

CamMate®

Operations Manual



CamMate Systems
Phone: (480) 813-9500
Fax: (480) 813-9292

425 E. Comstock
Chandler, AZ 85225 USA

www.cammate.com
cammate@cammate.com

ATTENTION

Verify clean AC power (100-240vac) before connecting CamMate Electronics Control Box. A surge suppressor or line conditioning device is recommended when connecting this unit to AC power.

The power supply in this unit auto-senses line input voltage but incorrect input voltages or incorrect wiring of the AC power source may result in damage to the unit and void the warranty.

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CamMate® Systems Assembly Guide

Our CamMate Systems are designed to mount on any flat plane surface, approximately 3 to 4 inches in diameter, with one bolt in the center which allows for a ½”-13 bolt to pass through. If you have purchased one of our mounting systems, a pedestal mounting knob is included.

If you have a tripod or dolly with a standard Mitchell Mount, an adapter plate may be needed. Adaptor plates are available through CamMate. If you need assistance mounting your CamMate, please call us at (480) 813-9500.

DO NOT ATTEMPT TO MOUNT A BOOM ON A FLUID HEAD

Due to weight and leverage considerations fluid heads will not maintain the system in a safe operating environment. No matter how tight you secure it, failure will occur. If you are not using a CamMate dolly or tripod for mounting your system and are not sure of the mount you intend to use, please consult CamMate.

Note: The CamMate boom and dolly have a Mitchell type key for mounting together. If your mounting platform does not have a key slot suitable for the boom base, the key may be removed for flat surface mounting.

CamMate, Travel Series, 2000 Series, Roomer, Roamer, CamVoyager and ScanMate are registered trademarks of CamMate Systems Inc, registered in the United States.

Safety Precautions

CamMate Systems operate under the same counterbalance principles of a “seesaw”. In other words, the camera is fixed on one side of the arm and counterweights are attached to the other side. If there’s no camera, or there are no counterweights, the seesaw will be out of balance. This can prove very hazardous. To avoid potential dangers, careful attention must always be paid to the forces applied on the camera crane. Only when they are in a state of balance can these forces be properly controlled. Do not operate a crane in inclement weather, such as lightning & rain, or in heavy winds.

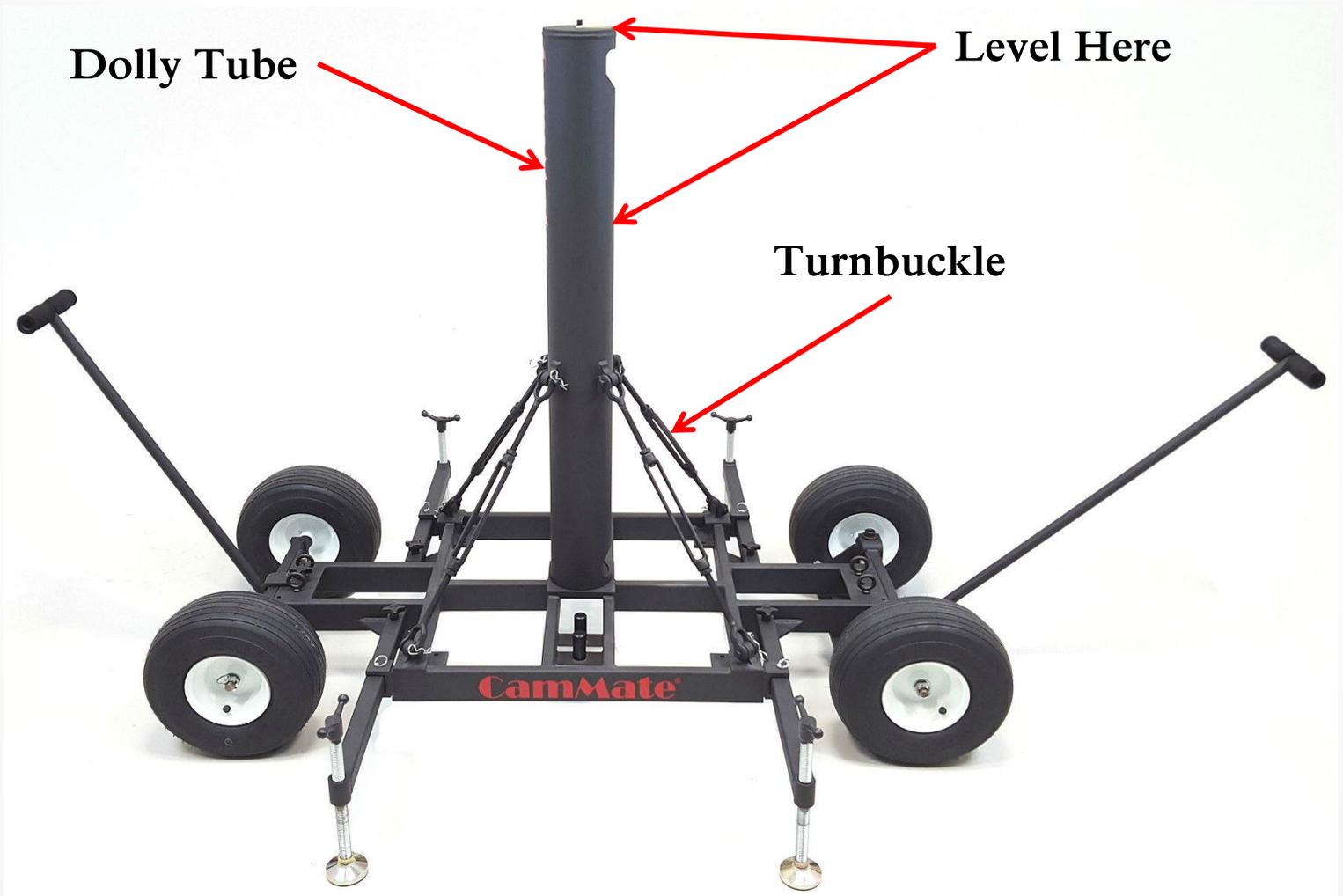
1. Before using CamMate Systems in a professional setting, practice the set up and operation procedures in the convenience of your studio. Include any personnel that will be using the boom and make sure that they understand how to use it safely.
2. Always rest the camera end of the boom onto a solid surface, like a C-Stand, or have a helper hold up the end when assembling the boom. Keeping in mind that you are working with a counterbalancing system, remember that removing weight from one side can cause the other side to become heavier and drop.
3. During assembly always mount the camera first, then add the counterweights.
4. When disassembling the boom, **REMOVE COUNTERWEIGHT BEFORE REMOVING CAMERA.**
5. When the boom Tilt and/or Pan Brakes are engaged, never remove weight from either end of the boom and do not force the boom to pan or tilt.
6. Avoid placing items such as cables or body parts in an area where moving parts can cause damage or harm someone.
7. When moving an assembled boom, have spotters on both ends of the Crane. Never push from a high spot. To avoid tipping, always pull (preferably) or push from a low spot near the wheel base. Do not roll the dolly & crane over cables as the crane may become unstable.
8. Always be aware of your surroundings, consider obstructions, wiring and environmental situations that will effect safety and your performance.
9. Never swing or position the boom in a manner that would risk contact with people or objects. Know your boundaries before you begin shooting.
10. Be aware that understanding the disassembly of the boom is just as important as understanding the assembly process.

If you have questions after reading this manual, please call CamMate. For technical questions please contact our CamMate trained technicians. Phone: (480) 813-9500

Leveling

Having the boom level is important for proper boom operation. With a torpedo or similar type level, check the Dolly Tube for vertical and horizontal positioning. Turn the Turnbuckles accordingly until leveling is achieved. (See page 53 for Dolly assembly.)

Note: Only hand tighten Turnbuckles. Tighten them inwards, drawing the Dolly Tube and Dolly Base towards each other.



Pictured: Roomer Dolly

Pedestal

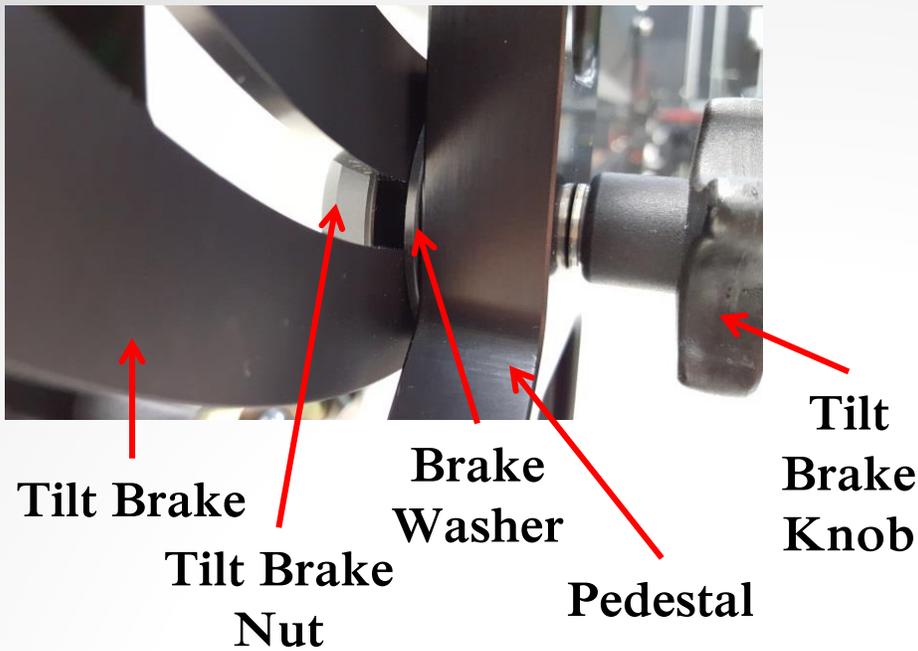
Set the Pedestal onto the Dolly Tube or Riser mount. Using the Pedestal Mounting Knob, securely attach the Pedestal to the top of the Dolly Tube. If a Riser is used, attach the Pedestal on top of the Riser (shown on page 47).

Note: The keyway of the Pedestal must be in the slot.



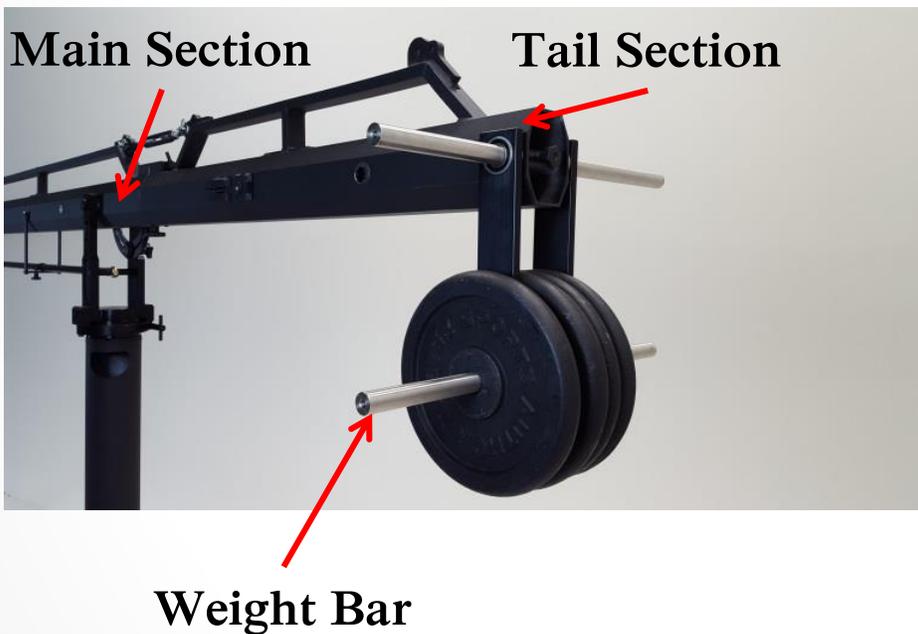
Tilt Brake Knob

Insert the Tilt Brake Knob through the Pedestal. Slide the Brake Washer between the Tilt Brake and Pedestal, then slide the knob through the Tilt Brake. Finally, install the Tilt Brake Nut.

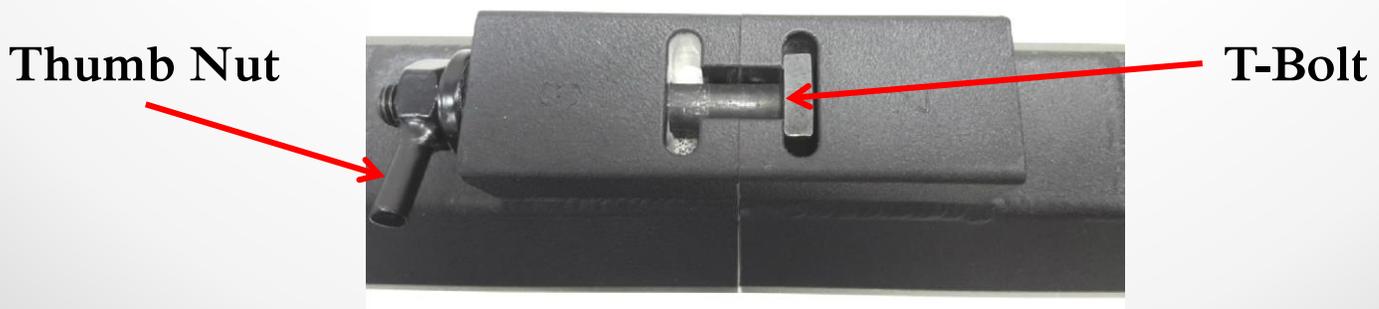


Tail Section

Attach the Tail Section of the Boom to the Main Section, insuring T-Bolt alignment. (See below and next page.) Use the Thumb Nut Tool (not pictured) to tighten the Thumb Nut. Make sure Thumb Nut becomes tight without the Thumb Nut Tool making contact with the Tail Section. If the tool makes contact, the T-Bolt is **NOT** tight enough. In this case, adjustments can be made by disengaging the T-Bolt, then turning it, in $\frac{1}{4}$ turn increments, and then reengage. Repeat tightening process as needed.



