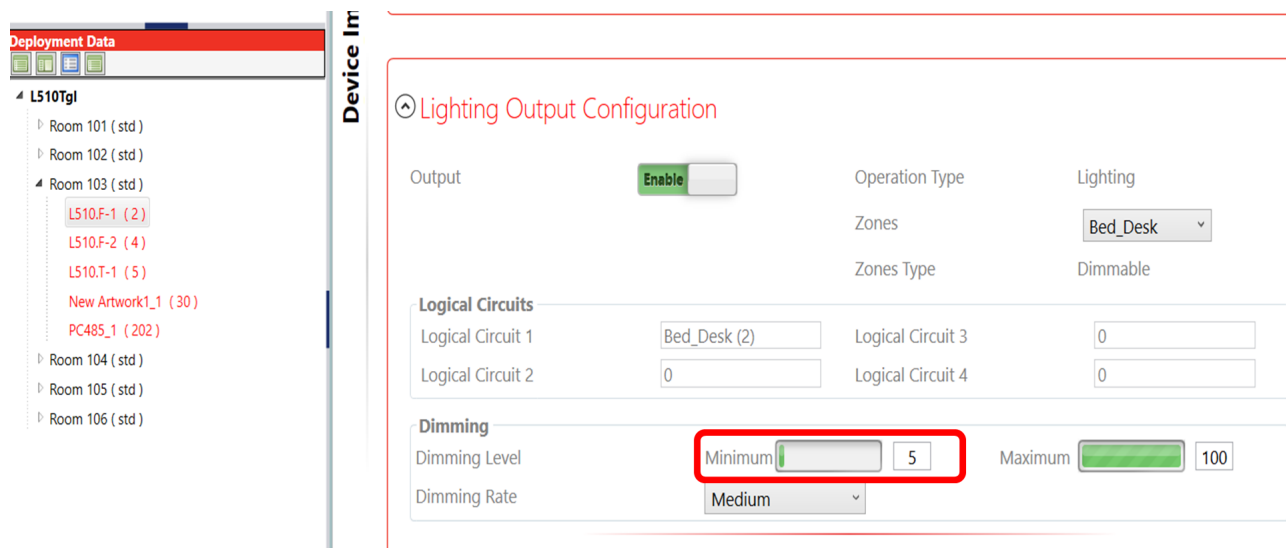

Try increasing the Minimum level to a higher% value, 20%, for example. You can use the slider control or manually enter the desired value. When you change the value, the "Commit To Room Type" and "Make New Room Type" options will become available because you have changed the Min Dim Level from what is currently stored in EngINN.

• If you think you will be applying this change to ALL L510.F s in all rooms that are using the defined Room Type ("Std" room type in this example), click the "Commit To Room Type" button.

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- If it is only this one room or a handful of rooms where you need to adjust the L510 Min Dim level, or you want to test just 1 room before applying the change to all rooms, consider creating a new Room Type and assigning the L510's in the selected rooms to this new room type. Click the "Make New Room Type" option.
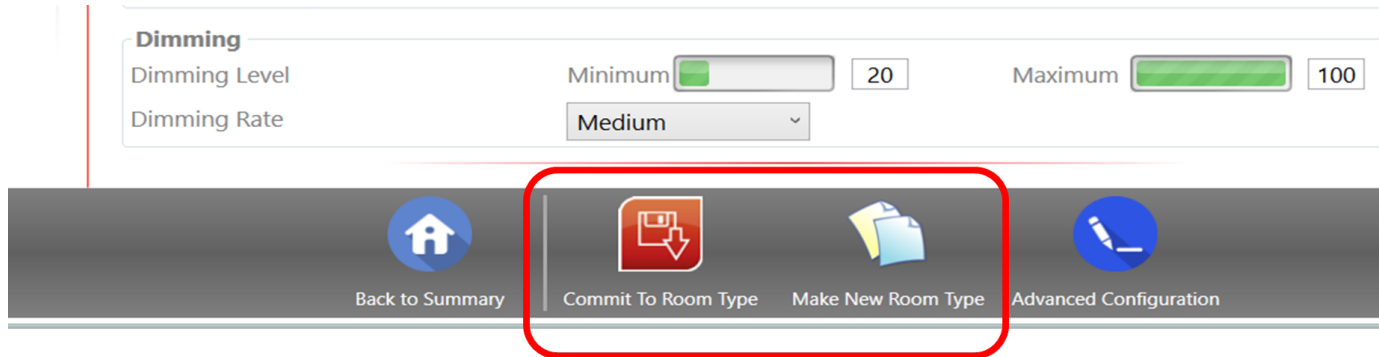

Now that you have changed to the existing room type or created a new one, you need to push the new configuration to the L510.

