Steadicam® Steadimate-RS™

LIT-901000, RevA

STEADICAM®

Introduction

The Steadicam® Steadimate-RS™

Welcome to the Steadicam family!

Steadicam began stabilizing film cameras over 40 years ago, and we continue to innovate solutions for today's digital cinematographers.

Designed exclusively for use with the DJI RS 2, RS 3 and RS 3 Pro motorized gimbals, the Steadimate-RS offers many advantages of traditional Steadicam stabilizer operation, without sacrificing the strengths which make motorized gimbals so popular. It's a true hybrid system.

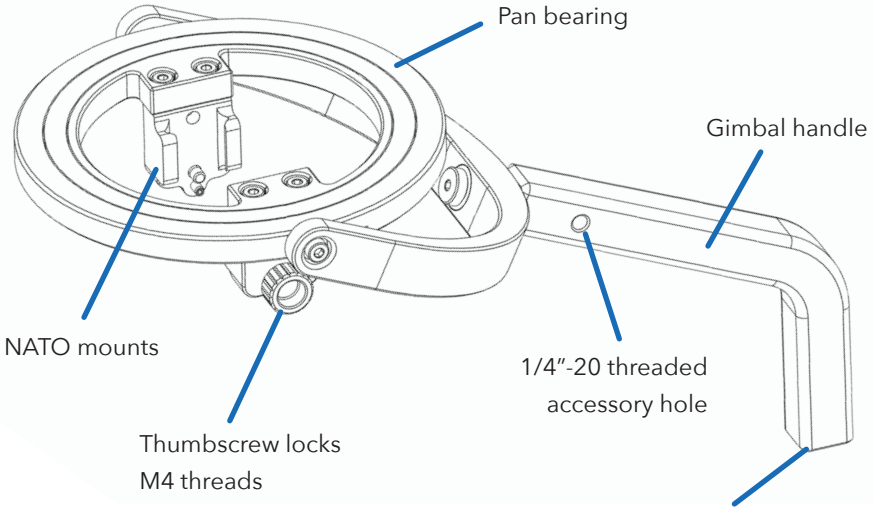
In combination with a Steadicam A-15 or A-30 arm and vest, the new Steadimate-RS greatly reduces operator fatigue and increases operating time by carrying the system weight on the hips. The spring arm also reduces the common bouncing image effect on the vertical axis that occurs while walking with handheld stabilizers, allowing more natural camera movements, resulting in smoother final shots.

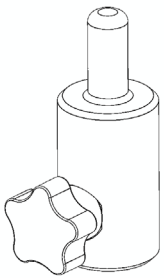
Get ready to take your filmmaking to the next level, by identifying the Steadimate-RS parts, and installing them onto your DJI stabilizer!

The Tiffen Company
90 Oser Avenue
Hauppauge, NY 11788
Visit us at Tiffen.com

What's in the box?

