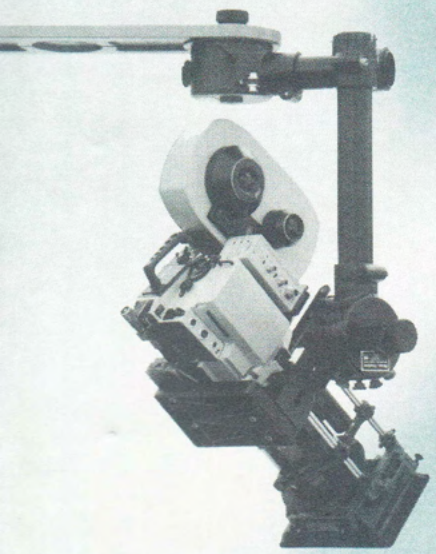
2-Axis Head

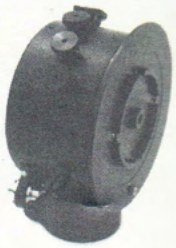


Weaver/Steadman 2-Axis Head

The fluid W/S 2-Axis Head utilizes modular design and tube frame construction to provide a lightweight, rigid, infinitely adjustable Assembly that supports and balances a Camera Package. Mounted in an upright or suspended (underslung) position, this quickly assembled System excels in situations that require extreme tilts, extreme low angles, or near nodal point configurations.

W/S 2-Axis Head Parts List

Pan Module



Tilt Module

90° Bracket

Dutch Angle Bracket

Drop Bracket with Lead Screw Assembly and Locking Lever

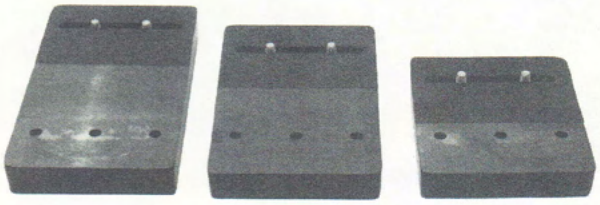
Allen Wrench

Pan Handle

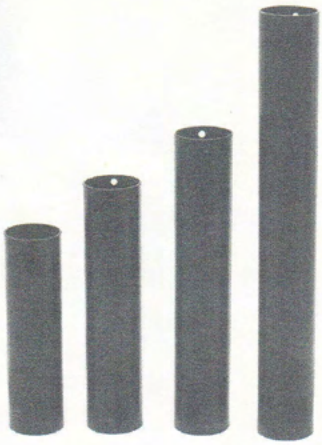
Safety Collar with Fast Pin

Tie-Down Assembly

Panavision /Arri /Video Shoes



9" Tube, 11" Tube, 13" Tube, 18" Tube

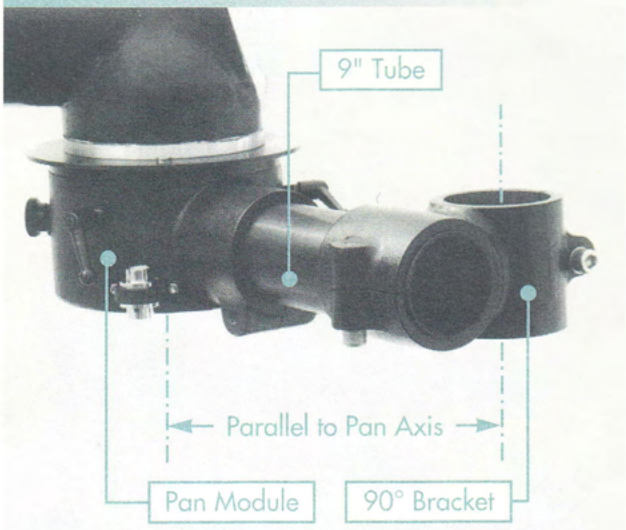


W/S 2-Axis Head assembly

1 **Mount the Pan Module on a dolly, tripod or jib arm.** Make sure the Module is securely attached, with 1/2"-5/8" (10 turns) of the Tie-Down Assembly Knob's screw threaded into the Mitchell Plate. (See page 11, #1 if the Knob's screw is too short.)

2 **Install a 9" Tube in the Pan Module's socket.** Using the shortest Tube possible makes a more compact Assembly. Make sure the Tube is fully inserted; securely tighten the Allen Screw.

