

Technical Specifications and Safety Rules for STEREOtec Lightweight Rigs

General Notes: Please read the complete Lightweight Rig user manual carefully before using the Lightweight Rig. The Lightweight Rig is a precision tool and should be treated as such. It requires special care in order to avoid damaging the Lightweight Rig, your equipment or causing personal injury.

Please note that the guarantee is lost if any of the sealed screws are damaged!

The set-up instructions must be read and understood before set-up or operation. The Lightweight Rig may only be assembled and operated in accordance with the manufacturer's instruction manual.

The manufacturer's technical specifications and limits must be adhered to at all times and in no way exceeded.

The Lightweight Rig may only be set-up or operated by trained and experienced personnel. To avoid misuse by untrained personnel, the Lightweight Rig should be dismantled or locked when not in use or under supervision.

The Lightweight Rig may not be set-up or operated under the influence of alcohol, drugs or any other intoxicating substances. The respective protective clothing e.g. gloves, should be worn.

The manufacturer accepts no liability for damages or injuries for incidents or accidents occurring due to negligence by the operator or misuse of the Lightweight Rig or disregarding the instruction manual.

General handling: Do not place the Lightweight Rig on a cart, unstable tripod, stand, table or any other unstable surface. If the Lightweight Rig falls down, it might get damaged or cause personal injury. Do not unscrew or detach any parts of the Lightweight Rig that are not specifically designed to be treated in such a way.

Do not use accessories or attachments which are not provided or recommended by STEREOtec. The screws provided by STEREOtec are custom-made, in order to ensure safety and stability they must not be interchanged with standard screws.

Do not stand on the Lightweight Rig or use it as a support. Never lift the Lightweight Rig by touching at the Beam Splitter Box or its rods, at the Guide Slide, at the Guide Rails or at the Handle Wheel for interaxial adjustment.

Do not place the Lightweight Rig either on the side or on the Beam Splitter Box.

Always move the rig axis to zero before transporting the Lightweight Rig. The slides should be in line with the Lightweight Rig body before placing the Lightweight Rig in the transportation case.

Handling during operation: Do not touch the moving parts of the Lightweight Rig during its operation in order to prevent personal injury.

Don't use force. If one of the parameters' response is tight (Interaxial, Convergence, Tilt, Roll, Height, Distance to the Beam Splitter) something may have got jammed in the slide way, is blocking the movement of the cameras or you have reached the maximum limit of adjustment. If something doesn't move or moves hard: There is always a reason for it. (e.g. a cable is pulling or jammed, the lens is

blocked in the mirrorbox, a tripod handle is blocking the pathway of the slides, a follow focus rod or motor blocks the movement of the guide slide...)

Always take care that neither cables nor any other objects get jammed in the Guide Rails of the Lightweight Rig. Cables always have to be fixed in such a manner that they do not interfere with the moving parts of the rig. While setting up always be aware that both cameras will move off center in opposite directions on the Lightweight Rig due to the balancing mechanism. You should keep that in mind before fixing cables. Movement of the Lightweight Rig and the cameras should not be constrained by traction (from cables or similar) as this could destabilize the setup and change the calibration of the cameras.

Never move a Lightweight Rig axis manually, if a powered Lightweight Rig control system is connected! Always power off the Lightweight Rig control device or disconnect the motor cable before moving a Lightweight Rig axis by hand! If you move a Lightweight Rig axis manually while the Lightweight Rig control device is off, you always need a recalibration after you powered the device again!

To avoid end stop blocking we recommend bringing the Lightweight Rig axis in a middle position before calibrating the motor with the Lightweight Rig control system. Turn the hand wheel of every Lightweight Rig axis manually, until you reach a position in the middle of the axis range. Then power your device and start the calibration.

Before driving any motors make sure the moving path is free of obstacles like rods, follow focus motors or other objects that can collide with the mirror box and could cause damage to the mirror box.

Be aware that the Interaxial counter can be reset and that it might show wrong values if you don't reset it after calibration.

Make sure the mirror is attached properly in the mirror box. When operating the Lightweight Rig on a tripod, dolly or any other device, ensure that the device where the Lightweight Rig is attached is secured against moving, slipping and collapse and that it provides the specified support and stability. Use of the Lightweight Rig on insert vehicles, camera cars or any motorized vehicle is not allowed. The manufacturer accepts no liability for damages or injuries for incidents or accidents occurring due to use of the insert vehicles on insert vehicles, camera cars or any other motorized vehicles.

General camera compatibility: The Lightweight Rig is designed for professional small sized cameras like ARRI Alexa-M, RED Epic, RED Scarlet, Phantom Flex, Sony F3, Sony F5 / F55, SI-2K and others. Please contact STEREOtec for an up to date list of compatible cameras.

Always make sure that you have the correct STEREOtec Adapter Plates for your specific camera type. Despite similar installation mechanisms, only the correct STEREOtec Adapter Plate ensures that both cameras are exactly mounted in the correct position on the Lightweight Rig. If you use the wrong plates you might not be able to align the cameras correctly.

