

Assembly Manual



What's In The Box

Please inspect the contents of your shipped package to ensure you have received everything that is listed below.

- Kite-22 Telescopic Jib Arm Crane with Accessories
- Spin-3 (3-Axis) Motorized Dutch Roll Pan Tilt Head (PT-SPIN-3)
- D-33 Pro Camera Dolly
- Gravity Robust Tripod Stand (TP-GVTY-ULT)
- Tools and Tool Pouch/Wrap- **Complimentary**
- Customized Storage cases

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First Packing

- Jib Sections

Second Packing

- Jib Sections

Third Packing

- Accessories of Jib Crane

Fourth Packing

- Gravity Jib Stand

Fifth Packing

- Dolly Pack

Sixth Packing

- Sr Pan-tilt Head



NOTE: We send the Jib sections in two boxes. One box has the sections with pipe packing, and the other cardboard box has the rest. **We only send one pipe packing for the jib sections.** We send the Dolly in a cardboard box.

Packaging Material of Box 1 & 2: 7x Jib Sections



Packaging Material of Box 3: Accessories of Jib Crane



Joystick Controller Bracket



Hub Section



Head Platform with Bolt, Shaft Collars, Washers and Nut



6 x Shanks for Joining Arms



Levelling Cable



6 x Pins for Joining jibs



7 x Black Velcro



2 x pins



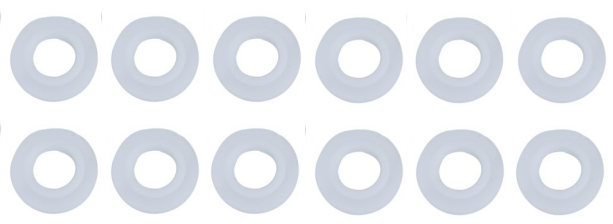
Shank



Hub Mounting knob



Turn buckle



12 x Washers



Rear Frame Mounting Rod



Complimentary Tools Pouch

Packaging Material of Box 4: Gravity Robust Tripod Stand (TP-GVTY-ULT)



Gravity Robust Tripod Stand



Ultimate Gravity Stand Bowl

Packaging Material of Carton Box 5: Camera Dolly



D-33 Pro Camera Dolly



3 x Tripod holder



17mm Spanner



1 x 3/16" L-Type Allen Key

Packaging Material of Box 6: Spin-3 (3-Axis) Motorized Pan Tilt Head (PT-SPIN-3)



Spin-3 Pan-tilt Head



Spin-3 Joystick Controller with Cap



3mtr Adapter Cable



15mtr Control Cable



Camera Plate



Universal Adapter



Joystick Controller Plate



12V AC Adapter



Pan-Tilt Mounting Plate and knob



Fasteners



1/4" Camera Mounting Screw



Safety Hints

ATTENTION: PLEASE READ THE FOLLOWING CAUTIONARY POINTS BEFORE USING THE JIB TO PREVENT DAMAGE TO THE EQUIPMENT AND THE OPERATOR!

- The crane may not be assembled or operated under the influence of alcohol, drugs, or any other intoxicating substances. Lack of attention while connecting the components can cause substantial damage to the equipment/operator.
- The crane may only be operated in a leveled horizontal position. Make sure that the surface is stable.
- To prevent any harm or injury, properly join all crane sections. In addition, using the support stand while telescoping the complete length is suggested.
- Always connect the steel cables properly to provide stability to the system. They should not negatively impact the movements of the crane in any way.
- After the crane is set up, the pan-tilt/gimbal head shall be positioned under the central pivot section. In the assembled state, when the pan-tilt head/gimbal head is higher than the central pivot section, there should be someone to look after the crane system.
- The complete panning & lifting range around it must be kept free. Avoid anybody standing under the crane. No loose objects may be stored or placed on it. Be very careful while using indoors.
- Never operate the crane near high-voltage power cables. It holds danger to life.
- Particular care is required when operating the crane in unfavorable weather conditions. The crane must be shut down in sufficient time. When used on a rainy day, the pan-tilt / gimbal head and controlling bar shall be protected against rain.
- When transporting the crane, lock the Pan & Tilt Axis for safety. Ensure the components do not rub together and cause any material wear.
- Before removing the counterweights, ensure the remote head rests on the support stand. Then, gradually remove the counterweights before the remote head, camera, or other parts.
- Avoid abruptly swiveling or stopping the crane in the interest of safe crane operation. Otherwise, it may cause serious damage to equipment.

FOLLOWING THESE GUIDELINES WILL PROVIDE BETTER SHOTS AND TROUBLE-FREE OPERATION.

SHOULD YOU NEED ADDITIONAL INFORMATION, TECHNICAL ASSISTANCE IS AVAILABLE 'ONLINE' BY CONTACTING THE SALES REPRESENTATIVE.