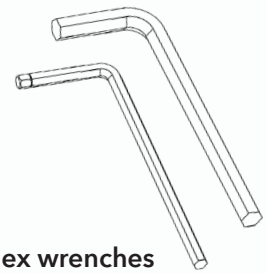
Steadimate-RS Gimbal





Balance stand adaptor
5/8" stand to 1/2" stud

Lock screws
M4 x 10mm

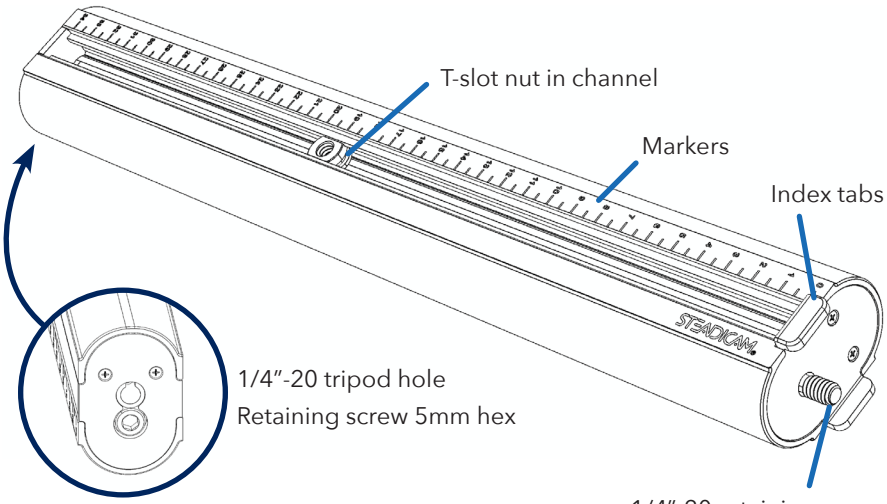


Hex wrenches
3mm and 5mm

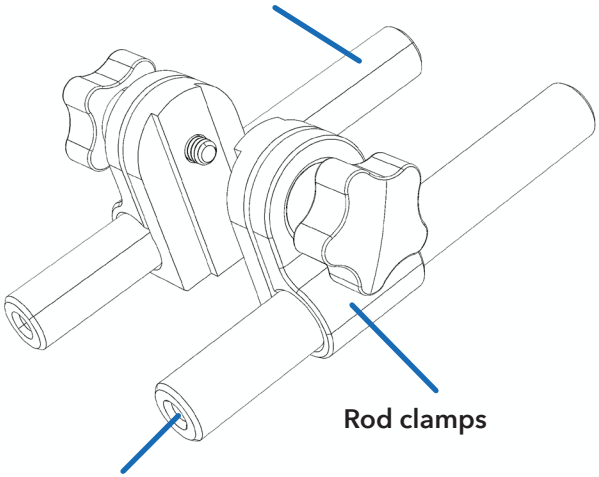
NOTE: *if your system is equipped with an A-15 arm, you can fly camera payload up to approximately 7lbs (3.2kg) with the Steadimate-RS. Using an A-30 arm allows your system to handle the full 10lb (4.5kg) capacity of the DJI RS 2, RS 3 or RS 3 Pro electronic stabilizer.*

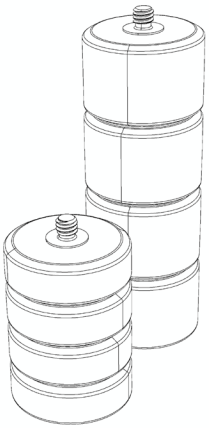
What's in the box?

Steadimate-RS Post



15mm weighted rods





Screw-on weights

(4) .25lbs (.11kg)
(4) .50lbs (.22kg)
1/4"-20 threads

Visit tiffen.com for a complete list of available accessories

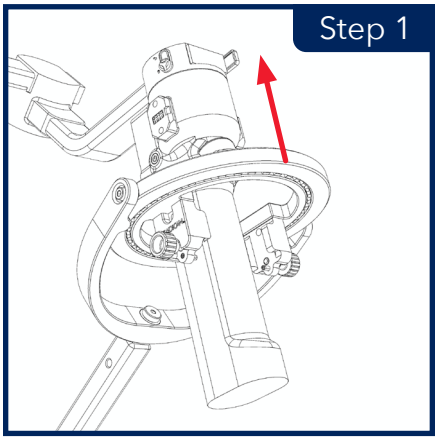
Building Steadimate-RS

Adding the Steadimate-RS components to your DJI RS 2 or RS 3 stabilizer is a technical task, but if you can balance an electronic gimbal, you can do this! First, we'll attach the Steadimate-RS gimbal above the handle, then add the post with adjustable weights below the handle, and finally balance the complete system for optimum performance.

IMPORTANT: *build, balance and test your electronic stabilizer before adding the Steadimate-RS parts. Make sure you include any camera batteries, memory cards, and accessories like filters or microphones you plan to use. Don't hold back, because the Steadimate-RS will be supporting the weight!*

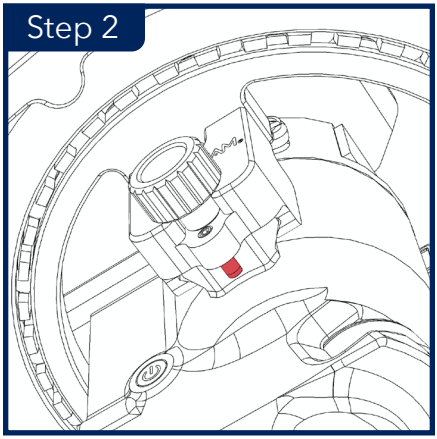
To protect the camera; after confirming your stabilizer is working correctly, mark the position of the camera plate where it is balanced, lock all 3 axis, and remove the camera before installing the Steadimate-RS.

Start by passing the ring of the gimbal up over the stabilizer handle, aligning the two NATO mounts with the RSA/NATO ports on each side of the stabilizer body.



Attaching the gimbal

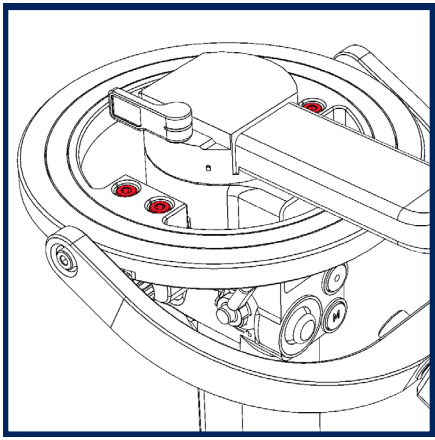
Step 2



Ensure the thumb screws are out of the way, so the RSA/NATO ports fully seat into the NATO mounts.

Tighten the thumbscrew on each side to secure the Steadimate-RS gimbal to your stabilizer.

