

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.



Boxer HD-2X Motorized Pan Tilt Head



Pan and Tilt Motor



Focus & Zoom Controller



Joystick Controller



Focus and Iris Motor



Controller with Battery Box



Head Connector



43ft Long Cable

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12ft Long Cable



5m AC Power Cable



3 x Knobs



Ratchet Knob



Extra Motor Gears



Belt



3 x Allen Keys
(Size: 2mm, 3/16", 6mm)



Universal Adapter



MS Check Nut
(Size : 1/4")



4x Wing Nuts



Rod For Motor Holding



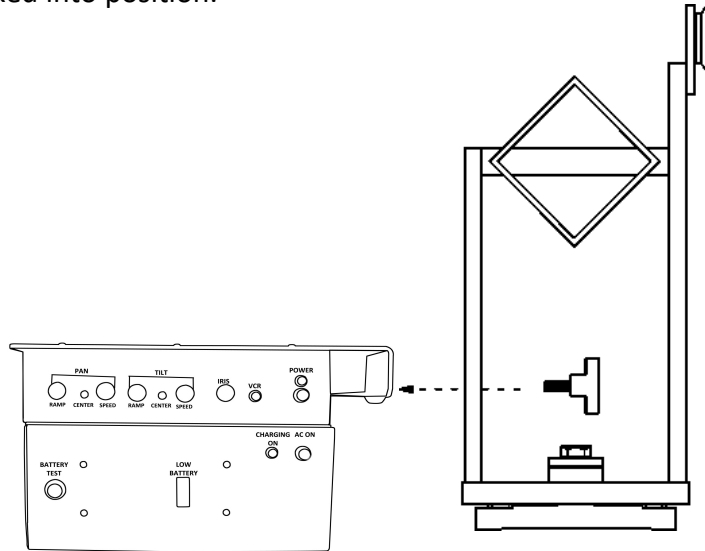
Bag Packing

INDEX

Sr. No	Particulars	Page No.
1	Boxer HD-2X Motorized Pan Tilt Head Mounting	15
2	Pan Tilt Motor Mounting	15
3	360° Pan Rotation	16
4	360° Tilt Rotation	17
5	Camera Mounting	17
6	Camera Balancing	18
7	Lens Bracket Mounting	19
8	Rod Mounting	19
9	Iris Motor Mounting	19-20
10	Focus Motor Mounting	20
11	Controller Box Mounting	20
12	Focus Zoom Controller Mounting	20
13	Joystick Controller Mounting	21
14	Battery Mounting	21
15	Cables Mounting	21-23
16	Final Setup	23

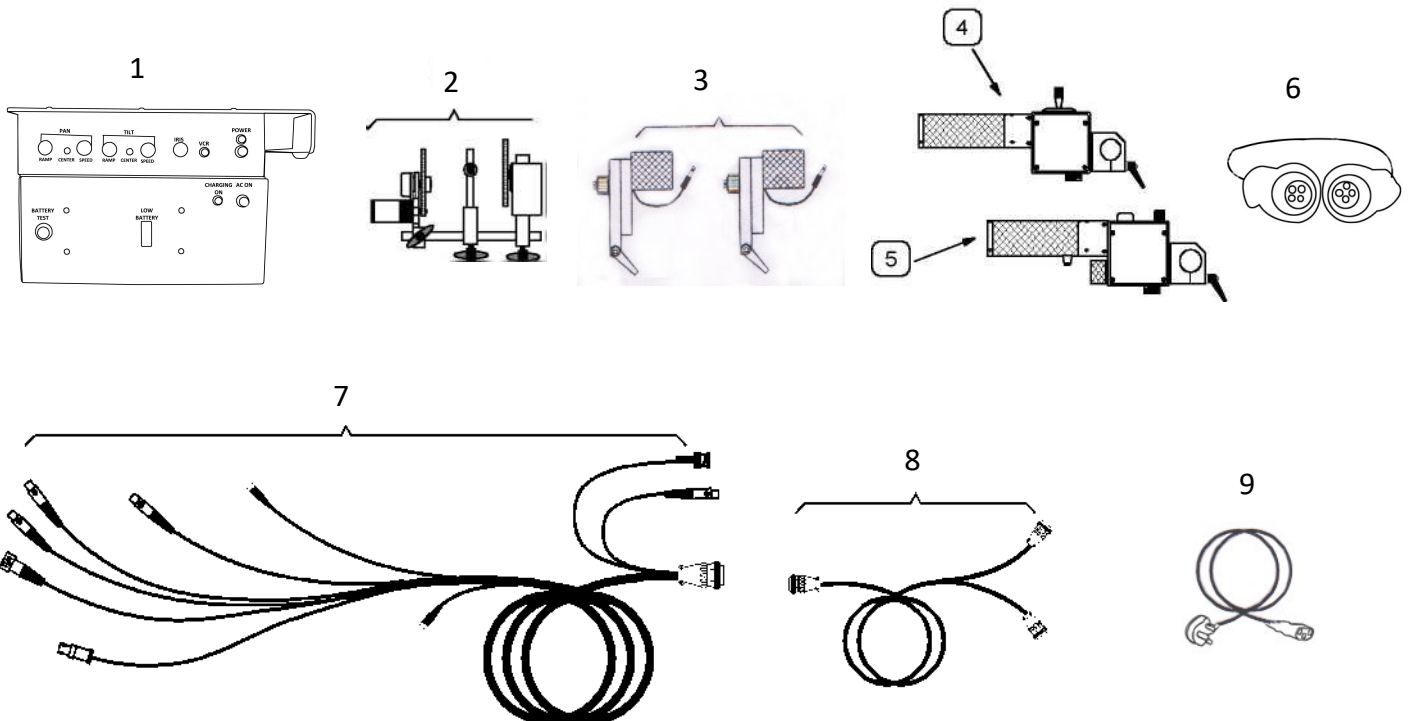
CONTROL & BATTERY BOX

1. Attach the Control Box to the left side of the Pedestal (use the bottom hole) and secure with the provided Star Knob.
2. Attach the Battery Pack to the bottom of the Control Box. When the side latches engage, you will hear a snap if they have locked into position.



REMOTE HEAD

1. Control & Battery Box
2. Focus/Iris Assembly
3. Pan & Tilt Motors
4. Joystick Handle
5. Zoom / Focus Handle
6. 4 Pin Cable
7. Head Cable
8. Control Cable
9. AC Cable



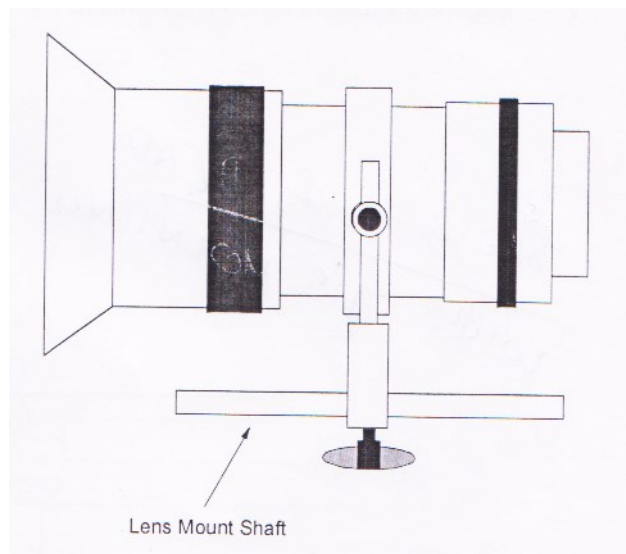
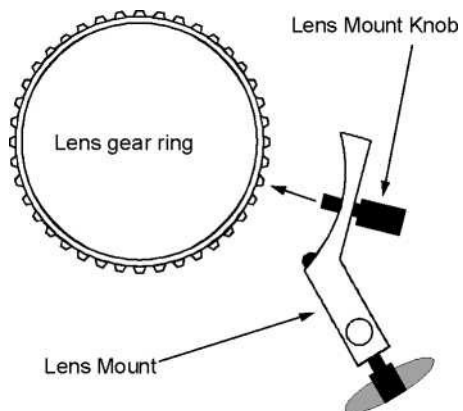
PAN & TILT MOTORS

1. The Pan and Tilt Motors are mounted to the Head through the use of a pin and a pinch type motor mount bracket.
2. Engage the motors by rotating them into the 4 in. gear and tightening the pinch clamp.

