

# TYLER MIDDLE MOUNT II SET-UP INSTRUCTIONS

**IMPORTANT – HELICOPTER CAMERA MOUNTS MUST BE CAREFULLY BALANCED TO WORK PROPERLY.**

## TO INSTALL MIDDLE MOUNT IN HELICOPTER:

1. Install mount into helicopter using Tyler Middle Mount Model 403 Installation Manual as reference.

**CAUTION – DO NOT INSTALL OR REMOVE MOUNT WHILE ROTORS ARE TURNING.**

## TO ATTACH CAMERA TO MOUNT:

**NOTE:** Have “mount arm” ⑩ in locked position using “mount lock” ⑪ and have tailweight ⑫ in place.

2. Prepare camera package as it is to be used, proper lens, filters, zoom/focus drive unit, power cables, accessories and film load, completely “ready to shoot”.
3. Bolt Tyler “camera plate” ⑬ to underside of camera assembly, as close to or slightly forward of center of camera balance as possible.
4. Twist “safety” knob ⑭ and open “camera plate receiver lever” ⑮ on camera mount.
5. Position camera package into mount receiver. Close “receiver lever” ⑮ and twist “safety” knob ⑭ to up position. Plug in camera and lens power cables ⑯ & ⑰ and battery ⑱ and mount power cable ⑲.

**NOTE:** Proper direction of zoom & focus is obtained by flipping toggle switches on underside of control handle. Focus speed control knob is located at position ⑳.

## TO BALANCE CAMERA ON MOUNT: (Have “mount arm” ⑩ in locked position and “tailweight” ⑫ in place.)

6. **Camera Balance:** First, tighten “pan friction” knob #1 ① and bring camera to level position. Next, loosen “tilt friction” knob #2 ②. Then twist knob “A” ③ to shift the camera front to back until camera feels equally balanced on tilt axis.
7. **Tilt Balance:** Turn “tilt balance” knob #4 ④ to raise or lower the camera and control handle assembly until camera will stay pointed both level and down (does not try to tip over or seek level).
8. **Pan Balance:** First, loosen “pan friction” knob #1 ①. Now, by holding “L” support arm ⑤, tilt the camera to point down. Next, twist knob “B” ⑥ to shift the camera side to side until camera will stay pointed both right and left.

**IF NECESSARY, REPEAT ABOVE 3 STEPS UNTIL CAMERA FEELS NEUTRAL AND TENDS TO STAY IN ANY POSITION IT IS PLACED IN.**

9. **Pan & Tilt Friction:** Apply pan and tilt friction using knobs #1 and #2 ① & ② until desired drag is achieved (Tight enough so wind doesn't move camera but not so tight that camera jerks at start of pan or tilt.)

## TO BALANCE MOUNT:

10. **“Mount Lock” Release:** First, depress button on mount lock “pip pin” ⑦ and remove pin. Next, swing the “mount arm” ⑩ out of the “lock bracket” ⑧. Then spin the mount lock “release knob” ⑨ counterclockwise until it stops. Now, rotate the “lock bracket” to an upright position and spin the “release knob” back in to store the “lock bracket”. Store “pip pin” in empty hole.
11. **Mount Vertical Balance:** Use “turnbuckle knob” #5 vertical balance ⑫ to pivot tailweight assembly ⑫ fore or aft until “mount arm” ⑩ stays vertically level. For very light cameras, balance can be attained by removing weights from weight compartment under “mount arm” and from inside “cap” #6 ⑥. For heavy cameras, add weight to underarm weight compartment.
12. **Mount Horizontal Balance:** Spin mount “tailweight” #7 horizontal balance ⑬ in or out until mount stays horizontally level.
13. **Tilter:** Adjust “tilter” knob ⑭ at base of mount “mast” post ⑮ until mast is vertical. NOTE: This adjustment may need tuning during flight depending on floor angle of helicopter.
14. **Sliding Base:** Adjust mount “sliding base” to desired position and lock off with “base lock” knob ⑯. EXAMPLE: Slide base towards outside of helicopter for “down shots” or slide into helicopter for high speed shots or traveling.

