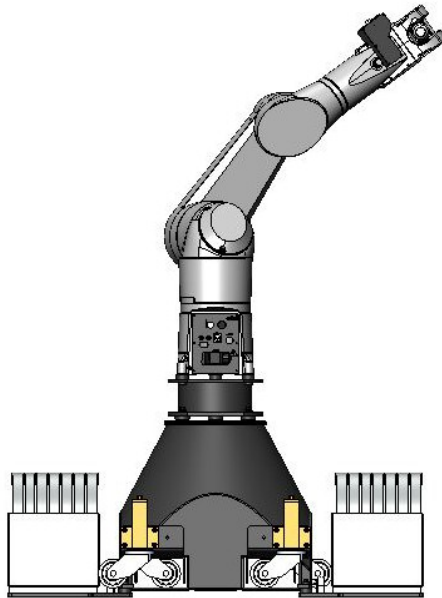


**MRMC**  
INNOVATION IN MOTION

# BOLT JUNIOR (PEDESTAL)

COMPACT LIGHT-WEIGHT HIGH SPEED ROBOT



## QUICK START GUIDE

Product code: MRMC-2003-00

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## **Bolt Junior on Pedestal Quick Start Guide**

Product code: MRMC-2003-00

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# Chapter 1 Quick Start

## Overview


Thank you for using the Bolt Junior on Pedestal from Mark Roberts Motion Control (MRMC). Bolt Junior is designed for reliable day-in, day-out use in professional studio and Outside Broadcast environments. It has a small, lightweight robotic arm which can be used either as camera rig or model mover. It has a base designed for bolting to the ground and can also be held down with weights at temporary locations. It has removable trolley wheels for moving between sets.

## Software setup

- Always ensure you have the right configuration for the robot you are using, such as maximum axis speeds and accelerations.
- Prior to running moves, enter in and keep to a minimum all software axis and Cartesian limits. For example if the main axis only needs to travel +/-40 degrees then reduce the limit to +/-40 degrees even though it could do +/-180 degrees. This keeps the likelihood of operator or software errors to a minimum.
- Also check the Cartesian speed and acceleration limits are set to reasonable values.

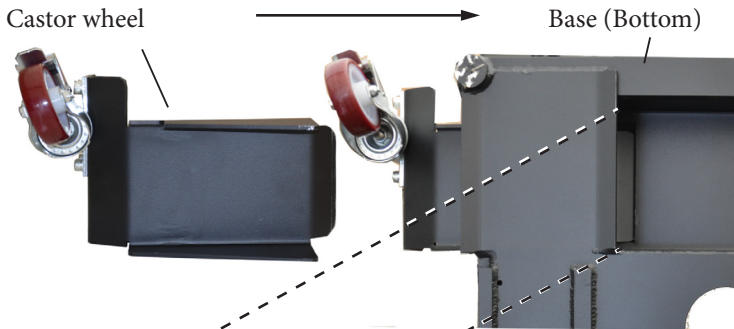
## Operational safety

- Do not use around flammable gas. All electrical equipment can generate sparks that can ignite flammable gas.
- Keep the equipment dry. The system has **not** been made weatherproof. Do not use with wet hands.
- Always run moves only when standing within easy reach of the emergency stop.

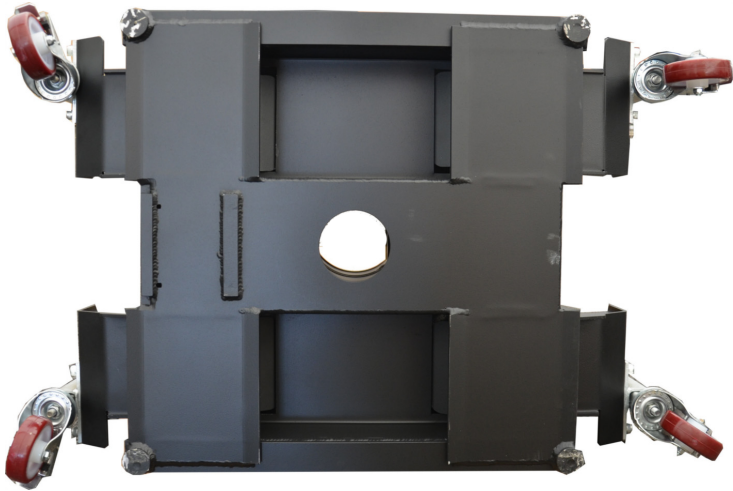
- Always tell the production company and the crew to keep away from the robot and not approach it when any of its red lights are on which indicates it is powered up. Have them sign the appropriate safety documents and disclaimers to ensure they understand this and are indemnifying MRMC if anything happens.
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- Always loudly and clearly indicate to others when the rig is about to move. Shout “Rig Moving!” if no other means exists.
- ⇔ When using track motion always have someone keep an eye on the trailing rig cables to ensure they don’t get caught on anything or anyone.
- Always ensure the rig is disabled when someone has to enter the No Go Zone.
  - Always run any move or adjusted move slowly at first to check the motion. Even if you have checked the move previously, if you make a minor change to it then you need to recheck it.
  - Keep the software in “slow mode” unless the move has been tested and is now specifically doing a high speed pass.
  - In the event that a person or Actor has to be within the no-go zone during a move (hand model etc.) ensure that they fully briefed on the safety requirements and that they know not to change their position or do anything other than the rehearsed moves without fully warning the operator. Any such person is to have a clear escape route to allow them to move safely away from the robot.
  - During use, repeatedly check the rig mounting points, cables, camera mount, accessories etc. to ensure nothing has, or is, working its way loose.
  - Never bypass any safety hardware or software.