INBOX

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Kite-22 Crane Ultimate Setup

Kite-22 Crane Ultimate Mounting on Dolly

D-33 Dolly Assembly

- Loosen the side bolt of the D-33 Pro Camera Dolly using the 17mm spanner.

NOTE: This dolly has various holes for flexible Tripod mounting.



- Remove the Bolt nut, washer and Bolt.



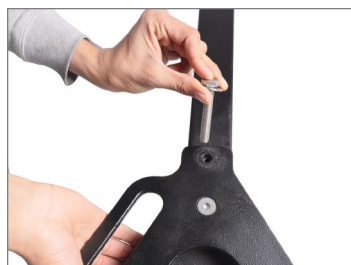
- Repeat the same steps to remove the second side Bolt of the D-33 Dolly.



- Stretch the legs of the D-33 Dolly and open it.



- After opening the Dolly, re- insert the Bolt, washer and Bolt nut.



- Tighten the Bolt nut using the 17mm spanner.
- Repeat the same step to re-insert the second side Bolt.

NOTE: The centre bolt will not be removed to open the D-33 Dolly.



Tripod Holders Assembly

- Remove the Allen bolt from the Tripod holder using a 3/16" T-Type Allen key and mount the holder on the Dolly.

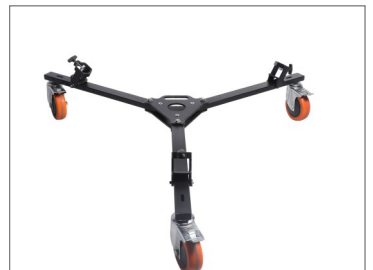


- Carefully align the holes of the Tripod holder with the Dolly, insert an Allen bolt, and retighten it using a 3/16" T-Type Allen key.



- Repeat the same step to mount the remaining tripod holders.

FEATURE: The position of the Tripod Holder can be adjusted to accommodate the Tripod legs.



Gravity Robust Tripod Stand Assembly

- Stretch out the legs of the Gravity Stand **(Not Included)** and open the Stand.



- Now, remove all the rubber feet from the Stand.



- Loosen and remove the Allen bolt using the screw driver.
- Remove the plastic stopper as well.
- Repeat the same process to remove the plastic stoppers from the other two Stand legs.



- Now extend the Stand's leg and slide the extension upwards.
- Align the Stand's leg holes with the stopper and securely lock it using the locking pin.



- Tighten the knob of the tripod leg.
- Repeat the same process to increase the height of the other two Stand legs.



Gravity Stand Mounting on D-33 Dolly

- Loosen all the knobs of the tripod holder and securely place the Gravity Stand in them.



- Tighten all the knobs of tripod holder after mounting the Gravity stand.



Hub Mounting Assembly

- Firstly, place Ultimate Gravity Stand Bowl top of the Stand. Then tighten the provided knob.



- Mount the Hub Mounting on the Tripod.

NOTE: The Hub Assembly has several mounting holes for attaching additional accessories like a LCD Monitor or a Joystick box.



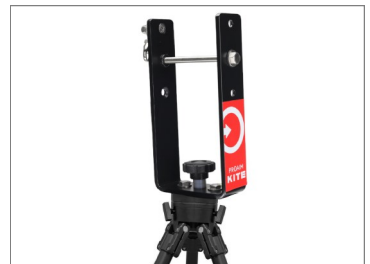
- Now, re-insert the bolts and tighten them using the 21mm spanner.



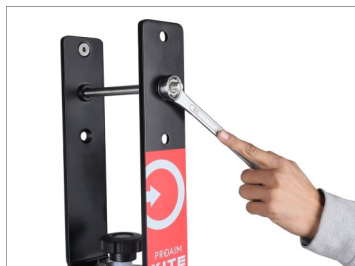
- Re-insert the plastic washer and pan friction knob.
- Tighten the knob properly to secure the assembly hub.



- Hub Mounting is now securely mounted on the Stand.



- Loosen the nut bolt using the 21mm spanner and remove the Hub mounting shank.



Jib Section Assembly

- Insert the 2nd section into the 1st section and mount them on the Hub mounting by aligning the threads.



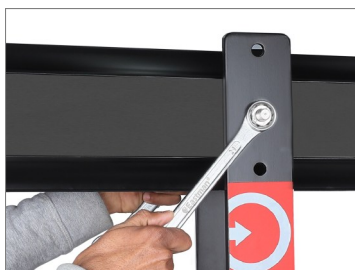
- Insert Shank into the Hub mounting ensuring the holes of the both sections are aligned with the holes of the Hub mounting.



- Now, re-insert the washer and nut bolt into the Shank of the hub mounting.