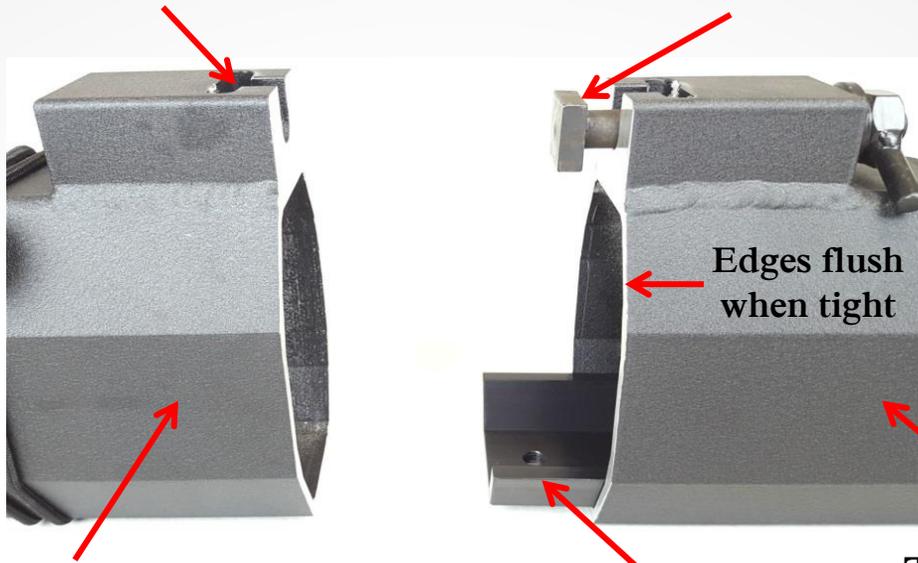
Top View



Tail Section Continued...

T-Bolt Slot

T-Bolt



**Main Boom Section or Tail
Extension Section**

Connecting Tongue
Tail Section

While lowering the T-Bolt from the Tail Section into the T-Bolt Slot on top of the Main or other section, slide the Connecting Tongue from the adjoining Tail or other extension section toward the Main Section, aligning screw holes. Insert the Mounting Knob through the aligned holes in the bottom of the Main Boom Section. Then tighten the Mounting Knob. Repeat this process for remaining Boom Sections.

Note: Proper assembly is achieved when the edges of the Sections are flush.

Bottom View



Mounting Knob

Tail Section Continued...

Note : This page only applies to 2000 Series Cranes.

1. Place the end of the Turnbuckle that has the R mark, toward the Tail Section. (This will allow all of the Turnbuckles to tighten and loosen in the same direction.)
2. Insert Turnbuckle Pins through the Turnbuckle and Eyelet, then install the Quick Release Clip. Repeat this process for the other side of Turnbuckle.
3. Finally hand tighten the Turnbuckle. (**Only hand tighten turnbuckles**). **Tighten them inwards, drawing the boom sections toward each other.**
4. Repeat this process for remaining boom sections.

Turnbuckle Pin

Top View

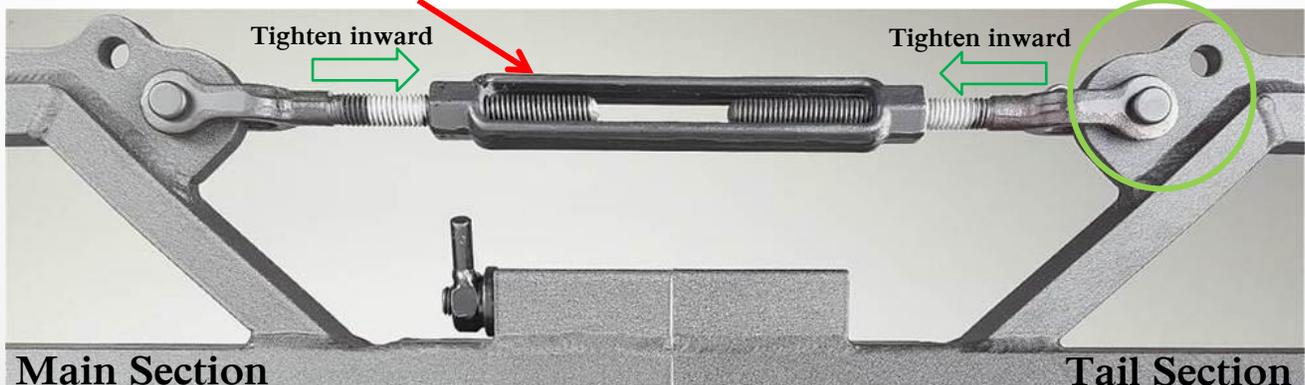


Quick
Release Clip

Side View

Turnbuckle

Eyelet



Main Section

Tail Section

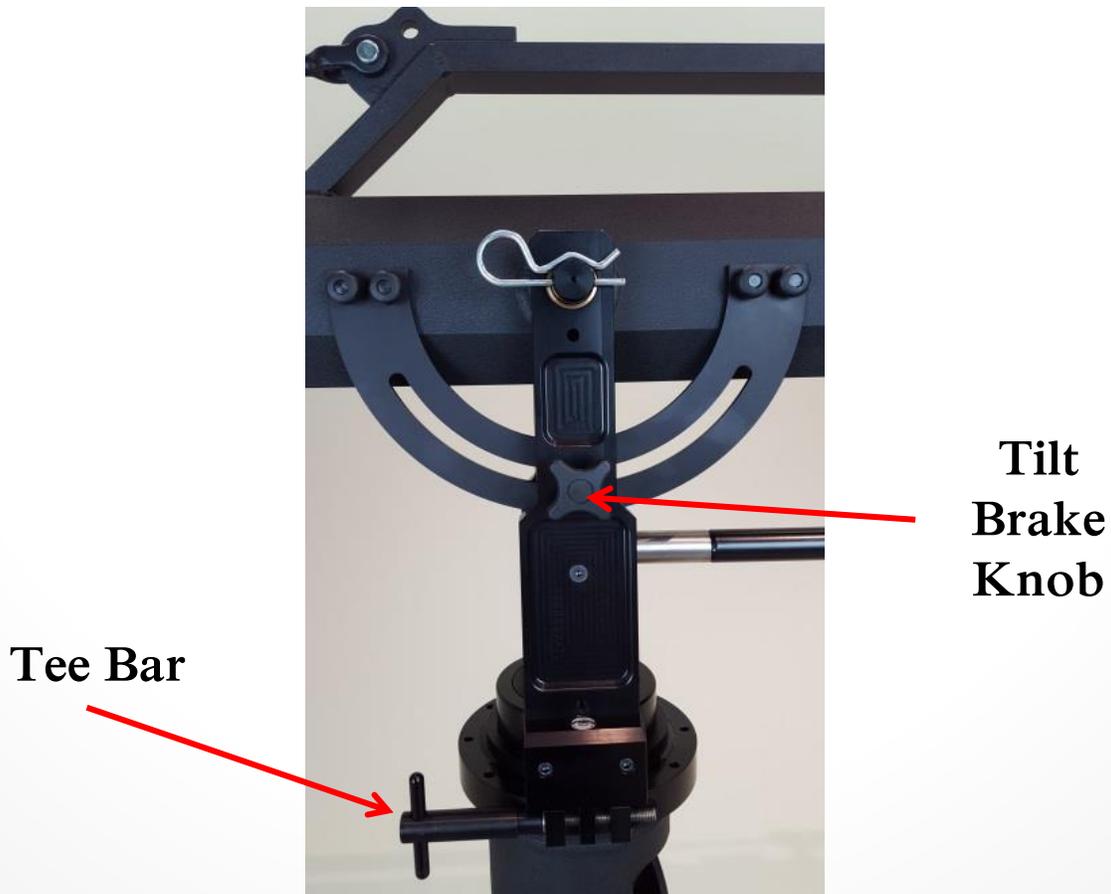
Boom Securing Brake, Drag

The tilt and pan brakes for the boom are controlled by the Tilt Brake Knob and Tee Bar, located on the same side of the Pedestal.

The Tilt Brake Knob controls braking for boom tilt and can be used to add drag as needed.

The Tee Bar controls braking for boom pan, and can be used to add sufficient drag as needed. This becomes very useful in windy situations.

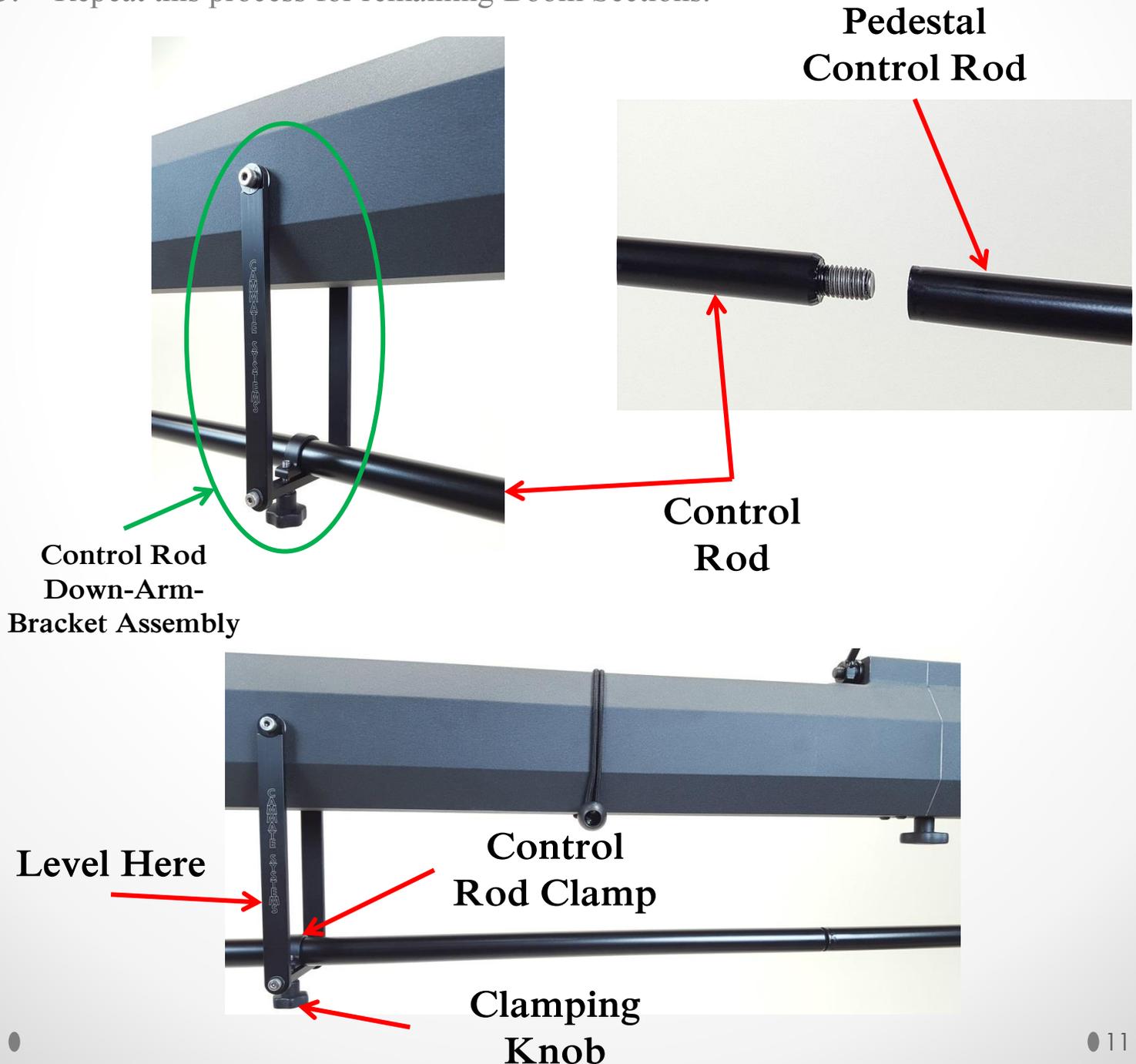
DO NOT OPERATE BOOM WITHOUT THESE BRAKES INSTALLED OR DAMAGE MAY OCCUR.



Control Rod Installation

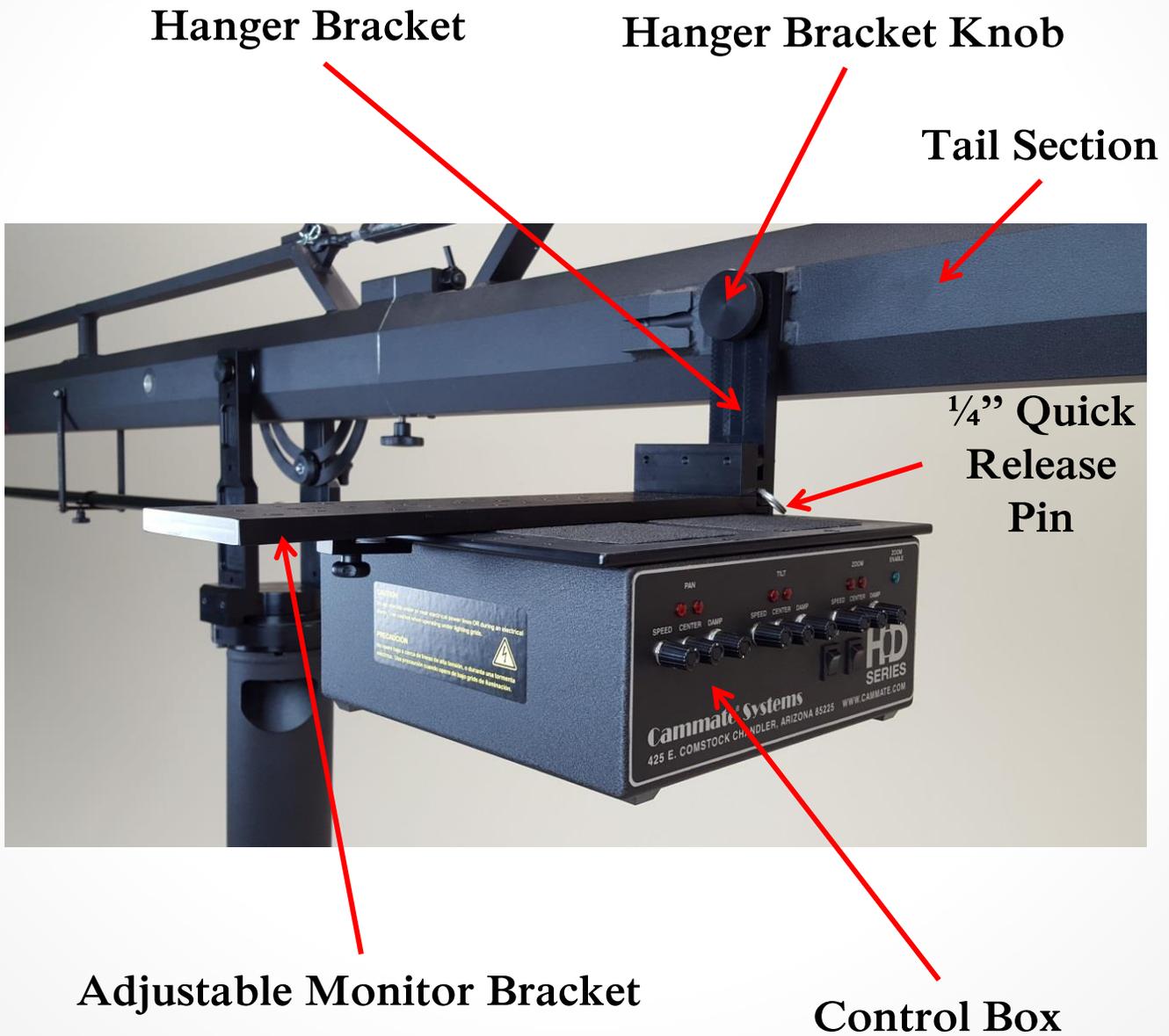
Note: Install the Control Rod while installing each boom extension section.