General lens compatibility: The Lightweight Rig is compatible with prime lenses (fixed focal length), as well as zoom lenses (variable focal length) with a focal length of >16mm (S35mm, 1:1,78 – large size lenses are limited >18 mm), as long as the total weight limit is not exceeded. Please note that the field of view and the maximum possible interaxial without vignetting with wide angle lenses is reduced.

Mechanical Mounting: Do always secure all components that are attached to the main body (like cameras, lenses, motors, mirror box and French flags, covers, filters, motor control and everything else), with appropriate safety ropes to an external stable and solid safety point. Also secure the main body accordingly.

The Lightweight Rig should be used with an appropriate tripod head and appropriate legs that are strong enough to support the rig and the cameras to ensure easy and smooth handling. It is highly recommended to test the chosen tripod head with the Lightweight Rig and the cameras before shooting! Always secure the Lightweight Rig with enough 3/8" screws to compensate the weight.

Do not use the wedge or any of the STEREOtec dovetail plates with the Lightweight Rig in a hanging configuration, also not on an object that is fast moving or that is accelerating and also do not use it on a crane or above persons or animals or any other objects that could be damaged by falling objects. The wedge and the dovetail plates (Universal Adapter Plate, Tripod Adapter Plate) are for use on static shots or slow moving dolly shots only.

Always check all screws especially after transportation if they are tight. Screws might get loosen during transport due to vibration.

Make sure that the Lightweight Rig is always mounted properly secured before operation! Make sure all components of the Lightweight Rig are firmly attached and cannot be loosen even if acceleration appears.

Before mounting the Lightweight Rig on a tripod always consider whether the Lightweight Rig should be mounted on top or bottom and ensure that all brakes of the tripod's head and legs are fastened and that the tripod stands perfectly stable. You should use at least three 3/8" screws to connect the Lightweight Rig with the Tripod Dovetail Plate or a standard tripod mounting plate.

Always ensure that the Camera Adapter Plates are correctly fixed and not jammed anywhere. They have to rest upon the guide slides with the security bolt snapped in and furthermore they have to be properly secured by the tightened lock handle! Mind this especially on the vertical guide slide! When installing the camera on an adapter plate please also attach the safety block on the side of the camera adapter plate and the safety screws underneath the camera adapter plate after sliding the plate on the Lightweight Rig to make sure the camera cannot slide from the sledge. Always check if the safety block is firmly attached and if the screw threads are in good condition.

Loads and acceleration: Weight of the Lightweight Rig (Beam Splitter Box and Body) is about 9,8 kg plus accessory (French flags, adapter plates...) plus cameras, lenses and camera accessory, motors and motor controls.... The Lightweight Rig is designed for the

following loads on the camera slides and accelerations of the Lightweight Rig:

- Recommended weight of the camera and lens combination including accessory up to 6,5 kg for each camera slide. Maximum acceleration of whole Lightweight Rig setup specified with 5 m/s².
- Maximum weight of the camera and lens combination including accessory up to 11 kg for each camera slide. Maximum acceleration of whole Lightweight Rig setup specified with 2,5 m/s².

Make sure that all accelerations stay within the limits of this specification. Stereoscopy Technologies GmbH explicitly excludes all liability for any use on moving or accelerating objects exceeding this specification.

Loads up to 6,5 kg on each camera slide will have an elasticity of the rig body of only about 0,1 mm which gives a reasonable good alignment stability. If loaded with more than 6,5 kg elasticity will increase.

Do not load each camera slide with more than 11 kg for the complete camera and lens combination including accessory to keep specified performance.

Using the rig in Top Shooter configuration: When using the Lightweight Rig in Top Shooter Mode, please be aware to secure the upper camera manually when opening the Red Lock Handle. Otherwise the camera might fall and the lens could be damaged and could also damage the Beam Splitter. If you mount the camera in a topshooter configuration the red safety pin has no function. Especially in this case you need to make sure that the safety block on the side of the camera adapter plate is firmly attached to ensure that the camera cannot fall. Also check if the screw threads of the safety block are in good condition. When installing the camera on the vertical guide slide, make sure at all times that the lens opening of the Mirror Box is covered to avoid particles falling onto the Beam Splitter and damaging it.

Maintenance: The STEREOtec Beam Splitter and the optional STEREOtec Front Protection Glass require special treatment. It is highly recommended to cover the Beam Splitter with a piece of cloth during installation. Do not touch the Beam Splitter. If it cannot be avoided use cotton gloves or similar. Be careful when installing the STEREOtec Beam Splitter to avoid smearing and scratches! Don't clean clean the Beam Splitter or remove dirt from it, if the surface or the dirt is frozen. Use a heater first to defrost. When the dirt is liquid again, you can carefully remove it. You can use a soft cloth to clean the surface of the Beam Splitter, but make sure to remove dried dirt and dust with distilled water first before using the soft cloth! Immediately remove dead batteries from the Counters and depollute them accordingly. Use only appropriate battery types and make sure that the polarity is correct when you insert the battery. The Lightweight Rig should always be kept clean from sand, dirt and fluids. By periodic maintenance use special technical oil (e.g. PRESSOL gun oil) on Threads, Guide Slides, Guide Rails and moving parts to ensure easy movement and longer life.

Rig Motor Control: For specifications and safety regulations of the motor control please refer to <http://lcs.chrosziel.com/support/>