Click the "Back to Summary" button and the "Write Configurations" button to upload the changes to the L510. When the upload is finished, dim the L510 output to its minimum level and see if the flickering has stopped. If it is still flickering, you can try increasing the Min Dim Level to a higher level.

You can also send a dialog command from the EngINN Trace Viewer to the L510 to directly adjust the Min Dim Level first, then once you find the correct level, update this in EngINN to update the INNproj file.

If using EngINN with a PC503:

1. Select the desired L510 in the desired room in the Deployment Data section. In this example, an L510.F in Room 103 with address two is selected.
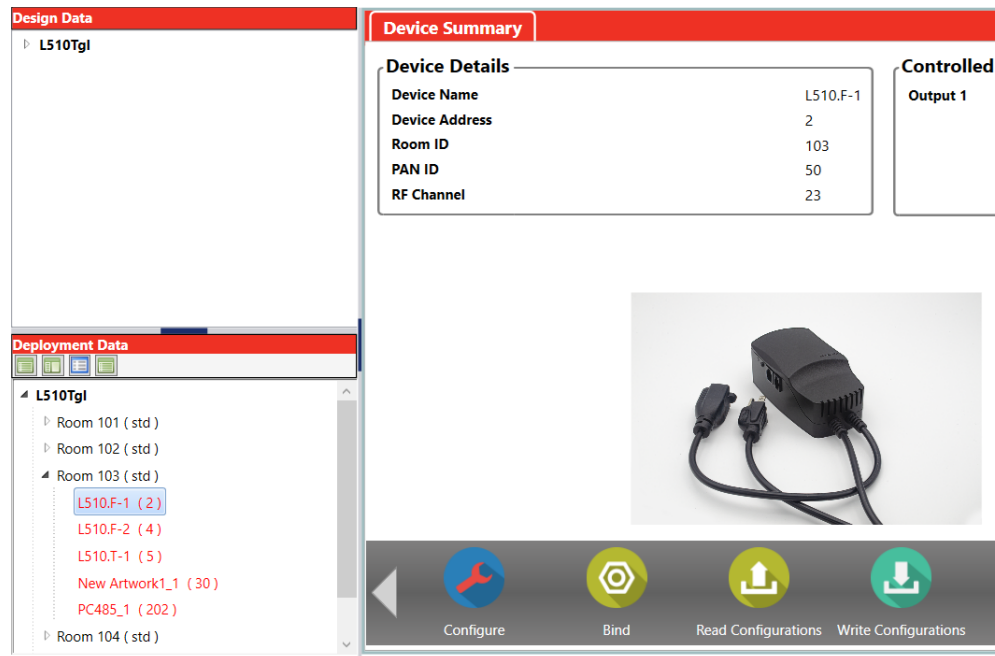
2. Open the EngINN Log Viewer (also called Trace Viewer) by clicking the "Show Log Viewer" button. The "Enable Filter" check–box should be enabled with the Room ID filter already enabled (103 in this example).
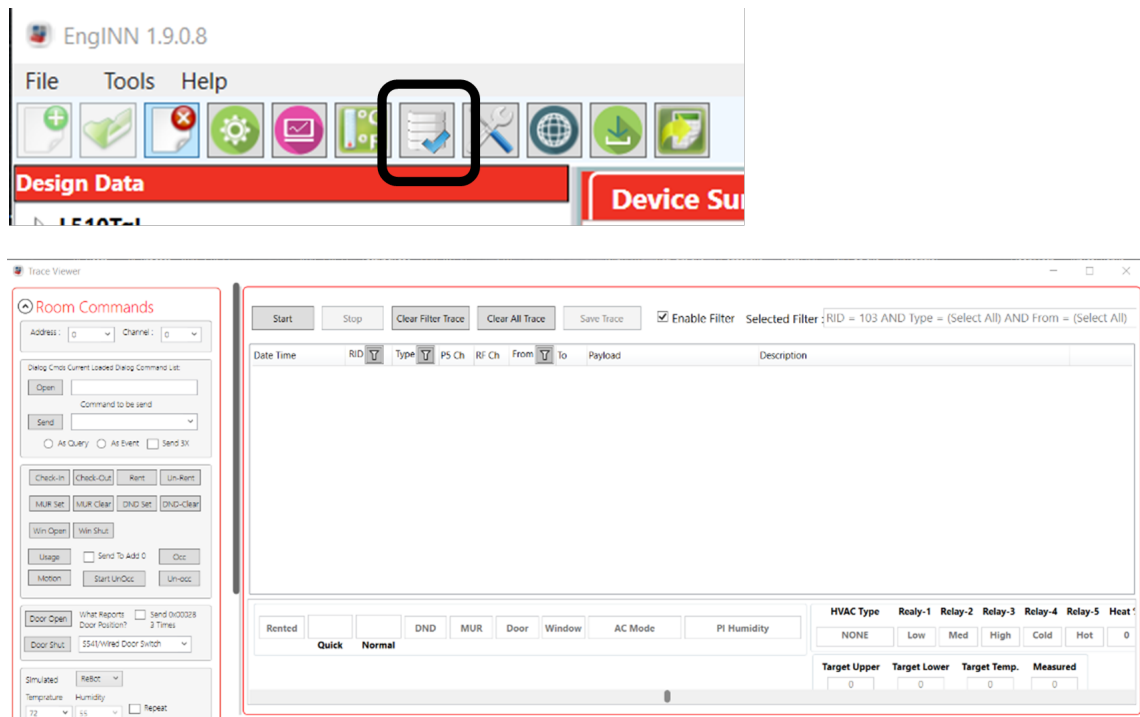
3. On the trace screen in the right–hand corner, click the Start button, uncheck all the addresses except for L510 from the "From" filter, and click OK. In this example, it's Address 2. This will display only messages from l510 Address 2 in the selected Room.This makes it easier to see the responses from the L510.