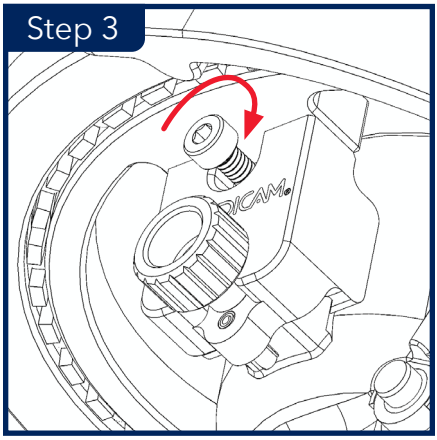
Don't over-tighten.



NOTE: *The four screws on top of the pan bearing that secure the NATO mounts MAY need to be loosened slightly to help properly align the mounts to the DJI Ronin RSA/NATO ports, then re-tightened.*

Use the provided 3mm hex wrench.

Step 3



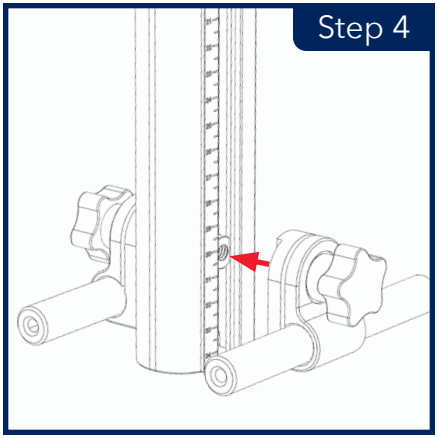
For additional security, or in place of the thumbscrews for certain situations, you may wish to add the included, optional lock screws to the dovetails.

Use the provided 3mm hex wrench.

Building the base

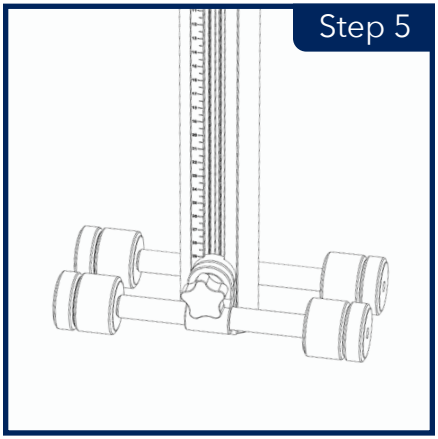
Grab the post and attach the two weight rods by threading the rod clamp screws into the captive t-nuts, one on each side.

The two rods should always be at the same height on the post. Use the marker numbers to confirm.

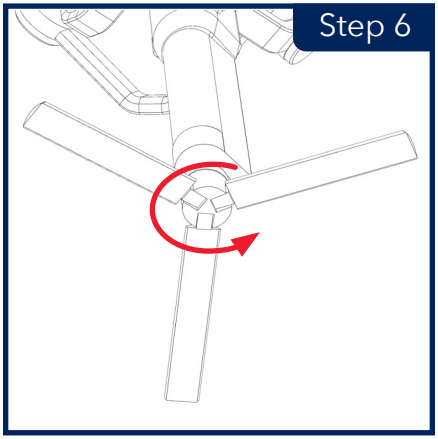


Thread the balance weights onto the weight rods as shown, one large and one small on each end.

We'll start with ALL of the weights, and the rods aligned at the bottom of the post.

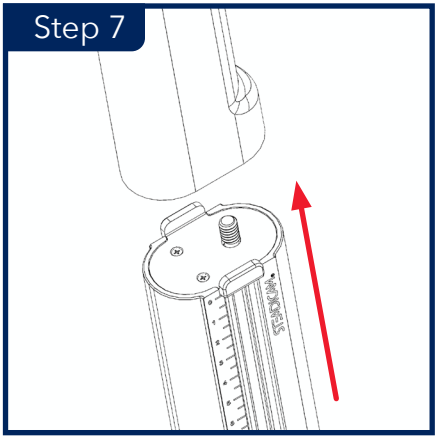


Remove the factory tripod base from the bottom of your stabilizer handle and set it aside.



Final assembly

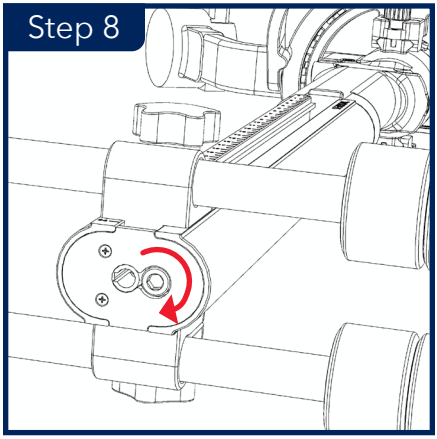
Step 7



Align the Steadimate-RS post with the bottom of the handle, taking care to place the retaining screw at the 1/4”-20 hole near the FRONT of the handle.

Confirm the post alignment tabs are on either side of the stabilizer handle.