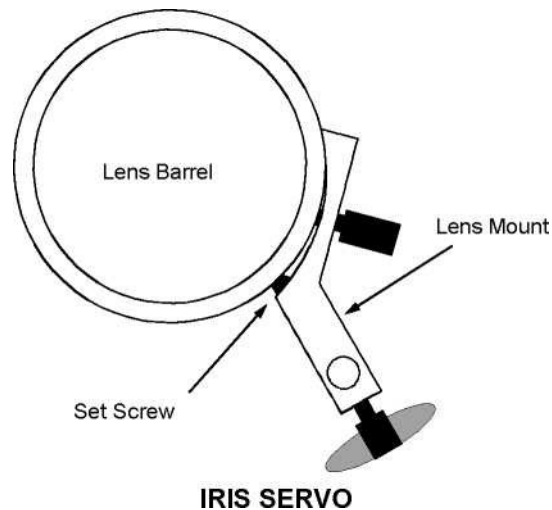


FOCUS & IRIS MOUNT

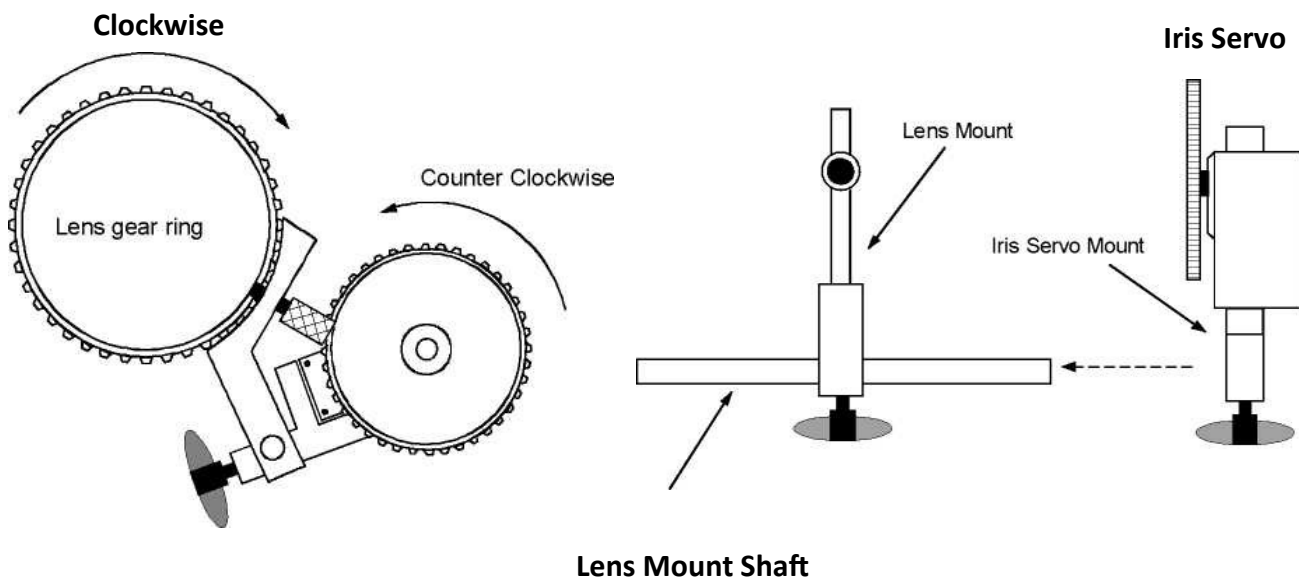
The Focus/Iris assembly consists of two servos with gear wheels attached. This assembly mounts to the screw hole utilized by the lens manufacturer to mount their cable drive focus systems. As you tighten the Lens Mount Knob to mount the assembly, you must be careful that the screw does not bottom out inside the lens. If you continue to force the screw you may do internal damage to your lens.



Occasionally the curvature of this mount is greater than the lens curvature. This means that there will be contact only at the center of the mount instead of along the entire curve. This can cause the Focus/Iris assembly to twist on the lens. To correct this problem, adjust the set screw in the Lens Mount. Back out this set screw only far enough to just touch the lens.



1. The lens auto iris switch should be in the off position.
2. Slide the Iris Servo onto the Lens Mount Shaft and plug the servo into the proper (blue) connector. Turn the unit on.
3. Rotate the Lens Iris clockwise (iris closed) until you hit the lens stop. Rotate the Iris Servo gear (using the Iris Knob on the control box) counter clockwise until you hit the servo stop. This will synchronize the Lens and Servo stops.
4. Engage the Iris Servo with the Lens by rotating the Iris Servo on the Lens Mount Shaft. Lenses with extenders may require the Iris Servo to be reversed in its mount.

