

## 102893 Key Fob Owner's Manual

### Theory of Operation

The Key Fob Transmitter combines a high-performance synthesized transmitter to form a highly reliable, yet cost-effective RF remote control transmitter. The transmitter's advanced synthesized architecture delivers superior stability and frequency accuracy while minimizing the effects of temperature and body proximity.

The Key Fob operates in the following manner: when a button is pressed on the Key Fob, power is applied to the internal circuitry and the encoder IC is enabled. The encoder then detects the logic states of the button data lines. The encoder data is used to modulate the transmitter, which, through the antenna, conveys the data into free space. The transmission cycle continues until the button is released. On the receiver side, a decoder IC is used to check the transmitter's address bits against the address saved in memory. If a match is confirmed, and if the decoder has permission to recognize the specific button being pressed, the decoder's outputs are set to replicate the transmitter's button states. These outputs can then be used to activate external circuitry required by the application

### Setting the Transmitter Address

The transmitter address is set at the factory or by the OEM using the final device and the end user should not attempt to modify this value, attempts to do so may render the Key Fob useless.

### Button Assignments

The Key Fob is available in five button configurations. Those configurations are determined by the receiving hardware and cannot be modified.

### Contention Considerations

It is important to understand that only one transmitter at a time can be activated within a reception area. While the transmitted signal consists of encoded digital data, only one carrier of any particular frequency can occupy airspace without contention at any given time. If two transmitters are activated in the same area at the same time, then the signals will interfere with each other and the decoder will not see a valid transmission, so it will not take any action.

### Battery Replacement

The transmitter utilizes a standard CR2032 lithium button cell. In normal use, it provides several years of operation. Access for replacement is accomplished by unscrewing the two halves of the Key Fob. Once the unit is open, remove the battery by sliding it out from beneath the retainer.

There may be the risk of explosion if the battery is replaced by the wrong type. Replace it with the same type of battery while observing the same polarity, with the positive contact facing out and away from the printed circuit board.

### INSTRUCTION TO THE USER

This device complies with Part 15 of the FCC Rules and Industry Canada license-exempt RSS standard(s). Operation of this device 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.

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.

The user is cautioned that changes and modifications made to the equipment without the approval of manufacturer could void the user's authority to operate this equipment.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radioexempts 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.