- Tighten the nut bolt using the 21mm Spanner.



- Remove the black shank knob and plastic washer by loosening them.



- Now, insert the Shank into second hole of the 1st Jib section, as shown in the image.



- Re-insert the plastic washer and knob from the other side.



- Tighten the knob using the 4mm T-Type Allen key.



- Insert 3rd section into the 2nd section by ensuring the holes are aligned.
- Insert the 4th, 5th & 6th section following the same steps.



- Insert the Shank in the section joint after ensuring alignment of the holes.



- Now, insert plastic washer and knob from the other side.



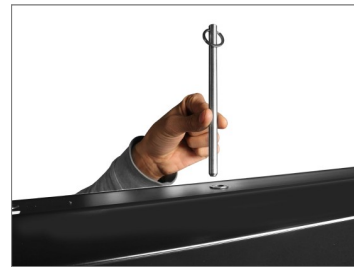
- Tighten the shank knob using the 4mm T-Type Allen key.



- Insert the locking pin into the 1st section from the top and lock it securely.



- Similarly, insert the locking pin into the 2nd section from the top and lock it securely.



- The 1st, 2nd and 3rd Section are securely attached.



- Repeat this process for attach the remaining sections.



Jib Section 7th & Section 6th Assembly

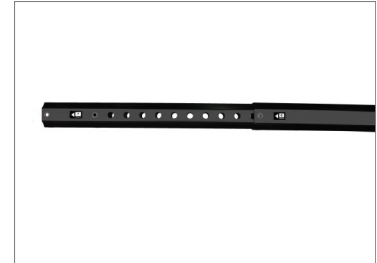
- Insert 7th section into the 6th section and insert the shank ensuring the holes are aligned.



- Insert plastic washer and knob from the other side and tighten the knob securely.



- 7th section is securely attached.



- Insert locking pin into the 6th section from the top and lock it securely.
- Attach 6th section with 5th, 5th section with 4th, 4th section with 3rd, 3rd section with 2nd and 2nd section with the 1st.



Head Platform Mounting

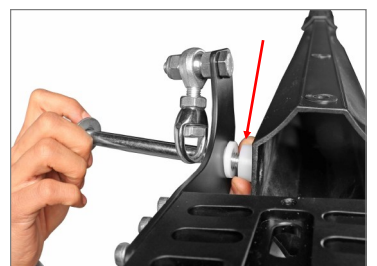
- Loosen the bolt of the Head platform and remove it.
- Remove plastic washers, steel washers and shaft collars from the Shank.



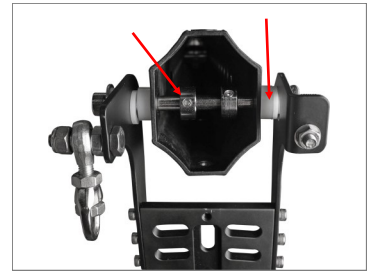
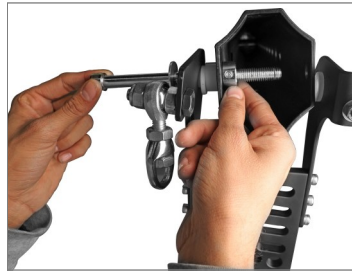
- Mount Head Platform on the 7th section of the jib.



- Attach Head platform to the jib section.
- Now, insert the long bolt and plastic washer.



- Insert two Shaft collars inside the jib and insert plastic washer in the center of Jib and Head platform.



- Insert plastic washer and steel washer to the other side of the long bolt.



- After inserting washer, insert nut and tighten it using a 21mm spanner.
- To tighten the bolt, tighten the other side of the long bolt using the 10mm Allen key and then tighten the other side using the 21mm spanner.



- Now, move both the Shaft collars to the sides and tighten them using a 3mm T-Type Allen key.



Turn Buckle Mounting

- Attach Turn Buckle to the Hub mounting.

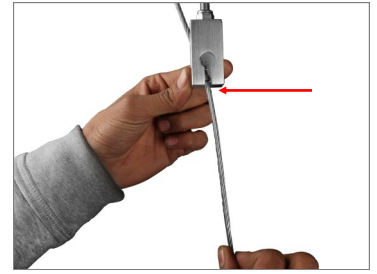


Leveling Cable Assembly

- Attach one end of the levelling cable to the Hub mounting.



- Insert the other end of the Leveling cable into the Turn Buckle and lock the cable.



- Stretch the levelling cable per your requirement.



Joystick Controller Bracket Assembly

- Attach the Joystick Controller Bracket to the Jib and insert the Shank.



- Now, insert the washer and nut bolt to the other side of the Joystick Controller .



- Tighten the nut bolt using the 21mm Spanner.
- Joystick Controller Bracket is now attached to the Jib.