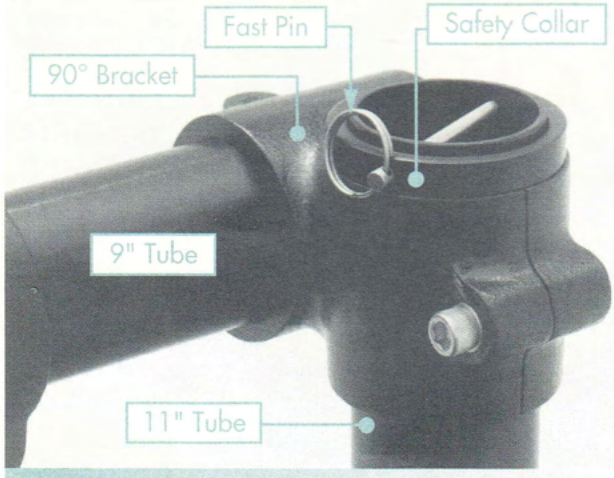
3 **Install the 90° Bracket on the end of the 9" Tube.** Vertically align the Bracket's empty socket, so it is parallel with the pan axis; securely tighten the Allen Screw.



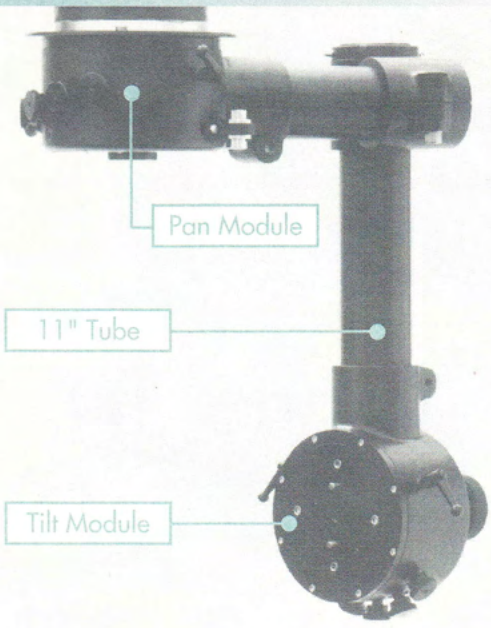
4 **Install the Safety Collar on the 11" Tube** when the Head is in a suspended position to prevent the Camera from falling while adjusting the 90° Bracket. Mount the Collar on the end of the Tube with 1/4" holes; align the holes and insert the Fast Pin all the way through the Assembly.

5 **Install the 11" Tube in the 90° Bracket's vertical socket.** When mounting the Head in an upright position, insert the Tube from below until the Safety Collar meets the Bracket; in a suspended position, drop the Tube through the 90° Bracket from above. Securely tighten the remaining Allen Screw.

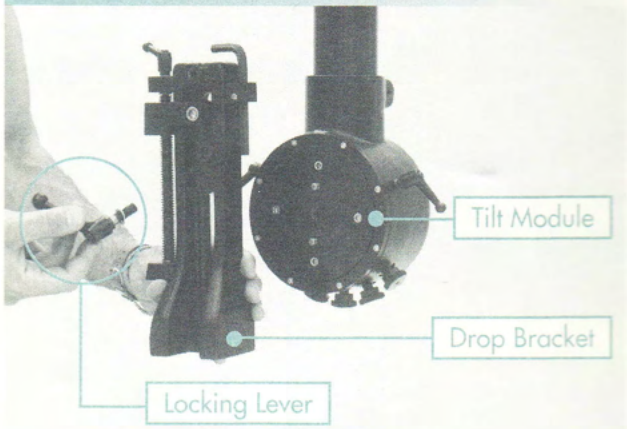
The 11" Tube is most often used because it creates a compact configuration. Special situations may require a longer Tube for lens or magazine clearance.



6 **Install the Tilt Module on the vertical Tube** with its face toward the Pan Module side of the Assembly. Make sure the Tube is fully inserted into the Tilt Module's socket; securely tighten the Socket Screw.



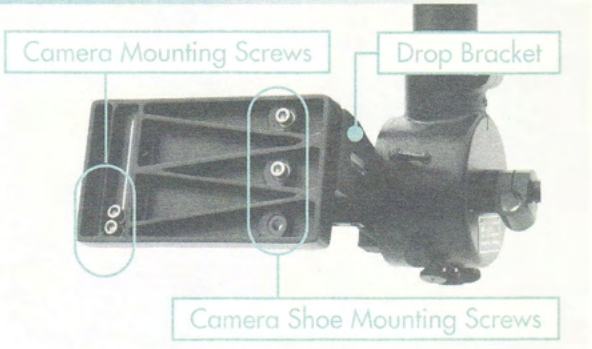
7 **Install the Drop Bracket on the Tilt Module,** engaging the T-nut on the 2 pins and screwing in the Locking Lever. Be sure to use the washer provided.