1. Screw the Pedestal Control Rod into the Pedestal Control Rod Connector. (See image on page 6).
2. Slide the Control Rod through the Control Rod Clamp. Then screw the Control Rod into the Pedestal Control Rod.
3. Using a torpedo or similar type level, level the Control Rod Down Arm Bracket Assembly.
4. Secure the Control Rod Clamp by tightening the Clamping Knob.
5. Repeat this process for remaining Boom Sections.



Adjustable Monitor Bracket

The Adjustable Monitor Bracket mounts on top of the Control Box, by inserting the 1/4" Quick Release Pin through the Hanger Bracket and Hanger Bracket Block, attached to the Control Box. Next, secure the Hanger Bracket to the Tail Section by using the Hanger Bracket Knob. The Adjustable Monitor Bracket can be leveled with (2) 1/4"-20 set screws, which are on the back of the Hanger Bracket. When level, monitor can be attached to the Adjustable Monitor Bracket as shown on page 14.

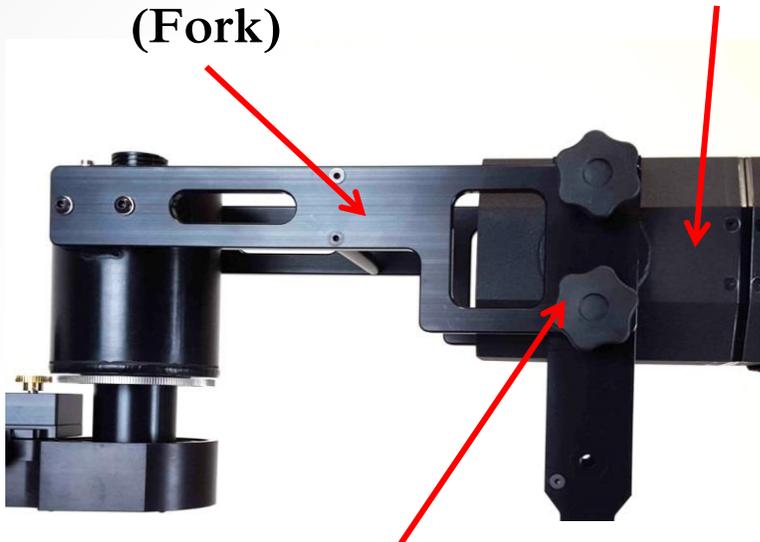


Mounting the Head

The Head Mount Bracket (Fork) is attached to the L-Head from the factory. (See page 17 for Upright Head mounting instructions.) Install the Head Mount Bracket to the Nose Assembly by using the supplied (4) 1/4"-20 Knobs.

**Head Mount Bracket
(Fork)**

Nose Assembly



1/4"-20 Knobs

Place a torpedo level on top of the Head Mount Bracket. If not level, use a hex wrench to loosen (2) 3/8"-16 Hex Head Bolts, which are inside the Nose Assembly (see below). Rotate the Nose Assembly until level is achieved. Then tighten these bolts.

Front View of Nose Assembly

**3/8"-16 Hex
Head Bolts**

Tighten the Screw Adjuster into the Control Rod, until the Nose Down Arms are level (verify with torpedo level), then tighten Jam Nuts.



**Nose
Down
Arms**

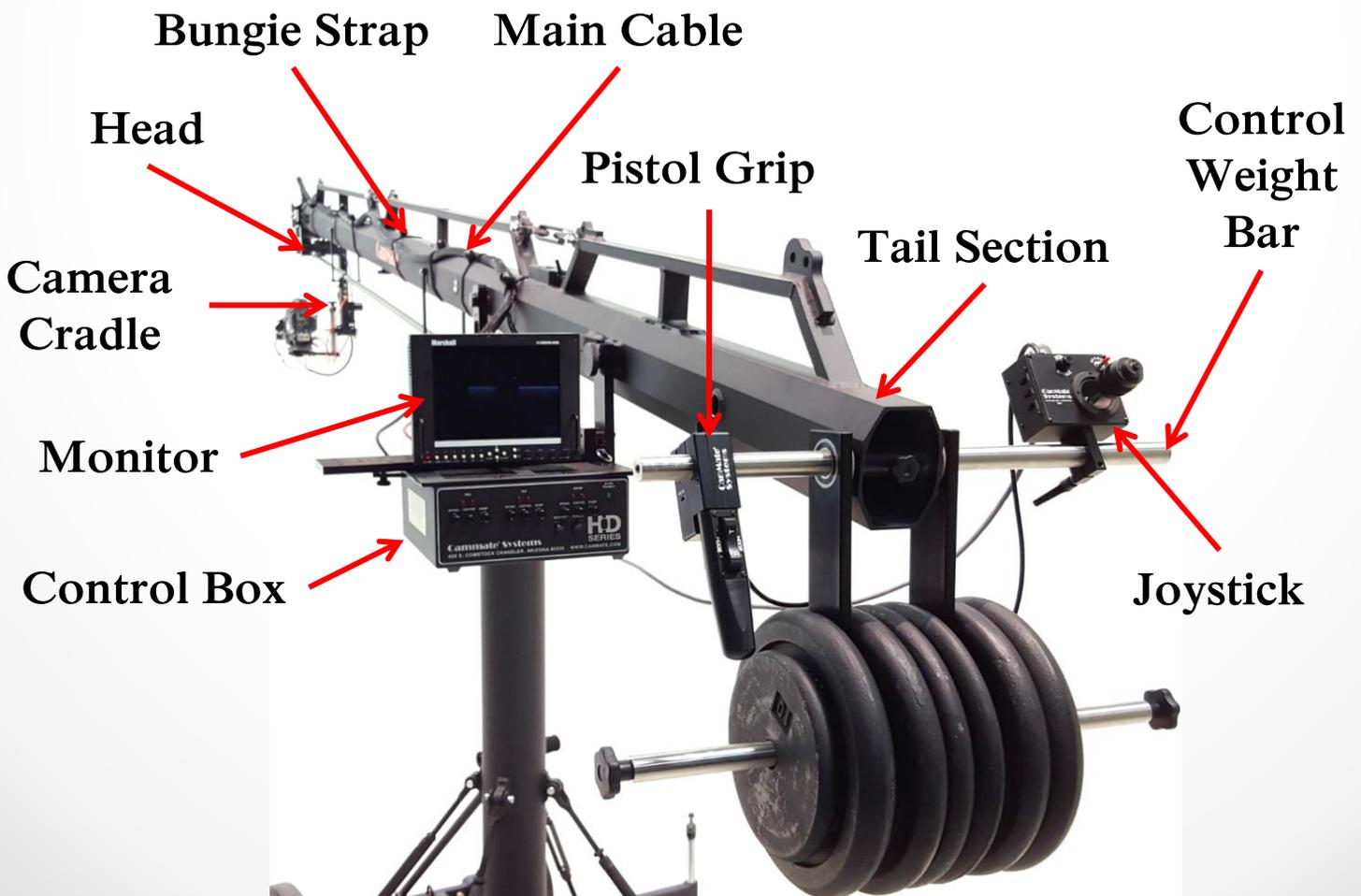
Jam Nuts

Screw Adjuster

Control Rod

CamMate Electronics Assembly

1. Mount the Control Box to the Tail Section of the boom, using the Hanger Bracket Knob, as shown on page 12.)
2. Run the Main Cable down the length of the boom, securing with Bungie Straps.
3. Connect Main Cable to the Control Box and to the Head. (See Back Panel on page 34).
4. Attach Joystick and Pistol Grip to the Control Weight Bar.
5. Connect Joystick Cable to Control Box.
6. Verify the head is level (leveling instructions are on page 13). Then mount the camera to the Camera Cradle using Camera Knob (See page 25).
7. Attach the Focus and Iris Servo's to the lens on the camera. (See page 15.)
8. Attach the Lens Control Cable to camera Lens Connector Focus and Iris Servo's (see pages 15 and 16). Follow instructions for leveling and balancing camera on pages 24 and 25.

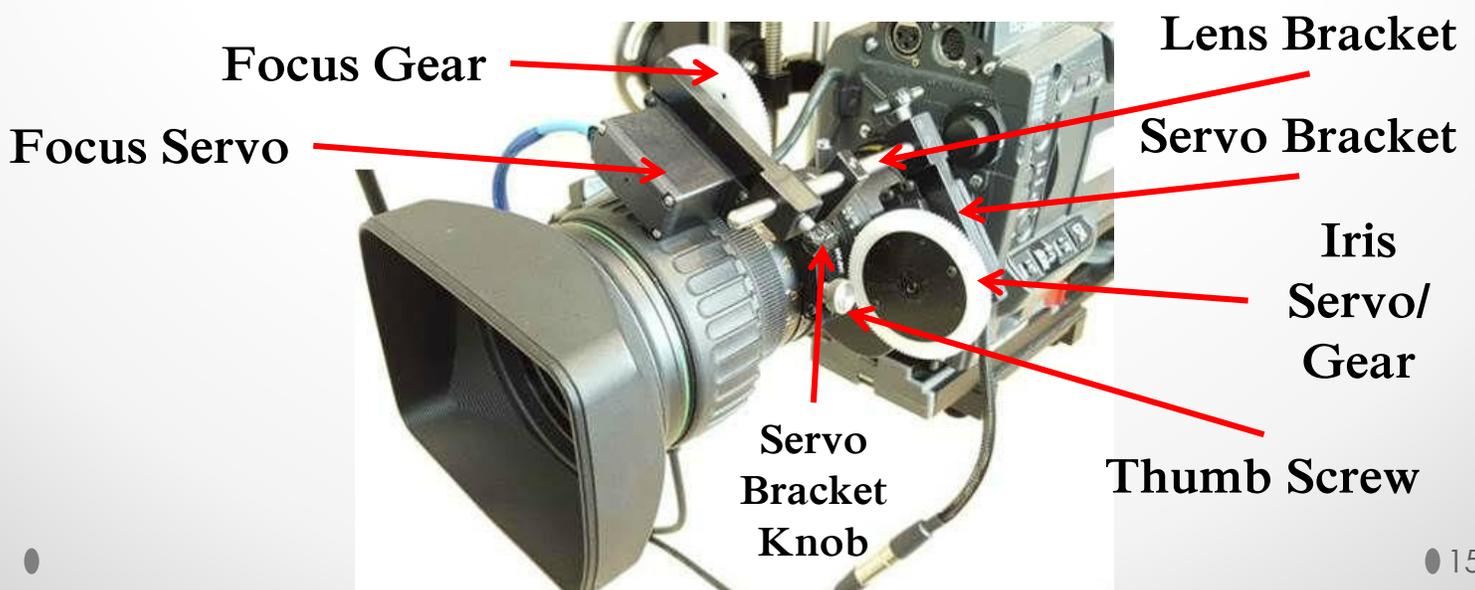


Lens Control Assembly

1. Attach the Lens Bracket to the lens with Thumb Screw. A threaded hole for this purpose is located between the zoom and focus rings on the camera.
2. Rotate the lens to the highest focal distance. With the system power off, rotate Focus gear by hand in a complimentary direction to its maximum position.
3. Loosen the Servo Bracket Knob on the Servo Bracket and position the Focus Gear to match the gear track of the lens.
4. Swing the Focus Gear down to engage to the track. Apply light pressure on the gear to ensure good engagement with the gear track; tighten Servo Bracket Knob. Slowly rotate the lens, by using the Focus Controls (see instructions on page 32), to ensure proper gear tracking. Repeat step 2-4 for engaging Iris Gear.

Note: Too much pressure may cause the servo motor to bind. Too little pressure and the gear will slip. You will quickly learn the correct pressure that is needed. On some lenses, it is necessary to remove the Servo from the Servo Bracket and mount the Servo in a different position on the Servo Bracket, in order for the wheel and gear to line up.

5. Place the Lens Selector (see next page) into the corresponding lens position, (Canon or Fujinon). For Angenieux lenses, use the Canon position.
6. Plug the Lens Control Cable (see next page) to the 14-pin Panel Connector on the head.
7. Connect the Focus and Iris Mini XLR connectors from the Lens Cable to the Servos.
8. Connect the 8-Pin Connector from the Lens Cable to the lens.
9. Some Fujinon lenses use a 12-pin connector. Use the 8-pin to 12-pin adaptor (ECF-126), supplied with your CamMate System.



Lens Control Assembly Continued...

Lens Control Cable

8-Pin Connector

Iris Mini XLR

Servo Assembly



14 Pin Lens Connector

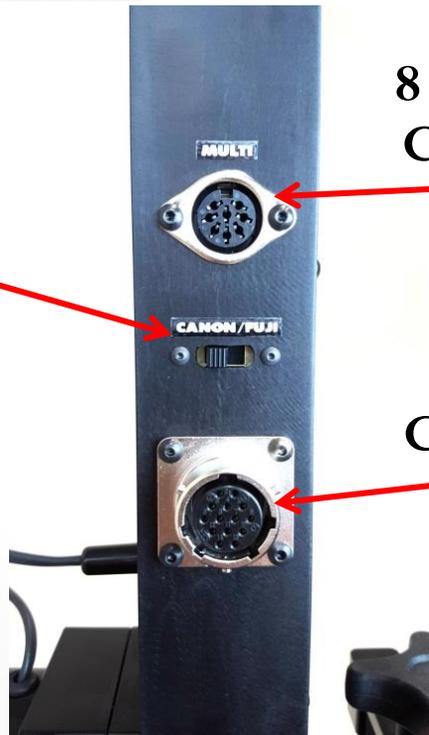
Focus Mini XLR

Head Connections

Lens Selector

8 Pin Multi Connector

14 Pin Panel Connector

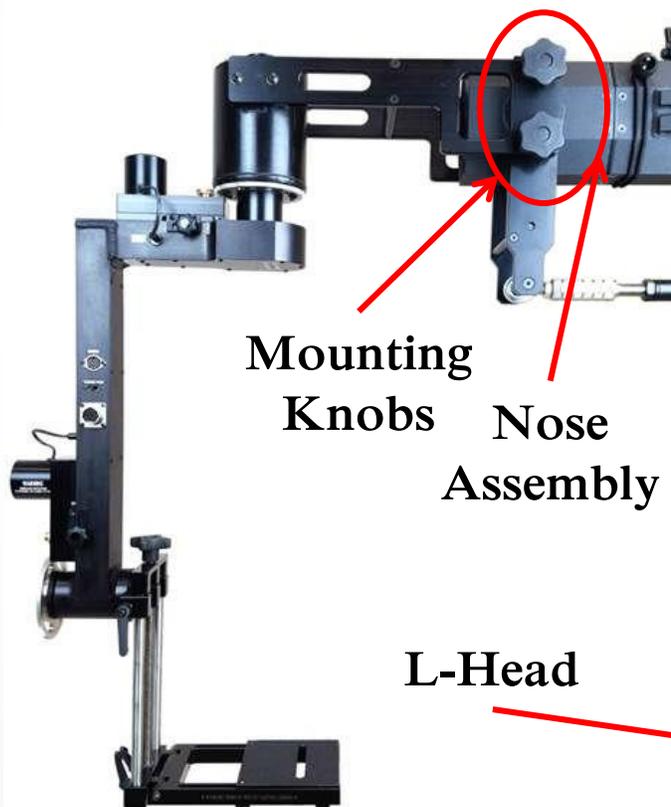


Upright Head

The Head Mount Bracket (Fork) is attached to the L-Head from the factory in the Down Position. If your shot requires a higher viewpoint, you can mount the head in the Upright Position.