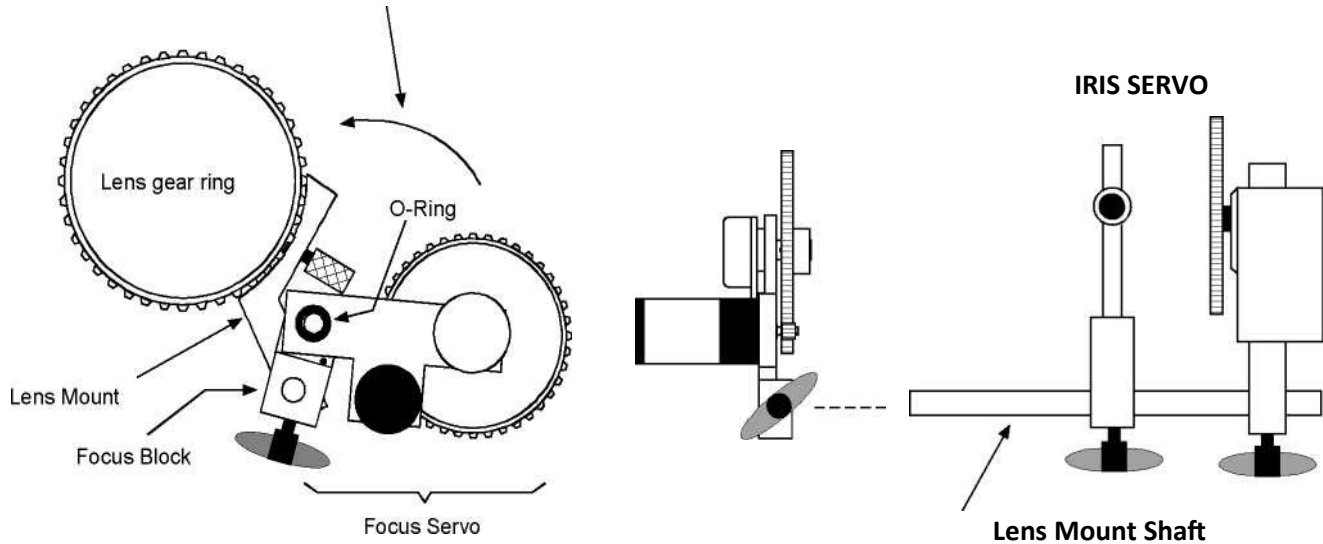


FOCUS SERVO

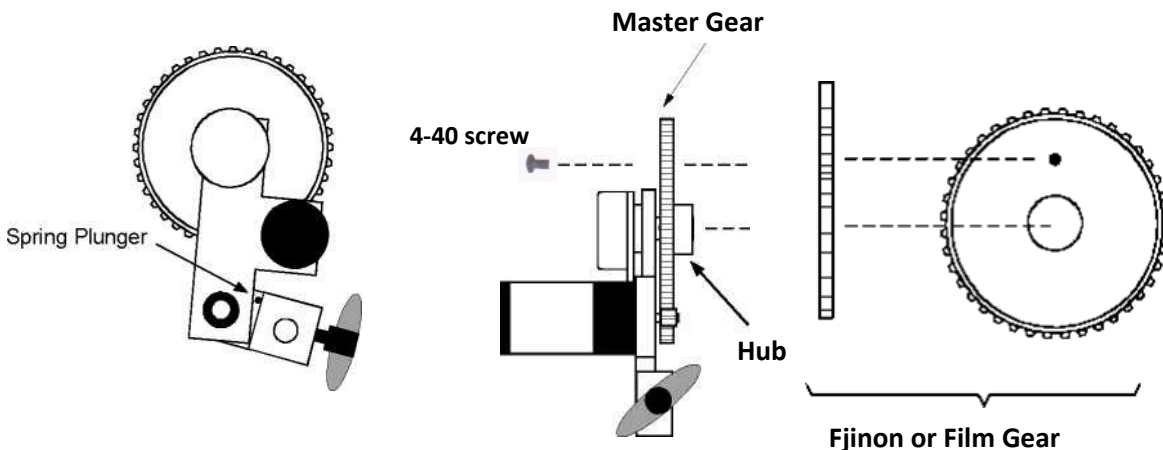
1. Slide the Focus Servo onto the Lens Mount Shaft and plug it into the proper (red) connector.
2. Rotate the Servo on the Shaft until the Lens Focus Gear ring and servo gear engage.
3. The Focus Servo Bracket is spring loaded. Compress this spring slightly when you engage the gears.

If you have a Canon Lens, the Master Gear will directly engage the lens. If you have another lens it will be

Rotate Servo Bracket to engage servo gear and lens.



Necessary to add an extra gear. Slip the extra gear over the hub of the Master Gear and secure with the 4-40 screw.



The Focus Block can be placed in multiple positions to facilitate mounting the Focus Servo to a variety of video lenses and cameras. The o- Ring holds the focus block in place. While inserting the focus block into its new location, the Spring Plunger must be depressed with a small screw driver.

The Focus Servo can be mounted to 15mm matte box rods by removing the Focus Block and replacing it with a 15mm Focus Block. This is an accessory available from Stanton Video.

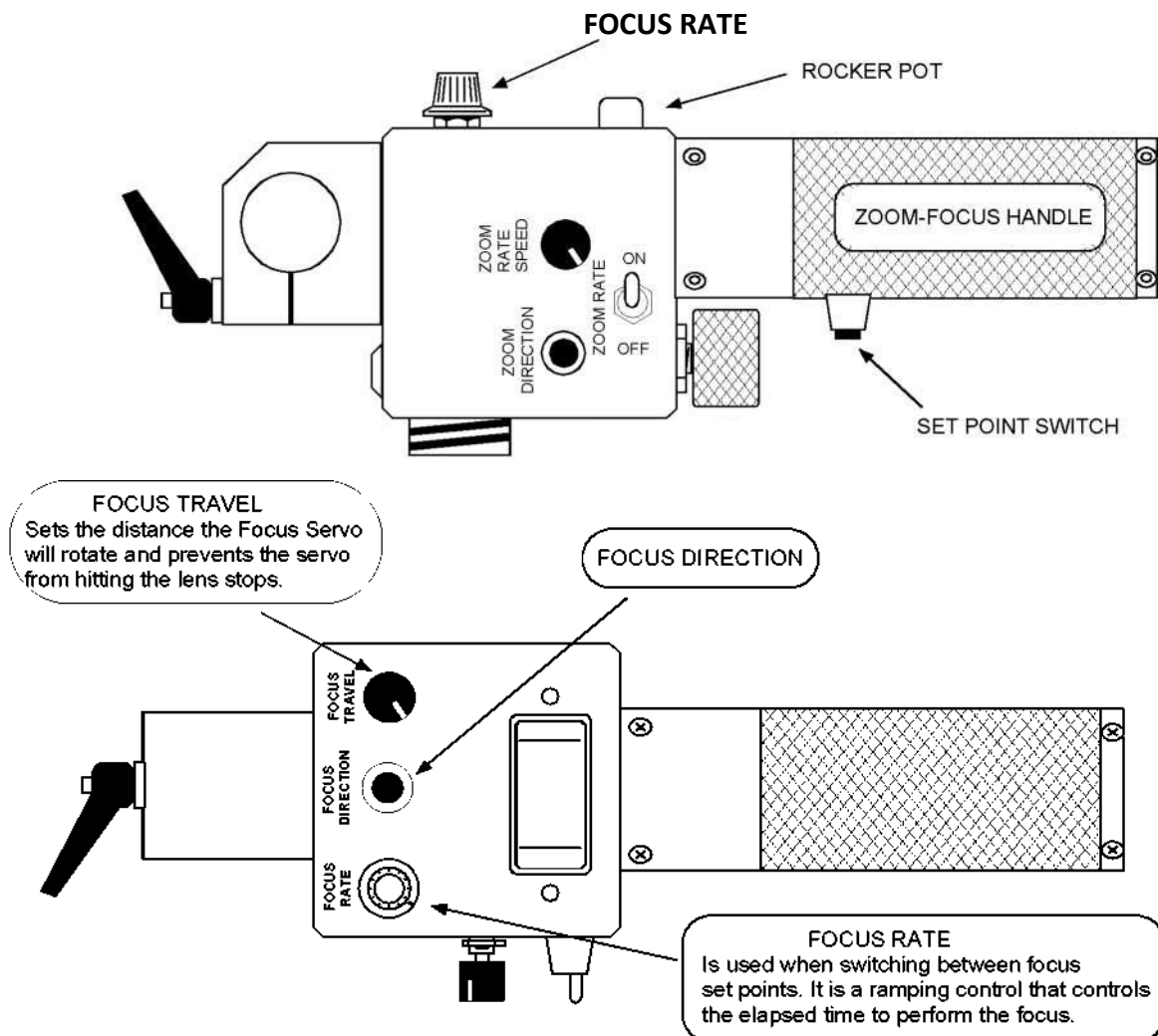
Focus Rotation Focus rotation is set at the factory at about 90°. This will usually be more than enough for most video lenses. If you need to increase focus rotation refer to the last page under PC Board Adjustments. You should call Stanton Video before making this adjustment.

