Inmotion Controls Inc K1212 Plus Series Radio Remote Control Instruction Manual

Contents

Inmotion Controls Inc

Inmotion Controls Inc K1212 Plus Series Radio Remote Control

Customer Information

Thank you for purchasing an Inmotion Controls, Inc. radio remote control.
READ ALL INSTRUCTIONS CAREFULLY BEFORE MOUNTING, INSTALLING AND CONFIGURING 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, and 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 (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:

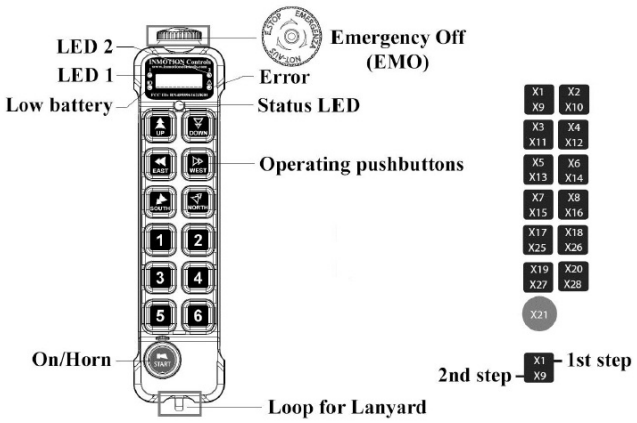
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from the to which the receiver is connected.
- Consult the dealer or an experienced Radio/TV technician for help.

Additional information on labeling and user information requirements for Part 15 devices can be found in KDB Publication 784748 available at the FCC Office of Engineering and http://apps.fcc.gov/oetct/kdb/index.cfm.

IC Statement (IC: 10821A-89896162902)/RX-(10821A-89896162901)
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.

General Description

The K Plus Series transmitter comes in different versions, featuring 10 or 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.



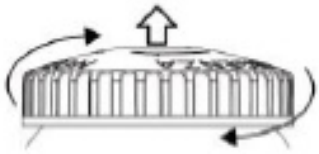
Start/ Horn switch
The K Plus transmitter has a Start/Horn pushbutton on the left side. The Start/Horn switch has 2 functions:

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

Start the transmitter in operating mode

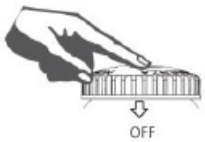
1. Turn to release the Emergency Off button.