1. Simply remove the Head Mount Bracket (Fork) from the Nose Assembly by removing the 4 Mounting Knobs.
2. Remove the L-Head from the Head Mount Bracket by removing the (4) ¼"-20 x 1" Mounting Bolts.
3. Invert the head and attach it by using the (4) ¼"-20 x 1" Mounting Bolts.
4. Finally, mount the Head Mount Bracket to the Nose by re-attaching the 4 Mounting Knobs.

Down Position

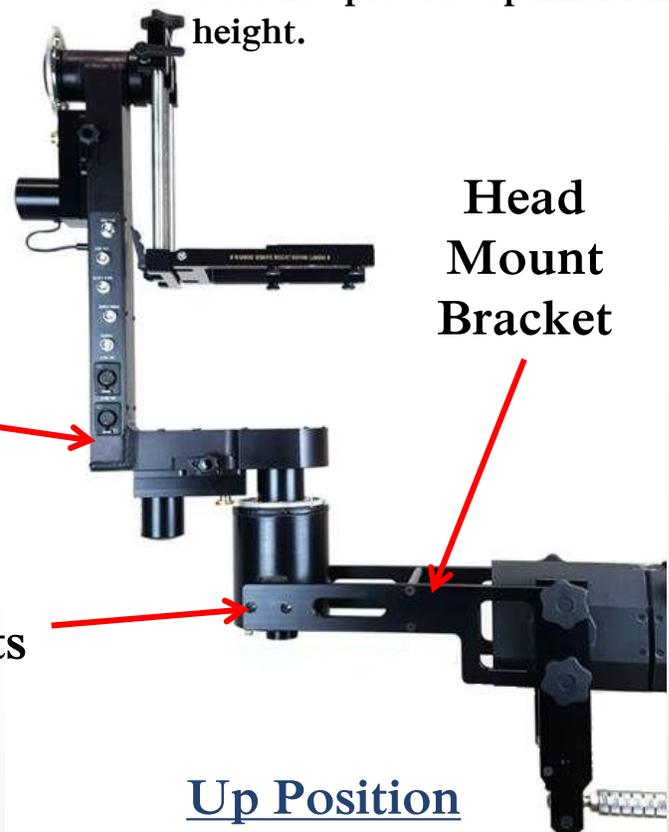


Mounting
Knobs Nose
Assembly

L-Head

Mounting Bolts

Note: These instructions will provide the highest lens height, in the upright position. The L-Head can also be put into the Upright Position by removing the 4 Mounting Knobs, inverting the L-Head and re-attaching the 4 Mounting Knobs. However, this method does not provide optimal lens height.



Head
Mount
Bracket

Up Position

Dis-Assembly and Repack

Tear down of the boom should be exactly reverse of the setup. Always rest the camera end of the boom onto a solid surface, like a C-Stand, or have a helper hold up the end when dis-assembling the boom. Then start unloading the weights from the Operator end of the boom. Always disengage the Pan and Tilt Motors (shown on page 26) when packing the head.

Both the electronics components and the Travel Series boom sections come with hard cases. The electronics cases are foam lined, and each component has it's own slot. Proper packing will protect your system during transport. The 2000 Series boom comes with soft carrying bags for packing (not shown).



CAUTION

Always remove counter-weight first and camera last. If the camera is removed first, the crane may roll backwards, damaging itself and anyone standing nearby.

Travel Series Cable Assist Setup

Cable Assist Kits are standard for Travel 25' and CamVoyager 29'. CamMate can provide Cable Assist Kits for shorter booms.

1. Insert the 3 Cable Support Rods into the Main Section's Rod Holes (two on sides and one on top).
2. Slide the combined Ball/Loop Cables & Ratchet Straps ball end into the Slot Block on the Tail Section.
3. Insert the ball end of the three 19' cables into their corresponding Slot Blocks. (Side Cables go into the Nose Assembly Side-Slot Blocks, and the Overhead Cable goes into the Last Extension Section Top Slot Block.)
4. Connect the 19' cables loop end to the Ratchet Strap's Oval Connector Link.
Note: For the V-29 setup, install the 3' cable extensions in between the 19' cable loop and the ratchet strap's oval link.
5. Position the cable into the 20" Support Rod Slots. Pull the strap on the Ratchet Strap Assembly to remove the slack. Start ratcheting to prevent the strap from slipping out of the ratchet.
6. Next position the Overhead Cable into the Support Rod's Slot and continue ratcheting until the Nose begins to bend upward. (Once the electronics and counter weights are installed, the boom will return to level and may require further tightening.)
7. Finally, tighten the Side Cables. Ratchet these two straps evenly.

Cable Support Rods

Overhead Cable

Ratchet Strap Assembly

Tail Extension Section

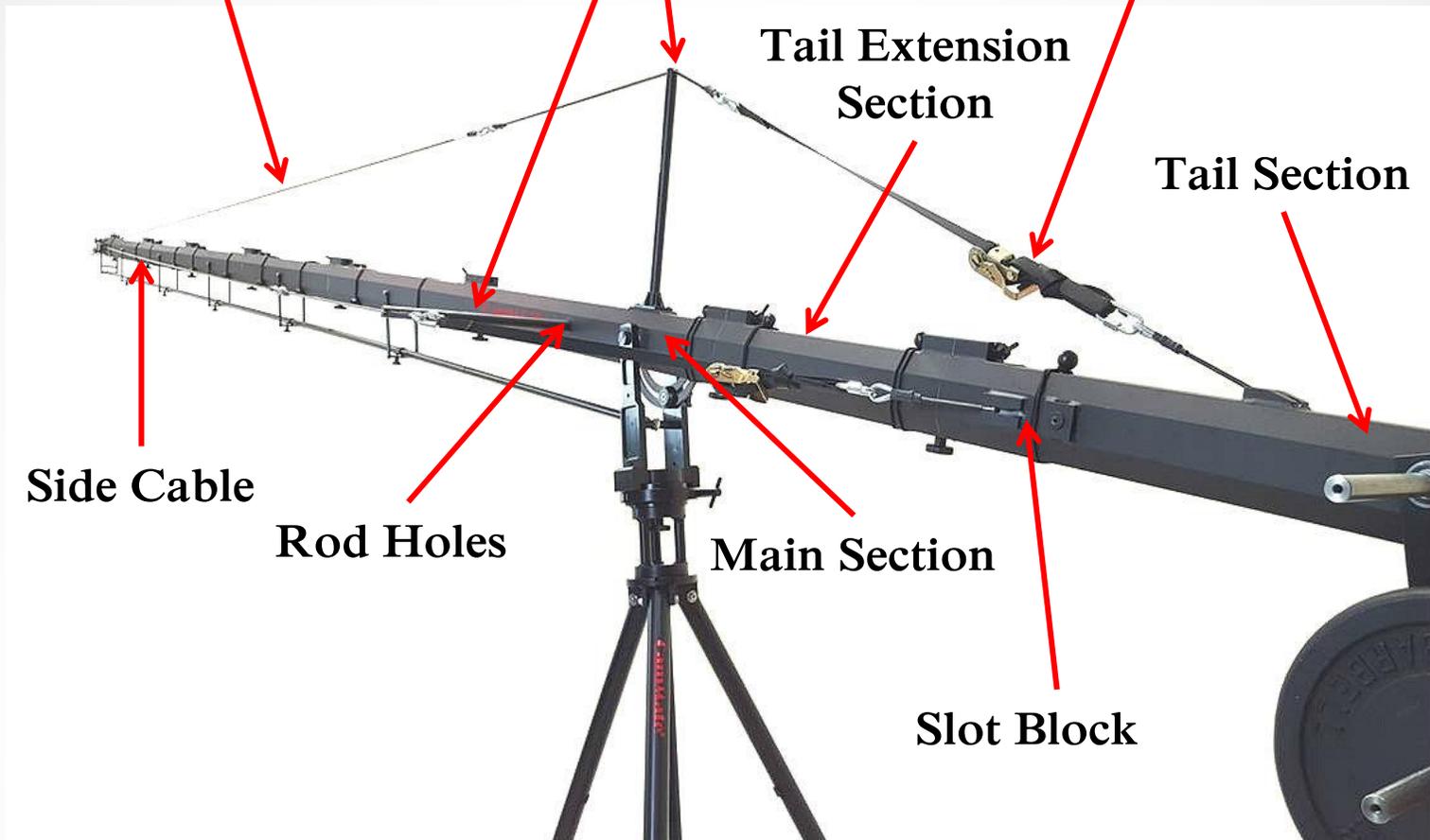
Tail Section

Side Cable

Rod Holes

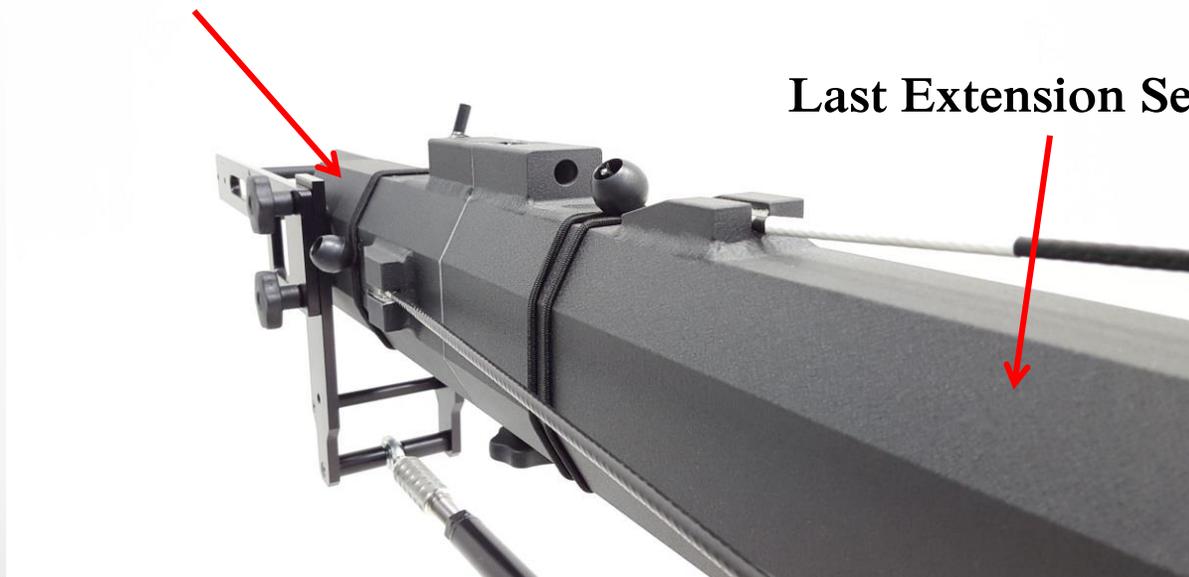
Main Section

Slot Block



Nose Assembly

Last Extension Section



2000 Series Cable Assist Setup

Cable Assist Kits are standard for 2032, 2039, 2043 and 2050. CamMate can provide Cable Assist Kits for shorter booms.

Note: Cable lengths are color coded for easier identification.

2032 Series Crane Cable Assist Setup - Side Cables only.

1. Insert the two 30” Cable Support Rods into the Main Section Rod Holes.
2. Slide the combined Ball/Loop Cable’s & Ratchet Strap’s Ball End into the Slot Block on the Tail Section.
3. Insert the ball end of the RED marked cables into their corresponding Slot Blocks on the Nose Assembly.
4. Connect the RED marked cables loop end to the Ratchet Straps Oval Connector Links.
5. Position the cable into the 30” Support Rod Slots. Pull the strap on the Ratchet Strap Assembly to remove the slack. Start ratcheting to prevent the strap from slipping out of the ratchet.
6. Finally, fully tighten the Side Cables. Ratchet these two straps evenly.

2039 Series Crane Cable Assist Setup - Overhead & Side Cables.

1. Insert the three 30” Cable Support Rods into the Main Section Rod Holes.
2. Install the Ratchet Strap’s Pear Link Connector to the Tail Assembly’s rear mounting Eyelet.
3. Install the Overhead Cable’s Pear Link Connector to the 4th Extension’s Eyelet. Connect the cable’s loop end to the Ratchet Strap’s Oval Connector Link.
4. Next position the Overhead Cable into the Support Rod’s Slot, continue ratcheting until the Nose begins to bend beyond parallel. (Once the electronics and counter weights are installed, the boom will return to level and may require further tightening.)
5. Follow the 2032 Side Cable installation instructions as described above. Start at Step 2.

2043 Series Crane Cable Assist Setup - 2043 & 2050 Systems both come with three 48” Steel Cable Support Rods & three 30” Aluminum Cable Assist Support Rods. The 48” rods are used with 2043 & 2050 Systems. The 30” rods are used with 2032 & 2039 Systems.