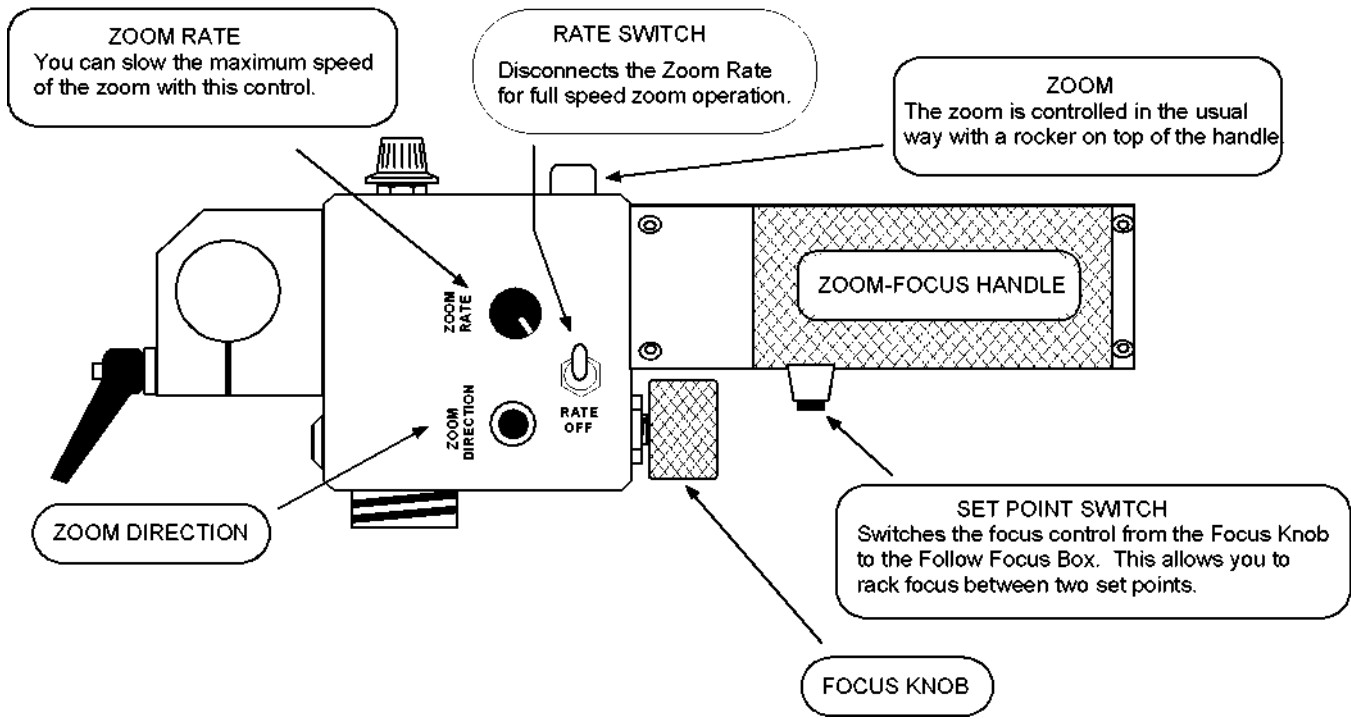
FOLLOW FOCUS SYSTEM

1. Set Point Switch: This switches focus control from the Focus Knob on the bottom of the Handle, to the Follow Focus Box. This allows you to rack focus between two focus set points by using the follow focus as a memory position.

2. Focus Rate: Is used when switching between focus set points. This pot controls the elapsed time to perform the focus.

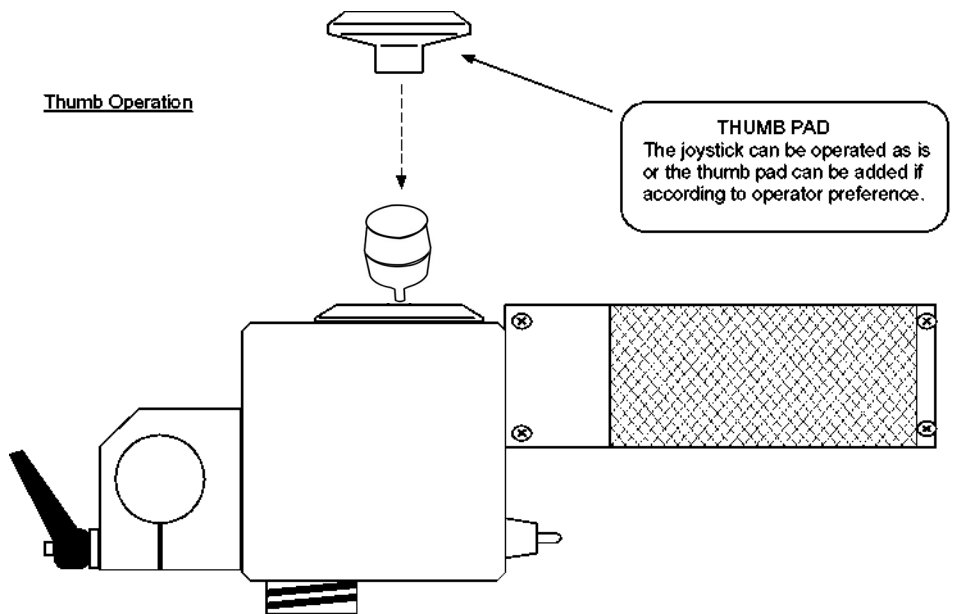
NOTE: The Set Point Switch transfers focus control back and forth between the Focus Handle and the Follow Focus Box. If the follow focus is not connected and the switch is in the wrong position the focus control on the handle will not work.





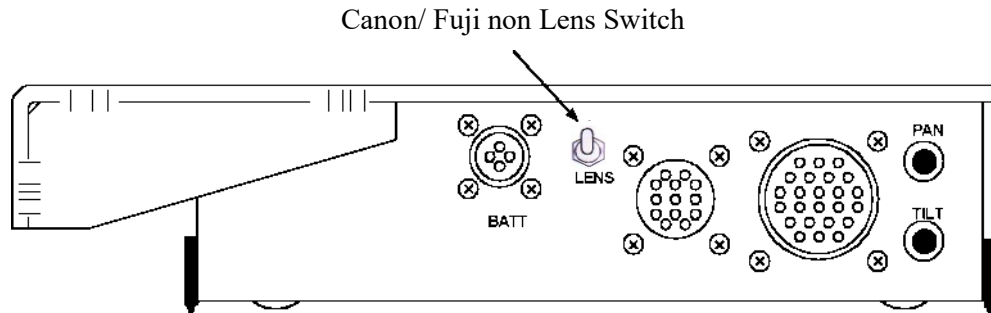
JOYSTICK HANDLE

You can change the joystick control from a thumb operated style to a more conventional setup with the Joystick extension. Remove the four attachment screws, take off the handle and then push on the longer extension.



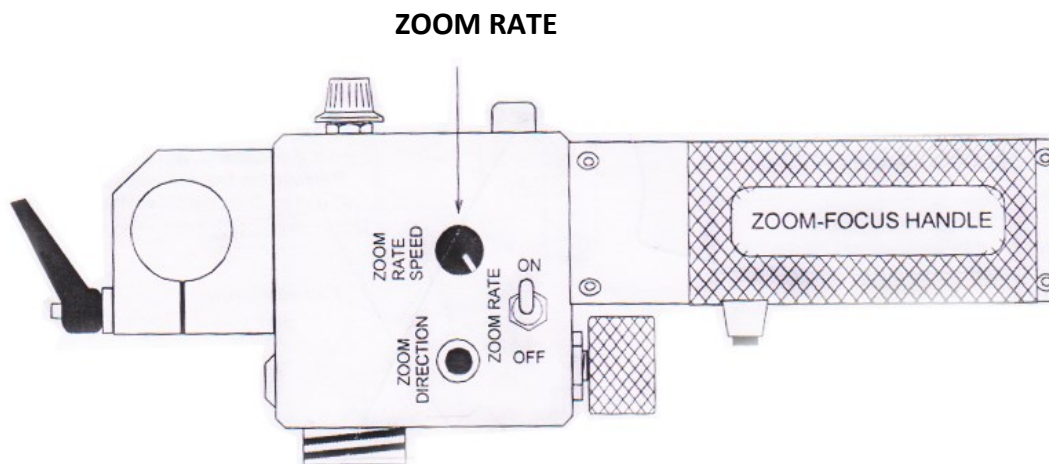
HOW TO ELIMINATE ZOOM CREEPING (New 4B controls)

There are two possible situations that can cause a creeping zoom problem. One is that the lens switch on the back of the control box is in the wrong position and the other is due to natural variations from lens to lens. Lens to lens variation can be corrected by adjusting a trim pot inside the Zoom Handle. It is extremely important that the lens switch be put in the correct position before the trim pot is adjusted. Please follow the instructions below to insure proper setup.



Lens Switch

1. Turn the camera on and observe how the lens responds. Rotate the Zoom Rate from minimum to maximum. If you can zoom the lens in and out using the Zoom Rate control then the lens switch is in the wrong position.
2. Once the lens switch is in the correct position the lens should work normally except for the creeping.