Weight Rod Assembly

- Insert the Weight rod into Joystick Controller Bracket.
- Now, insert the black tube to the center.



- Using the same step insert the black tubes to the weight rod on both sides, as shown in the image.



Weight Mounting

- Put weights on the weight rods as per your requirement.

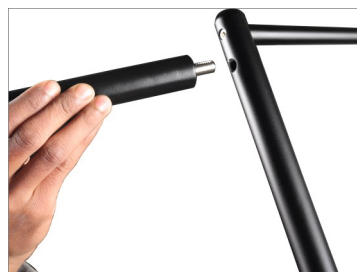


- Now, put stoppers to secure the weights.



Rear Frame Mounting Rod

- Insert Rear Frame Mounting Rod into the Joystick Controller Bracket and tighten them securely.



- The Jib is securely mounted on the stand.



Kite-22 Crane Ultimate Mounting on Dolly



Spin-3 Axis Pan-tilt Head Mounting

- Attach Spin-3 Pan-Tilt head to the mounting plate and insert the knob.



- Spin-3 Pan-Tilt Head is securely attached to the mounting plate.



- Loosen the Spin-3 Pan-Tilt head bolt with the 4mm Allen key and detach the motor gear.
- Then rotate the Pan-Tilt adjustable arm and balance it.

NOTE: Ensure to detach the motor gear before rotating the Pan-Tilt head adjustable arm.



- After balancing the Pan-Tilt adjustable arm, now tighten the bolt using a 4mm Allen key.

NOTE: The 3-Axis Spin-3 pan-tilt head ensures a perfect camera balance and offers smooth camerawork at all times.



- Now, loosen the Pan-Tilt adjustable arm bolt using a 4mm Allen key, rotate the Camera mounting plate and balance it.
- Then, re-tighten the bolt using a 4mm Allen Key.



Camera Mounting

- Mount the Camera (**Not Included**) on the camera plate and insert the bolt.

NOTE: The universal camera plate is adjustable for different sized setups.



- Tighten the bolt using the 3/16" L-type Allen Key.

NOTE: The Head will pan tilt and roll through 360°, and this enables the camera to point directly upwards or downwards when required.



Spin-3 Axis Joystick Controller Mounting

- Loosen and remove all the bolts of the Joystick Controller plate using a screwdriver.



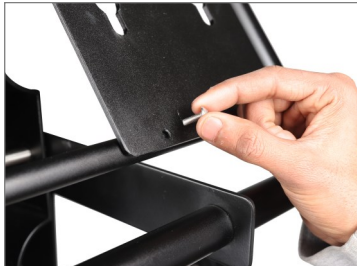
- Now, remove the Joystick Controller plate.



- Attach the Spin-3 joystick plate ensuring the holes alignment.



- Now, insert the bolt and re-tighten them using the screwdriver.



- Follow the same process to secure the remaining bolts.



- Attach Spin-3 joystick controller and securely lock it.



Cable & XLR Cable Assembly

- Connect the female end of the Pan-tilt cable to the male end of the XLR cable.



- Attach the cable's female end to the Joystick controller.



- Attach the AC Adapter's female end to the Joystick controller.



AC Adapter & Universal Adapter Assembly

CAUTION:

- Do not use an unregulated power supply.
- The regulated power supply must produce less than 24 volts.
- We do not recommended for 24 volts or above as it may cause permanent damage.

- Attach the Power cable's one end to the adapter.



- Attach the Power cable's other end to the Universal adapter.



- **Speed Controller -**

The Speed Controller adjusts the speed of pan tilt & Dutch roll based on the requirement of the shot.

- **Dead Spot -**

The dead spot prevents the head from stopping suddenly with a jerk.

