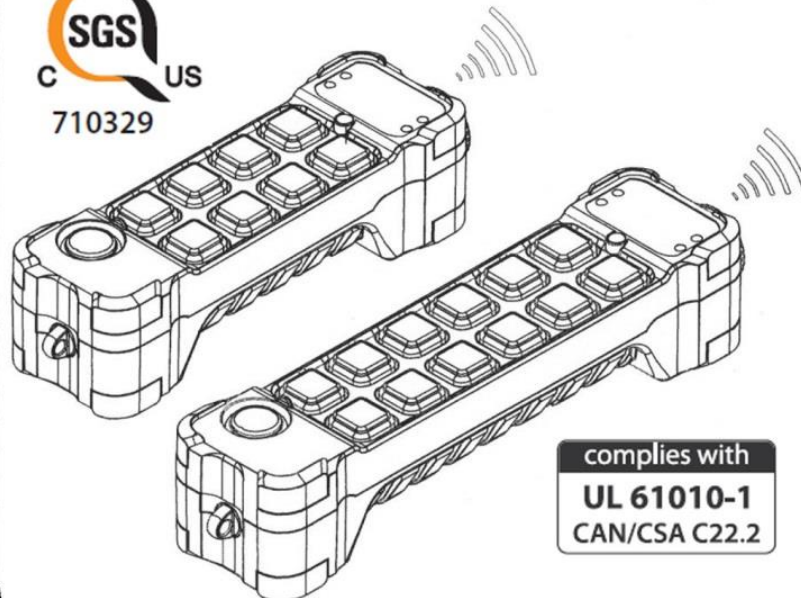




**INMOTION Controls, Inc.**  
**Radio Remote Control System**  
**For Operation in Explosive Areas**  
**Class I, II, III, Division 2**  
**Groups A-G**

# **User Manual**

**K200NC2EQX, K202NC2EQX,  
K400NC2EQX, K404NC2EQX,  
K600NC2EQX, K606NC2EQX,  
K806NC2EQX, K808NC2EQX,  
K1010NC2EQX, K1212NC2EQX**



complies with  
**UL 61010-1**  
CAN/CSA C22.2

**September 2016**

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Guarantee, service, repairs and maintenance

Inmotion Controls, Inc. products are covered by a one year guarantee/warranty against material, construction and manufacturing defects. During the guarantee/warranty period, Inmotion may replace the product or faulty parts. Work under guarantee/warranty must be carried out by Inmotion Controls, Inc.

The following are NOT covered by the guarantee/ warranty:

- Faults resulting from normal wear and tear
- Parts of a consumable nature.
- Products that have been subject to unauthorized modifications
- Faults resulting from incorrect installation and use
- Condensation and water damage

Maintenance:

- Repairs and maintenance must be carried out by qualified personnel.
- Use spare parts from Inmotion Controls, Inc. only.
- Contact your representative if you require service or other assistance.
- Keep the product in a dry, clean place.
- Keep contacts and antennas clean.
- Wipe off dust using a slightly damp, clean cloth.

## **Chapter 1: Customer Information**



Thank you for purchasing an Inmotion Controls, Inc. radio remote control.

### **READ ALL INSTRUCTIONS CAREFULLY BEFORE MOUNTING, INSTALLING AND CONFIGURATING THE PRODUCT.**

This manual includes general information concerning the operation of the radio remote control transmitter.

#### **General Information on Safety**

- Persons under the influence of drugs and/or alcohol and/or other medicine that impairs their reaction may not assemble, disassemble, install, put into operation, repair or operate the product.
- All conversions and modifications of an installation/system must conform to the relevant safety requirements. Work on the electrical equipment must be performed only by qualified, authorized personnel and in accordance with the relevant safety requirements.
- In the event of malfunctioning, visible defects or irregularities, the product must be stopped, switched off and the relevant master switches must be switched off.

Symbols and Definitions for Warnings	
	Warning against hazardous situation
	Warning against electrical voltage

#### **FCC Part 15 TX- (FCC ID: RN489896162JK915S)/RX-(RN489896162JK915 )**

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 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.

Additional information on labeling and user information requirements for part 15 devices can be Found in KDB Publication784748 available at the FCC Office of Engineering and Technology (OET) Laboratory Division Knowledge Database (KDB) <http://apps.fcc.gov/oetcf/kdb/index.cfm>.

