Model: Wireless Charging Module

User's Manual

March 7, 2024

REVISION 2

Wireless Charging Module model A (WCM_tx1)

FCC ID: L2C0091TR

IC ID: 3432A-0091TR

Wireless Charging Module model B (WCM_tx2)

FCC ID: L2C0092TR

IC ID: 3432A-0092TR

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Purpose	The Wireless Charging Module version WCM_tx1, Variant A (forward compatible form factor) charges consumer electronics devices wirelessly by supplying power under the Wireless Power Consortium (WPC) Qi v1.3 charging standard. The Wireless Charging Module version WCM_tx2, Variant B (forward compatible form factor) charges consumer electronics devices wirelessly by supplying power under the Wireless Power Consortium (WPC) Qi v1.3 charging standard.
User Directions	WCM_tx1 and WCM_tx2 have no physically exposed interfaces to the customer. The module will be installed in the vehicle console underneath a mat made of rubber or other material with low electrical conductivity. The mat is the A surface that the customer places their compatible consumer electronics device onto (interface surface). Upon detecting the presence of an object on the interface surface, the WCM provides a small amount of power to the device at 128kHz operating frequency. If the device is a compatible consumer electronics device, it will communicate to the WCM via amplitude modulation at 2kHz frequency, and charging will commence with the consumer electronics device controlling the operating point.
Model name	WCM_tx1, WCM_tx2

Wireless Charging

Warning Wireless charging may affect the operation of an implanted pacemaker or other medical devices. If you have one, it is recommended to consult with your doctor before using the wireless charging system.

Warning Remove all objects from the charger before charging your compatible smartphone. Objects, such as coins, keys, rings, paper clips, or cards, between the smartphone and charger may become very hot.

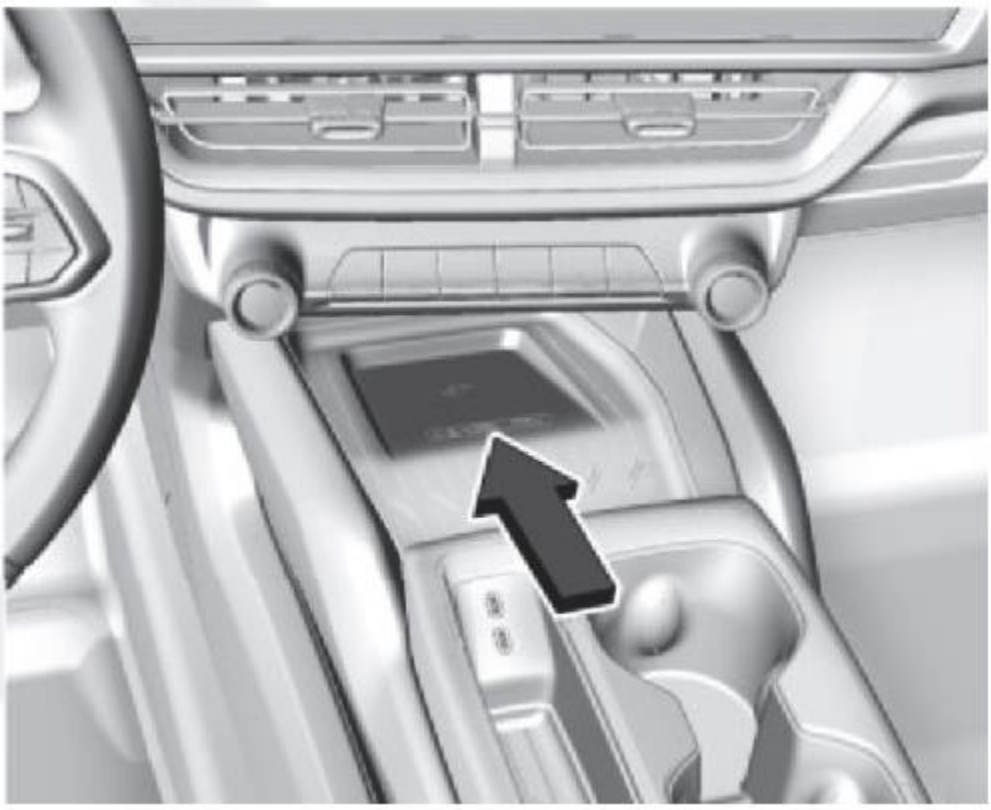
On the rare occasion that the charging system does not detect an object, and the object gets wedged between the smartphone and charger, remove the smartphone and allow the object to cool before removing it from the charger, to prevent burns.

