

Radio Remote Controls

Airmark Series



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Airmark Overview

Overview

The Airmark radio was developed specifically for the overhead crane market. With over 60 years of radio design experience from acquiring Jay Electronique, we created Airmark as a simple, affordable, all-in-one radio solution to quote, sell, install, and service with minimal thought and effort. In our research and development of Airmark, we discovered the unnecessary complexity of ordering and installing radio/receiver solutions and the inflated cost of an a la carte approach. We knew the overhead crane industry deserved better. cTUVus listed to UL 61010-1 and CSA C22.2.

Efficient

- Control of the 3 motions of the crane with the 6 two step pushbuttons
- Narrow body transmitter for comfortable one-handed operation
- Built-in horn & warning lamp
- Quick and easy to install and maintain
 - » Prewired receiver (22 wires, 1.5m long cable)
 - » Transmitter / Receiver pairing without needing to access the receiver
 - » Automatic radio channel management



Reliable

- Full 2 Year Warranty on both Transmitters and Receiver
- Radio signal indication and scanning function
- Regulated or adjustable radio power for the best trade-off between range and battery consumption
- Rubber bumper for shock absorption if dropped
- Complete set of spare parts available

Flexible

- Standard 3 motion crane, auxiliary hoist, tandem trolley, and tandem crane
- Radio channel can also be selected manually, or one of three different automatic channel options
- A wide range of optional accessories



Features and Benefits

Features and Benefits

Pairing of transmitters

- Each system comes with 2 transmitters already paired
- Tandem trolley and crane applications are easily achieved by pairing a transmitter with two receivers
- Transmitter/Receiver can be paired without needing to access the receiver, thus avoiding climbing of the crane
- Pairing a new transmitter automatically replaces the first paired transmitter

Built-in horn to signal the start of crane motion

- Each receiver has 99 possible horn sounds that can either be manually chosen or set to automatically match the radio channel in use
- Sound of the horn can be set to either high or low
- A user will know by the sound which crane they are operating

Built-in warning lamp to signal

- Receiver is ON
- Receiver is Free or Assigned (for Tandem configurations)
- Receiver is Selected (during pairing)
- Pairing is in progress

Select the best radio channel

- Four options to make sure the best radio channel is selected
 - » Automatically selected at every startup
 - » Automatically changed in operation if another channel is more efficient
 - » Manually selected from 92 available channels
 - » Channel scan function is available to help select the best channel

Trade-off between radio range and battery life

- Self-adjusting radio power to limit battery consumption
- Manually reduce power to limit radio range

Tandem mode can be configured with different setting possibilities for:

- The selection of overhead crane A and B
 - » Tandem crane can be setup with a single tandem transmitter and dedicated transmitter for crane A and B limiting tandem control to single transmitter
 - » Tandem can be set up with dual tandem transmitters where each transmitter can control both systems
- The automatic or voluntary release of stopped overhead crane
- The automatic shutdown of the second overhead crane if the radio link with the first is lost

Protected startup by keystroke combination

- Pin code startup. Create a pin code to prevent unauthorized operators from driving the crane
- Pin code option to protect radio setting while allowing for operation without code

Sleep mode adjustable (1 to 99 min/sec.), or deactivated

Complete System

The Complete Airmark System

Right out of the box, Airmark by Conductix-Wampfler is a complete system and ready to go. Each Airmark system includes the following:

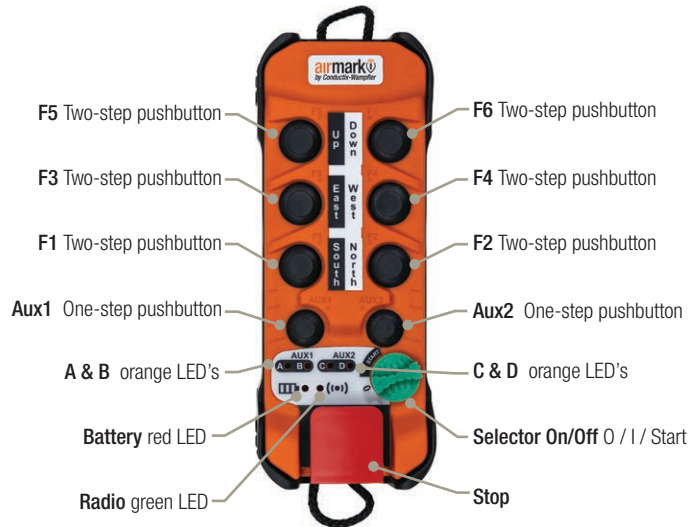
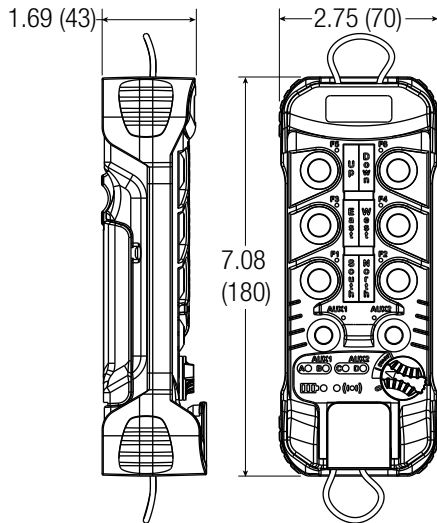
- One Airmark Receiver with built in horn and light
- Two Airmark 8 Button Transmitters
- Two sets of (2) AA Batteries
- Two sets of Button Decals
- Two Transmitter Neck lanyards
- Instructional Manual