## **Chapter 2: General Description**

### **FCC Part 15**

\*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.

\*You are cautioned that changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

NOTE: 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, used 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.

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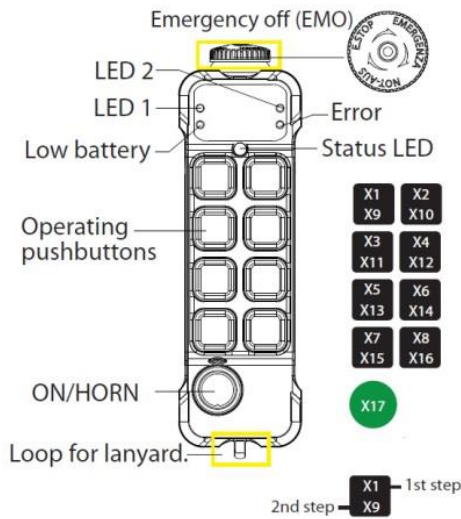
### **IC Statement**

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) 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.

## Chapter 2: General Description

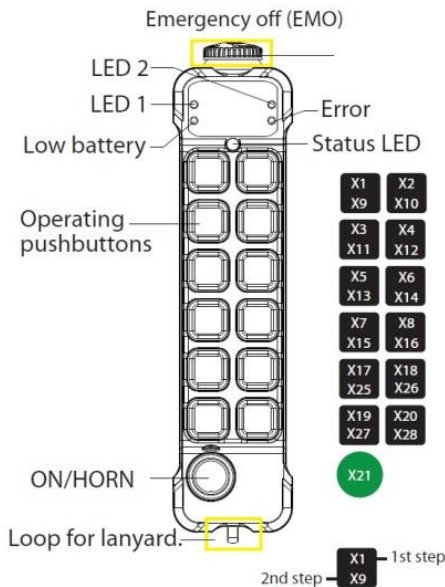
The K series transmitter comes in different versions, featuring 2~12 pushbuttons. The transmitter also features 2-step pushbuttons. Both steps of each pushbutton can operate different functions like controlling the speed of a movement, step 1: slow, step 2: fast.



### Technical Data

#### Transmitter

Frequency Range	902.5~927.5 MHz
Modulation Method	2 GFSK
Typical Operating Range	300 Feet
Control System	PLL Based
Antenna Impedance	50Ω
Typical response time for Stop Command and commands	50ms ~ 100ms
Power Supply	AA Ni-MH 1.2V x2
Antenna	Internal
Average power consumption	36mA@DC2.4V
Radio-frequency Power	≤25mW
Operating & storage temperature	(-4°F)~(+185°F)
Protection degree	IP65
Dimensions	7.6"x2.24"x2.0"
Weight (including batteries)	11.42 oz.
Housing material	PA6 (30% GF)



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Typical Operating Range	300 Feet
Control System	PLL Based
Antenna Impedance	50Ω
Typical response time for Stop Command and commands	50ms ~ 100ms
Power Supply	AA Ni-MH 1.2V x2
Antenna	Internal
Average power consumption	36mA@DC2.4V
Radio-frequency Power	≤25mW
Operating & storage temperature	(-4°F)~(+185°F)
Protection degree	IP65
Dimensions	9.1"x2.24"x2.0"
Weight (including batteries)	13.75 oz.
Housing material	PA6 (30% GF)

## Chapter 3: User Instructions

### Start/ Horn switch

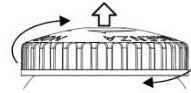
The K series transmitter has a Start/Horn pushbutton on the bottom left side. The Start/Horn switch has 2 functions:

1. Press to Start.
2. Press for horn while operating.



### Start the transmitter in operating mode

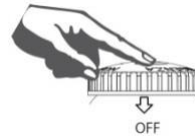
1. Turn to release the Emergency Off button.
2. Press the "START" button.



### Turning the transmitter off

Turn the transmitter off by completely pressing the Emergency Off button. The transmitter turns off.

All relays deactivate.