1. Insert the 48” Overhead Cable Support Rods into the Main Section Top Rod Hole.
2. Start installing the crane’s Extensions and Turnbuckles. **Note: Only hand tighten turnbuckles. Tighten them inwards, drawing the extensions toward each other.**
3. As extension #1 is installed, connect the **WHITE** lower overhead cable to the end of the 1st extension by using the Oval Connector Link. Install the 3’ Tail Section to the back end of the Main Assembly. Install the other end of the **WHITE** cable to the Ratchet Strap’s long strap with Oval Link. Install the Ratchet’s Pear Link Connector to the far end of the 3’ Tail Extension Eyelet. Finally, tighten up Ratchet Strap until the Extension Section begins to bend upward.
4. Install 2nd & 3rd Extension and Tail Section with their Turnbuckles. The Middle Overhead Cable is mounted to the end of the 3rd Extension and the other end connects to the Eyelet on the Tail Section. Follow steps 2 & 3.
5. Insert the Side Cable Support Rods. Insert the **RED** cables through the inner holes on the Support Rods. Follow the 2032 Side Cable installation instructions as described in the 2032 Series section instructions on page 21. Start at Step 2.
6. Install 4th & 5th Extension and their Turnbuckles. **Note: Only hand tighten turnbuckles. Tighten them inwards, drawing the extensions toward each other.** Mount the **BLUE/YELLOW** cable to the end of the 5th Extension Section’s with the **YELLOW** side towards the Eyelet with Oval Link. Attach the **BLUE** end of the cable to the Torque Pin Ratchet Strap’s Oval Link. Attach the Ratchet Strap’s Pear Link to the Tail Section’s rear Eyelet. Position the **BLUE/YELLOW** cable on top of the Overhead Cable Support Rod. Pull the strap on the Ratchet Strap Assembly to remove the slack. Start ratcheting to prevent the strap from slipping out of the ratchet. Verify that the cable clears any other crane components. Fully tighten the Ratchet Strap by hand and then use the torque wrench and socket on the Torque Pin and tighten cable until the Extension Section begins to bend upward.
7. Install the **GREEN** Side Cables, follow the 2032 Side Cable installation instructions as described in the 2032 Series section instructions on page 21. Start at step 2.

2050 Series Crane Cable Assist Setup - Follow all seven 2043 Cable installation instructions on page 22.

8. Next, add the last 2 **YELLOW** cables to the **GREEN** cables at the back of the crane. When the Side Cables are tight, install the 24” & 20” Cable Support Rods in the Side Rod mounting bracket located on 2nd & 5th Extension Sections.
9. Pull the **RED** cable out onto the 24” Support Rods. Pull the **GREEN** cables out onto the 20” Support Rods. **Note: If needing to reduce bow in the boom, tilt the boom nose up and then tighten all three overhead cables.**

Camera Leveling

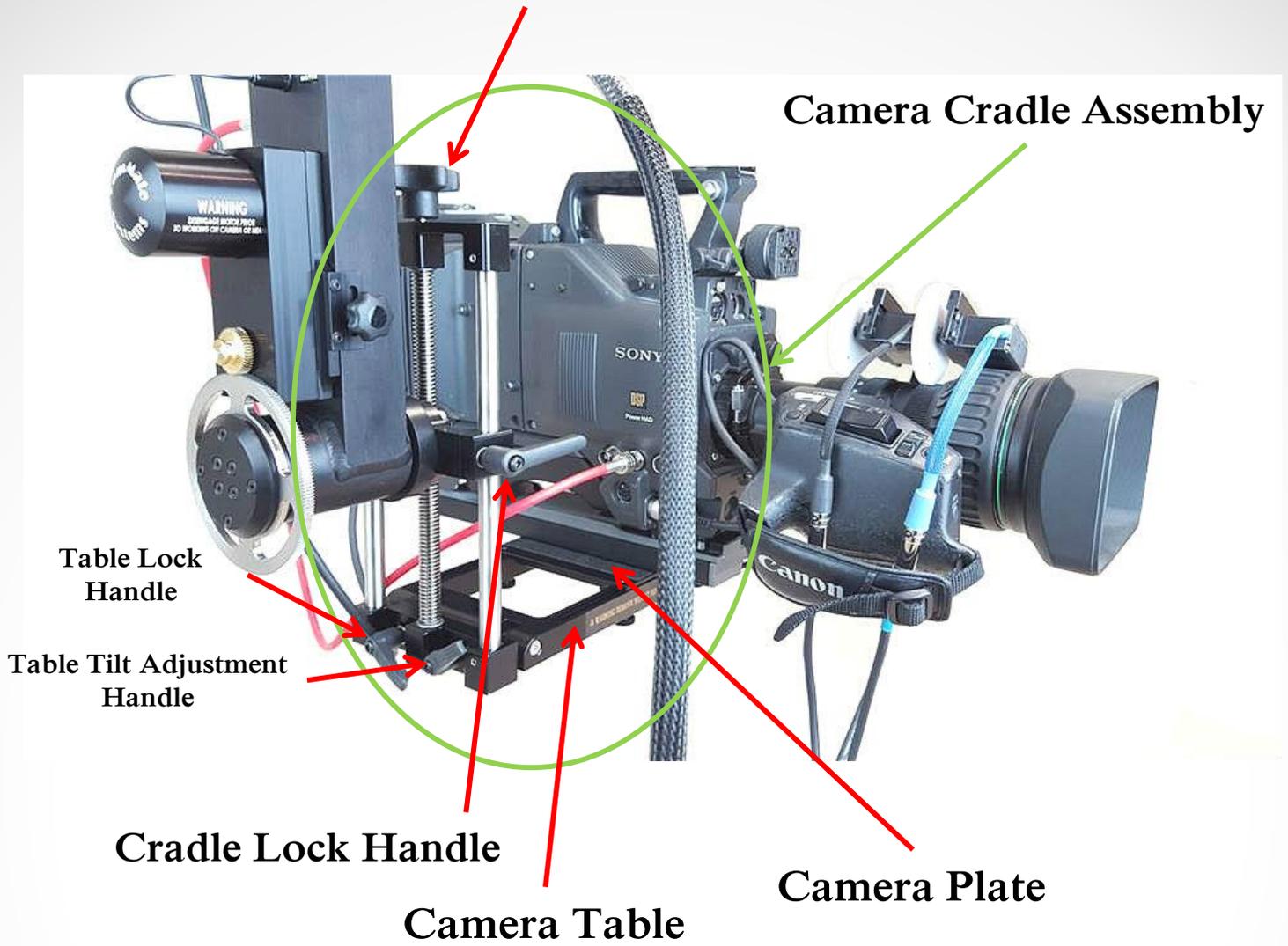
There are two handles on the Camera Table. (See picture on page 25.) If you put your camera on the Camera Table and it tilts the table downward, which will cause your picture to be unlevelled, a twist of the Table Tilt Adjustment Handle will change the angle of the table to compensate for your camera's weight. Once your camera is level, screw in the Table Lock Handle to keep the Camera Table in place.

Camera Balancing

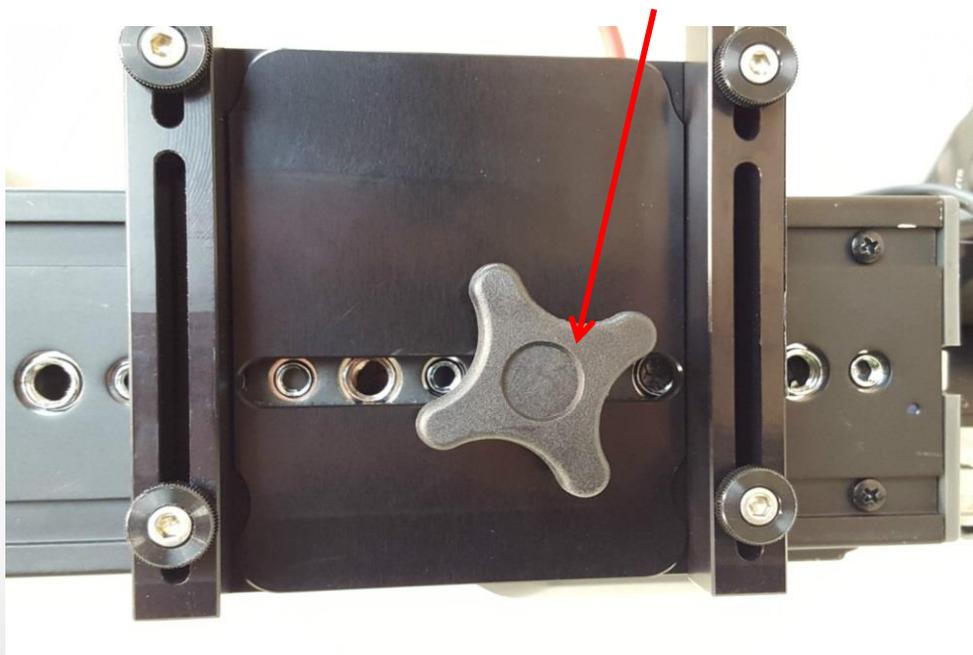
1. Start with the Camera Cradle in the down position and the Cradle Lock Handle unlocked.
2. Use the supplied Camera Knob to mount the camera to the Camera Plate.
3. Make sure all cables, gaffers tape, servos and accessories are on the camera before balancing.
4. While holding the camera, gently loosen your grip to see if the camera is front or rear heavy. Move the camera forward or backward on the Camera Plate as needed.
5. Once front-to-rear balancing is set, tighten the Camera Knob, and raise the Camera Table by using Table Height Adjustment Knob until center of gravity is achieved.

Note: Gently rock the camera. If the camera falls forward and backward, the center of gravity is too high. Lower the Camera Table by turning the Table Height Adjustment Knob as needed. If after gently rocking the camera it returns to center of level position, then the center of gravity is too low. Raise the Camera Table. A final adjustment to the camera position on the Camera Plate may be required. Optimal tilt balance is achieved when you let go of the camera and it remains in any set position. Then, lock the Cradle Lock Handle.

Table Height Adjustment Knob



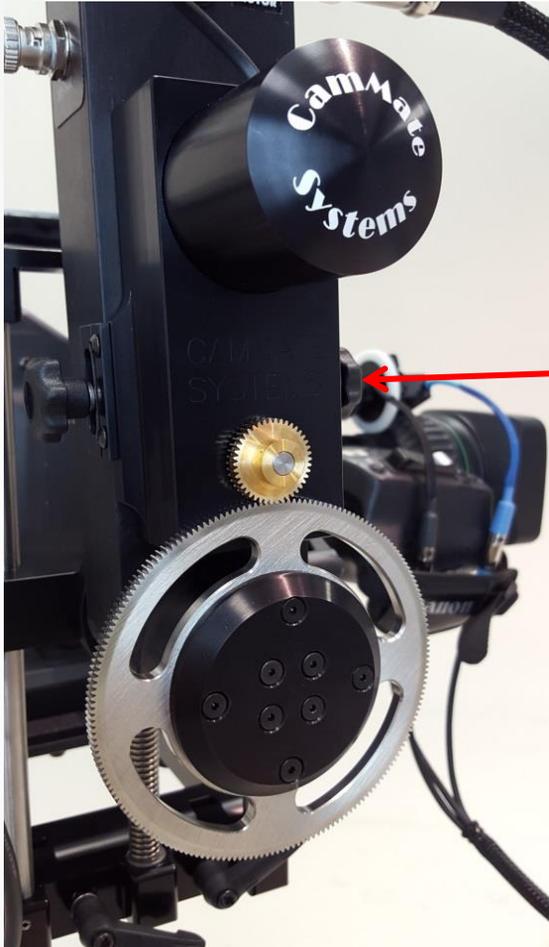
Camera Knob



Engaging Motors

Note: Only engage the motors after camera is balanced.

Tilt Motor

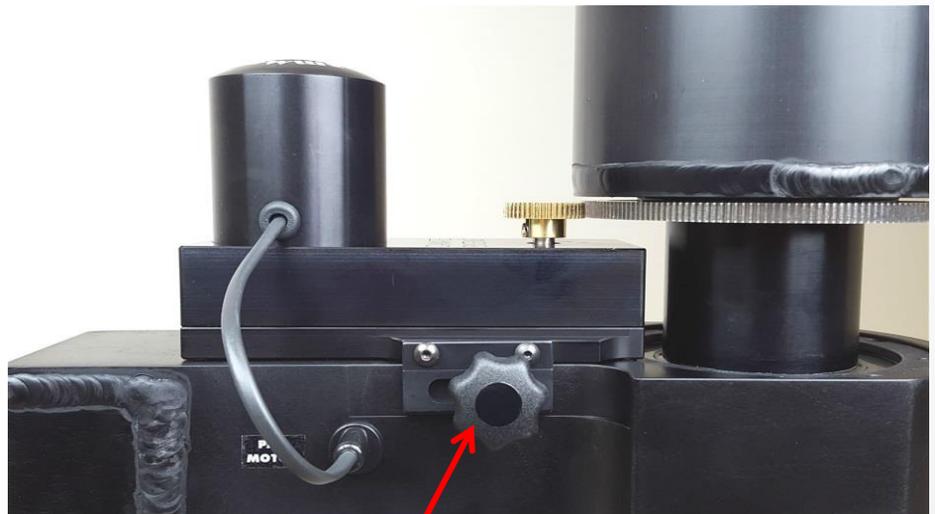


1. Loosen the two Motor Knobs , then slide the Tilt Motor until the gears mesh, and then tighten the Motor Knobs.

Note: Always disengage the Tilt Motor before removing camera.

Motor Knob

Pan Motor



Motor Knob

Repeat Step #1 for Pan Motor.

Note: Make sure Pan and Tilt Motor's are flat against Head.

Operator Notes

CamMate®

Controls Manual



Table of Specifications

Dimensions_____10.75” W x 10.75” D x 4.75”H

Weight_____Approximately 15 Lbs.

AC Power Input_____100/240VAC @ 1.0-1.5 Amps

Camera Power Supply_____15.25V @ 10 Amps

Pan Speed_____6000 RPM Motor. Approximately 4.8 seconds in
1 revolution.

Tilt Speed_____6000 RPM Motor 180° in 3 seconds.

Inputs_____One 16-Pin CPC connector for Joystick
Assembly.

Outputs_____One 37-Pin CPC connector for Main Cable

Joystick Controls

Pan and Tilt Control

Left to right movement of the Joystick proportionally controls Pan direction and speed of the Head.

The first Personality Switch changes the direction of the Joystick's Pan control.

Forward and back movement of the Joystick proportionally controls the Tilt direction and speed of the Head.

The second Personality Switch changes the direction of the Joystick's Tilt control.

Zoom Control

Clockwise and counter-clockwise twisting of the Joystick proportionally controls Zoom direction and speed.

The Pistol/Joystick Switch changes Zoom control between Joystick and Rocker.

The third Personality Switch changes the direction of the Joystick and Rocker's Zoom control.

Joystick



Personality Switches

Pistol/Joystick Switch

Joystick Controls Continued...

Zoom Enable

Press the Zoom Push Button to enable/disable zoom function.

Start/Stop Switch

Toggle the switch to start and stop camera's recording function.