**THIS COMPLETES MOUNT BALANCING PROCEDURES.**

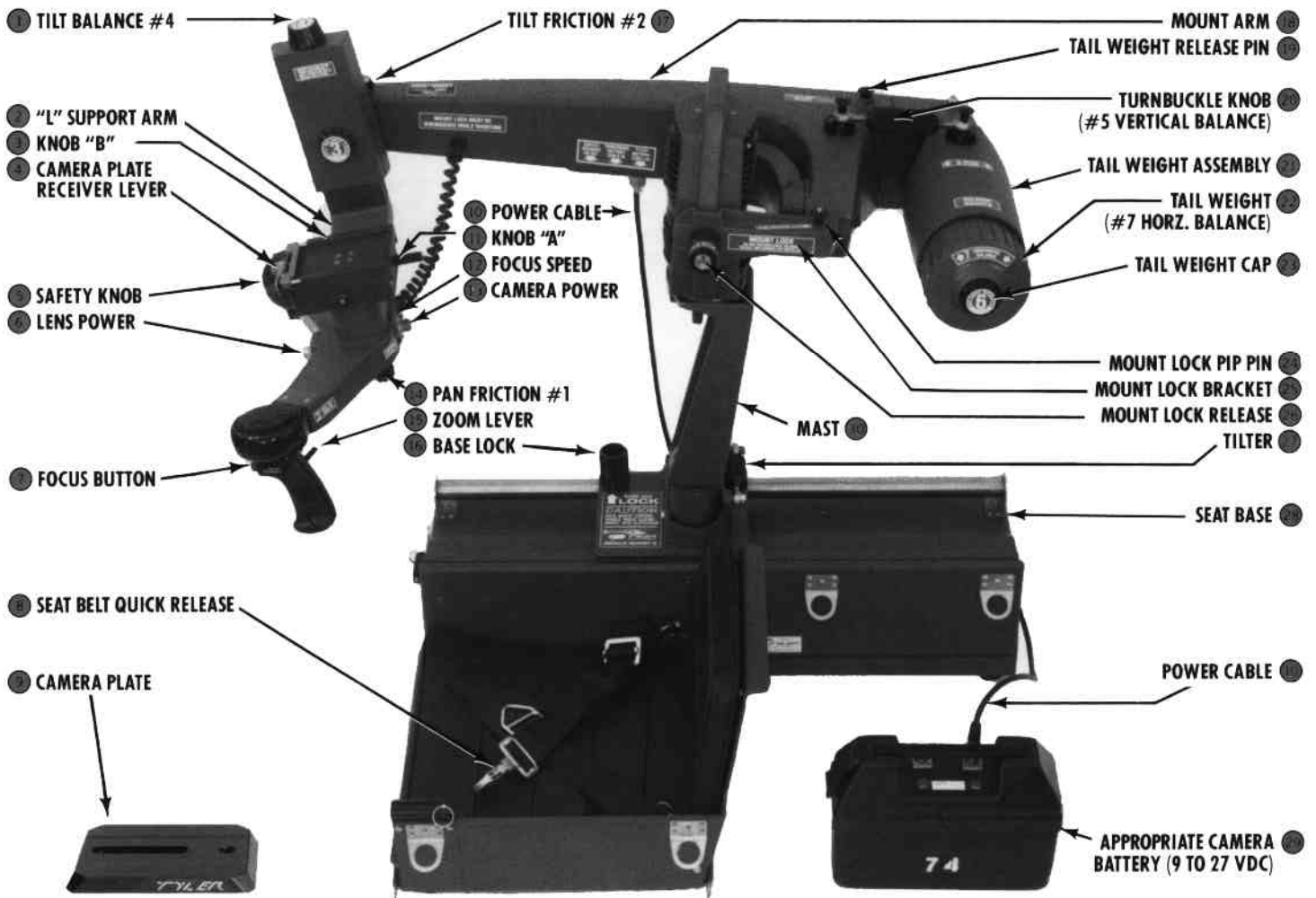
**NOTE: ON DISASSEMBLY, BEFORE REMOVING CAMERA, MOUNT ARM MUST BE SECURED WITH “MOUNT LOCK”. TO DO THIS, PIVOT “LOCK BRACKET” TO LEVEL POSITION AND LOCK WITH “RELEASE” KNOB. NOW, SWING MOUNT ARM INTO “LOCK BRACKET” AND INSERT “PIP PIN”. DISCONNECT CAMERA AND LENS POWER CABLES BEFORE OPENING “CAMERA PLATE RECEIVER LEVER”.**

# CAMERA MOUNT OPERATION

## IMPORTANT

- I. "Mount lock" ⑤ must be released and placed in vertical position while shooting.
- II. All 5 mount axis must, as close as possible, be balanced to a neutral position.
- III. Set "pan" and "tilt friction" knobs #1 and #2 ① & ② tight enough so wind does not move camera but not so tight that camera jerks at start of pan or tilt.
- IV. Use the main mast pivot points located behind you. The pan and tilt axes at the camera assembly point should be used to add greater latitude of movement to the overall pivot points behind you. The most important technique in operating the mount is the proper use of the pan/tilt frictions and the main mast pivot points.
- V. While shooting, do not let the mount or camera come in contact with any portion of the helicopter.
- VI. Make sure the pilot understands the shot before taking off.
- VII. Check to see that the helicopter has a "hot mike" intercom which is a necessity for proper cameraman to pilot communication.