2. Press the ”START” button.



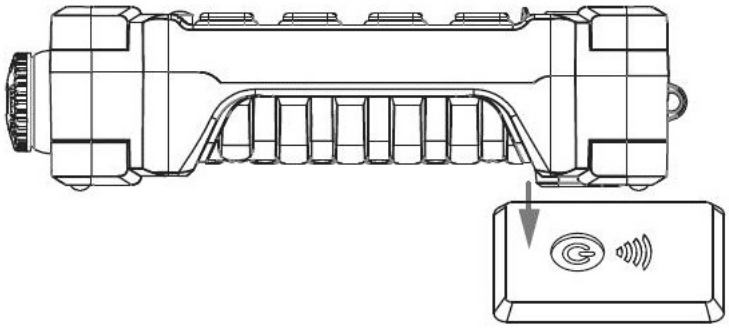
Turning the transmitter off

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



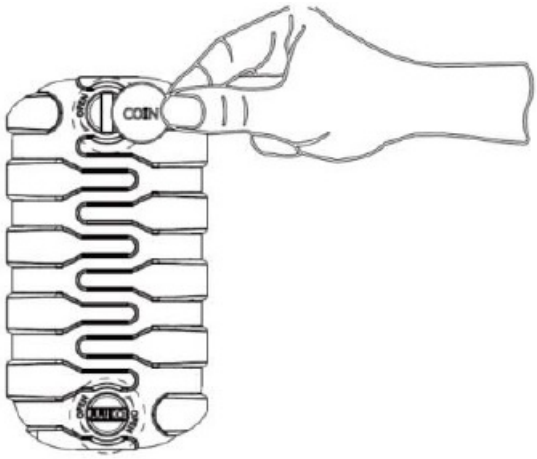
How to use Qi wireless charging

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

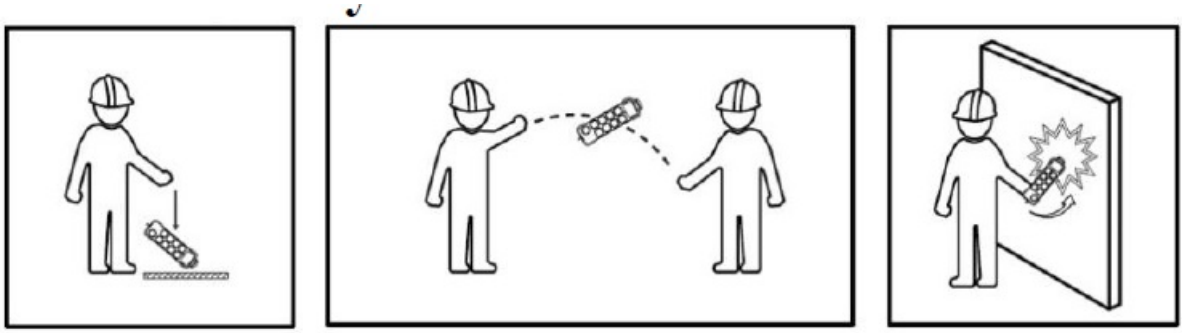


Changing the batteries:
BATTERY TYPE: AA (HR6) Ni-MH x 2

The included batteries are rated for up to 1500 recharge cycles and should not need to be removed for many years of service.
Warning: Do not replace batteries with any type other than Ni-MH. Use only 2000mAH batteries.



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.

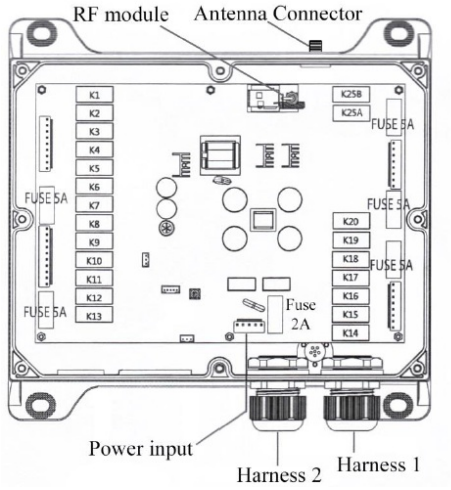
Technical Data

Transmitter

Frequency Range	902.5 ~ 927.5MHz
Modulation method	2GFSK
Typical operating range	300 feet
Control system	PLL (Phase Lock Loop)
Antenna impedance	50 ohms
Typical response time for commands	50ms~100ms
Power Supply	AA(HR6) Ni-MH x 2
Antenna	Internal
Average power consumption	38ma@2.5VDC (default setting)
Radio-frequency power	<15dBm (default setting)
Operating and storage temperature	-4°F ~ 131°F / -40°F ~ 149°F
Protection rating	IP65
Dimensions	9.06” x 2.25” x 2.00” (10-12 buttons)
Weight (including battery)	Approx. 13.75 ounces
Housing material	PA6 (30% Glass Filled)