- **Damping Control -**

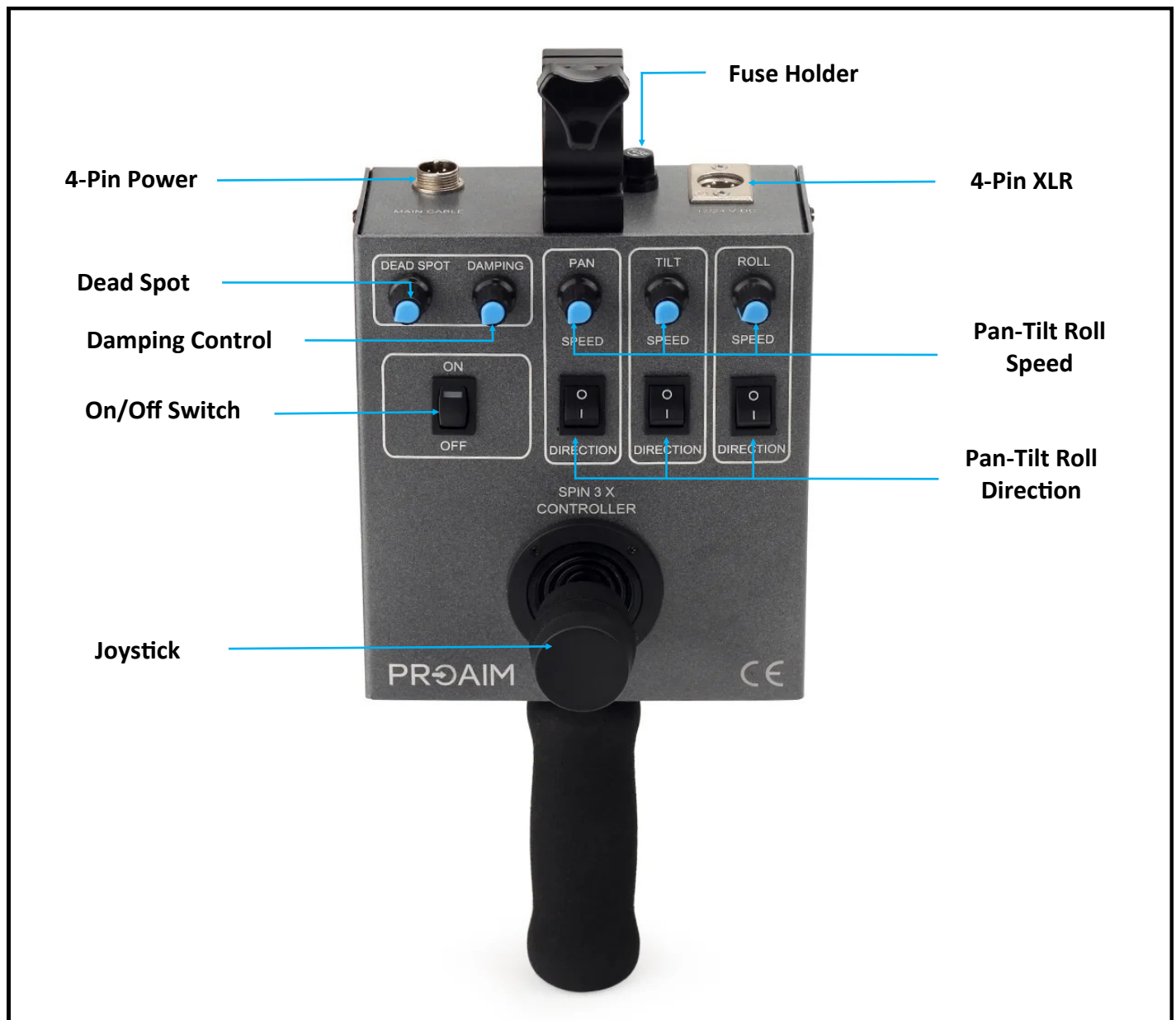
Damping control prevents the Head from stopping with a jerk enabling you to achieve smooth endings.

- **Pan-Tilt Roll Direction -**

You can reverse the panning & tilting direction as & when required.



Parts of Spin-3 X Joystick Controller



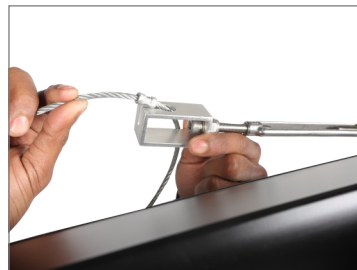
Screen Mounting

- Remove the Base-100 and mount the Screen **(Not Included)**.
- After mounting the screen use a screwdriver **(Not Included)** to tighten its bolt.
- Loosen or tighten the bolt using a 4mm Allen key to adjust the positioning of the screen.



Shorting the Length of Jib

- To shorten the length of the Kite crane remove the Levelling cable from the Shank of the Hub section.
- Remove both locking pins from the 1st Section.
- Loosen and remove the knob of the shank using a 4mm T-Type Allen key.



- Now, remove the shank.



- Remove the nut bolt of the Hub section's shank using the 21mm spanner and remove the shank, as shown in the image.



- Slide 2nd Section into 1st Section and insert the shank.
- Now, align the second hole of section 2 with the first hole of section 1 and insert the shank.



- Insert the nut bolt from the other side and tighten them using the 21mm spanner.



- Slide 3rd section into 2nd section and repeat the same step to insert the shank.

NOTE: Make sure to align the holes of both sections.



- 2nd Section is now securely attached to 3rd section .