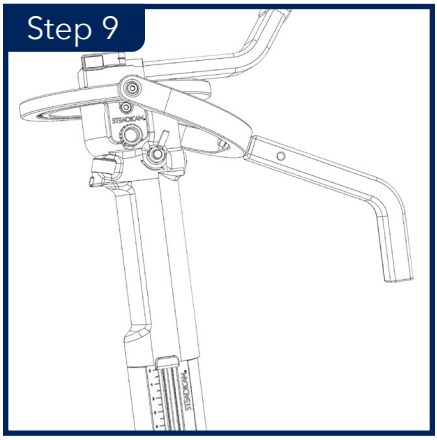
Step 8



Attach the post to the handle by turning the retaining screw clockwise with the provided 5mm hex wrench.

Don’t over-tighten, but ensure the post is secure.

Step 9



Confirm the battery grip is locked to the gimbal, then re-install your camera onto the stabilizer.

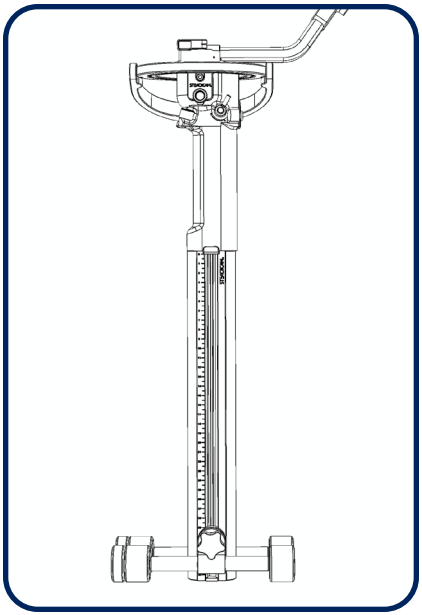
If you wish to use the DJI tripod, spin it onto the base of the post.

Double check everything is secure, and flip to the next section to balance the Steadimate-RS!

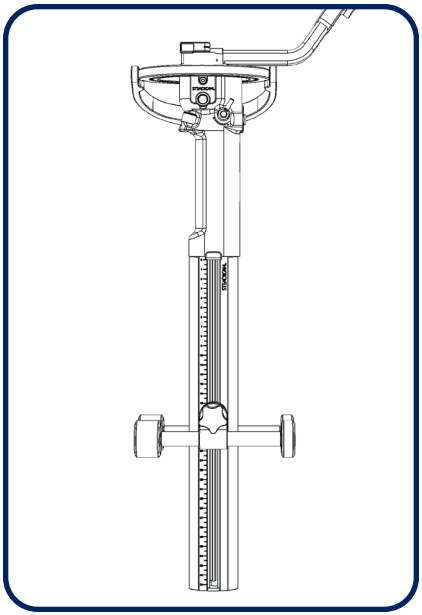
Balancing Steadimate-RS

Balancing your Steadimate-RS equipped stabilizer is similar to balancing any mechanical stabilizer. We observe how the system behaves, and make changes. The goal here is to balance the stabilizer only ***slightly*** bottom heavy; the handle should hang vertically from the Steadimate-RS gimbal, but tilt up and down with a light touch, and use the least additional weight.

We'll begin with all of the weights at the bottom, then remove and reposition the weights to dial it in for your setup. You can expect to repeat a few of the steps as you approach the optimal arrangement. Here are two examples:



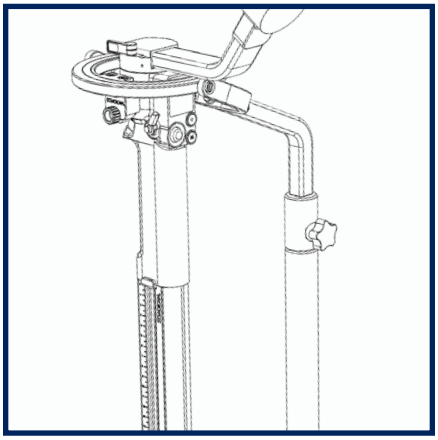
Heavier camera systems
Use more weights
Position weights lower on post



Lighter camera systems
Use fewer weights
Position weights higher on post

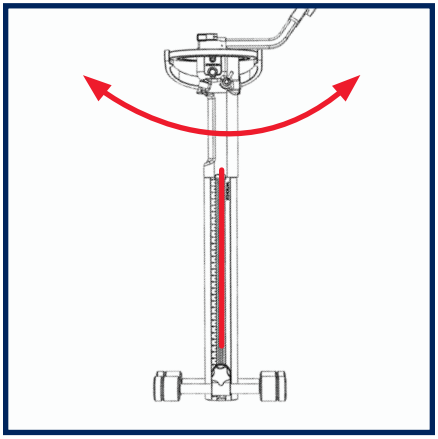
IMPORTANT: *while balancing the Steadimate-RS, your electronic gimbal must be precisely balanced, but preferably powered off and locked. All accessories must be added before balancing the system.*

Balancing



Use a C-stand or a heavy-duty light stand, with the included adapter, to support the system while balancing.

