

- #945 150mm Bowl Models
- #944 2-Stage Carbon Fibre
- #943 1-Stage Alloy
- #944 1-Stage Alloy Studio
- #945 MINI 1-Stage Alloy
- #935 100mm Bowl Models
- #932 2-Stage Carbon Fibre
- #931 1-Stage Alloy
- #932 1-Stage Alloy Studio
- #935 MINI 1-Stage Alloy

# HD 100 HD 150 OPERATOR'S MANUAL

## ACCESSORIES & COMPONENTS

Cat #	Description
#480	Studio HD Dolly
#483	Studio HD Dolly with Cable Guards and Track Lock
#475	Rubber Feet (set of 3)
#993	Mid Level Spreader
#974	Softcase for HD 100 & HD 150 2-stage
P4816	Transport Clip

## SERVICE, SALES & SUPPORT

Miller Authorised Service Agents must carry out all service and repair work. Failure to observe this requirement may void warranty. It is advisable to notify Miller or a Miller Authorised Service Agent if a change of performance is observed as a result of dropping or rough usage. For information regarding sales and service of Miller products, or for your nearest Miller representative please contact us via our website or at the following:

<p><b>MILLER CAMERA SUPPORT EQUIPMENT</b> 30 Hotham Parade, Artarmon, Sydney NSW 2064 Australia Tel: +61 2 9439 6377 Fax: +61 2 9438 2819 Email: sales@miller.com.au</p>	<p><b>MILLER CAMERA SUPPORT LLC (USA)</b> 218 Little Falls Road, Cedar Grove, New Jersey 07009-1231 USA Tel: (973) 857 8300 Fax: (973) 857 8188 Email: sales@millertripods.us</p>
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**MILLER FLUID HEADS (Europe) LTD.**  
Unit 12A, Shepperton Business Park  
Govett Avenue, Shepperton  
Middlesex TW17 8BA United Kingdom  
Tel: +44 (0)1932 222 888  
Fax: +44 (0)1932 222 211  
Email: sales@millertripods-europe.com