If equipped and enabled, the vehicle has wireless charging in front of the center console storage bin. The system operates at 128 kHz and wirelessly charges one Qi compatible smartphone. The power output of the system is capable of charging at a

rate up to 3 amp (15W), as requested by the compatible smartphone. See Radio Frequency Statement (US/CAN) Radio Frequency Statement (MEXICO).

The vehicle must be on or in accessory mode. The wireless charging feature may not correctly indicate charging when a Bluetooth phone call is active.

The operating temperature is −40 °C (−40 °F) to 85°C (185°F) for the charging system and 0 °C (32°F) to 35°C (95°F) for the phone. A charging stopped alert may be displayed on the infotainment screen, if the wireless charger or smartphone are outside of normal operating temperature. Charging will automatically resume when a normal operating temperature is reached.



To charge a smartphone:

1. Confirm the smartphone is capable of wireless charging.

2. Remove all objects from the charging pad. The system may not charge if there are any objects between the smartphone and charger.

3. Place the smartphone face up against the rear of the charger. A thick smartphone case may prevent the charger from working, or reduce the charging performance.

4. A green  appears on the infotainment display next to the phone icon when the smartphone is detected.

The smartphone may become warm during charging. This is normal. In warmer temperatures, your phone may take longer to charge.

Troubleshooting Wireless Charging

If a smartphone is placed on the charger and a yellow  appears, remove the smartphone and any objects from the pocket. Turn the smartphone 180 degrees and wait a few seconds before placing/aligning it on the pocket again.

If a smartphone is placed on the charger and a red  appears, the charger and/or the smartphone is overheated. Remove the smartphone and any objects from the charger in order to cool the system.

For vehicles with wireless phone projection, the smartphone may overheat during wireless charging. The smartphone may slow down, stop charging, or shut down to protect the battery. The phone may need to be removed from its case to prevent overheating. The  may flash while the phone is cooling down enough for wireless charging to automatically resume. This is normal. Individual phone performance may vary.

Certain vehicle and smartphone accessories may not be compatible with the wireless charging system. See your dealer for additional information.

Radio Frequency Statement (US/CAN)

FCC

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) The device must accept any interference received, including interference that may cause undesired operation.*

- *Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.*

EMC

- *Class B*
- *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 is connected.*
- *—Consult the dealer or an experienced radio/TV technician for help.*

RF exposure safety

This device complies with the FCC RF exposure limits and has been evaluated in compliance with portable exposure conditions.

- *The equipment must be installed and operated and was evaluated with minimum distance of **30 mm (3 cm.)** of the human body. This distance or greater is maintained by vehicle design and ensures compliance by normal use of the vehicle.*

General info to the user

- (c) The provisions of paragraphs (a) and (b) of this section do not apply to digital devices exempted from the technical standards under the provisions of § 15.103.
- (d) For systems incorporating several digital devices, the statement shown in paragraph (a) or (b) of this section needs to be contained only in the instruction manual for the main control unit.
- (e) In cases where the manual is provided only in a form other than paper, such as on a computer disk or over the Internet, the information required by this section may be included in the manual in that alternative form, provided the user can reasonably be expected to have the capability to access information in that form.

§ 18.213 Information to the user.

The Wireless Charger may cause interference with other RF devices operating in the 128 KHz or 13.56 MHz frequencies in near proximity.

The Wireless Charger is built into the console of the motor vehicle and is not serviceable by the user. If you need maintenance for your Wireless Charger, please consult the vehicle dealer.

If the vehicle user suspects interference of the Wireless Charger with another device, it is recommended to relocate the second device to another location within the vehicle. The wireless charger is built into the vehicle console and cannot be moved.

ISED CANADA

- *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 harmful interference, and*
- *(2) The device must accept any interference received, including interference that may cause undesired operation.*
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- *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.*
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- *Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.*

  RF exposure safety
  This device complies with the ISED RF exposure limits and has been evaluated in compliance with portable exposure conditions.
- *The equipment must be installed and operated and was evaluated with minimum distance of **30 mm (3 cm.)** of the human body. This distance or greater is maintained by vehicle design and ensures compliance by normal use of the vehicle.*
- ***CAN ICES-003***

- *Les changements ou modifications non expressément approuvés par la partie responsable de la conformité peuvent annuler le droit de l'utilisateur à utiliser l'équipement.*

Sécurité d'exposition aux RF

- *Cet appareil est conforme aux limites d'exposition RF d'ISED et a été évalué conformément aux conditions d'exposition portable.*
- *L'équipement doit être installé et utilisé à une distance minimale de **30 mm (3 cm.)** du corps humain. Cette distance ou plus est maintenue par la conception du véhicule et assure la conformité par l'utilisation normale du véhicule.*
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CAN NMB-003

- *Cet appareil numérique de classe B est conforme à la norme canadienne NMB-003.*