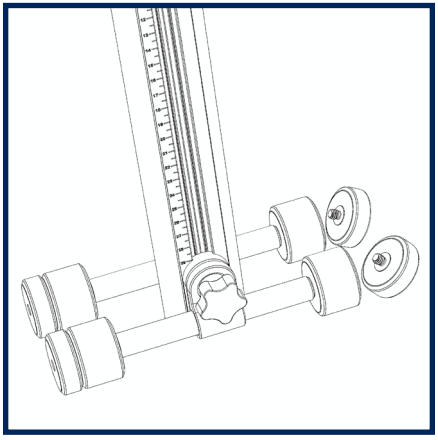
If you don't have a stand, you can pick it up by the Steadimate-RS handle to test the balance.



The post should rest vertically.

Feel how much effort it takes to tilt the post up and down by the handle.

For all but the heaviest cameras, it is probably very "bottom heavy" with all of the weights attached.



To make large adjustments to the tilt feel, we'll remove pairs of weights and compare how it feels to tilt with less counterweight.

Remove the pair of small weights from the rear of the rods, and check the effort required to tilt.

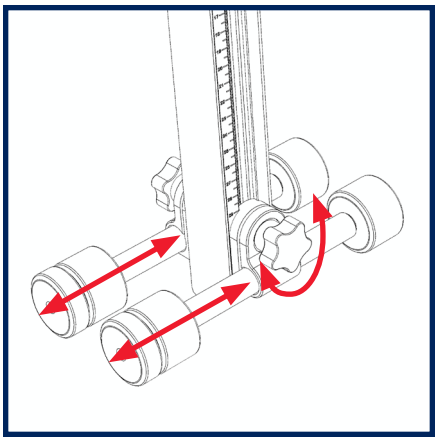
Can you feel a difference?

Balancing

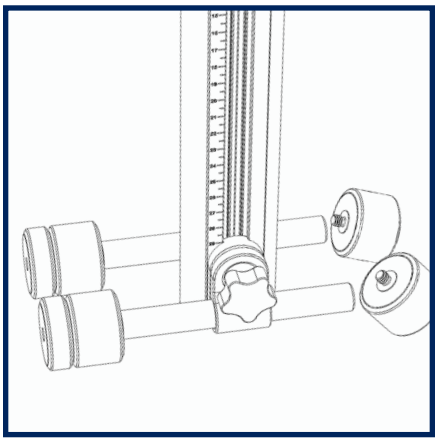
Any time you change the weights, the post tilt may need to be balanced fore-aft.

Loosen the rod clamps slightly and slide each weight set fore or aft to, then re-lock the clamps.

Slide each rod the same amount, so the weight sets remain parallel.

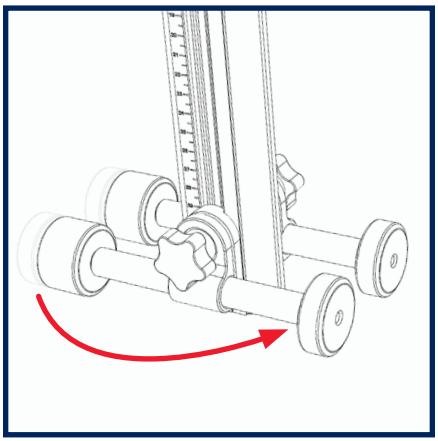


If the tilt remains bottom heavy, repeat the previous steps, this time remove the large weights at the rear of the rods.

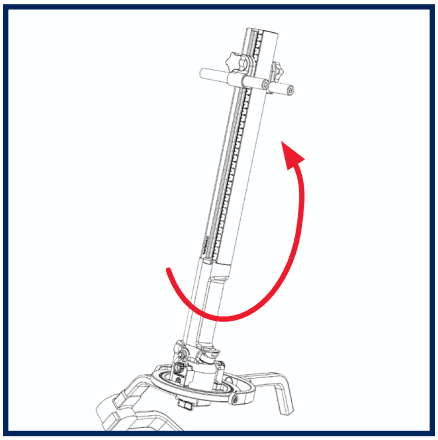


Redistribute the two small weights from the front of the rods to the rear, then re-balance by sliding the rods fore-aft.

Typically, more weight is needed at the front of the Steadimate-RS to maintain a vertical post.



Balancing

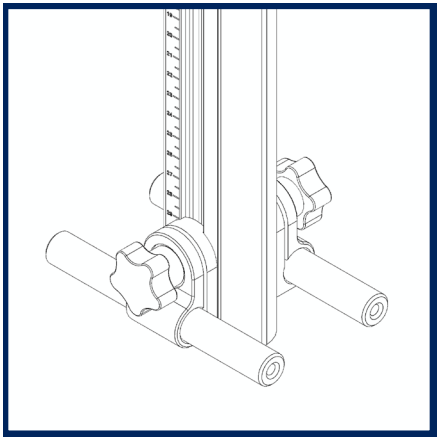


Continue removing weight pairs, re-balancing fore-aft, and testing, until the system will not rest with the camera at the top.

Then replace one pair of weights so the system is bottom heavy.