8 **Mount the Camera Shoe on the Drop Bracket.** There are 3 Shoes provided which will accommodate most Cameras. Use the shortest Shoe that will allow the Camera to clear the Drop Bracket/Locking Lever; this keeps the Assembly compact and facilitates aligning the Camera over (or under) the pan axis.

Each Shoe has 3 mounting holes and 1 or 2 slots for attaching the Camera. 2 of 3 holes are used to mount the Shoe on the bottom of the Drop Bracket, depending on individual requirements. For example, the front 2 holes might be used with a Panaflex and primes to keep the Shoe more centered under the Camera; the rear 2 holes might be used for attaching a B.L. with a zoom.

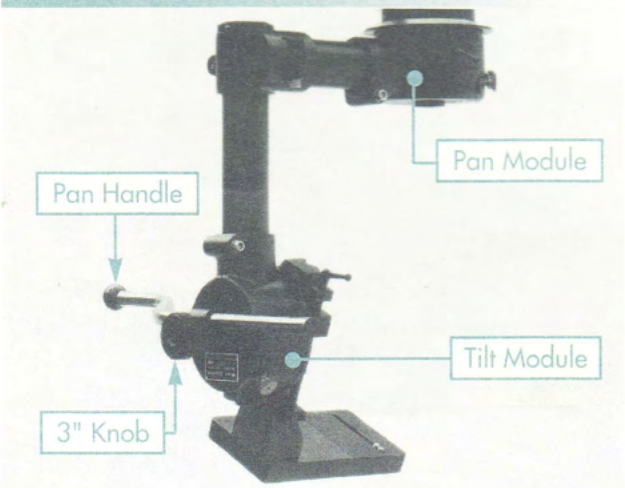
The slots are **only** used for attaching the Camera. (See page 11, #2 for details on removing a Mounting Screw from the Camera Shoe.)



9 **Mount the Camera's Dovetail Base** if required. Otherwise, mount the Camera directly on the Shoe using the (2) Camera Mounting Screws captive in the slot.

10 **Mount the Camera,** sliding it forward until approximately centered on its dovetail base.

11 **Install the Pan Handle on the Tilt Module.** Be sure to tighten the 3" Knob on the Handle Clamp to fully engage the serrated teeth between the Clamp and tilt axle.



Note

1. If the Mitchell mount on the dolly or tripod is too thick, the Tie-Down Assembly Knob may not thread far enough into the Mitchell Plate on the Pan Module's base to support the Head. To adjust, loosen the Allen Screw on the side of the the Knob and increase the length of the Knob's screw until 1/2"-5/8" will thread into the Head's Mitchell Plate. Re-tighten the Allen Screw onto the flat surface of the Knob's screw.

2. Removing a Mounting Screw from the Camera Shoe can seem tricky because it is captive in the slot. To remove, slide the Bolt towards the end of the slot where threads are cut (look closely for the threads on the step within the slot). The Mounting Screw can only be unscrewed here; **do not** attempt to force it out of the slot.

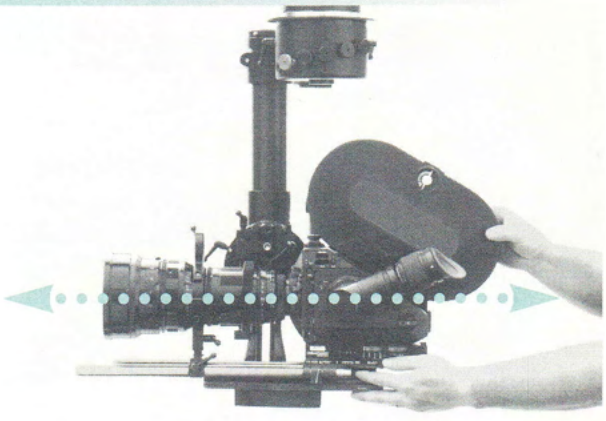
Camera balance adjustments

Horizontal and vertical balancing involve positioning the Camera's center of gravity so it lines up with the axis of the Tilt Module's axle. When in balance, the Camera will remain wherever it is positioned with the Knurled Spring Plunger Knobs fully disengaged and the Brakes backed off.

