

# Kite-22 Crane Ultimate Package (KITE-22-ULTIMATE)

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## 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.

- Proaim 24.5ft Long Telescopic Camera Jib Crane
- Proaim Gravity Robust Tripod Stand (TP-GVTY-ULT)
- D-33 Pro Camera Dolly
- Proaim Spin-3 (3-Axis) Motorized Dutch Roll Pan Tilt Head (PT-SPIN-3)
- Proaim Zoom Control (P-ZC-3DV)
- Proaim Customized Storage cases for Camera Jib Arm, Jib Stand & Accessories
- **Complimentary** Tools and Tool Pouch/Wrap

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**First Packing Includes**

- Jib Sections

**Second Packing Includes**

- Jib Sections

**Third Packing Includes**

- Accessories of Jib Crane

**Fourth Packing Includes**

- Gravity Jib Stand

**Fifth Packing Includes**

- Dolly Pack

**Sixth Packing Includes**

- Spin Pan-tilt Head



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

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



**Packaging Material of Box 3:** Accessories of Jib Crane



Head Platform with Bolt, Shaft Collars, Washers and Nut



Hub Mounting



Joystick Controller Bracket



Levelling Cable



6x Locking Pins



Turn buckle



6x Shanks for Joining Arms

**Packaging Material of Box 4:** Gravity stand



Ultimate Gravity Stand Bowl

Gravity Stand

**Packaging Material of Box 5:** Dolly



D-33 Pro Camera Dolly

Tripod holder

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



Spin-3 Pan-tilt Head

Joystick Controller with Cap

15mtr Control Cable

3mtr Adapter Cable

Camera Plate

12V AC Adapter

Universal Adapter



## Safety Hints

### **ATTENTION: PLEASE READ THIS BEFORE USING TO PREVENT DAMAGE TO EQUIPMENT & OPERATOR!**

- The crane may not be assembled or operated under influence of alcohol, drugs or any other intoxicating substances. Lack of attention while connecting the components together can cause substantial damage to equipment / operator.
- The crane may only be operated on levelled horizontal position. Make sure that the surface is stable.
- To prevent any harm or injury, properly join all sections of the crane. It is suggested to use the support stand while telescoping the complete length.
- Always connect the steel cables properly to provide stability to the system. They should not negatively impact the movements of crane in any way.
- After setup of the crane, the pan-tilt head / gimbal head shall be positioned under the central pivot section. In assembled state, when the pan-tilt head / gimbal head is higher than 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 in the immediate vicinity of high-voltage power cables. It holds danger to life.
- Particular care is required when operating the crane in unfavourable weather conditions. The crane must be shut down in sufficient time. When it is used in a rainy day, the pan-tilt head / gimbal head and controlling bar shall be protected against rain.
- When you want to transport the crane, lock the Pan & Tilt Axis for safety. Make sure that the components do not rub together and cause any material wear.
- Before the counterweights are removed, ensure the remote head is resting on the support stand. Then gradually remove the counterweights before remote head, camera or other parts.
- In the interest of safe crane operation, avoid abruptly swivelling or stopping the crane, 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.

## Jib Stand Setup

- Now take out the Tripod Stand from its case, and stretch its legs on floor as per the requirement.



- Loosen knob at the bottom of jib stand. Stretch its legs on floor and set height of stand, as per the requirement. Then tighten the knob back to secure it.



**NOTE:** We have provided double locking precautions on Jib Stand. knob is the first and primary, locking pin is the secondary locking, so first lock the knob to avoid slipping of stand.



## Dolly Setup

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

- To open the legs of Dolly remove the bolts & fully spread it on floor.



- Then insert the bolts with their washer and tighten the bolts properly.



**NOTE:** To keep the dolly in static position, lock the wheels by pushing down the lever.



- Remove the allen bolts from tripod holders.



- Match the hole of Tripod holder with dolly to insert the long bolt & tighten it with the help of allen key.



- Place the jib stand onto dolly.



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



## ■ Hub Section Setup

**NOTE:** The Hub Assembly has several mounting holes. You can mount LCD Monitor or Joystick box to this assembly if you want.