Pistol Grip Controls

Focus Control

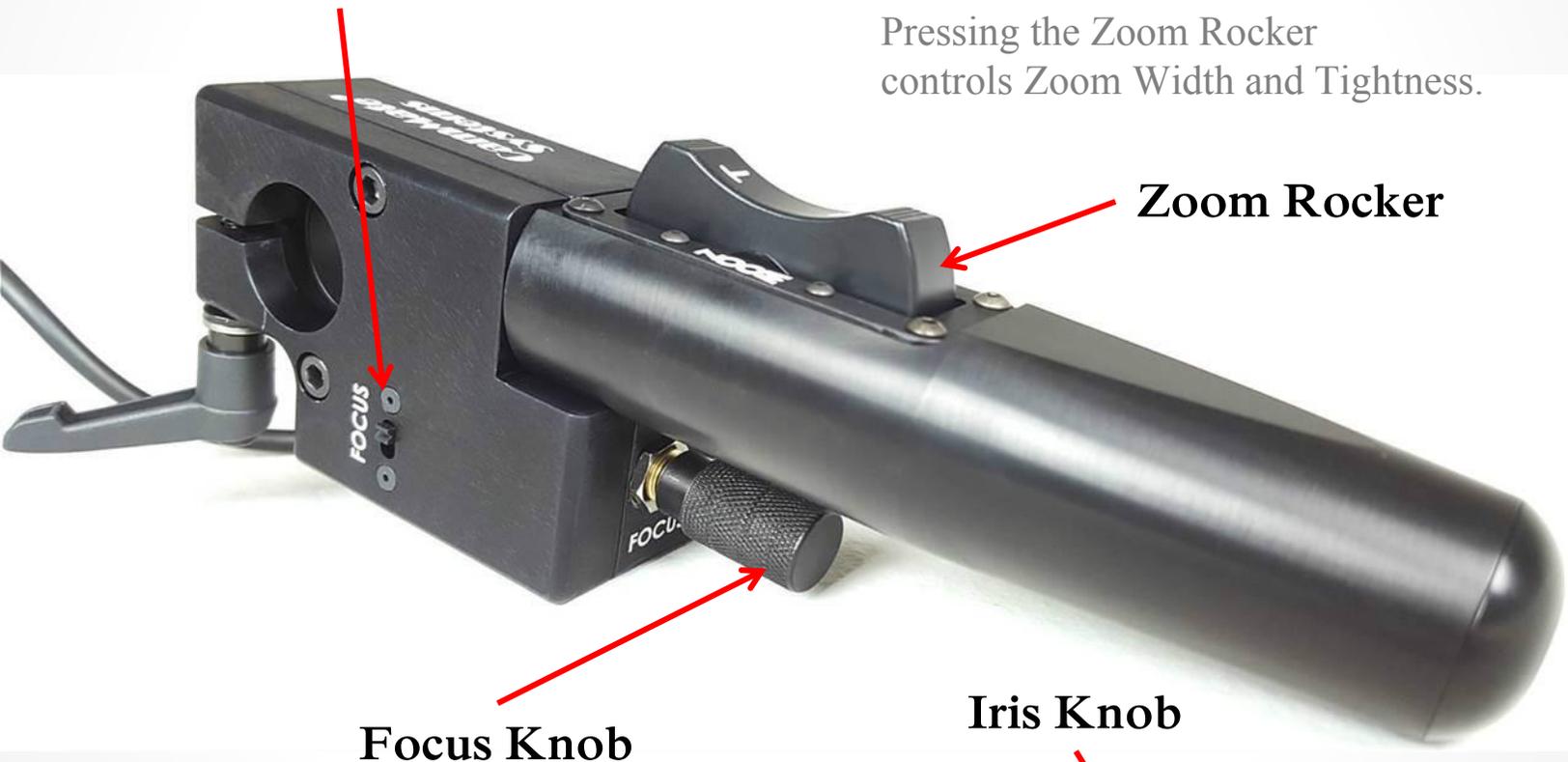
Clockwise and counter-clockwise turning of the Focus Knob proportionally controls Focus direction and speed.

The Focus Personality Switch changes the direction of the Focus control.

Focus Personality Switch

Zoom Control

Pressing the Zoom Rocker controls Zoom Width and Tightness.



Focus Knob

Iris Knob

Iris Control

Clockwise and counter-clockwise turning of the Iris Knob proportionally controls Iris opening and closing.

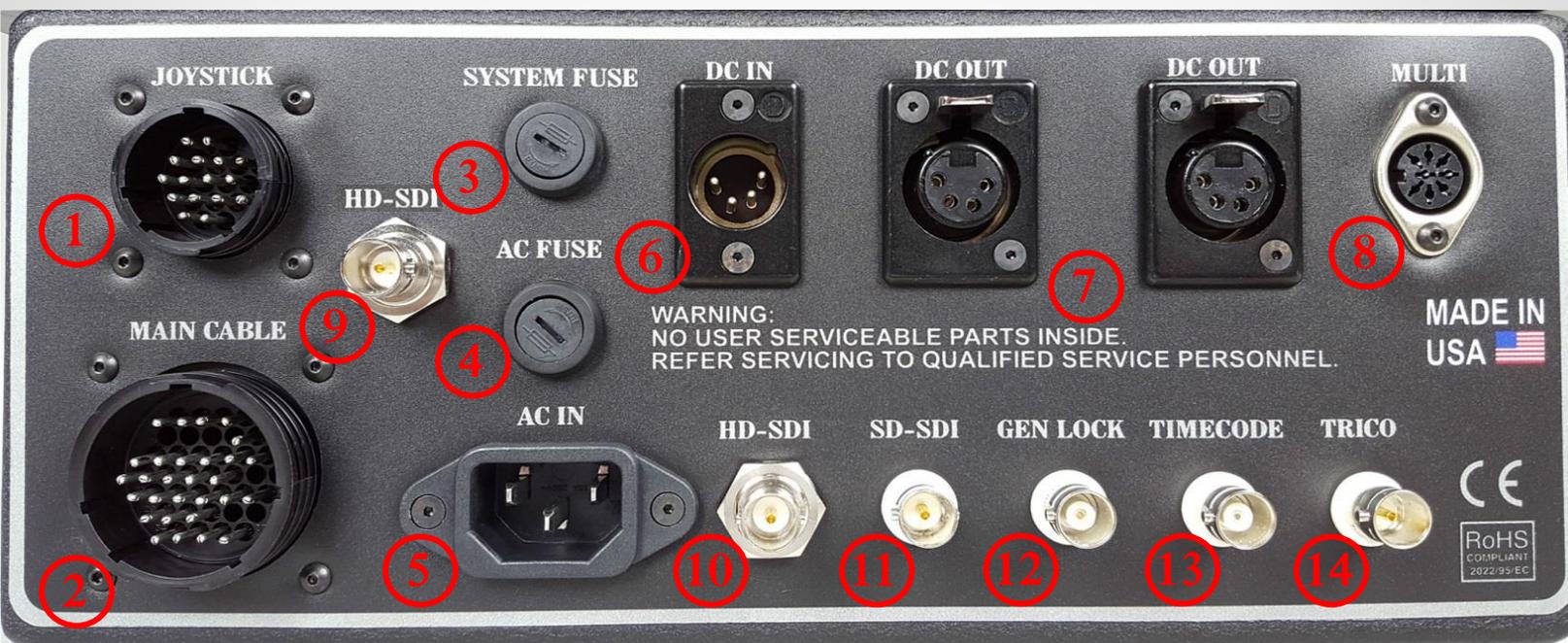


Control Box Front Panel



- 1) Pan direction LED's.
 - 2) Tilt direction LED's.
 - 3) Zoom direction LED's.
 - 4) Zoom Enable indicator LED.
 - 5) **Pan Controls:**
 - Speed: This varies the Pan Motor's top speed over a 5:1 range.
 - Center: This controls the centering of the Pan Motor.
 - Damp: This control will vary the amount of dampening applied to the Pan Motor.
 - 6) **Tilt Controls:**
 - Speed: This varies the Tilt Motor's top speed over a 5:1 range.
 - Center: This controls the centering of the Tilt Motor.
 - Damp: This control will vary the amount of dampening applied to the Tilt Motor.
 - 7) **Zoom Controls:**
 - Speed: This varies the Zoom speed range.
 - Center: This controls the centering of the Zoom.
 - Damp: This control will vary the amount of dampening applied to Zoom Lens.
 - 8) **System Power Switch:** Turns On/Off the electronics DC power.
 - 9) **AC Power Switch:** Turns On/Off the AC power supply.
- Note: Turn this on before the System Power.**

Control Box Back Panel



- 1) 16-Pin CPC input connector from Joystick.
- 2) 37-Pin CPC connector, connects Main Cable to Head.
- 3) DC System Fuse (10 amp 125v Fast-Blow)
- 4) AC Line Fuse (3 Amp/125v Slow-Blow)
- 5) AC Line input connector.
- 6) External DC supply input connector (12-15v)
- 7) External DC supply output connectors (15.25v)
- 8) 8-Pin Multi pass thru connector.
- 9) HD-SDI input
- 10) HD-SDI output
- 11) SD-SDI output
- 12) Gen Lock output
- 13) Time Code output
- 14) Trico output

Operator Notes

CamMate[®]

Crab Dolly



Table of Specifications

The CamMate Crab Dolly utilizes all-wheel-steering.

Crab Dolly without Support Pack

Travel 25' and all shorter cranes

Assembled height _____ 48 5/8" with 36" Tube.
60 5/8" with 48" Tube.

Weight _____ 103 Lbs. with 36" Tube.
108 Lbs. with 48" Tube.

Diameter _____ 41"

Crab Dolly with Support Pack (Required with CamVoyager 29' & 2032 cranes) (Recommended for all shorter cranes)

Assembled height _____ 48 5/8" with 36" Tube.
60 5/8" with 48" Tube.

Weight _____ 149 Lbs. with 36" Tube.
154 Lbs. with 48" Tube.

Diameter _____ 44"

CAUTION

When repositioning the dolly, always push from the bottom of the dolly with someone at both ends. This will ensure that the dolly does not become unstable.

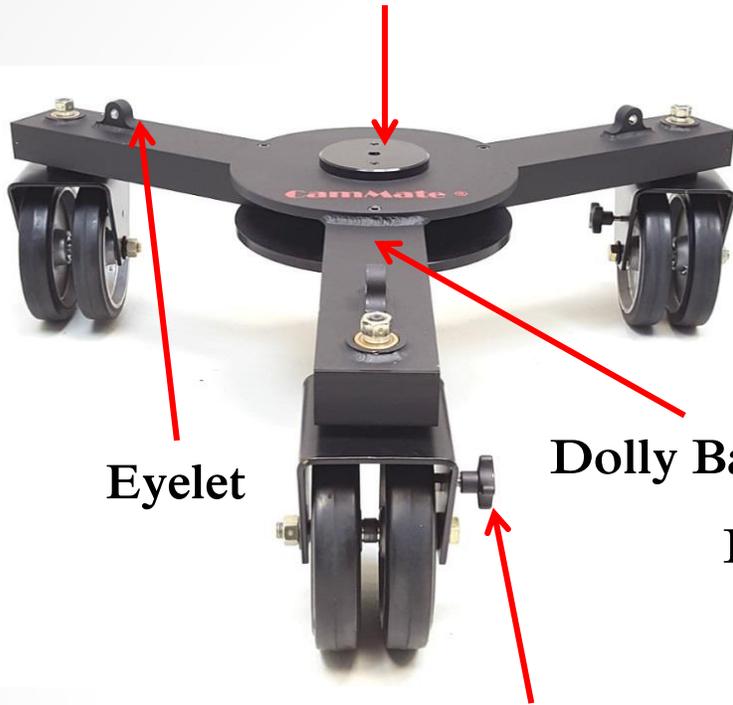
Crab Dolly Assembly Guide

The best application for our CamMate Crab Dolly is a studio floor, but it can also be used on other hard surfaces such as dirt roads, parking lots, etc.

Place the Dolly Tube over the Mounting Plate. Next install the three Turnbuckles. Place the end of the Turnbuckle that has the 5/8 mark, toward the Dolly Tube. (This will allow all of the Turnbuckles to tighten and loosen in the same direction.) Insert Quick Release Pins through Turnbuckle and Eyelet, install Quick Release Clip and tighten Jam Nuts.

Note: Hand tighten Turnbuckles only. Tighten them inwards, drawing the Dolly Tube and Dolly Base towards each other. See page 5 for leveling.

Dolly Tube Mounting Plate



Eyelet

Dolly Base

Brake Knob

Dolly Tube

Jam Nuts

Turnbuckle

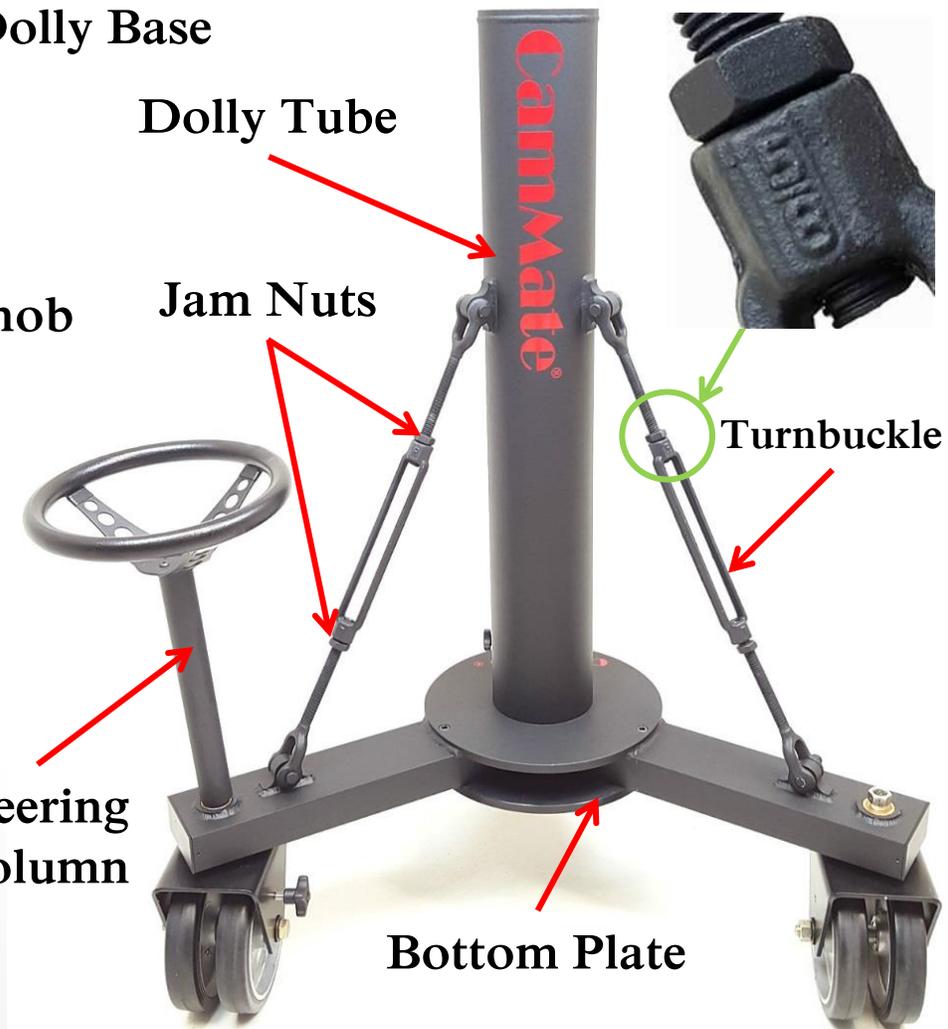
The Crab Dolly has two brakes. Tighten the Brake Knobs to set the brake.