**WEBSITE** [www.millertripods.com](http://www.millertripods.com)

## WARRANTY

Please refer to warranty card for complete details



## FEATURES AND CONTROLS

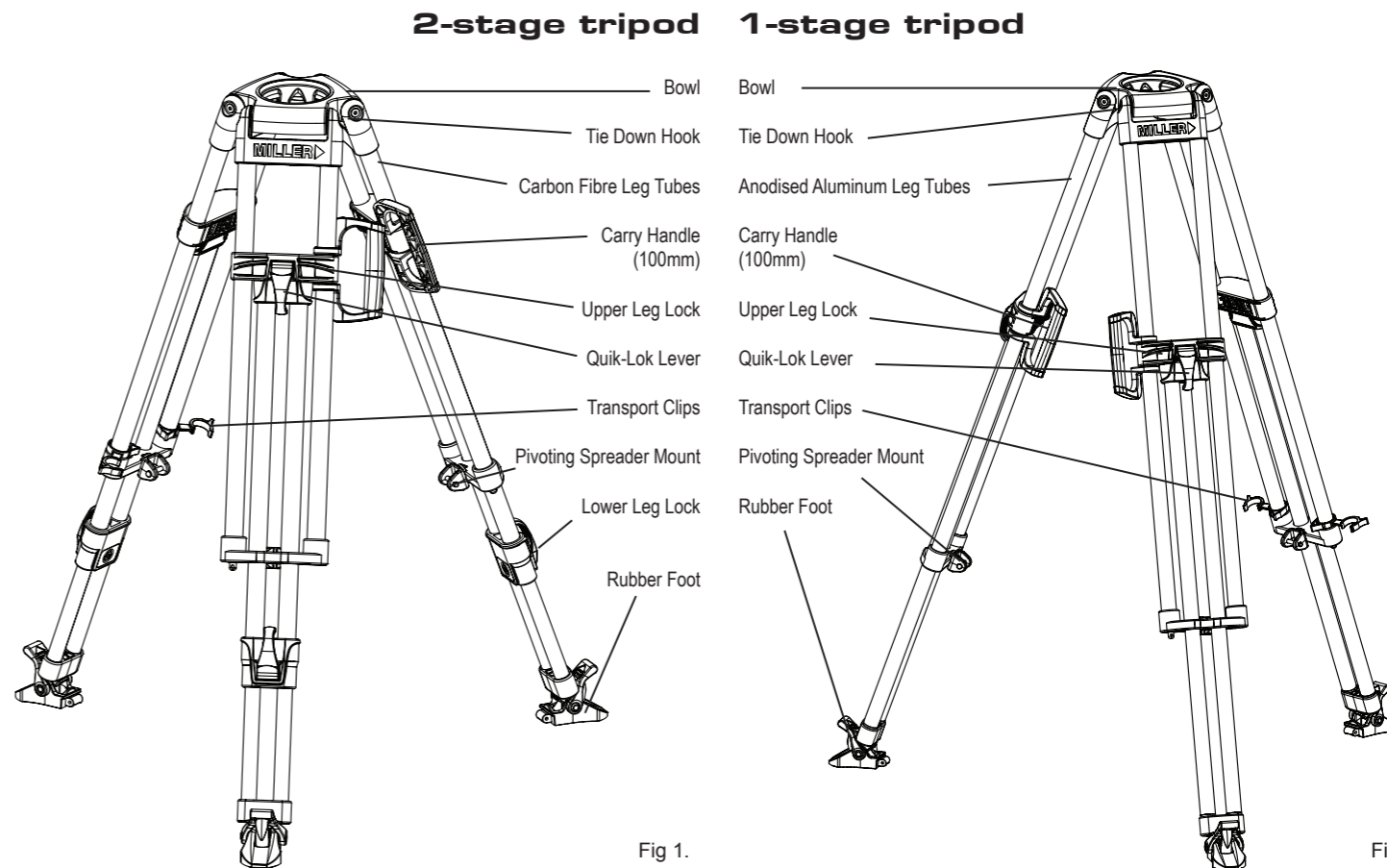


Fig 1.

Fig 2.

## INTRODUCTION

Thank you for purchasing the HD Tripod. The HD Tripod has been designed to suit payload capacities from ENG up to full configuration EFP cameras. The HD Tripod is available with either a Ø100 mm or Ø150 mm bowl and as 1-Stage, 2-Stage, Studio or Mini models. The 2-Stage Tripod comes in ultra-light, high strength carbon fibre tubing while the 1-Stage, Studio and the Mini Tripod comes in anodised alloy tubing. The HD Tripod is designed primarily to give excellent stability and durability. While many integrated features enable the user to operate the Tripod safely and easily – such as the Integrated Carry Handle (Ø100 mm bowl), Forever-Flat rubber feet and Fine height adjustable Mid-level spreader.

The HD Tripod will give best performance when used with the Arrow Fluid Head range and DS-60 Fluid Head. This will ensure maximum system stability to suit any professional set-up. The HD Tripod will suit most industry standard Ø100 mm Ø150 mm Fluid Heads as well, please refer to manufacturers' manual for mounting details.

## TECHNICAL DATA

Cat#	925	931	932	937	943	944	935	945
Tube Configuration	2-Stage	1-Stage	Studio	2-Stage	1-Stage	Studio	Mini	Mini
Tube Material	Carbon	Alloy	Alloy	Carbon	Alloy	Alloy	Alloy	Alloy
Bowl Dia. mm	100	100	100	150	150	150	100	150
Maximum Load kg (lb)	95 (210)	95 (210)	95 (210)	95 (210)	95 (210)	95 (210)	95 (210)	95 (210)
Weight kg (lb)	4.5 (9.9)	5.2 (11.5)	4.7 (10.4)	4.6 (10.2)	5.35 (11.8)	4.8 (10.6)	4.0 (8.8)	4.2 (9.3)
Max Height mm (in)	1590 (62.6)	1575 (62.0)	1270 (50.0)	1615 (63.6)	1590 (62.6)	1280 (50.4)	960 (37.8)	970 (38.2)
Min Height mm (in)	480 (18.9)	785 (30.9)	590 (23.2)	510 (20.1)	800 (31.5)	610 (24.0)	350 (13.8)	370 (14.6)
Transport Length mm (in)	750 (29.5)	930 (36.6)	782 (30.8)	750 (29.5)	940 (37.0)	790 (31.1)	645 (25.4)	650 (25.6)