Receiver

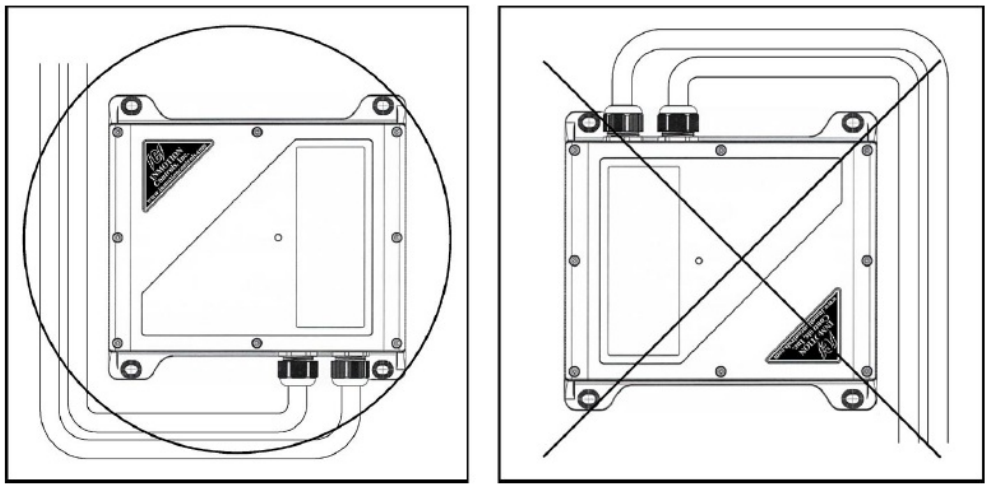
WARNING! The receiver must NOT be opened by any other than a qualified installer. Make sure to turn the electricity off before opening the receiver



Technical Data

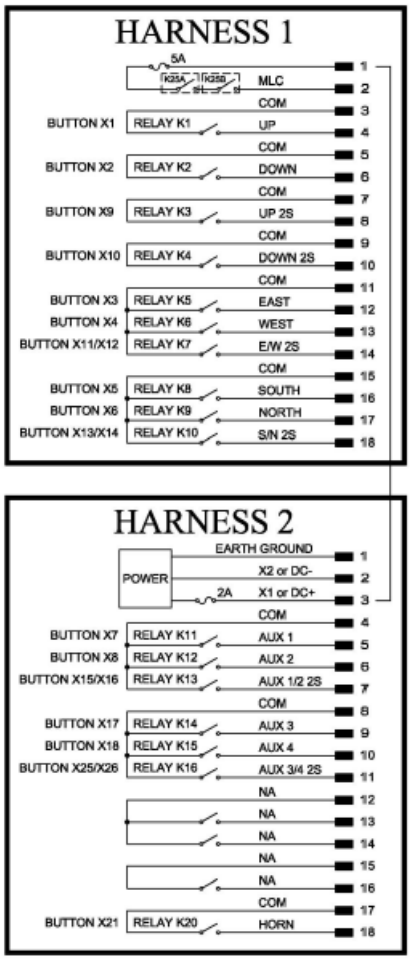
Frequency	902.5 ~ 927.5MHz
Modulation Method	2GFSK
Sensitivity	-112dBm@baud 1.2Kbps
Control System	POLL
Antenna impedance	50 ohms
Typical response time for commands	50mS ~ 100mS
Input Power (AC)/Power Consumption	90 ~ 240V AC, 50/60Hz (10.4 Watts)
Input Power (DC)/Power Consumption	90 ~ 160V DC (22.4 Watts)
Antenna	External
Standby power	0.97W
Operating and storage temperature	-4°F~131°F/-40°F~149°F
Protection degree	IP 65
Dimensions	10.71” x 10.23” x 3.78”
Weigh	6.5 Lbs.
Housing material	PA6 (30% Glass Filled)

Instruction guide

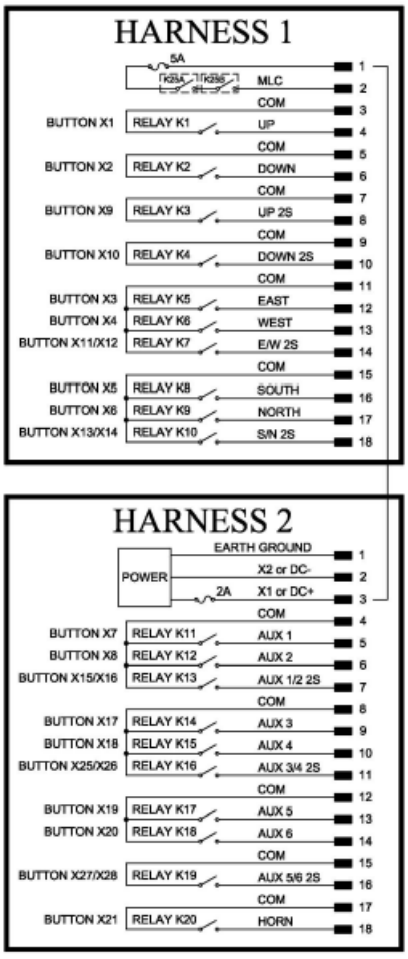


Mount Enclosure in the orientation shown above. Do not mount upside down. The Receiver Enclosure should be mounted in an area clear of large metal objects, away from crane electrification and with an ideally unobstructed line-of-sight to the operator’s area