Note: Always place a sand bag behind the wheels when on an incline, to keep the dolly from rolling.

The Steering Column is removable and it fits on all three wheel locations.

Steering Column

Bottom Plate



Crab Dolly Support Pack

The Dolly Support Pack was designed to provide more stabilization, especially for longer length cranes. The Dolly Support Pack should be installed before crane assembly.

Crab Dolly Support Pack



Note: It is recommended that the support pack be installed before the boom assembly. However, the Support Pack can be added later, as need is determined.

Crab Dolly Support Pack Continued...

Remove the three bolts that hold on the Bottom Plate (image on page 38). After the Bottom Plate is removed, the Dolly Support Pack Base can be installed in the same location. Reinstall and tighten the three bolts.

Slide the Dolly Support Legs into the Dolly Support Pack openings, align the holes in the Legs with the holes in the Dolly Support Pack and install the Locking Pins. Finally, adjust Screw Jacks to the floor.

Dolly Support Pack Base



Dolly Support Legs



**Dolly
Support Pack
Openings**



Dolly Support Legs

Screw Jacks

CAUTION

The Screw Jacks are designed to support the dolly, not to level it. Make sure the wheels are touching the ground at all times.

Operator Notes

CamMate[®]

Tripod with Wheels



Table of Specifications

Tripod with Wheels

Travel 25', 2024 and smaller cranes ONLY

Assembled height_____	53 3/4" with 6" Riser 59 3/4" with 12" Riser
Weight_____	80 Lbs. with 6" Rise 83 Lbs. with 12" Riser
Footprint_____	40.5" X 48.5"

CAUTION

When repositioning the dolly, always push from the bottom of the dolly with someone at both ends. This will ensure that the dolly does not become unstable.

Tripod Assembly Guide

Install the Rear Legs first (see page 45). Slide leg into the Tripod with Wheels Center Plate. Align holes in Center Plate with corresponding Leg Holes 1 & 2. Press the Quick Release Pin into Hole 1.

Note: The Right Rear Leg and Left Rear Leg have fixed wheels and MUST be installed with the wheels facing the same direction.

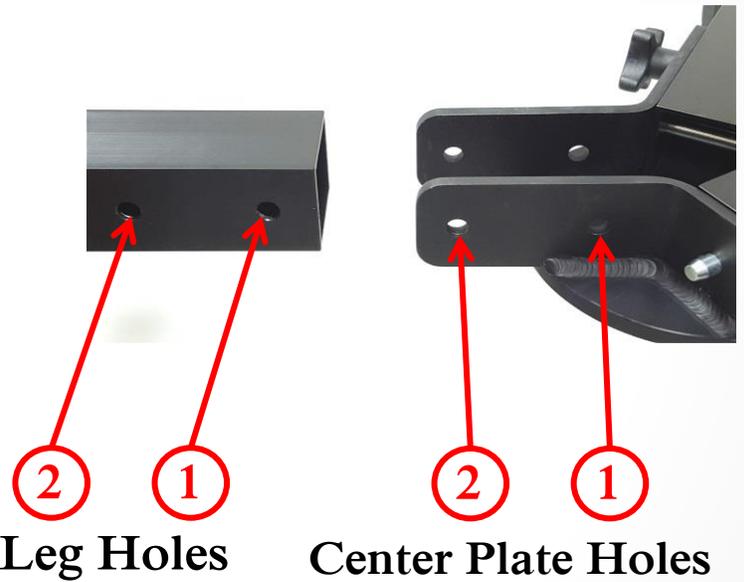
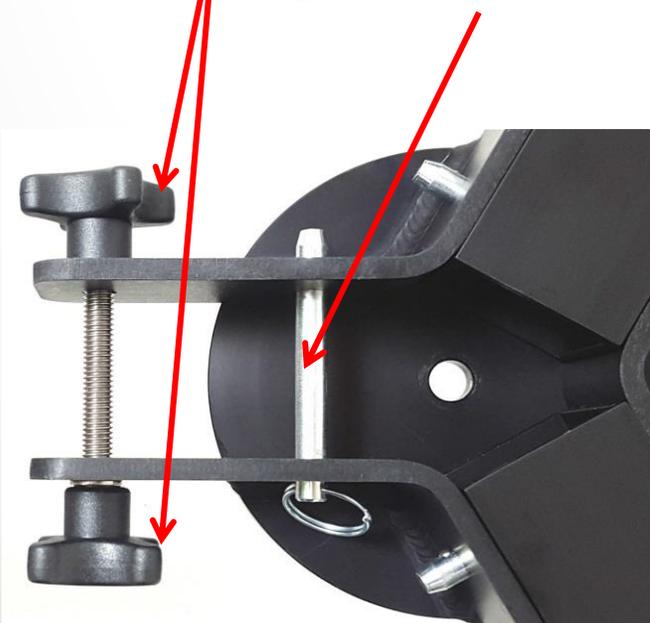
Top View

**Tripod with
Wheels Center
Plate**



Mounting Knobs

Quick Release Pin



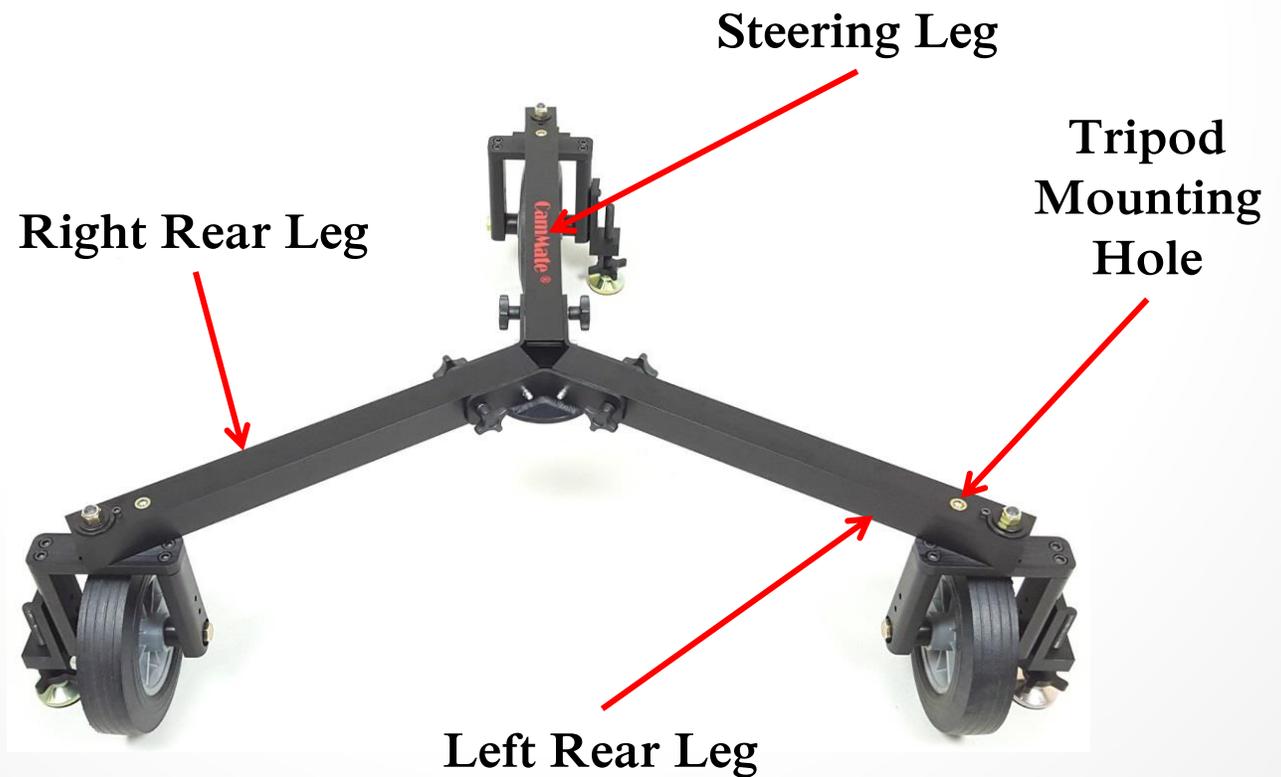
Insert the Mounting Knob, with washer, and attach screw through Hole 2 and tighten the other Mounting Knob onto the opposite side of screw. Repeat this procedure for the other Rear Leg and then install the Steering Leg last. (See page 45.)

Tripod Assembly Guide Continued...

Installed Legs



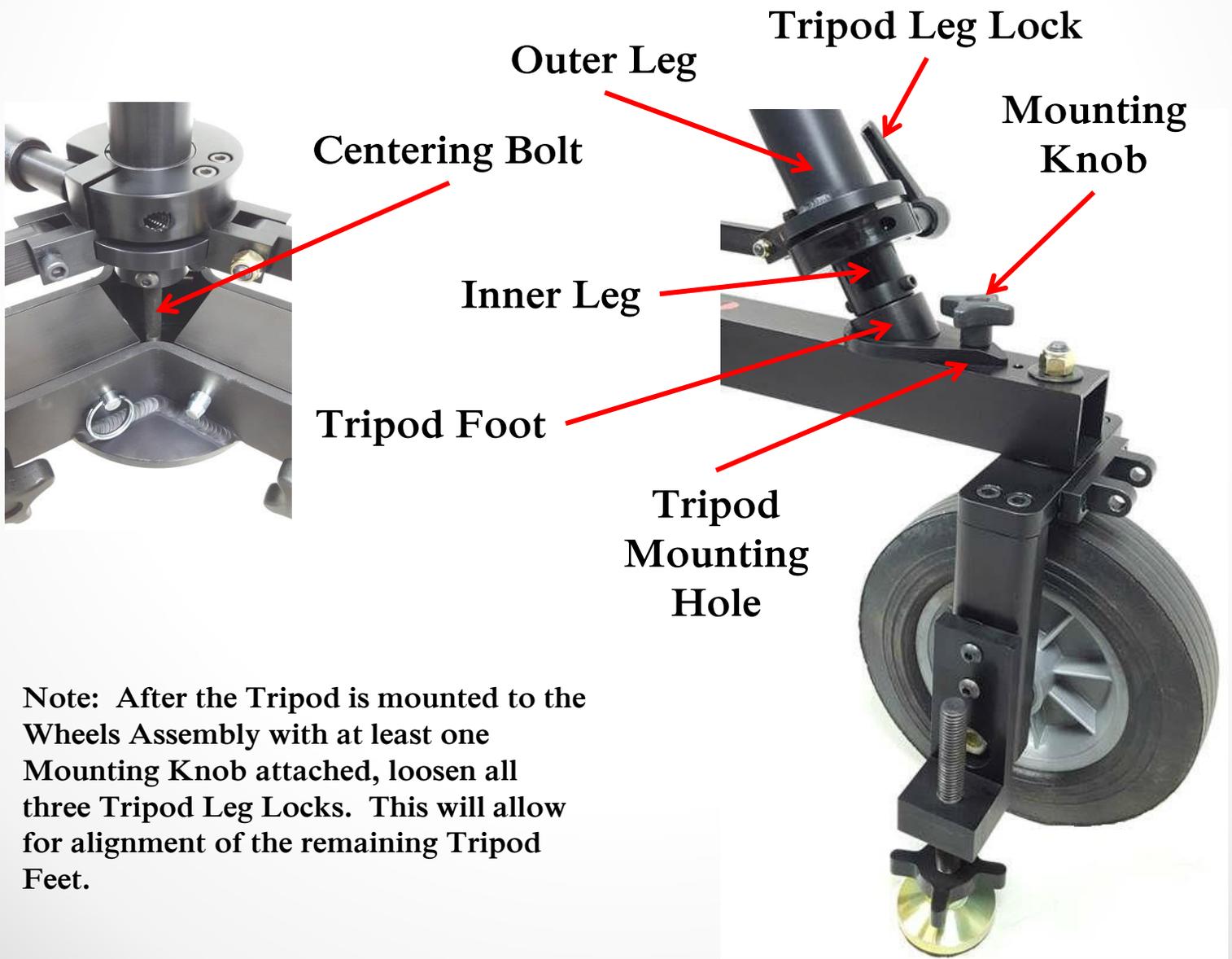
Wheels Assembly



Note: Pictured with Studio Wheels (Pneumatic Tires are also available).

Tripod Assembly Guide Continued...

The Tripod Assembly is shipped in the folded position. To unfold, loosen the Center Post Lock (image on page 47) and pull legs outward. The Tripod Feet are shipped 180° out of operational orientation. Loosen the Tripod Leg Locks and rotate Tripod Feet 180°. Slide the Inner Tripod Leg approximately one inch out of the Outer Tripod Leg; then tighten Tripod Leg Locks. Lift Tripod Assembly onto Wheels Assembly (image on page 45) and align Tripod Centering Bolt with the hole in the Center Plate. Align first Tripod Foot with corresponding Tripod Mounting Hole; insert and tighten Mounting Knob (see below). Repeat this procedure for the two remaining feet and then install Centering Bolt Mounting Knob (see page 47).



Note: After the Tripod is mounted to the Wheels Assembly with at least one Mounting Knob attached, loosen all three Tripod Leg Locks. This will allow for alignment of the remaining Tripod Feet.

Tripod on Wheels Leveling

Note: After the Tripod is mounted to the Wheels Assembly (see mounting instructions on previous page) and before the Pedestal can be mounted onto the Riser, the Tripod must be level.

Tighten the Center Post by turning the Center Post Handle clockwise into the Riser. Place a torpedo or similar type level on top of the Riser. To level, raise or lower corresponding Outer Leg of Tripod. Loosen the corresponding Tripod Leg Lock and then tighten, once level is achieved. Repeat this procedure on all Outer Legs until level. Next, install Centering Bolt Washer and Mounting Knob, and tighten fully. Finally, tighten the Center Post Lock.