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4. In the "Room Commands" section, set the Address and P5 channel to that used by the L510 (Add 2, P5 Chan 1 in this example), check the "As Query" option, and enter the command "0018C07030114" into the "Command to be send" field. Command 0018CXXYYZZWW reads Offset WW in Registry XX:YY: ZZ where these are in Hexadecimal. 0018C07030114 is reading Registry 7:3:1 Offset 20 Min Dim Level.

5. Click the Send button to send the command. You should see the reply appear in the trace section on the right. The reply was "01FF03C001000000" in this example. The first two values, 01, is the reply to the 0018C07030114 command. It is in Hexadecimal, and 0x01 = 1 decimal. So the current 7:3:1:20 Min Dim Level is 1. The 7:3:1:20 value is actually a 0-255 value and this value in percent% is (0-255 value)/255 X 100. So a value of 1 is 1/255 X 100 = 0.4%.

6. Now send the CBL32 Registry. Write the command to change the Min Dim Level to 20%. 0018DXXYYZZWWVV is the CBL32 Write Registry command. XXYYZZ is the desired CBL32 Registry, WW is the Offset of the Registry, and VV is the value to write. The command to send to change 7:3:1:20 Min Dim Level to 20% is 0018D07030114330018D is the Registry write command. 07030114 is Registry 7:3:1:20 Min Dim Level. The desired 20% scaled to a 0-255 range is 20/100 X 255 = 51 decimal. 51 = 0x33 hex.

So the command to send is 0018D0703011433. In the below image, the command was sent and acknowledged.

Then send the 0018C0703O114 command again to read the value to make sure it was changed. The first byte of the reply was 0x33, which is 20%. Now dim the output to its lowest setting and see if the flickering stops. If it is still flickering, try a higher value until you get the flickering to stop.

Regulatory Statements

This equipment has been tested and found to comply with the limits for a Class B digital device, according to Part 15 of the FCC Rules. These limits are designed to protect reasonably against harmful interference in residential installations. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used as per the instructions, may cause harmful interference to radio communications. There is no guarantee. That interference, however, will not occur in a specific installation. Suppose this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off. In that case, 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 is connected.

- 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 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. Please note that changes or modifications not expressly approved by the party responsible for compliance could void the user's author-ity to operate the equipment.

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L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique 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;

2. L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

FCC RF Exposure Statement
This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. In order to avoid the possibility of exceeding the FCC radio frequency exposure limits, this equipment should be installed and operated with minimum distance 20 cm (7.6 inches) between the antenna and your body during normal operation. Users must follow the specific operating instructions for satisfying RF exposure compliance.

ISED RF Exposure statement
This equipment complies with ISED RSS-102 radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20 cm (7.6 inches) between the radiator and any part of your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
Pour se conformer aux exigences de conformité ISED RSS-102 RF exposition, une distance de séparation d'au moins 20 cm doit être maintenue entre l'antenne de cet appareil et toutes les personnes. Lanceurs ou ne peuvent pas coexister cette antenne ou capteurs avec d'autres.