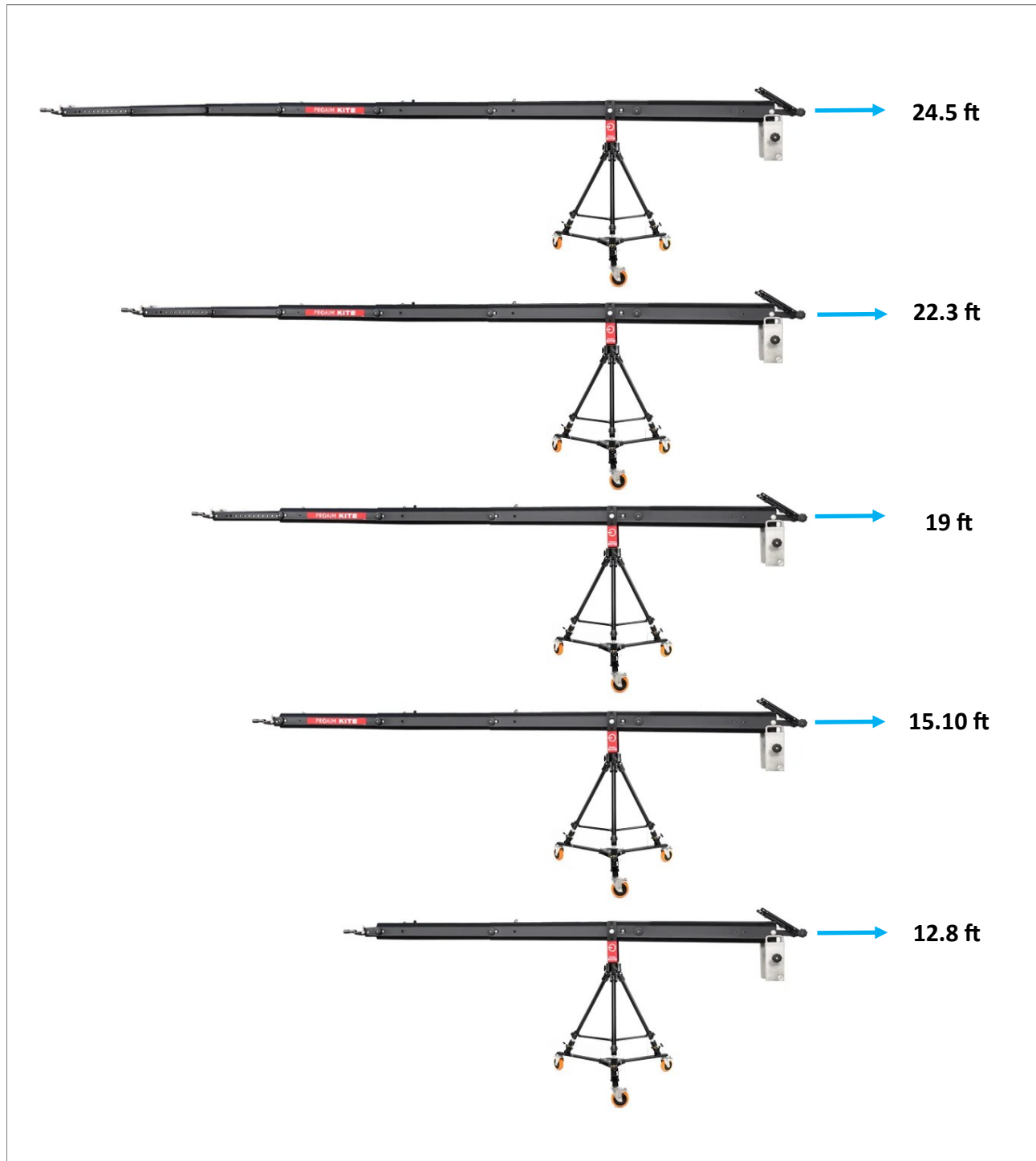
- Repeat the same steps to insert Shank with knobs and locking pins.



NOTE: To shorten the length of the jib, insert 2nd section into 1st section, 3rd section into section, 4th section into 3rd section, 5th Section into 4th section, 6th section into 5th section, and 7th section into 6th section.



Different Shooting lengths



Balancing

When you're balancing a camera on a motorized 3-axis pan-tilt head with a camera, it's often necessary to disengage the motors to ensure a precise balance without any motor resistance. Follow these steps to balance the setup:

1. Disengage Motors: Turn off or disengage the motors of the pan-tilt head system. This ensures that no external force (from the motors) interferes with the balance process. **Disengaging the motors** on the pan-tilt head using a screw (without removing the motor entirely), the idea is to temporarily allow the head to move freely for manual balance adjustments. This screw allows the motor to disengage from actively controlling the axis but keeps it physically attached.

2. Mount the Camera: Securely attach the camera to the mounting plate of the pan-tilt head. Ensure that the camera is tightened properly to avoid any unwanted movements during balancing. Ensure the camera is firmly attached but can still slide on the plate for further adjustments.