Tripod with Wheels

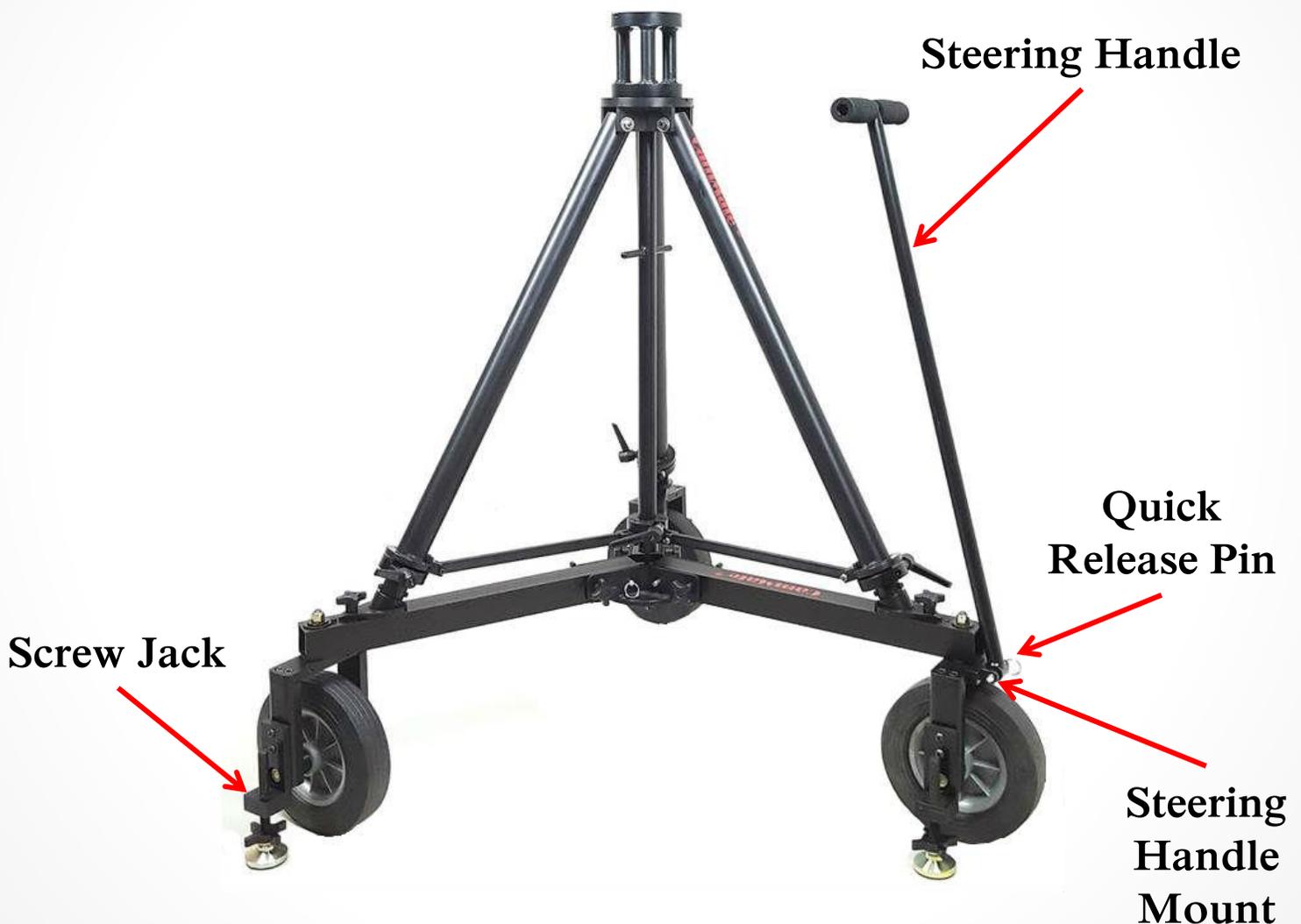
Bottom View



Tripod Assembly Guide Continued...

Note: The Steering Handle can be installed at anytime, using the Quick Release Pin to attach it to the Steering Handle Mount.

After the Tripod is level, adjust Screw Jacks to the floor.



CAUTION

The Screw Jacks are designed to support the dolly, not to level it. Make sure the wheels are touching the ground at all times.

Operator Notes

CamMate®

Roomer/Roamer Dolly Manual



Table of Specifications

Roomer Dolly

2032 and smaller cranes ONLY

Assembled Height	45" with 36" Dolly Tube 57" with 48" Dolly Tube
Assembled Weight	250 Lbs. with 36" Dolly Tube 255 Lbs. with 42" Dolly Tube
Wheel Base	56"
Footprint	33" X 69" without Outriggers 60" X 69" with Outriggers

Roamer Dolly

Required Dolly for 2039, 2043 & 2050 (Can be used with all CamMate Booms)

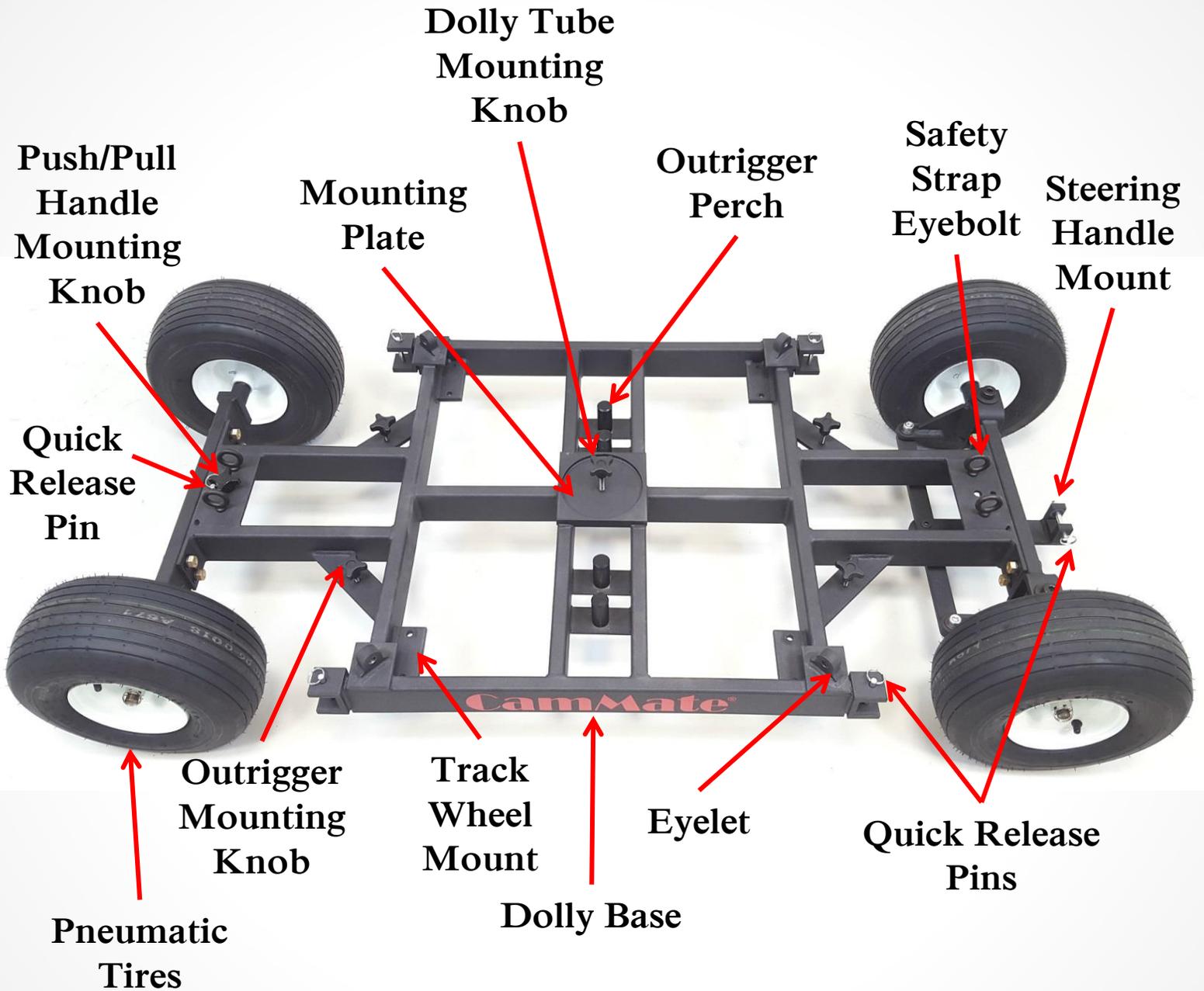
Assembled Height	45" with 36" Dolly Tube 57" with 48" Dolly Tube
Assembled Weight	266 Lbs. with 36" Dolly Tube 271 Lbs. with 48" Dolly Tube
Wheel Base	56"
Footprint	43" X 69" without Outriggers 60" X 69" with Outriggers

CAUTION

When repositioning the dolly, always push from the bottom of the dolly with someone at both ends. This will ensure that the dolly does not become unstable.

Roomer/Roamer Assembly Guide

Note: Always place a sand bag behind the wheels when on an incline, to keep the dolly from rolling.



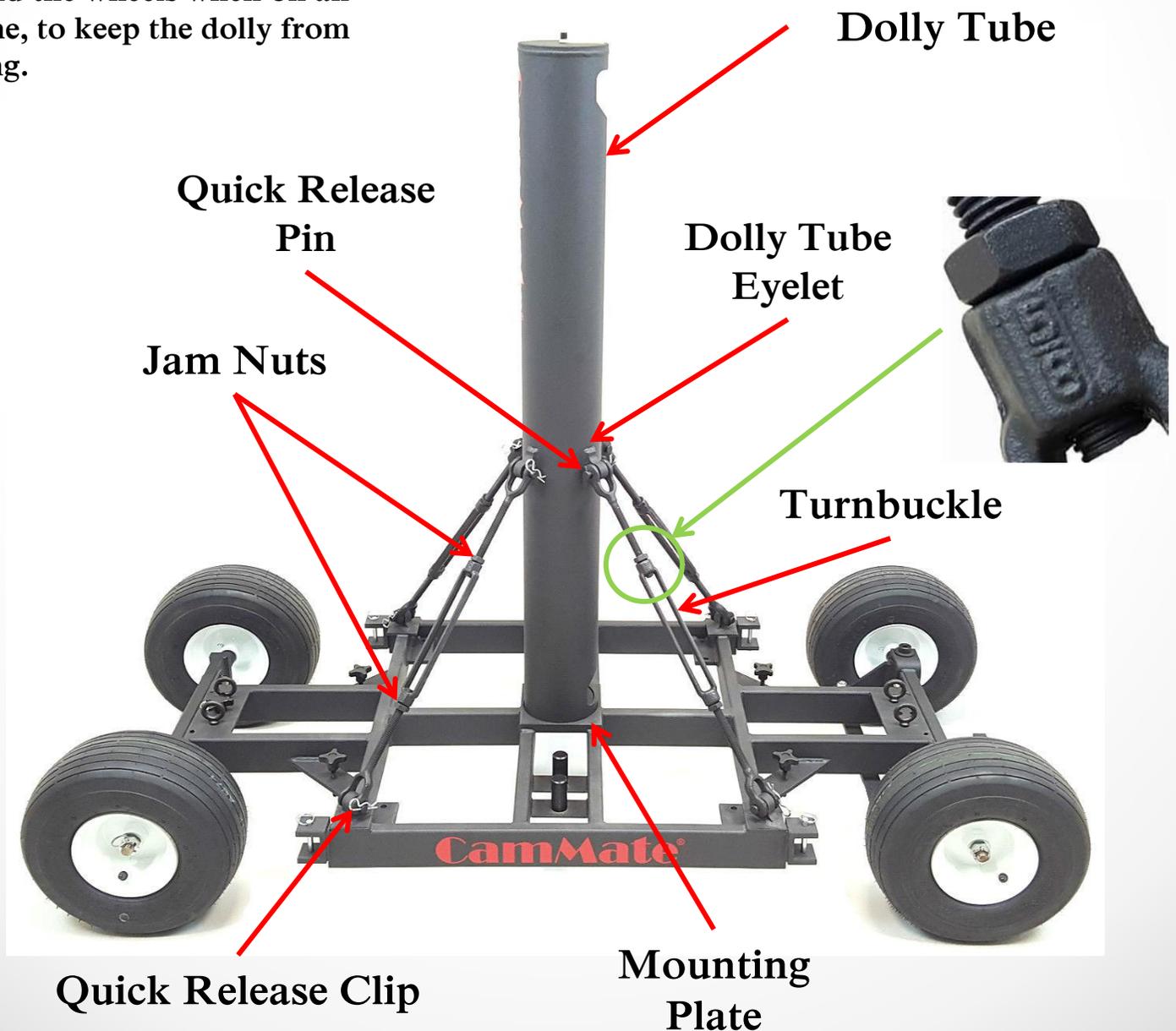
Note: Pictured with Pneumatic Tires, Studio Wheels are also available.

Roomer/Roamer Assembly Guide Continued...

Place the Dolly Tube over the Mounting Plate. Tighten the Dolly Tube Mounting Knob, and install the four Turnbuckles. Place the end of the Turnbuckle that has the 5/8 mark toward the Dolly Tube Eyelet. This will allow all of the Turnbuckles to be tightened and loosened in the same direction. Insert Quick Release Pins through Turnbuckle and Eyelet, install Quick Release Clip and tighten Jam Nuts.

Note: Only hand tighten Turnbuckles. Tighten them inwards, drawing the Dolly Tube and Dolly Base towards each other. See page 5 for leveling.

Note: Always place a sand bag behind the wheels when on an incline, to keep the dolly from rolling.



Roamer/Roamer Assembly Guide Continued...

Outrigger/Steering Handle & Push/Pull Handle Assembly

1. Remove the Outrigger's Quick Release Pin and Mounting Knob from Dolly Base.
2. Slide Outrigger into position and insert Quick Release Pin. Secure Outrigger with Mounting Knob.
3. Repeat Steps #1 and #2 for the remaining Outriggers.
4. Adjust Screw Jacks to the ground.

Note: The Push/Pull Handle can be installed at anytime. Use the Quick Release Pin to attach it to the Dolly Base and secure with Mounting Knob.

Note: The Steering Handle can be installed at anytime. Use Quick Release Pin to attach it to the Steering Handle Mount. (See page 52.)



CAUTION

The Screw Jacks are designed to support the dolly, not to level it. Make sure the wheels are touching the ground at all times.