## TRIPOD SET-UP

1. Before setting-up the tripod, the Mid Level Spreader must be attached.
2. Remove tripod from the Softcase and unclip the Transport Clips.
3. Place the Tripod Feet on level surface (if possible) and release the Quik Lok Upper Lever on each leg.
4. Lift the top of the tripod to a desired height and then apply the Quik Lok Upper Lever on each leg.
5. Release the Quik Lok Lower Lever on each leg (2-Stage model), then lift the tripod to a desired height and apply the Quik Lok Lower Lever on each leg.
6. Spread the Tripod Legs apart, check that the Tripod Bowl is approximately level to the ground.
7. Check that the tripod is secure.

## TRIPOD PULL DOWN

1. Remove the camera from the Fluid Head.
2. Retract the spreader arms fully.
3. Hold and lift off the ground by two legs, then bring the legs inwards.
4. While holding the top of the tripod, release the Quik Lok Upper Lever and Quik Lok Lower Lever (2-Stage model) on each leg then lower completely.
5. Apply the Quik Lok Upper Lever and Quik Lok Lower Lever on each leg.
6. Attach both Transport Clips and return the tripod to the Softcase.

## TRANSPORT CLIPS

The 2 Transport Clips (Fig.3) are designed to hold the HD tripod's three legs together during transport. Their spring-loaded design means they are easily gripped and detached for set up, and just as easily snapped back on to the legs for transporting tripod. The Transport Clips must be securely attached before transporting the tripod.

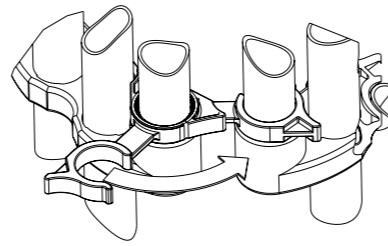


Fig 3.

## CARRY HANDLE

Miller's 2- part Carry Handle (patented) (Fig 4.) is perfectly positioned to balance the tripod with the head attached.

**NOTE:** 1-Stage & 2-Stage 100mm tripod models only.



Fig 4.

## LEG LOCK ADJUSTMENT

Over time the leg locks may need adjusting to prevent leg slippage.

Adjust the Upper Leg Lock Assembly in a locked position using 13mm Socket. (Fig 5.)

1. Extend the upper stage half way and lock the Upper Lever.
2. Turn the Upper Leg lock adjuster clockwise 1/8th of a turn. Release Quik Lok Upper Lever and ensure that stage slides freely.
3. When adjusted correctly Leg Lock Lever should only have a small amount of "free play" before locking action commences. If this free play is excessive repeat the steps above.

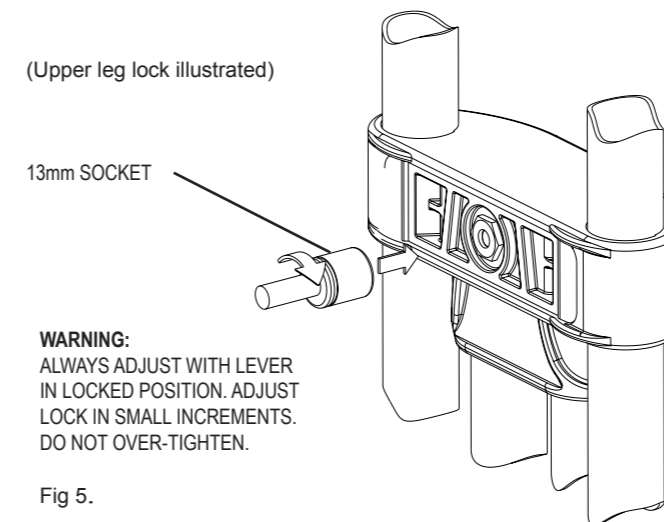


Fig 5.

## LEG TO BOWL ADJUSTMENT

The leg to bowl pivot joint on the HD tripod should have no lateral or free play movement and should swing with a firm, smooth resistance. Adjustment is usually not required, however, should it become necessary, the following procedure must be observed. (Fig 6.)