You may need to **slide the camera forward or backward** on the plate slightly to help achieve the perfect balance, especially if using long lenses or heavy camera setups.

3. Adjust the Sliding Balance Arm: Move the camera forward or backward along this arm to adjust the centre of gravity. The goal is to have the camera remain stable in a horizontal position without tilting forward or backward.

For front-heavy setups: Slide the axis arm backward to distribute the weight more evenly across the head.

For rear-heavy setups: Slide the axis arm forward to balance the load.

This sliding arm helps compensate for the additional weight and allows more precise balancing, reducing the need for motor strain.

4. Fine-Tune Balance Using Counterweights:

Attach an appropriate **counterweight** (or set of counterweights) on the opposite side of the imbalance:

If the camera is **front-heavy** (tipping forward), place a counterweight on the back of the rig.

If the camera is **back-heavy** (tipping backward), place a counterweight in the front.

For **side-heavy** imbalances (e.g., due to a heavy accessory like a monitor on one side), add the weight on the opposite side.

This process ensures the camera is finely balanced, reducing motor load and improving the overall performance of your pan-tilt head, especially for heavier setups.

5. Balance the Tilt Axis (With the help of sliding balance arm and counterweight)

Tilt the camera up and down manually to check its balance on the tilt axis.

If the camera tilts forward: Slide the camera backward on the plate.

If the camera tilts backward: Slide the camera forward.

Keep adjusting until the camera remains still at any tilt angle. This shows that the COG is aligned with the tilt axis.

6. Balance the Roll Axis (With the help of sliding balance arm and counterweight)

Tilt the camera side-to-side manually to balance the roll axis.

If the camera tilts to one side: Adjust the sliding axis arm horizontally to the opposite side to counterbalance the weight.

For extremely off-balance setups, additional **counterweights** or accessories (like a monitor or battery) might be needed on the opposite side to achieve a stable balance.

Adjust until the camera stays level without tilting to either side.

7. Balance the Pan Axis (Horizontal Rotation)

Unlock the pan axis and rotate the head manually.

The camera should **stay level** and not drift to one side as it rotates.

If the camera drifts or leans, adjust the **camera plate** position slightly left or right or fine-tune the sliding axis arm to adjust the balance.

8. Recheck Balance in All Axes

Once the camera is adjusted on the tilt, pan, and roll axes, recheck each axis by manually moving the camera:

Tilt the camera up and down: The camera should stay in place without falling forward or backward.

Roll the camera left and right: The camera should stay level and not tilt to either side.

Pan the camera left and right: The camera should not drift or wobble as it rotates.

If the camera moves or wobbles in any direction, go back to the sliding axis arm, counterbalance weights, or mounting plate adjustments.

Note: - Proper **balancing** of the camera setup can significantly reduce **gear backlash** in motorized pan-tilt heads.

9. Re-engage the Motors: After confirming the camera is balanced, turn the motors back on to power the system. The motors should now require minimal effort to maintain the camera's position, leading to smoother and more efficient operation.