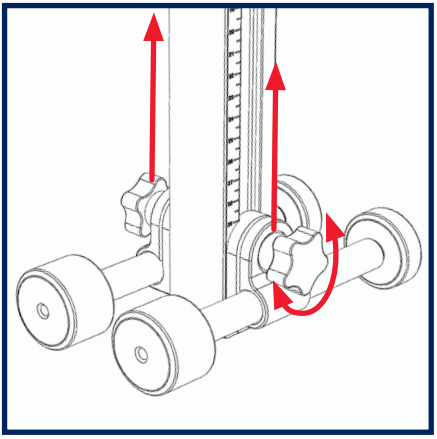
Re-balance fore-aft, if necessary.

Success! *This is the minimum balance weight for your camera payload.*



NOTE: *for lightweight cameras, you may be able to remove ALL of the weights without the post inverting.*

Use the weight rods alone and continue to fine tuning.

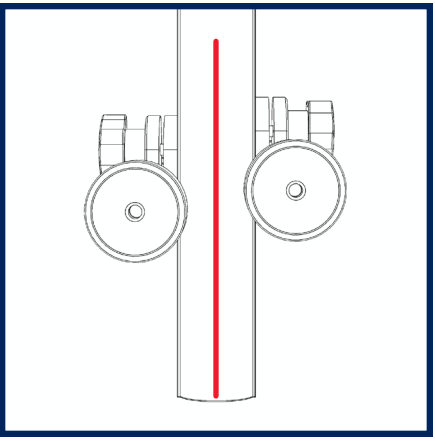


Now fine tune the tilt feel by raising the weight rods a little at a time, and testing, until you achieve fingertip control of tilt.

The higher you slide the weights, the lighter the feel becomes.

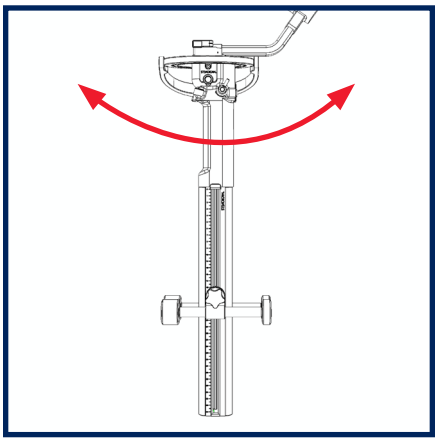
Balancing

NOTE: *You may find it necessary to raise one weight rod slightly higher than the other to maintain a level roll axis.*



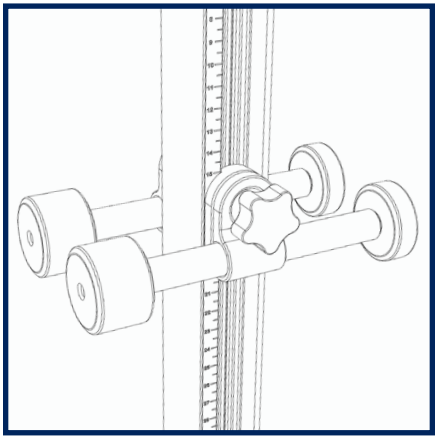
Continue sliding the weights higher on the post until the effort required to tilt the stabilizer is minimized.

This is to your preference, depending on your operating style and the shots you'll be creating.



Make sure all weights and thumbscrews are tight after balancing, and your Steadimate-RS equipped gimbal is ready to fly!

TIP: *take note of the position of the weights for your camera setup, so you can balance quickly next time!*



Notes

The Steadicam vest

The Steadicam vest is the major connection between your body and the Steadimate-RS system. It's adjustable to fit most body types via Velcro® straps and micro-adjustable buckles. Taking your time to properly fit the vest will ensure you get the highest performance and most comfort out of the system.

Take a look at the general components of an A-30 vest:

Refer to the manual included with your vest for additional details and for a complete fitting guide. Some customization may be required for optimal fit.

Putting on a Steadicam vest

Adjust the size of the vest using the Velcro® straps at the shoulders, back, and hips.

Set the length of the vest to place the waist pads low over the hip bones, yet still allow your legs to lift for climbing stairs.

Set the chest straps, but don't fasten the buckles yet.

The shoulder connectors should not ride high and the shoulder pads should rest on your shoulders.

Set the hip straps second, but don't fasten those buckles.

Putting on a Steadicam vest

The fit should be very snug, but not straitjacket tight.

