



MARK ROBERTS MOTION CONTROL

BROADCAST DUAL RAIL



QUICK START GUIDE

QSG Product code: MRMC-2128-00

Product Covered: MRMC-8030-00, MRMC-8031-00, MRMC-8032-00

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Chapter 1 Quick Start

Overview

Thank you for using the Broadcast Dual Rail Track from Mark Roberts Motion Control (MRMC). The Broadcast Dual Rail is designed for reliable day-in, day out use in professional studio environments. The Monorail is designed to help you achieve smooth, repeatable camera motions. It is suitable for live action, stills, and time-lapse applications, and can handle a total camera and head payload of up to 18 kg.

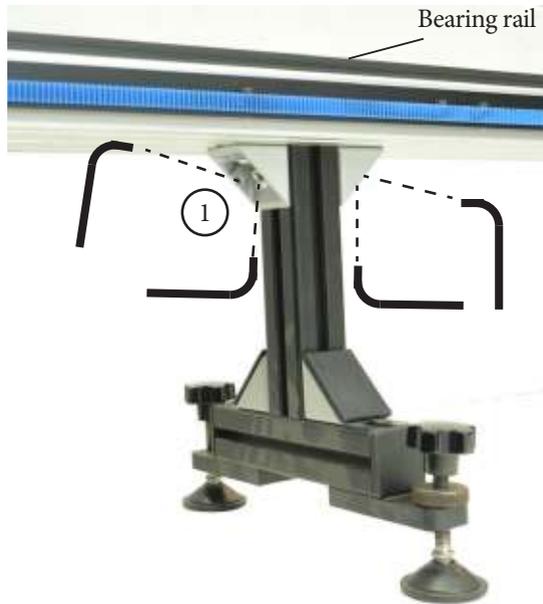
There are two variants available for the Broadcast Dual Rail: one with cable management system and the other without.

Safety

- Do not use around flammable gas. All electrical equipment can generate sparks that can ignite flammable gas.
- Keep Away From Pets And Children. The track and camera heads have powerful motors that can pinch, so take care not to get your hands trapped in the gears or cabling.
- Keep the equipment dry. The system has **not** been made weatherproof. Do not use with wet hands.
- Keep cables tidy. Use cable ties to keep them out of harm's way, and use the cable arm supplied with the Monorail to keep any trailing cables (such as Ethernet and power cables) away from the belt drive. If you have a head with slip rings then make use of them; avoid running any cables between the base of the head and the rotating part of the head or camera.

Assembling the Monorail

1. If your Monorail was delivered in sections, attach the leg unit to the main rail.



2. If your Monorail came with the end stops already installed, remove one of the stops from the end of the rail shown in the next picture, by removing the two bolts that hold the end stop on.



Adding the carriage

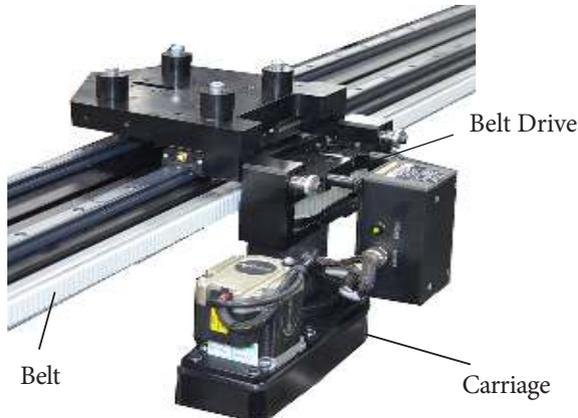
1. Carefully slide the carriage track bearings onto the bearing rail of the track as shown.

Caution

Misaligning the carriage can damage the track bearings. Carefully feed the first track bearing onto the bearing rail. As you push the carriage onto the rail, the belt drive in the carriage will engage with the belt in the track. Keep going until the rest of the track bearings engages with the bearing rail and the carriage is completely on the rail.

If the carriage or track bearings are not sliding on easily or aligning properly, DO NOT force them onto the bearing rail as it will heavily damage the bearing blocks.

2. If there is a misalignment issue, you need to loosen the 12 screws that hold the 3 bearing blocks on and then the carriage will slide on and then tighten the bearing blocks.

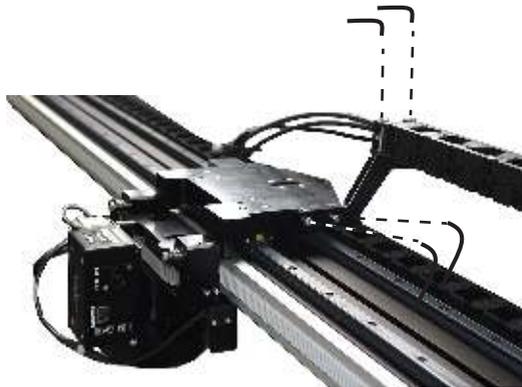


3. Make sure the belt drive in the carriage is aligned properly with the belt in the track unit.
4. Replace the end stop on the track, and install the other end stop at the other end of the track if this has not already been done for you.

Make sure both end stops overlap the ends of the bearing rail so that the carriage cannot run off the end of the bearing rail.