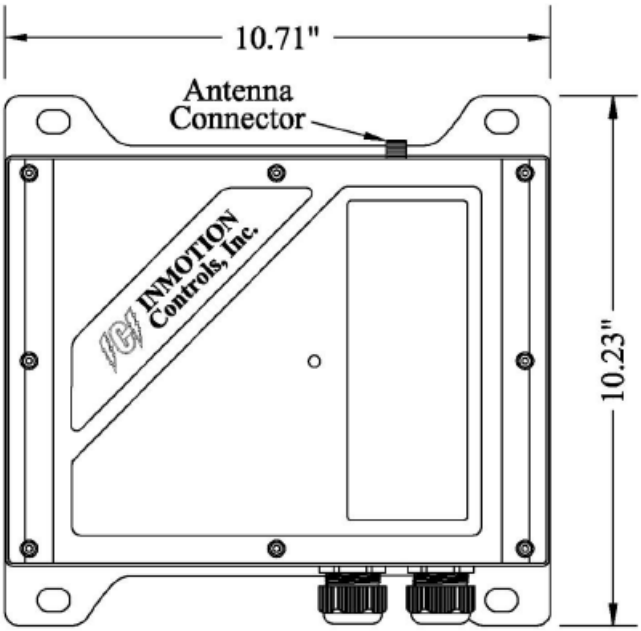
K1010 Plus Wiring Diagram



K1212 Plus Wiring Diagram



Receiver Dimensions (Not to scale)



This product is certified to ISO/IEC Guide 17067, Conformity assessment— Fundamentals of product certification, System 3, and in accordance with Standard for Safety for electrical equipment for measurement, control, and Laboratory use – Part 1: General requirements CAN/CSA C22.2 No. 61010-1-12, 3rd Ed. + UDP 1: 2015 UL61010-1, 3rd Ed. Rev. July 15, 201

Troubleshooting

LED Signal (● Short, ▬ Long)			Failure Analysis	Solution
	Red LED	Green LED	-Corrosion on the Battery Terminals.	-Clean the Battery Terminals.
Status				
🔋	●●●●●●		-Low Battery.	-Replace the batteries.
⚠			-Damaged Batteries.	
	Red LED	Green LED	-Transmitter is not Communicating with the receiver.	-Check the power supply of the receiver.
Status		●●●●●●		-Check the fuse in the receiver.
🔋				
⚠				
	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. -Contact Dealer.
Status				
🔋				
⚠	▬●●●			
	Red LED	Green LED	-G-Force exceeded.	-Re-Start System.
Status				
🔋				
⚠	●●●●●●			

Receiver

Should an error occur, the LED of the receiver will indicate the cause.

LED Signal ● Short ▬ Long			Failure Analysis	Solution
Status	Red LED	Green LED	-RF error	-Check the antenna and make sure it is not loose. -Contact dealer.
	▬●●●			
Status	Red LED	Green LED	-Receiver is not powered.	-Check the fuse. -Check the power supply.

Status	Red LED	Green LED	
		▬	-The receiver is receiving data.

Accessories

Pushbutton Protector

Waterproof Case

Certified Product: Radio Remote Control Receiver

- **Certificate:** USTC/16/FAI/00096
- **SGS Reference**: 619432/01
- **Contract Numbe**r; 710329
- INMOTION Controls, Inc.
- www.inmotioncontrols.com
- 888-501-2220

Documents / Resources

	**Inmotion Controls Inc K1212 Plus Series Radio Remote Control** [pdf] Instruction Manual K1212 Plus Radio Remote Control, K1212 Plus, Radio Remote Control, Remote Control

References

- **User Manual**