Part Number	Description
JAY-MKP46B01	Two Airmark transmitters with, 433 Mhz Premium, 6 two-step pushbuttons, 2 one-step pushbuttons, 1 off/on/start, 1 mushroom button stop, supplied with 2AA batteries (per transmitter), 2 sets of directional decals, 2 neck lanyards for transmitter. Airmark Receiver, 433 Mhz, 48-230 VAC power supply, Relays: 1 start, and 12 functions, integrated horn and light, and fixed antenna. Installation Manual.

Spare Parts

Transmitter

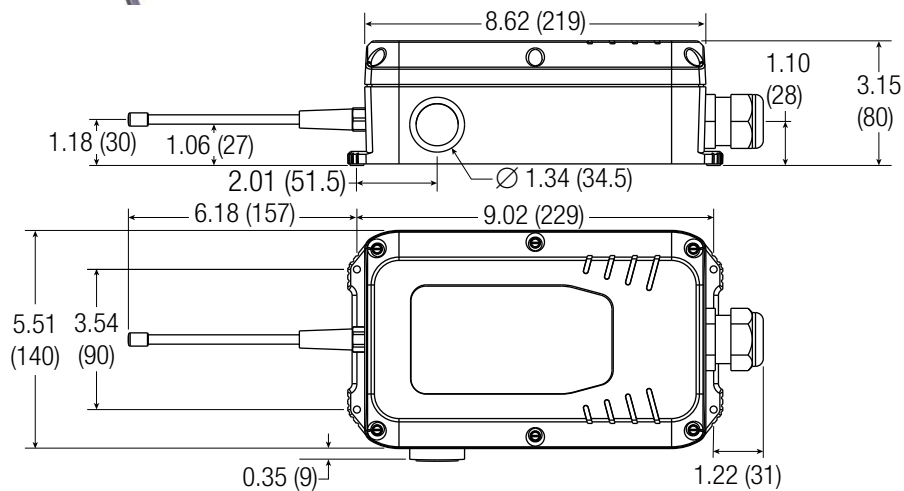


Part Number	Description
JAY-MKT4631	One Airmark transmitter with, 433 Mhz Premium 6 two-step pushbuttons, 2 one-step pushbuttons, 1 off/on/start, 1 mushroom button stop, supplied with 2AA batteries, 6 label kit arrows for buttons, neck strap for transmitter.

Receiver



Part Number	Description
JAY-MKR4MB10	Airmark Receiver, 433 Mhz, 48-230 VAC power supply, Relays: 1 start and 12 functions, integrated horn and light, and fixed antenna



Accessories

Accessories

Part Number	Description	Image/Information
JAY-OWE20	Removable 1-point lanyard	
JAY-UWE102	Removable 2 points shoulder strap	
JAY-UWE104	Removable 3 points shoulder strap	
JAY-UWE106	Fixing Belt	
JAY-PWM107	Carrying Sleeve	
JAY-UWE320	Silicon Protective Sleeve	
JAY-PWM111	Wrist strap for transmitter	
JAY-PWM113	Magnetic fixing for transmitter	
JAY-UWE203	Airmark transmitter motion label	

Accessories

Accessories

Part Number	Description	Image/Information
JAY-UWE207	Expanded transmitter labels	
JAY-UDWR38	Four-piece magnetic fixing kit	
JAY-OWR02	MMCx - BNC adapter, 10com, to connect an additional antenna	
XA-37767	Quick Disconnect - 24 pin, Female Bulkhead	
XA-41032	Quick Disconnect - 24 pin, Male Top Entry	
JAY-VUA103AM	Insulated and magnetic remote antenna 419-434MHz 1/2 wave, 3m cable - BNC	
JAY-VUA105AM	Insulated and magnetic remote antenna 419-434MHz 1/2 wave, 5m cable - BNC	
JAY-VUA100AH	Through insulated remote antenna 419-434MHz 1/2 wave, 0.5m cable - BNC	
JAY-VUA102AH	Through insulated remote antenna 419-434MHz 1/2 wave, 2m cable - BNC	
JAY-VUA105AH	Through insulated remote antenna 419-434MHz 1/2 wave, 5m cable - BNC	
JAY-VUA110AH	Through insulated remote antenna 419-434MHz 1/2 wave, 10m cable - BNC	
Transmitter & Receiver		
JAY-PWA-C	USB cable 0.75m / Type A - Type C	