- Install the Hub Assembly by sliding from the bottom side into the stand's Mount opening.



- Insert the bolts with washers and tighten properly with the help of Wrench.



**NOTE:** This is the Pan Friction Knob. Never pan the Jib with this knob tightened. If this knob turns while panning, it is too tight. Only tighten while parking the jib!

- Insert the provided washer & knob to secure the jib properly.



## ■ Jib Sections Setup

- Insert rear tube section (section 1) into the hub assembly, slide section 2 into section 1 and align holes of the Section 1 and section 2 with the central hole of hub assembly.



- Already attached 1st and 2nd jib sections, insert it into the hub then insert the long bolt and nut to Secure the sections properly.



**NOTE:** We have provided double locking precautions on Jib, Knob is first and primary, pin is secondary locking, so first lock the knob to avoid slipping of sections.

- After alignment of holes (Jib arms) insert shank lock pin & tighten it from another side with shank threaded cap.



- Repeat this process for rest of the sections. Attach them towards the other Section 6 with 5, 5 with 4, 4 with 3, 3 with 2 & 2 with 1.



## ■ Head Section Setup

- Remove the bolt from head section then attach with the jib.



- Attach the provided bolt, shaft collars, washers and nut. Tighten all the Allen bolts and nuts to secure properly as shown in the image.



- Connect the one end of Head Platform Levelling cable with the head platform by hooking the turnbuckle ends.



- Attach other end with the hub assembly.



## ■ Rear Frame Setup

- To mount Rear section of jib, insert the bolt with washers through one end of the section to other. Slide the bolt through and secure by tightening with hand.



## ■ Pan Tilt Head Setup

- Attach the pan tilt back into the head platform mounted on the end of the jib and secure with the provided knob.



- Attach & secure your camera on the camera platform of Head with the help of provided chuck nut.



- Install your cable starting at the camera end making sure to leave enough slack for full pan & tilt movements. Install and hookup the pan & tilt joystick box on Jib Frame.



## ■ Cables & Control Box Setup

- Install the 12 volt DC power (4 pin XLR) in rear of joystick box.



**NOTE:** Any 12 volt battery may operate the PROAIM GOLD PAN TILT HEAD as long as the connector mates and is #1 pin Negative and #4 pin Positive.

### HEAD CABLES

Install your cable starting at the camera end; leaving enough cable slack for the camera for full pan & tilt movement, you may need to add Velcro to loop the cable around the jib arm.



**NOTE:** *The Dutch roll arm can be detached from head in order to use the head as normal pan and tilt head.*

- After detaching the Dutch roll from the head, the H plate can be attached to install the camera.
- As each section is pulled from the previous section, you can store unused sections in the tail as ballast weight and lighten your counterweight demand.



## ■ Balancing

### Follow these steps to balance the head:

- Find the horizontal balance point of your camera by using 2 fingers of one hand while holding handle.
- Mark this point on the side of the camera with chalk or tape.
- Turn the unit on and move the tilt control until the camera plate is vertical.
- Loosen the two screws holding tilt motor. **(DO NOT REMOVE)**
- Grasp the motor and turn slightly to disengage gears.
- Mount the camera to the camera plate with the screw provided.
- Tighten by threading the nut up to the bottom of the camera plate securely.
- Make sure your balance point previously marked with chalk or tape is in the middle of the plate.
- Loosen the knob below the camera plate and slide the camera and plate up or down until the center line of your camera is about in the middle of the large gear. Now tighten knob.
- If the camera is perfectly balanced it will stay in any position while motor gear is still unattached.
- Grasp the motor and turn it back until the gears mesh.
- Gently tighten motor screws.
- Secure the camera.

**NOTE:** *All reduction boxes have a small amount of backlash. The balancing of the camera will reduce the backlash to a minimum making it felt at the top of the tilt arc.*

## ■ Opreation

- With the camera set up as previously described above, Power ON by pressing the RED Switch on the top of the Joystick control box.
- For inverted use, disconnect the leads to the motors, rotate the control box 180 degrees and re-install.