ELECTRICAL CABLE ROUTING

HEAD CABLE & CONTROL CABLE

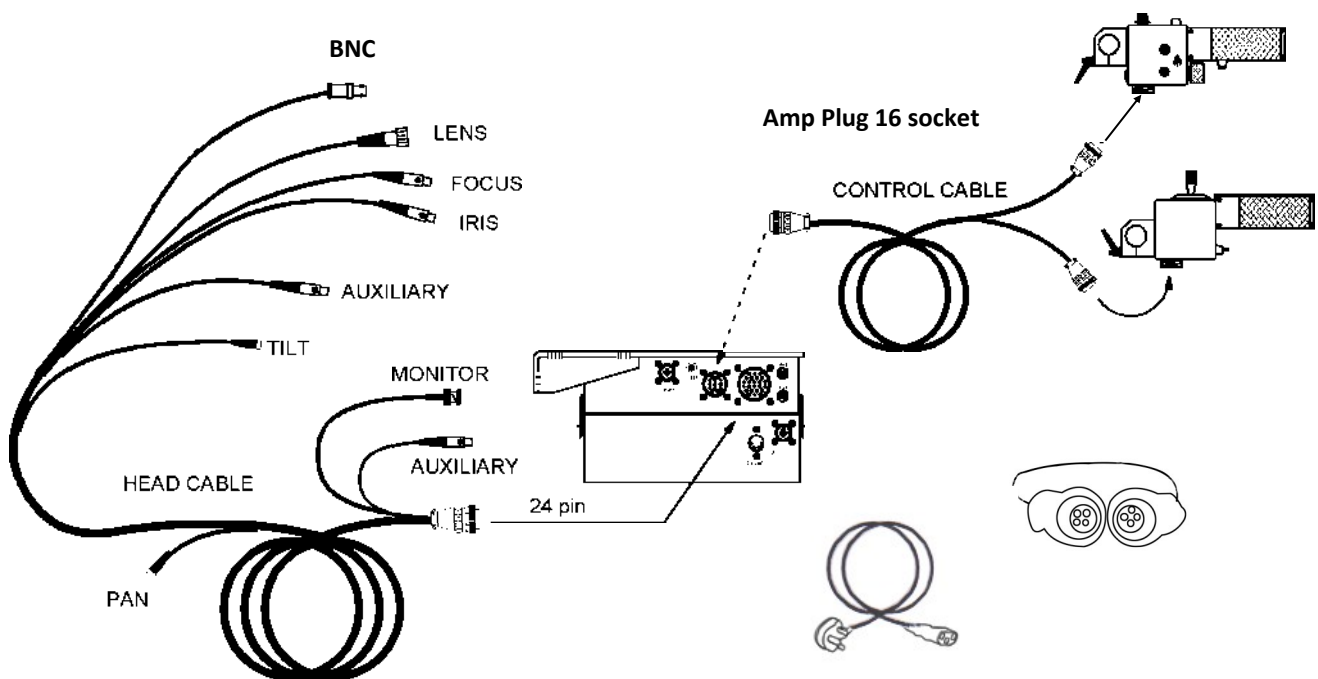
Blue 4 Pin **Focus Motor**

Red 4 Pin **Iris Motor**

1. Run the Head Cable along the top of the jib tube and fasten it in place with the straps..
2. Connect the Focus Motor (blue) and the Iris Motor (red) using the 4 pin Switch craft connectors.
3. Form a slack loop between the Head and the Jib arm. It may be necessary to slide the Head Cable along the jib tube in order to form the proper size loop.

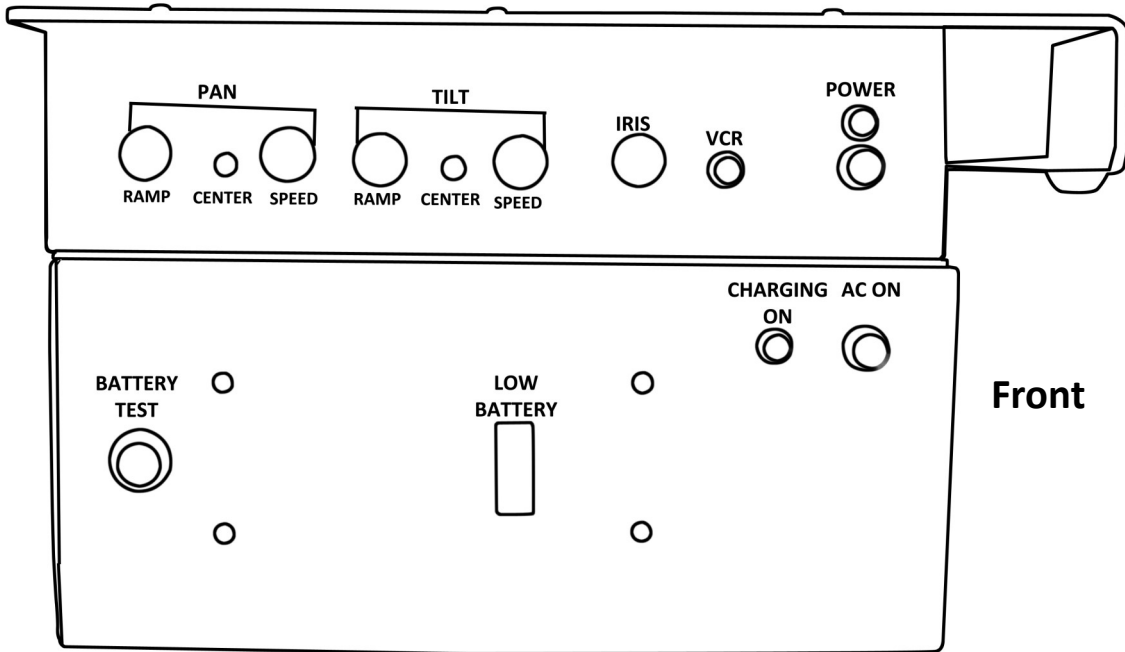
CONTROL CABLE

1. Slide the weight bar into the Rear Boom Section. Attach the Joystick and Zoom/Focus Handle to the weight bar.
2. Plug the 16 pin Amp connector of the Control Cable into the Control Box and route it down the Rear Tube section toward the weight bar.
3. Connect one end of the Control Cable (blue) to the Joystick and the other end (red) to the Zoom/Focus Handle.

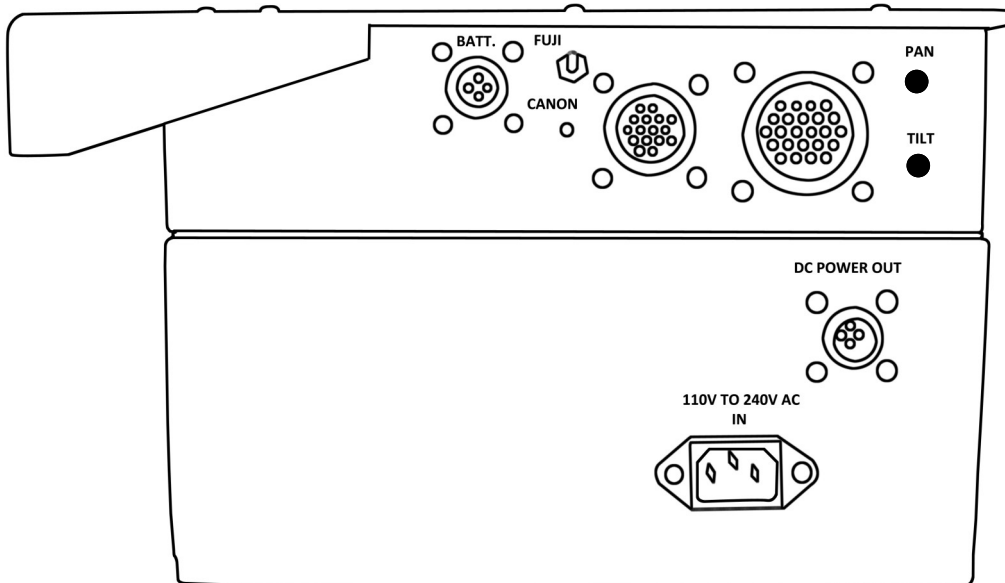


CONTROL & BATTERY BOX

1. The lid of the Control Box is also the monitor platform.
2. Attach the Battery Pack to the bottom of the Control Box. When the side latches engage, you will hear a snap if they have locked into position.