Specifications

Radio	
Transmission frequency	433MHz to 440MHz
Channel number	92
Modulation	FSK
Frequency selection	Manual or automatic
Emission power	1 mW
Average range (1)	50m - 100m in industrial environment (1) 200m - 500m in open space (1)
Range limitation	Selectable 5 levels of power
Startup response time	500ms
Response time of a command	300ms
Transmitter Technical Characteristics	
Housing	PA6GF30 / TPU / POM
Housing color	Orange (RAL2010)
Dimensions	7.08 x 2.75 x 1.77 (180 x 70 x 45)
Degree of protection	IP65
Weight with cells	0.70 lb. (320g)
Number of command buttons	6 two-step pushbutton + 2 one-step pushbutton
Power supply	2x 1.5V alkaline cells type LR6 (AA)
Battery Life	43 hours with at least one pushbutton used
Operating temperature	-4 °F to 122 °F (-20 °C to +50 °C)
Storage temperature	-22 °F to 158 °F (-30 °C to +70 °C) without battery
Attachment strap	2 points (3)
Prevent condensation	Breathable membrane
Button Cycles	500,000 cycles
Indicator light	Radio link = green, Battery level = red, Selection = 4x orange

Specifications

Receiver Technical Characteristics	
Housing	AD (UL94-V0)
Housing color	Black case with translucent cover
Dimensions	12.20 x 5.90 x 3.14 (310 x 150 x 80)
Fixing	4 x M3 screws - 9.01 x 3.54 (229 x 90) (3)
Degree of protection	IP65
Operating temperature	-4 °F to 122 °F (-20 °C to +55 °C)
Storage temperature	- 4 °F to 158 °F (-20 °C to +70 °C)
Weight with cable	3.08 lb. (1400g)
Power supply	40Vac to 230Vac \pm 10% - 50/60 Hz Protected fuse 0.5A Consumption 10W Orange indicator light
Connection	22 strand multi-core cable, section 0.75 mm ² , 18 AWG (0.8 mm ² Kcmil) Length 4.92 ft. (1.5m)
Cable gland	M32 (cable 17-25 mm)
Stop function	2 relays Protected fuse 5A breaking capacity 250 Vac @ 5A max (at max operating temperature) 12Vdc @50 mA min 2000VA for maximum power at cos φ =1 100 000 switching cycles under 230Vac, 6A and cos φ =1 Guided contacts AgNi + Au Red indicator light
Start function	13 relays (1x Start + 3x 3 motions + 3x auxiliaries) 3x protected fuses 5A breaking capacity 250 Vac @ 5 A max (at max operating temperature) 12Vdc @ 50 mA min 2000VA for maximum power at cos φ =1 100 000 switching cycles under 230VAC, 6A and cos φ =1 Contacts AgNi + Au Red indicator light
Radio link	Green indicator link
Buzzer	95dB max with 2 power levels
Antenna(2)	1/4 wave fixed antenna (2)
Prevent condensation	Breathable membrane

(1) = Range varies according to environment conditions around transmitter and reception antenna (steel works, metal walls, etc.).

(2) = Plug-in feature possible by BNC plug on industrial receivers, with kit OWR02.

(3) = See optional accessory JAY-UDWR38

Conductix-Wampfler Radio Series



Saga Radio Series

Conductix-Wampfler offers a full line of Saga Radio Remote controls to handle your ever changing needs. From the simple but powerful Protean Series offering 4, 6 or 8 single speed buttons with 330ft (100 meter) range to the L40 Series Belly Box that offers 5 speed dual joystick controls and up to 8 motions with A/B switches. With variations available with either single or two speed switches and a wide variety of motion control and configurations. Conductix-Wampfler can keep your overhead crane operations running smoothly.



Jay Radio Series

Conductix-Wampfler Jay Radios offer the ultimate in safety and reliability. In the Jay Radio Advanced Series by Conductix-Wampfler, there is continuous communication back and forth between the transmitter and receiver. This communication validates that the transmitter and the receiver are both working and listening to each other. If one does not "hear" the other, the safety relays open and the system shuts down. The Jay Radio Advanced line features:

- **Screen Display Readout** - The integrated screen gives users a complete system overview in real-time.
- **SIL3/PLe Emergency Stop** - Guarantees immediate system shut down during any emergency situation.
- **Unique ID Code** - The ID code ensures that radios on the same frequency do not interfere with each other. When the receiver sees a packet of information coming in, it checks to see if the transmission has the correct ID code before allowing the command through.
- **Access Limitations** - Access rights can be set at many different levels to ensure that only those that are trained and approved to operate and modify the system can do so.

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