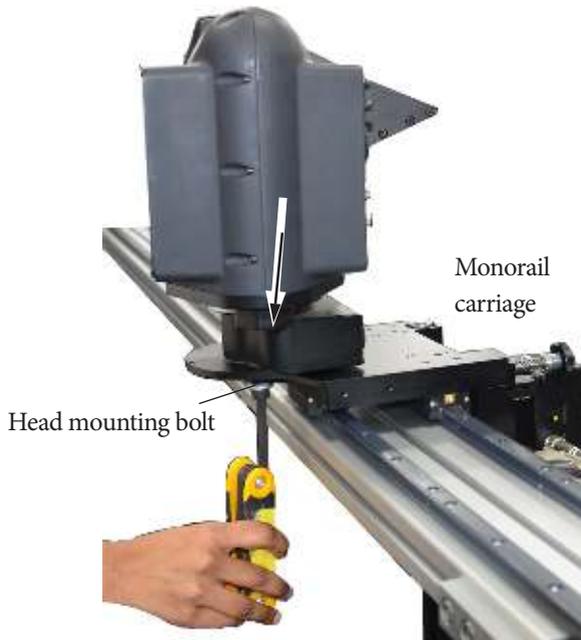


5. Attach the cable management system to the carriage:
 - 5.1 Lay the cable management alongside the rail positioning it so that the cables come out on the desired end.
 - 5.2 Add the bracket by screwing 2 x screws on the side of the carriage and then add the cable management system by tightening 2 x screws.



Mounting a head onto the Monorail carriage

Example: AFC 100S head



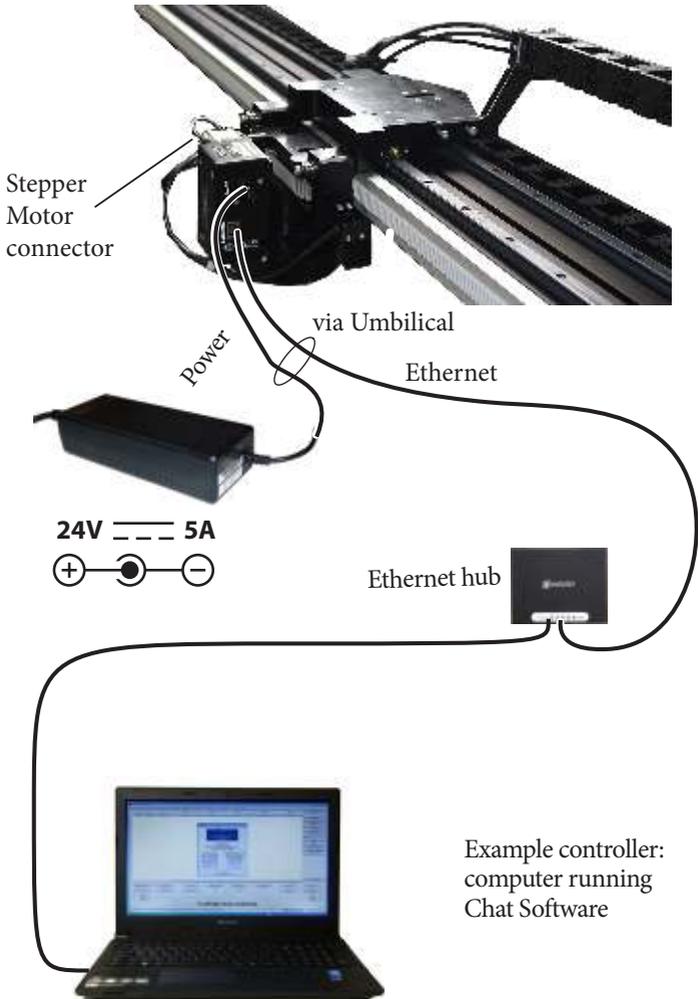
When mounting the head, make sure you line up the key (on the carriage) with the slot in the head.

Refer to the documentation that came with your head for details of connecting cables to the head and mounting a camera onto it.

The controller that you connect the head to can be any MRMC controller such as the Large Flat Panel (LFP), MSA-20 Handwheels, Joystick Controller, Mini MSA, or a PC running Flair Motion Control Software.

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You use the cable arm on the Monorail in combination with cable ties to help tidy the trailing cables that go to the controller (usually Ethernet and Power), so they don't catch on the track or track motor when the rig is moving up and down the track:



Datum magnet

The Broadcast Dual Rail has a Datum magnet which can be detected by the Datum Switch on the carriage. The Datum magnet defines a fixed reference point on the track for the electronics. The rig controller (such as a Joystick Controller, Mini MSA, or computer running the software) can then use this position as the **home** position or **zero point**, from which all positions, movements, and soft limits along the track are measured.



Hint

If you move the Datum magnet to a different position along the track, remember to change the soft limits in your controller or Flair/MHC computer to cater for the new Home position.

Notes

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Appendix 1 Specifications

Weight: 28 kg for the Dual Rail track and legs
3 kg for the carriage

Power requirements: 24 Volts DC

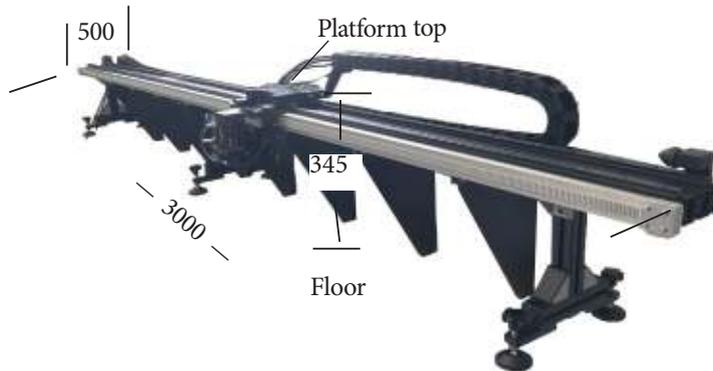
Temperature range: 0-45 °C (32-113 °F)

Humidity tolerance: 0% to 85% relative humidity, non-condensing

Camera payload (head + camera): 18 kg

Maximum velocity: 7cm/s

Dimensions: All measurements are in mm:



Notes



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