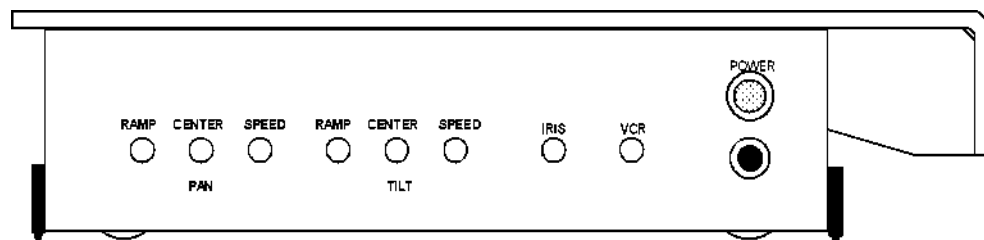
Front



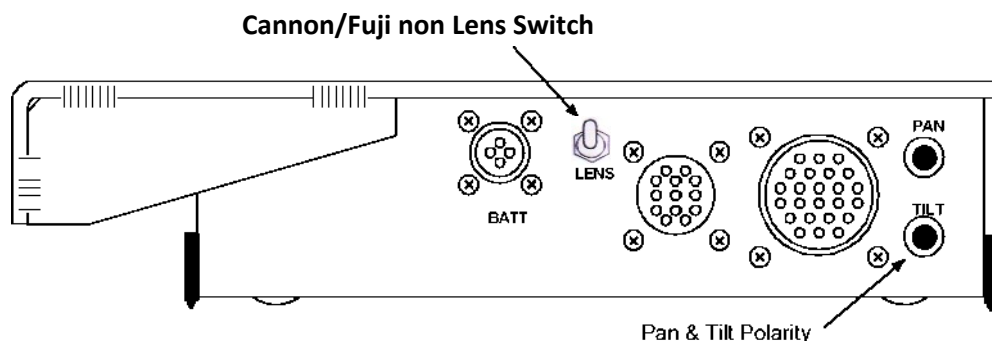
Back

ELECTRONIC CONTROLS

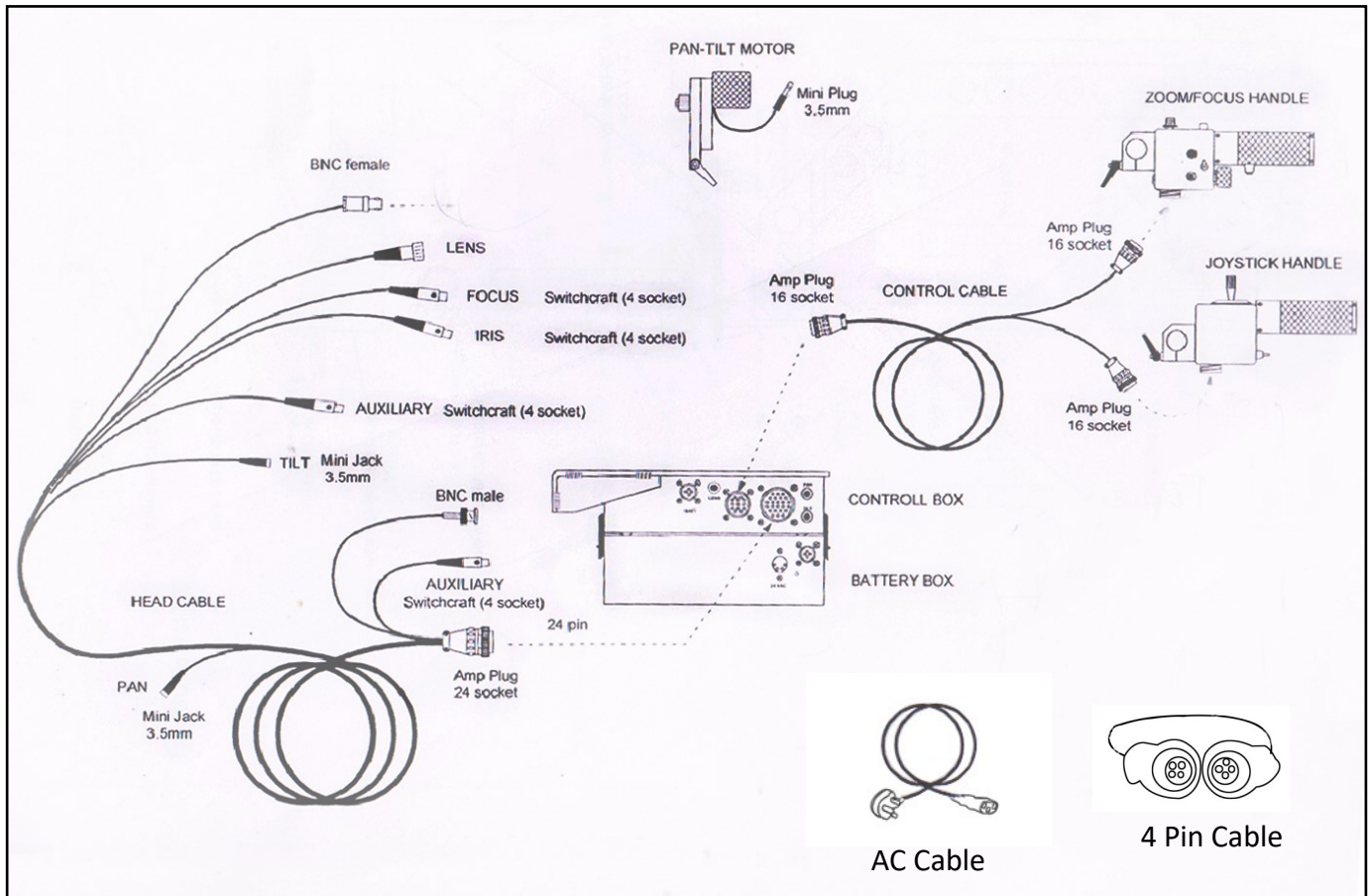
1. **Ramp:** An adjustable acceleration ramp that cushions the start and stop of the pan and tilt motion. The amount of cushion is increased by rotating the "Ramp" knob clockwise.
2. **Center:** Sets the pan or tilt output voltage to zero. This is set at the factory and under normal circumstances does not require operator adjustment. If you observe the head moving without deflecting the joystick, it will be necessary to adjust centering.
 - a. Disengage the motors from 4 in. gears.
 - b. Adjust the RAMP to minimum and the SPEED to maximum.
 - c. Position the head so that you can observe the motor pinion.
 - d. Adjust the centering control until the gear stops moving.
3. **Speed:** Controls the maximum speed for pan and tilt. This makes the joystick less sensitive and is most useful for slow accurate moves.
4. **Iris:** Controls the iris.
5. **VCR:** Starts and stops the VCR providing your lens connector allows for this. Make sure the VCR switch on your lens is in the off position. Since most newer cameras require a momentary contact this is the type of switch that we have provided. If your recorder requires a maintained switch you will have to start and stop the recorder at the camera.



6. **Lens:** By pushing this switch you change to Canon or Fuji non. If your lens does not work properly this switch is probably in the wrong position.
7. **Polarity:** This switch enables you to change direction of the Joystick to whatever "feels" most comfortable to you. When you under sling the head it will be necessary to change pan direction.



CONNECTOR



WARRANTY

We offer a one year warranty for our products from the date of purchase.

We will repair or replace your product, free of charge, in the event of a defect in materials or craftsmanship obtained during normal use or handling based on the user manual. Please note that we will not cover any shipping costs for returning the product to us. If any VAT or import duties are applied to the return, we will also charge these costs to the customer.

The warranty does not include, by the way of example, 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.

We are not liable for incidental or consequential damages resulting from the use of the unit or occurring due to any breach of this warranty.

Replacement parts of the product will be provided at nominal cost (covering the cost price of the replacement parts only) to the customers after the Warranty Period has expired.

We will cover the complete cost of sending replacement parts within the warranty period. After that, Nominal cost of the product & Actual shipping cost will be charged.

Do not send the unit to us without first getting a response and getting the approval to send back the item.

In case of any kind of dissatisfaction, we urge you to Contact us immediately and we shall do our Best to help you out. For any other assistance you can reach us via email.

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Boxer HD-2X Motorized Pan Tilt Head Setup

Boxer HD-2X Motorized Pan Tilt Head Mounting

- Boxer Pan Tilt Head ko jib ke Head Connector me insert krain.
- Then knob ko insert krain or properly tight krain.

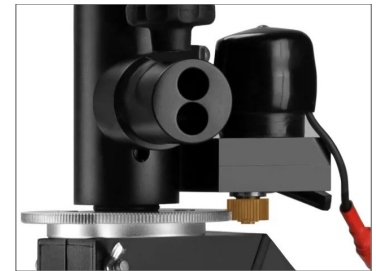
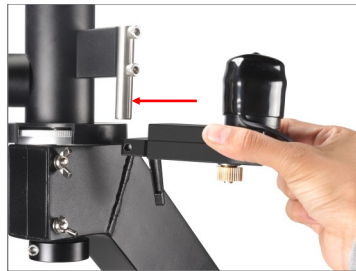


- Now Ratchet knob ko insert krain or properly lock krain.