**NOTE:** *Remember practice makes perfect and always watch the cables for binding.*

The PROAIM GOLD PAN TILT HEAD circuitry is built entirely into joystick box. The only other requirement is the AC power pack (provided) or battery power. The power pack can handle 90-240 volts. Users will need the appropriate plug adapter for local use.

## JOYSTICK

The joystick is a two-axis variable speed servo controller. The further you move in one direction the faster the output to that motor. This will be a little tricky at first, but little practice will improve your success.

The joystick may be operated in a handheld position or from a flat surface such as a tabletop, or attached to the boom arm of Jib.

After plugging the power cord into a proper outlet, press "power on". The LED light on the control box should illuminate and the head may jump slightly on start up or shut down. This is normal. This can be controlled by Dead Spot. Adjust the joystick to ensure correct movement of the head. It may be necessary to reconnect to the motors if required.

## POWER CONTROL

To the right and above the joystick is a knob labeled "SPEED".

This is the power control knob. Turning to the right will be full power and back to the left will decrease the available power to both pan and tilt operation. The advantage of power control is to be able to limit power when only slow accurate movements are needed. With the power control at half power (approx. 8 volts max. output) the full range of motion on the joystick will be between 0 and 8 volts making finer adjustments possible. The power control will be usable between a range of approximately 4 volts to 12 volts.

## DEAD SPOT

The knob to the left is marked Dead Spot. Turned all the way to the left (counterclockwise) will create the smallest dead spot. Meaning that the head will begin to move as soon as the smallest deflection of the joystick is made. Moving to the right will increase the area where no power is sent to head motors. At half way, the dead spot will close again, this helps to avoid crossing the tilt when only pan movement is desired.

The dead spot is so tight when the control knob is all the way to the left, it may be necessary to back it off slightly until no movement is seen in either axis.

**NOTE:** *With the dead spot all the way left the head may move in both axis on it's own. The dead spot should be set at approx. the 9:00 position to insure that no unwanted movement occurs.*

## Linear or Logarithmic taper joystick control

All joysticks are linear, meaning that each degree of movement of the stick correlates to the output. On the 12 volt PROAIM PAN TILT HEAD half deflection of the joystick means approximately 6 volts sent to the motors. But with the advent of Digital we can now control the taper of the joystick, making in Logarithmic as well. Logarithmic taper being that the first of joystick movement only sends a small amount of power to the motors and the last of the deflection will send more power per degree of deflection. On Logarithmic taper 1/3 of joystick deflection might yield 2 volts output the next 1/3 will yield 4 volts output and the last 1/3 of yields 6 volts for a max. again of 12 volts. This mode gives the operator fine slow movements yet retains the ability to go to max. speed if necessary.

## PAN DIRECTION SWITCH

### When the Pan-Tilt Head is used on a Tripod or on a Jib.

When the head is shifted from a Jib to a tripod, it needs reversal of direction as the location of the head will be inverted. By switching “on” the pan direction switch, we can immediately reverse the direction. When the joystick is moved to the right it gives right rotation as it gives while mounted on the tripod directly.

### Counterweights

The Jib is setup with “plate weights” or bar bells” style weights. Plate weights come in several weights and diameters. They get smaller as the weights get lighter. The largest (25lbs) is about 11 inches in diameter. The mounting hole is 1” in diameter for all weights. The jib has a varying weight ratio depending on the length you have chosen. The 24.5ft arm itself balances at about **121.5 lbs**. Just multiply the weight, of the additional items you will put on the end of the arm, by 5 and you will know how much weight to buy. Buy a few extras in case you add other accessories. The lighter weights will allow you to “fine tune” once you’re ready to go.

## ■ Balancing Tips

Its 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 (119lbs)**

**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 the same direction as you move the rear of the jib. This keeps your subject framed but changes the perspective of the camera.

### **Example:**

- Move the pan & tilt head all the way to the left, zoom out w/ subject framed in foreground.
- Now move your hands to the right (camera swings to the left) while panning the camera right, keeping your subject framed.
- You can also try this with up and down shots or diagonal shots. Just remember to move your hands the same direction as you pan/tilt 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.