1. Leg to Bowl Adjustment to eliminate lateral, or free play movement: Using a cross head screwdriver, ensure Bracket Mounting Screws on both sides of the Leg Top Bracket are tight. Retighten if necessary. Check all legs.
2. Leg pivot or 'swing' adjustment to ensure firm, smooth resistance. Tighten the Leg Pivot Screws on each side of the Leg Top Bracket using a 4mm allen key until a smooth resistance is maintained. Check all legs.

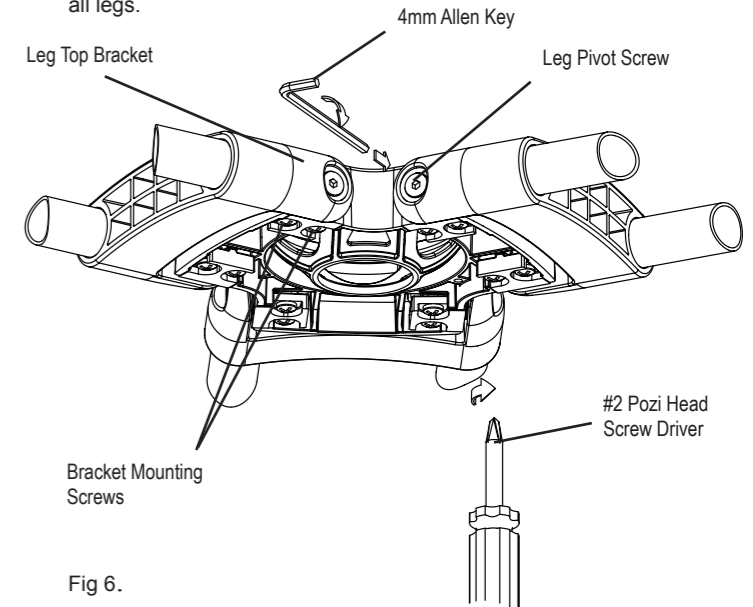


Fig 6.

## SPREADER

### Mid Level Spreader (Fig 7.)

The Mid Level Spreader allows the setting of the Tripods footprint and fine height adjustment. The tripod height and overall footprint can be adjusted by turning the Spreader Adjusting knob or by adjusting the length of the telescopic spreader arms.

### Spreader Set-up

1. Turn the Spreader Adjusting Knob counter-clock wise to the open position.
2. Stand the Tripod upright with legs spread out equally.
3. Release the Telescopic Clamp on the spreader arm then latch the Quick Release Latch on to the Pivoting Spreader Mount, repeat for the remaining two arms.
4. Bring each Tripod leg in such that the corresponding Spreader arm is fully retracted then lock the Telescopic Clamp, repeat for each Spreader arm.
5. Bring the Tripod legs towards the centre position, if resistance is felt do not force the Tripod legs, spread out the Tripod legs and make sure that the Spreader arms are fully retracted.

### Spreader Pull Down

1. Remove the Camera and the Fluid Head from the Tripod.
2. Stand the Tripod upright with legs spread out equally and the Mid Level Spreader in the open position.
3. Pull back the Quick Release Latch knob (Fig 8.) and lift the Spreader arm from the Pivoting Spreader Mount, repeat for the remaining two arms.

## MID LEVEL SPREADER

Fig 7.