Pan Tilt Motor Mounting

- Attach the Pan Motor to the top of the Boxer Head via the pin and properly match the gear.



- Motor ko attach karne ke bad knob ko tight krain.



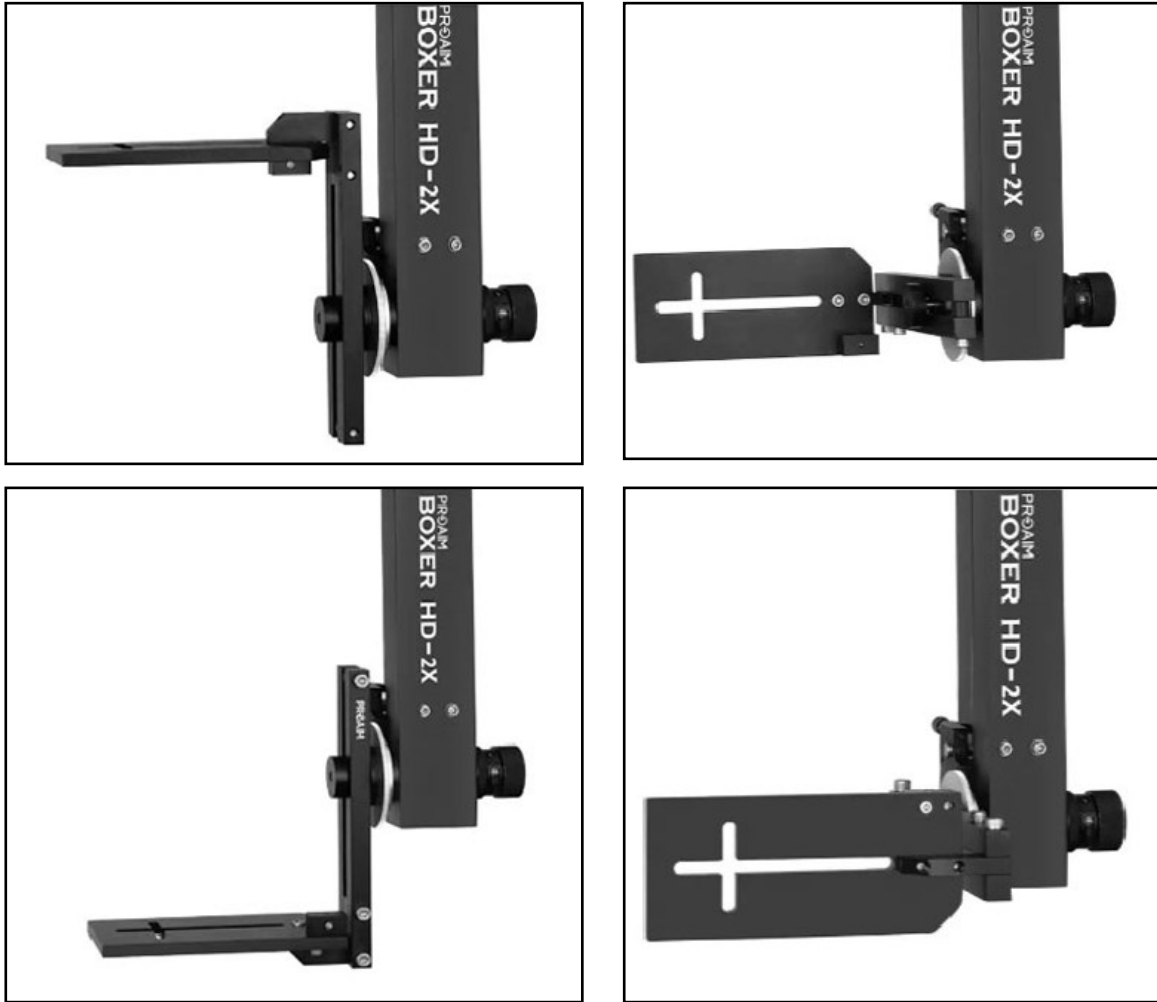
- Tilt motor to the bottom of the Boxer Head via the pin and tighten it with the help of knob.



360° Pan Rotation



360° Tilt Rotation



Camera Mounting

- Now camera (Not Included) ko camera plate par mount krain.

NOTE: Tilt motor gear & Boxer head's tilt gear are detached before mounting the camera.



- Camera mount karne ke bad knob ko bottom side se insert krain or properly tight krain.



Camera Balancing

- Now thumb screw ko loose krain or 3/16" Allen key ke help se screw ko loose krain.



- Now camera plate ko upward/downward slide krain or camera ko balance krain.
- Camera balance karne ke bad thumb screw or screw ko again tight krain.



- Now Camera is properly balanced.
- NOTE:** Apni requirement ke according camera ke position set krain or camera ko balance krain.



Camera Balancing In Different Ways



- Camera ko properly balance karne ke bad Tilt Motor ke gear ko Tilt Head ke gear se properly attach krain or knob ko tight krain.

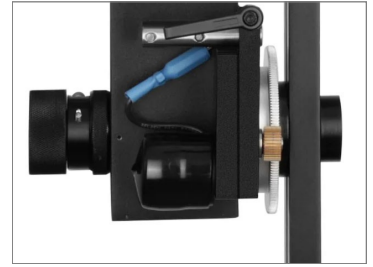
NOTE: Camera ko properly balance karne ke bad gears ko match krain.



NOTE: This system uses two coreless high-torque DC motors that provide inaudible and precise movements with zero backlashes and performance similar to top industry solutions at an affordable cost.

Lens Bracket Mounting

- Lens Bracket ko camera se attach krain or lens bracket knob se properly tight krain.



- Lens Bracket is properly attached to the camera.

NOTE: Our boxer head comes equipped with a convenient built-in lens control for Fuji/Canon ENG lenses. It is specially designed with an 8-pin zoom cable connector that is compatible with Canon and Fuji ENG lenses, featuring the same 8-pin connector.



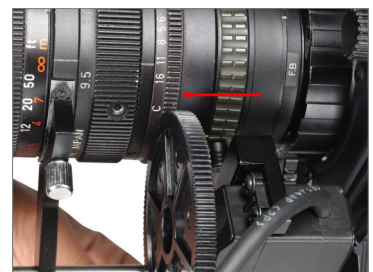
Rod Mounting

- Now Rod ko lens bracket mai slide krain or knob ko tight krain.



Iris Motor Mounting

- Iris motor ko rod me slide krain.
- Then Iris motor ke gear ko camera ke Iris gear se match krain.



- Gear ko match karne ke bad knob ko tight krain.



Focus Motor Mounting

- Focus motor ko rod me slide krain.
- Then Focus motor ke gear ko camera ke Focus gear se match krain.



- Gear ko match karne ke bad knob ko tight krain.
- Both motors are properly attached to the camera.



Controller Box Mounting

- Now knob ko jib ke mounting Head me insert krain.
- Then controller box ko knob me insert krain or knob ko tight krain.



Focus Zoom Controller Mounting

- Focus Zoom Controller ko Weight rod (Right side) par slide krain or knob ko tight krain.



Joystick Controller Mounting

- Joystick Box ko Weight rod (Left side) par slide krain or knob ko tight krain.



Battery Mounting

- Battery (**Not Included**) ko Controller Box ke battery plate par mount krain.
- Same process se another battery ko mount krain.

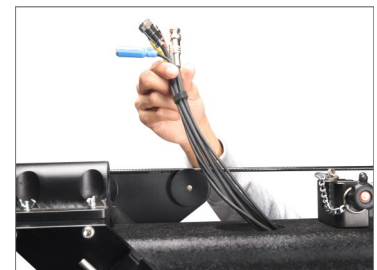


Cables Mounting

- 43ft long cable ka one end Controller Box (20 Pin) se connect krain.