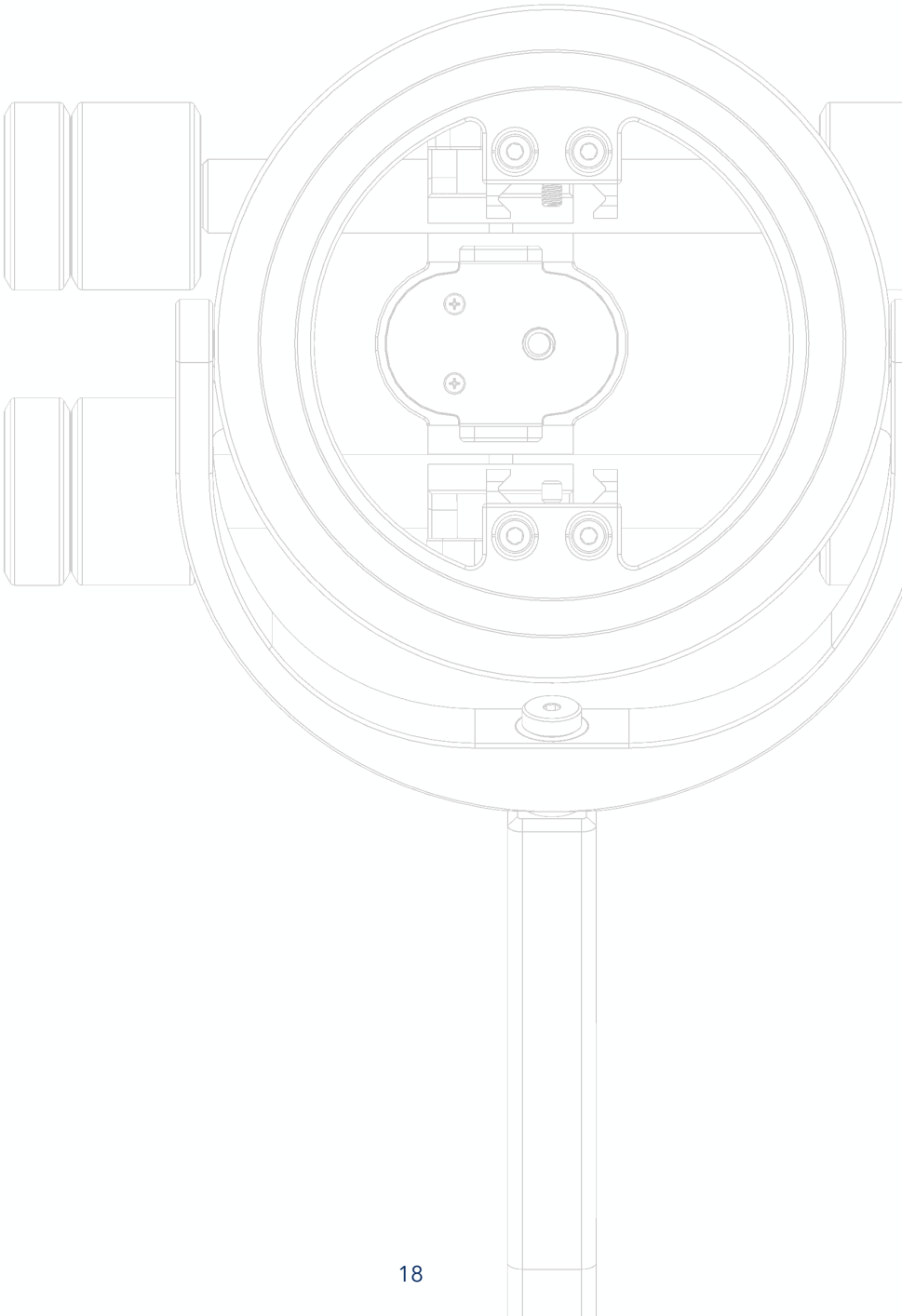
You must be able to breathe!

Pull down on the vest to make certain the hip pads are centered over your hip bones, and the shoulders fit well.

Close the chest buckles first, and finish with the hip buckles.

The center spar should stay centered on your torso and not slip to either side.

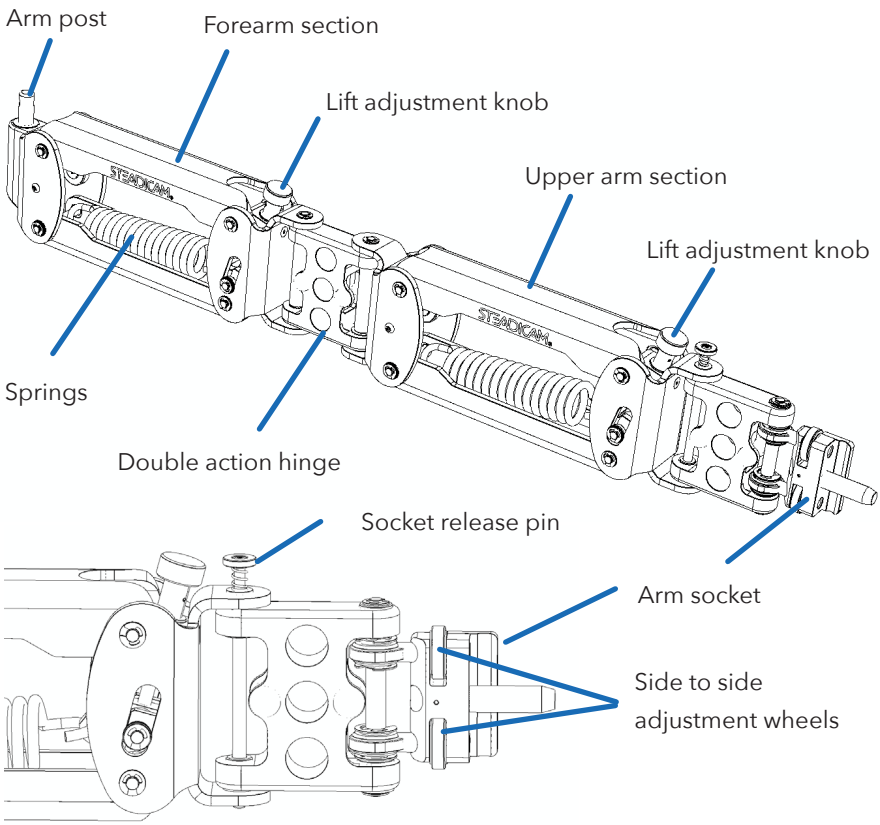
Your vest should fit as well as the vest in these pictures!