1 **Mount all Camera accessories** before making adjustments. Generally, a lighter Camera and Package (magazines, lenses, matte boxes) make a more compact Assembly that is easier to operate. If possible, avoid extended eyepieces which are heavy and tend to change the Camera's balance.

2 **With Brakes on, unscrew all Knurled Spring Plunger Knobs.** Then, while supporting the Camera, release the Brakes. Any minor imbalance will be apparent.

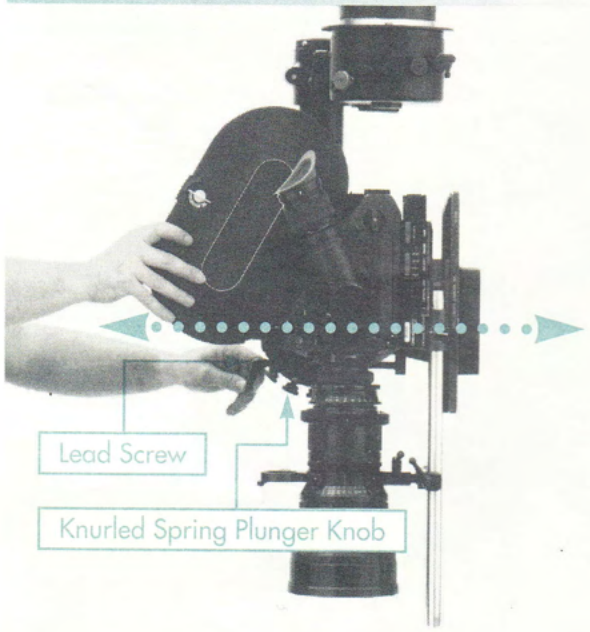
3 **Adjust the Camera's horizontal balance.** Slide the Camera Package on its dovetail base until the Camera remains in balance with the Tilt Module's Brakes released; lock the Camera to the dovetail base and/or Camera Shoe.



4a **Adjust the Camera's vertical balance.** This capability is a unique feature of the W/S Head. Begin by adjusting for clearance. Tilt the Camera 90°, so the lens is aimed straight down. When the Assembly is in an upright position, the matte box rods may hit the Pan Module. Use a longer vertical Tube for clearance, or loosen the Allen Screw on the socket at the base of the Tilt Module and swing the Camera clockwise (forward) to clear the Pan Module.

When the Assembly is suspended, the magazine may hit the Pan Module. Make sure the Safety Collar is installed, then loosen the 90° Bracket so the Camera can swing in either direction to avoid contact with the Module.

4b Now, make the vertical adjustment. While supporting the weight of the Camera with one hand, loosen the Drop Bracket's Locking Lever 1/2-turn and crank the Lead Screw which will move the Bracket horizontally (relative to the Tilt Module). When the Camera is in balance, lock off the Bracket's Locking Lever and tilt the Assembly back to a level position. Now, the Camera/Tilt Module can be swung back over (or under) the Pan Module.



Note

1. The Pan Module does not have to be directly under or over the Camera. Instead, the offset arrangement is variable — creating options for unusual problem solving.

2. Tubes which configure the Head can be switched or adjusted without disturbing the Camera's balance, as long as the Camera Package and Tilt Module remain unchanged. Using shorter Tubes makes a more compact Assembly.

Drag Knob adjustments

Knurled Spring Plunger Knobs on both the Pan and Tilt Modules control drag; each Knob controls an individual disc of fixed resistance. As the Knob is screwed into the main Module, a spring-loaded pin is lowered onto the edge of a disc. The Module is rotated and, with a click, the pin becomes seated in a slot on the disc.

To engage a Knurled Spring Plunger Knob, make sure it is screwed in clockwise all the way, snug but not over-tightened. Screwing a Knob down harder will **not result** in more drag. To disengage a Knob, make sure it is backed out counterclockwise all the way (not tightly) to clear the disc's edge. Partially engaged or disengaged Knobs will **not affect** dampening, but will diminish smoothness and impair continuity of movement.

The blue Knob engages the disc with the lightest drag — usually sufficient for most situations. Very little drag is required to smoothly control the Camera when balance is properly adjusted. In fact, less drag is more desirable for making agile starts and stops.

Note

A partially engaged Knurled Spring Plunger Knob may make a clicking sound when the Head is rotated, indicating the Knob needs to be completely screwed in or backed out.