**WHEN ORDERING A MOUNT, SPECIFY THE TYPE OF HELICOPTER TO BE USED SO THE PROPER MOUNT SEAT BASE WILL BE SENT.**

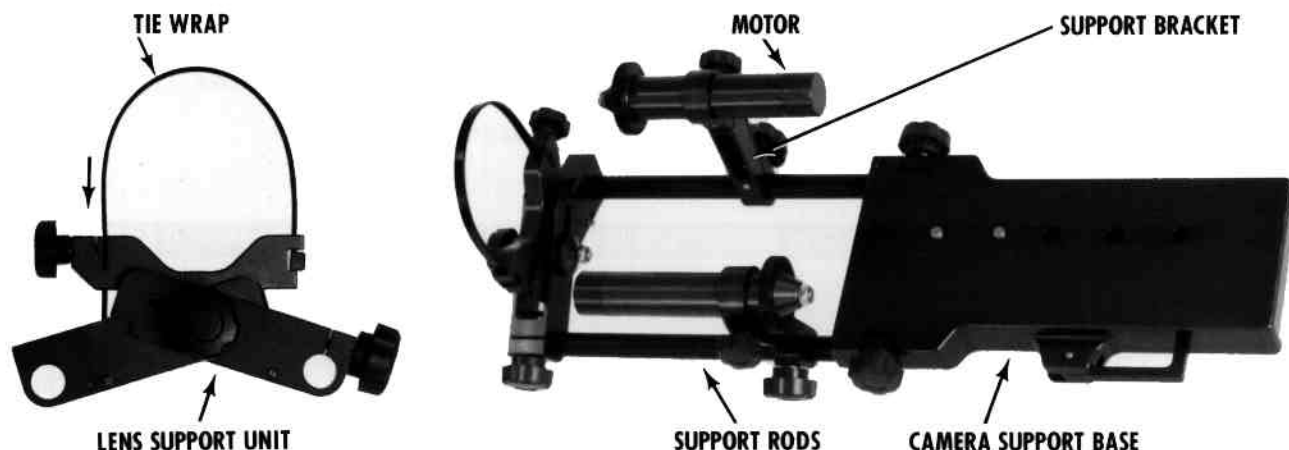


**CAUTION: BEFORE FLIGHT, CHECK INTERIOR OF HELICOPTER FOR ANY LOOSE EQUIPMENT OR ITEMS THAT COULD FALL OUT OF OPEN DOORWAYS. BEFORE TAKE OFF, ALWAYS CHECK THAT YOUR SEAT BELT IS PROPERLY SECURED. WHEN APPROACHING OR LEAVING THE HELICOPTER, DO SO IN A CROUCHED MANNER AND NEVER GO NEAR THE TAIL ROTOR.**

# TYLER ZOOM & FOCUS DRIVE SYSTEM INSTRUCTIONS

## THE TYLER ZOOM LENS DRIVE SYSTEM IS COMPRISED OF THREE BASIC PARTS:

- 1) Camera "Support Base" with "slide" and "slide clamp".
- 2) Adjustable "Lens Support Unit" with "support rods".
- 3) "Zoom & Focus Motors" with motor "support brackets".



## CAMERA SUPPORT BASE:

Loosen "slide clamp", turn "support base" upside down and move "slide" clear of bolt holes. Slip 3/8-18 82° 1-inch long Allen Flat Head bolt thru base and into bottom of camera. Pivot "support base" until spring loaded line-up pin snaps into bottom of camera, then tighten bolt. NOTE: Some Panavision lenses, for clearance, need a riser plate under the camera. Do not use riser plates if not necessary.

## LENS SUPPORT:

Loosen knobs on "lens support" unit and slip unit onto "support rods". Position support unit under a non-movable portion of lens, raise center portion of support unit until it fits snugly under lens and then tighten knobs. Added stability can be obtained by slipping a tie wrap around lens body and down thru slot in support unit. Pull tie wrap tight and tighten clamp knob. The tie wrap end can then be cut off if in the way.

## TYLER ZOOM/FOCUS MOTOR & MOTOR BRACKET:

Slip "motor bracket" over motor and "support rod". Tighten bracket onto motor as close to gear as possible with electrical plug facing down. Position motor gear in line with lens gear, fully engage motor gear and tighten bracket to support rod. NOTE: This special "auto backlash" bracket, on being tightened, will spring back and furnish a proper amount of clearance between gears for smoothest operation.

CAUTION: To protect lens, the motor gear clutch should allow the motor to continue turning at end of lens travel. Motor clutch can be loosened or tightened by holding screwdriver on end of motor shaft and then adjust nut in or out 1/8 turn with 7/16" wrench.

NOTE: Some odd-shaped lenses require that slightly larger gears be put on the drive motors. Do not use larger gears if not necessary.

## BALANCE:

Move "slide" on bottom of "support base" fore or aft until it is close to or slightly forward of center of balance of "ready to shoot" camera and lens assembly, close "slide clamp". Bolt camera mount "camera plate" to bottom of slide.

## FIXED LENS:

When switching from zoom to fixed lens, first remove "support rods" containing motors and "lens support". Remove zoom and install fixed lens. Next, release slide clamp and move camera and base forward until camera is balanced over camera mount tilt axis. Tighten "slide clamp" and then re-balance camera mount.

**FOR ADDITIONAL INFORMATION OR ASSISTANCE CONTACT TYLER CAMERA SYSTEMS.**