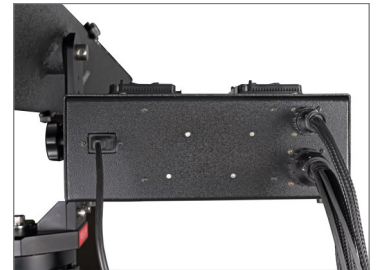
- 43ft long cable ka another end jib me insert krain or jib head ke top hole se nikale.



- 12ft long cable ka one end Controller Box (13 Pin) se connect krain.



- AC Power Cable ka one end Controller Box (3 Pin) se connect krain.



- Power cable ka second end Universal adapter se attach krain.



- 43ft long cable ke **Red** cable (4 Pin) ko Iris motor se attach krain.



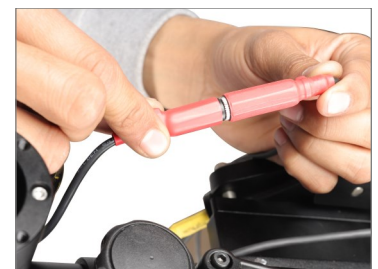
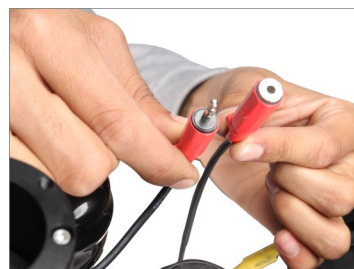
- 43ft long cable ke **Blue** cable (4 Pin) ko Focus motor se attach krain.



- 43ft long cable ke **Blue** cable (1 Pin) ko Tilt motor se attach krain.



- 43ft long cable ke **Red** cable (1 Pin) ko Pan motor se attach krain.



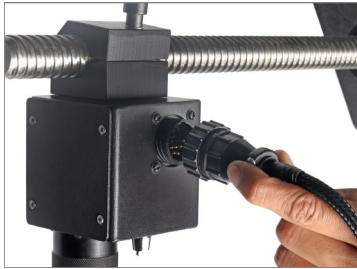
- BNC cable ko camera ke video out connector se connect krain.



- 43ft long cable ka 8-pin connector camera ke 8-pin connector se connect krain.



- 12ft cable ka 1 end (7 Pin) Joystick Controller se attach krain.



- 12ft cable ka another end (8 Pin) Focus & Zoom Controller se attach krain.



- Now ON Button se Controller Box ko ON krain.



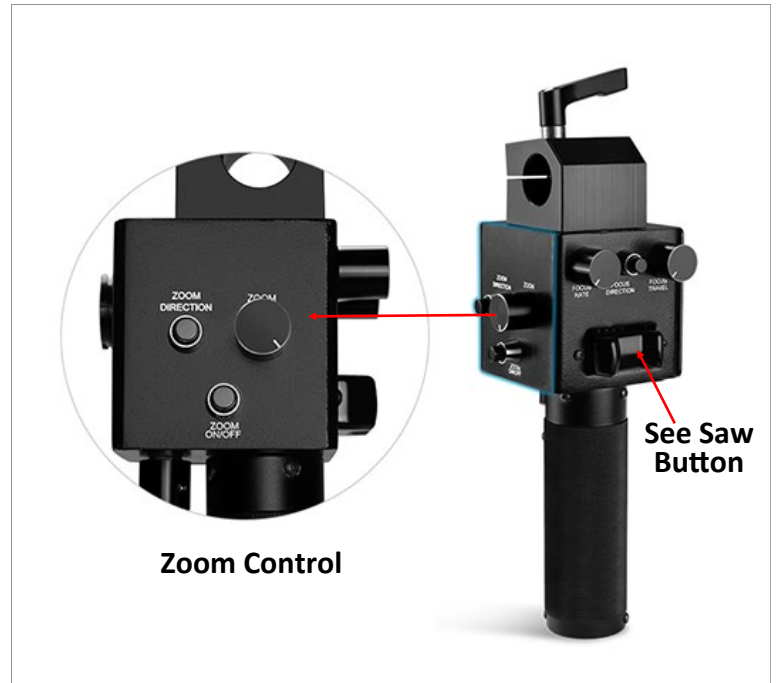
- Camera is properly mounting on Boxer head.



Focus Zoom Controller

The Joystick Zoom Controller enables the operator to increase the magnification, empowering them to take well-framed shots with ease and reliability.

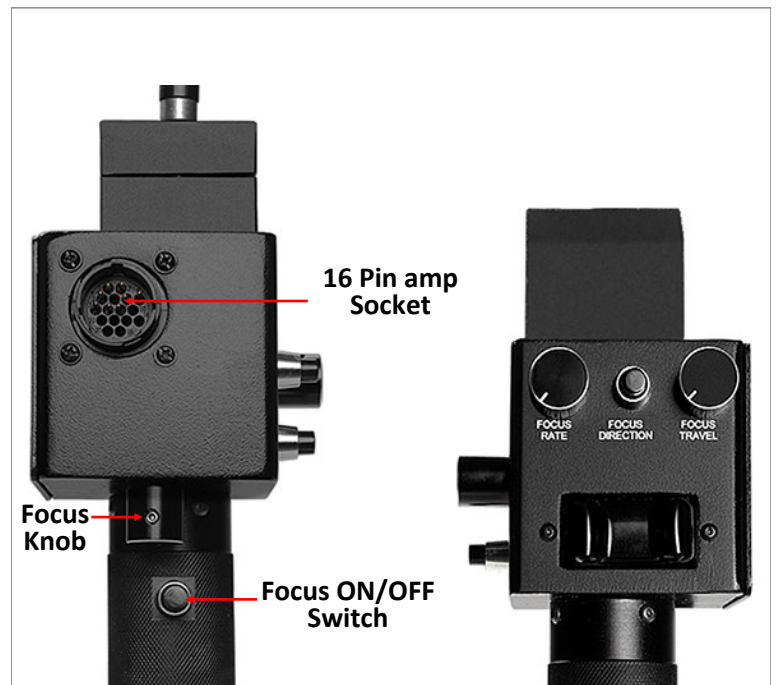
- 1. Zoom On/Off:** The switch works as a zoom speed controller; when switched OFF, the zoom speed is at its maximum, and when switched ON, the zoom speed can be controlled via the 'zoom rate' knob.
- 2. Zoom Rate:** When the 'zoom on/off' button is on, the knob allows you to control the zoom speed per your requirement.
- 3. Zoom Direction:** The button reverses the current zoom direction from zooming in to zooming out or vice-versa.
- 4. See-Saw Button:** The rocker pot facilitates forward and reverse zoom direction.



Focus Control /Follow Focus System

The Joystick focus controller lets the operator make precise adjustments to achieve the ideal sharpness and clarity in every shot.

- 1. Focus Rate:** It is a ramping control that controls the elapsed time to perform the focus.
- 2. Focus Travel:** Sets the distance the focus servo will rotate and prevents the servo from hitting the lens stops.
- 3. Focus Direction:** The button reverses the focus direction from left to right or vice versa.
- 4. Focus Control Knob:** Rotates the servo motor as per your requirement.
- 5. Focus On/Off Switch:** Turning ON this switch will allow you to control the focus movement via the given control points, whereas turning OFF this switch will completely turn off the focus functions.



Speed, Damping, Iris & Direction Control

The main control box of our pan-tilt features a 2-V-mount battery plate, which facilitates the convenient mounting of V-mount batteries, offering a significantly larger capacity, thereby enabling prolonged uninterrupted operation. **Speed Control:** It features two independent speed controller switches that let you control and precisely adjust the speed, suiting the requirement of the shot.

Damping Control: And two independent Damping control switches prevent the Head from stopping abruptly with a jerk, giving you smooth endings.

Pan-Tilt Direction: There are also two independent switches, so you can easily change and reverse the direction of panning & tilting as and when required.

The **Iris** : With the Iris control switch, you can adjust the camera's aperture to accommodate prevailing day/night light conditions, improving visual clarity.

Moreover, the controller box is equipped with an up/down flip knob, which must be switched when using Fuji or Canon lenses.



**YOUR PROAIM BOXER HD-2X MOTORIZED PAN/TILT HEAD
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.