The Steadicam arm

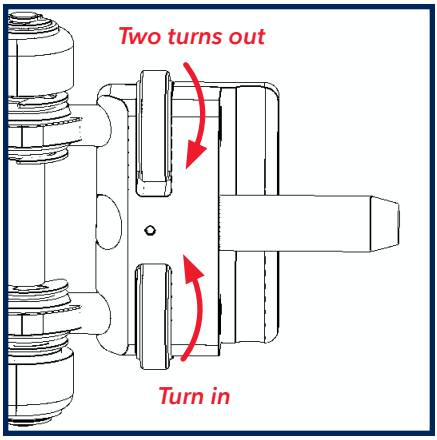
The Steadicam arm supports the weight of the Steadimate-RS system, while helping isolate the camera from the operator's movements, and facilitates booming up and down. The lifting strength of the arm is adjustable to accommodate a wide range in payload, but the adjustment knobs can ***only*** be turned with the arm loaded. The arm can be worn on either side of the operator by flipping the sockets on the arm and vest. Steadicam A-15 and A-30 arms are similar in design and operation, only their capacities are different.

Here are the general components of an arm:



Refer to the manual included with your arm for additional details, how to swap sides, and warnings for the use of A-series arms.

Attaching the arm



Confirm that the side to side adjustment wheels are set as follows:

The top knob is first turned all the way in, and then TWO turns out.

The bottom knob should be turned all the way in.

Insert the arm pin into the vest socket block fully.

IMPORTANT: *always maintain control of the arm with at least one hand, so nobody gets hurt.*

Secure the arm to the vest by tightening both fore-aft adjustment knobs equally, so the sockets are parallel.

The knobs must be snug, but do not need to be overly tight.

Adding the Steadimate-RS

Add the Steadimate-RS system to the arm post, and boom up and down a few times.

Like balancing, we observe how each section of the arm behaves, and make adjustments.

If the arm is lifting too much, or too little, adjust the lift knob on each arm section until both sections of the arm are neutral just above horizontal.

IMPORTANT: *arm lift is only adjustable with the arm sections* ***just above horizontal,*** as shown.

Do not force the knobs!

With the arm lift adjusted, stand up straight and hold the system like this:

Your gimbal hand controls booming, and moves the arm with a firm grasp.

Your stabilizer hand controls tilt and pan with a lighter touch.

Adding the Steadimate-RS

If the rig tends to move straight ***away*** from you; loosen the bottom thumbscrew and slowly tighten the top thumbscrew until the rig is neutral.

Then re-tighten the bottom thumbscrew.

If the rig tends to move straight ***towards*** you; loosen the top thumbscrew slowly, until the rig behaves, and then tighten the bottom thumbscrew.

TIP: *remember these settings (count the threads showing) so you can attach the arm quickly every time!*

Repeat the arm adjustments as needed until the Steadimate-RS system is neutral when sitting slightly to your operating side, in balance with your vest.

You're now ready to fly!

Operating tips

Your Steadimate-RS system is now capable of helping you create dynamic, moving shots all day long. It is truly a hybrid machine with its own unique strengths. And yet, you can still quickly take advantage of handheld opportunities when needed, then return to Steadimate-RS mode with the arm and vest, without losing a beat.

Posture is extremely important to getting the most out of any body-worn stabilizer. When operating, stand up straight whenever possible, and let the arm and vest do the work. Your standing posture should place most of your weight on one foot so you're always ready to move in any direction.

- Walk normally, avoid stabilizing with your knees.
- Start and finish every move with the arm.
- Look around. Learn to look away from the monitor briefly.
- When walking backwards more than a few steps, ask someone to guide you around obstacles.
- Keep your fingers and other objects out of the arm!
- CAUTION: The Steadimate-RS post is not intended to be used as an extension handle for the Ronin or to support weights other than those used for typical balancing.
- Accessories may be mounted to the 1/4"-20 threads on the handle. This location will not effect balance.
- Accessories may also be mounted on the weight rods using aftermarket 15mm x 60mm LWS brackets, in conjunction with balance weights.
- Visit tiffen.com for setup videos and more!

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