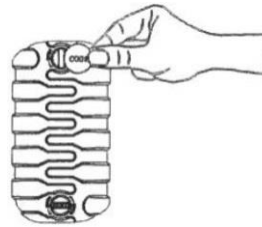
**WARNING: Replacing Batteries with any type other than Ni-MH will impair intrinsic safety!!!**

### Replacing Batteries

**Battery Type 2 x 1.2Volt Ni-MH (AA)**

**Note: Replacing batteries voids warranty.**

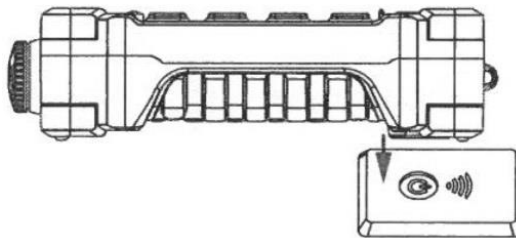
Open the battery cover by unscrewing the 2 screws on the backside of the battery cover.



<b>WARNING-EXPLOSION HAZARD</b>	<b>ATTENTION RISQUE D'EXPLOSION</b>
BATTERIES MUST ONLY BE CHANGED IN AN AREA FREE OF IGNITIBLE CONCENTRATIONS.	les batteries doivent seulement être changer dans une zone ou il n'y a pas de concentration de produits inflammable
Use AA NI-MH 1.2V rechargeable batteries ONLY	Utiliser seulement les batterie rechargeables AA NI-MH 1.2V

### Wireless Charging

1. Turn the transmitter off by completely pressing the emergency off button.
2. Place Transmitter on top of the Wireless charging pad. You will hear a beep, the battery LED will flash every 1 second. When it is finished charging the battery LED flashes every 5 seconds.
3. Remove the transmitter from the pad.

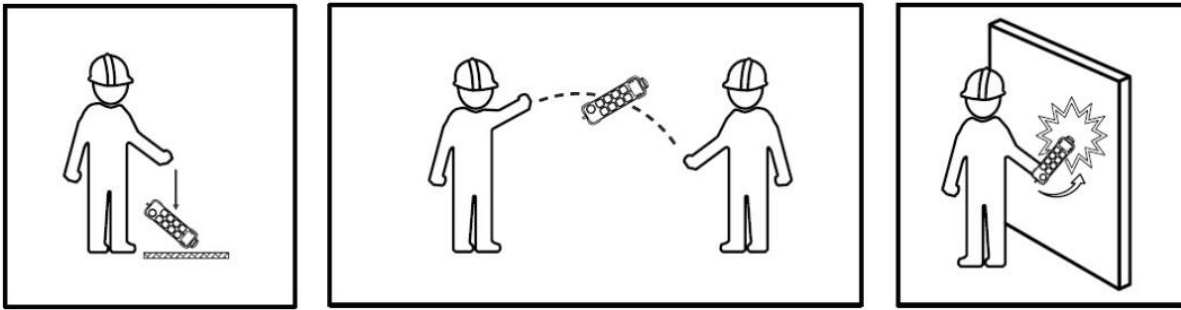


## Chapter 4: Troubleshooting

LED Signal			Failure Analysis	Solution
	● Short █ Long			
	Red LED	Green LED	-Corrosion on the Battery Terminals. -Low Battery. -Damaged Batteries.	-Clean the Battery Terminals. -Replace the batteries.
Status				
	●●●●●●			
	Red LED	Green LED	-Transmitter is not Communicating with the receiver.	-Check the power supply of the receiver. -Check the fuse in the receiver.
Status		●●●●●●		
	Red LED	Green LED	-Pushbutton damaged	-Contact dealer.
Status				
	█●●			
	Red LED	Green LED	-RF Error	-Check the antenna and make sure it is not loose. -Change the RF Module. -Contact dealer.
Status				
	█●●●			
In Charging Mode				
	Red LED	Green LED	-Battery not found. -Battery damaged. -Wrong type batteries.	-Contact dealer.
Status				
	●●● ●●●			
	Red LED	Green LED	-Battery is overheating.	-Contact dealer.
Status				
	●●●●●●			

## Chapter 5: Zero-G Safety

### Zero-G Safety



The zero-g safety function can prevent the uncontrolled output of commands in specific emergencies. The G sensor can detect if the transmitter receives a hard impact, dropped or thrown. These features can deactivate either the complete radio system or only the safety-relevant function relays. Alternately, a pre-defined output (e.g. crane horn) can be triggered. Please contact your dealer for special settings.