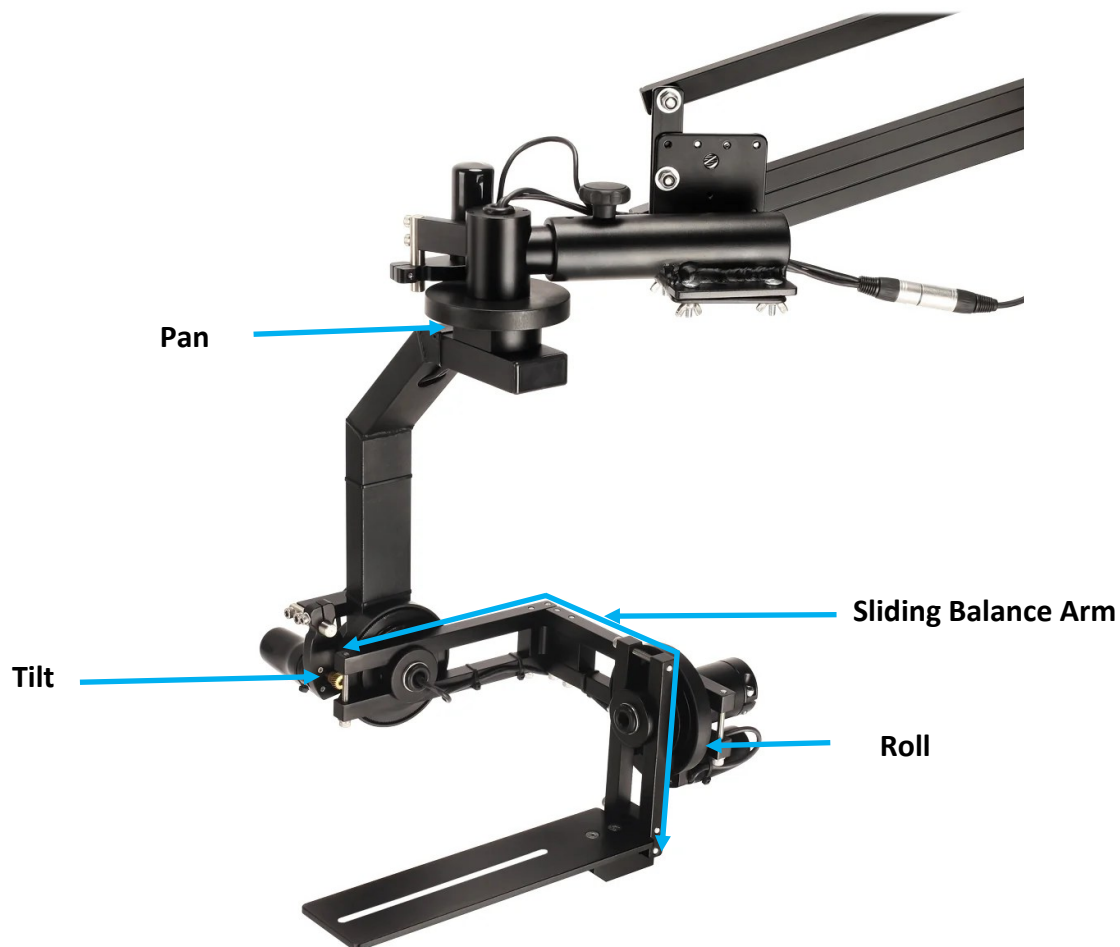
10. Lock and Secure All Adjustments

Once the camera is fully balanced, tighten all locks and screws to secure the setup.

Ensure the **sliding axis arm is locked** in place and any counterweights or accessories are securely mounted.

11. Power On and Test the System

After securing the balance, power on the pan-tilt head and run test movements through the **full range of motion**:



Balancing Tips

The sections collapse into each other

1. 24.5' Jib

Weights required for balancing only Jib (without camera & Pan Tilt) is: **55Kg (121.5 lbs)**

If the camera weight is 1kg, the jib is balanced with $55+5\text{kg}=60\text{kg}$

If the camera weight is 2kg the jib is balanced with $55+10\text{kg}=65\text{kg}$

2. 22.3' Jib

Weights required for balancing only Jib (without camera & Pan Tilt) is: **54Kg (119 lbs)**

If the camera weight is 1kg, the jib is balanced with $54+4\text{kg}=58\text{kg}$

If the camera weight is 2kg the jib is balanced with $54+8\text{kg}=62\text{kg}$

3. 19' Jib

Weights required for balancing only Jib (without camera & Pan Tilt) is: **53Kg (116 lbs)**

If the camera weight is 1kg, the jib is balanced with $53+3\text{kg}=56\text{kg}$

If the camera weight is 2kg the jib is balanced with $53+6\text{kg}=59\text{kg}$

4. 15.10' Jib

Weights required for balancing only Jib (without camera & Pan Tilt) is: **52 Kg (114 lbs)**

If the camera weight is 1kg, the jib is balanced with $52+2\text{kg}=54\text{kg}$

If the camera weight is 2kg the jib is balanced with $52+4\text{kg}=58\text{kg}$

5. 12.8 ' Jib

Weights required for balancing only Jib (without camera & Pan Tilt) is: **51 Kg (112 lbs)**

If the camera weight is 1kg, the jib is balanced with $51+1\text{kg}=52\text{kg}$

If the camera weight is 2kg the jib is balanced with $51+2\text{kg}=53\text{kg}$

For some interesting compound shots try:

Moving the pan & tilt control in the same direction as you move the rear of the jib. This keeps your subject framed but changes the perspective of the camera.

**YOUR PROAIM KITE-22 CAMERA CRANE ULTIMATE PACKAGE
ALL DRESSED UP AND READY TO GO!**



(SHOWN WITH OPTIONAL ACCESSORIES)

Warranty: We offer one year warranty for our products from date of purchase. Within this period of time, we will repair it without charge for labor or parts. Warranty doesn't cover transportation costs nor does it cover a product subjected to misuse or accidental damage. Warranty repairs are subjected to inspection and evaluation by us.

Liability: We are not liable for damage caused by products that we do not supply or from mishandling in transit, accident, misuse, neglect, lack of care of the product, or service by anyone other than our company.

Contact Us: In case of any kind of dissatisfaction, please Contact us immediately and we promise our utmost support and care until you use our product.