## Mounting the Castor Wheels

1. Gently tip the base over from the top so its bottom is visible.
2. Slide one castor wheel into the base ensuring that edge of the plate in the wheel assembly is inserted in the slot in the base.



3. Similarly insert all the castors into the base ensuring the plates are inserted into the slots.



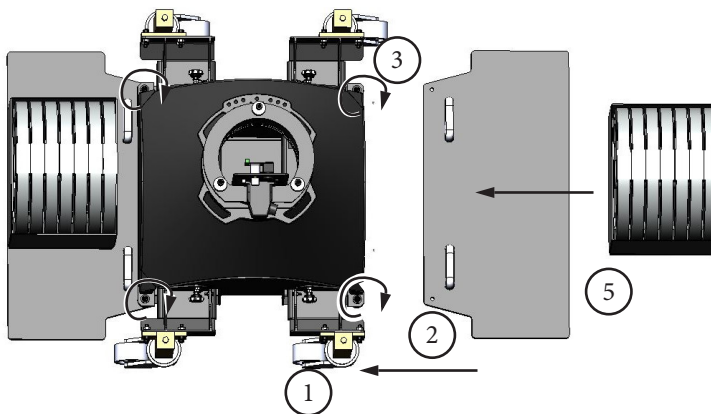
4. Stand the base on the wheels and tighten the four screws to secure the castor wheels on the base. Do not use the jack screws on the wheels yet to seat them on the ground.





## Mounting the Weight Plates

1. Use the jack screws on the castor wheels to lift the base high enough to insert each of the weight plates on either side of the Bolt Junior Base lining up the screw cavities.
2. Lower the base close to the wing but not quite resting on it, close enough for the two retaining bolts to reach the wings through the base.
3. Secure the weight plates using the 2XM10 screws on either plate.
4. Lower the base completely so it is resting on both wings. At this point, you can remove the castor wheels, if so desired.
5. Put the weights onto the wings. Bolt Junior requires four boxes of weights — one at each corner. Each box contains 140 Kg of weights (7 × 20 Kg).

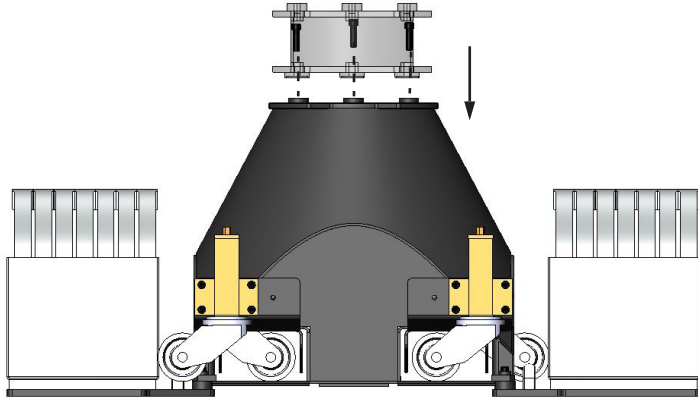


### Hint

You can move Bolt Junior without removing the wings if you want, as long as you take the weights off first.

## Mounting the Riser

1. Lower the riser on the base aligning the three screw cavities.
2. Tighten the three screws.

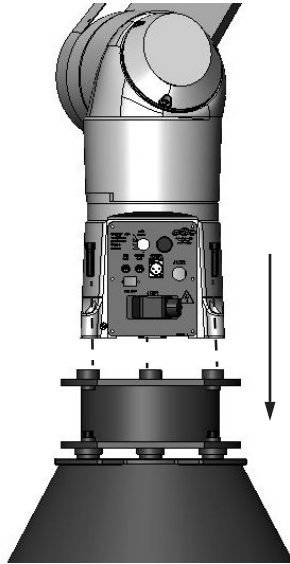


### Hint

Use this procedure to mount any riser or an additional riser on the pedestal.

## Mounting the Staubli Arm

1. Lower the TX90 Staubli arm on the Bolt Junior pedestal aligning the sides and screw cavities.
2. Tighten the three screws.

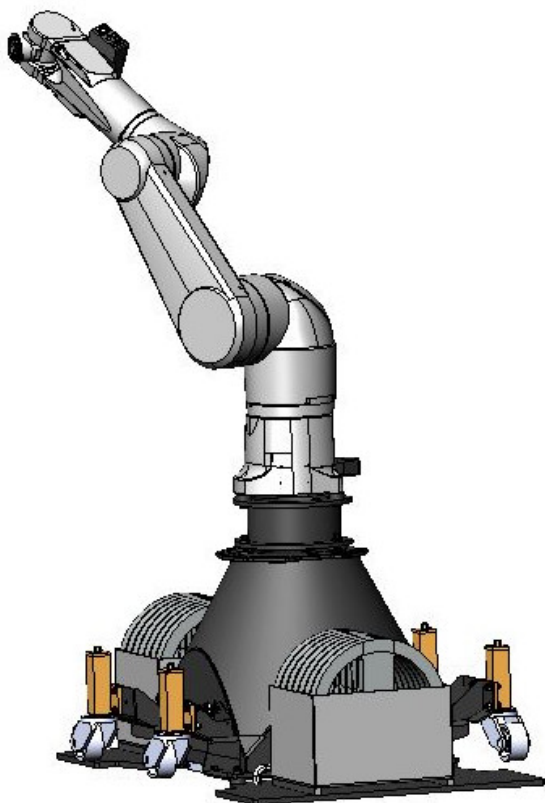


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