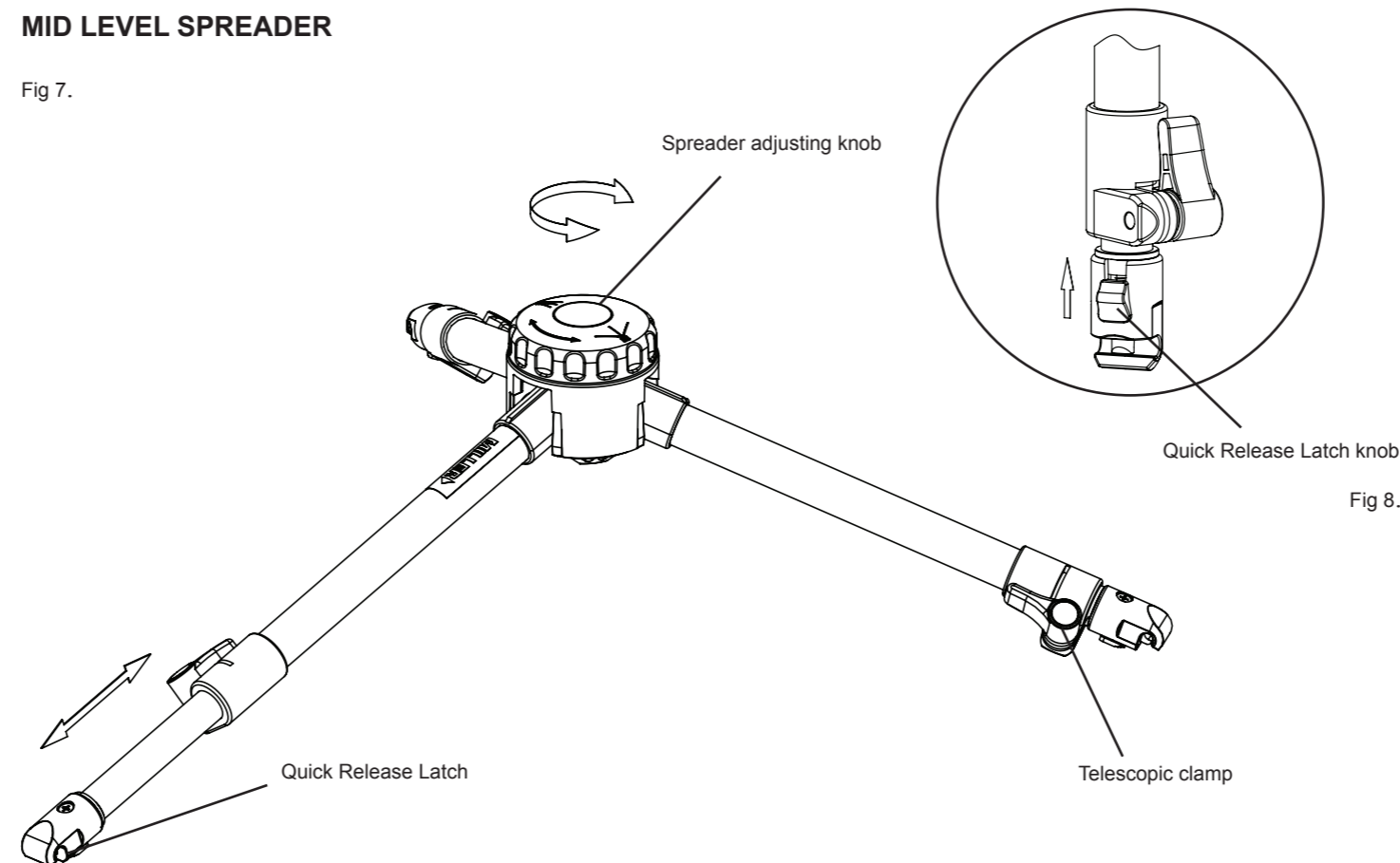


Fig 8.

## SAFETY

Ensure that all equipment is operating correctly and free from defects and damage, also please ensure that the tripod is steady, secure and that the bowl is approximately horizontal when attaching the camera. The operator is responsible for the safe operation of this equipment.

1. Do not exceed the maximum payload capacity of the Tripod.
2. Do not leave the camera unattended on the Fluid Head.
3. Do not adjust the tripod Leg locks whilst the camera is attached to the Fluid Head.
4. Do not move the Tripod whilst the camera is attached to the Fluid Head.
5. Do not remove the Mid Level Spreader or Ground Spreader whilst the camera and fluid head is attached.

## MAINTENANCE

Regularly inspect the tripod, paying particular attention to any tube damage, leg lock adjustment, leg top adjustment, condition of the bowl rim, spreader mounting points, carry handle and feet.

Keep grit and dirt out of Quik Loks as much as possible, including behind levers. Regularly clean the tripod with a clean damp rag or soft brush. Wipe off all sand, dust and salt spray.

Do not clean with solvents, cleaning fluids, lubricants, polishes, abrasives or wire brushes.

Transport and store the tripod in Miller case wherever possible. Store the tripod in a dry place, away from direct sunlight.