

STEADICAM[®]

MERLIN²[®]



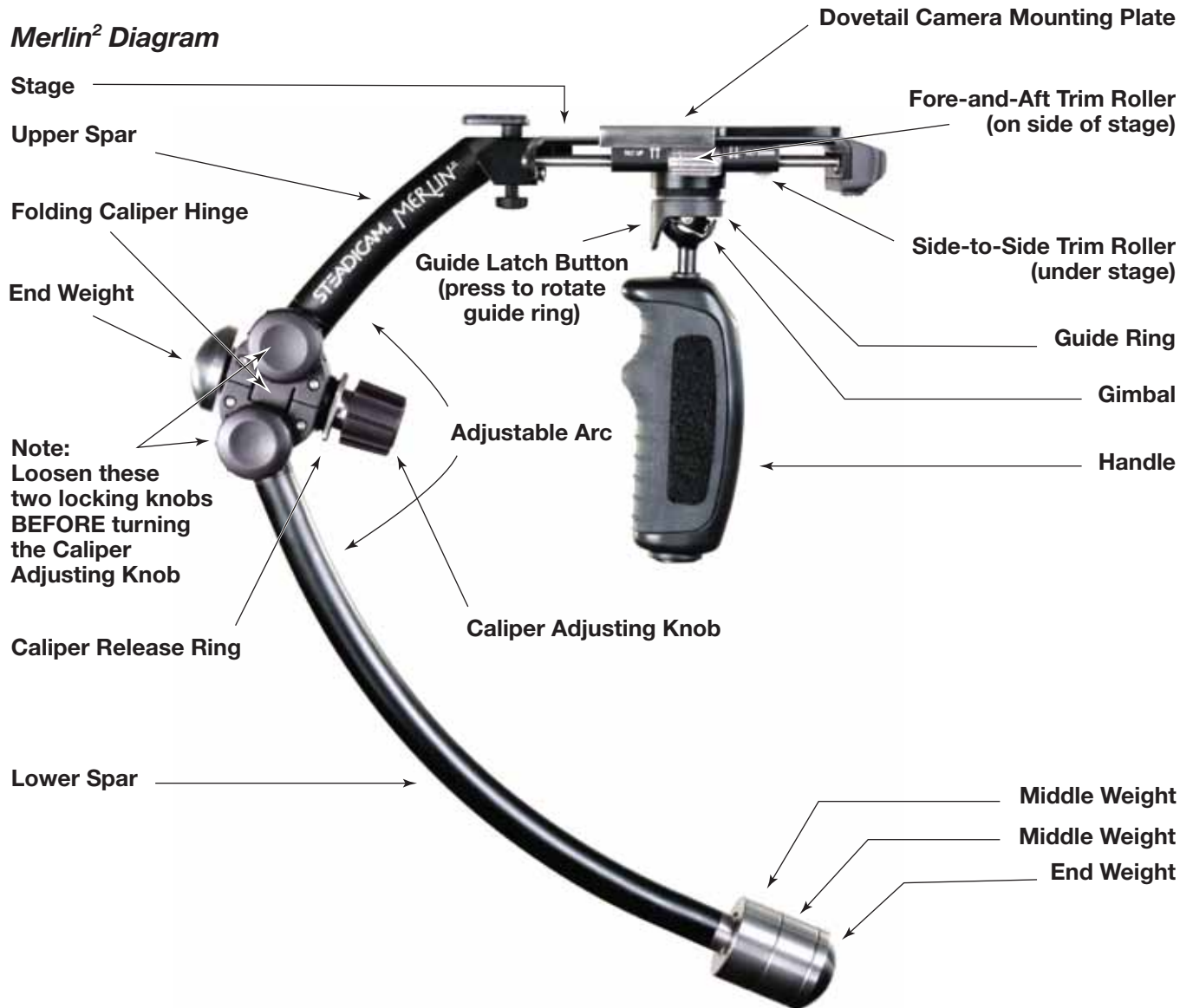
Merlin Quick Start Guide (Merlin and Merlin²)

Merlin Quick Start Guide

NOTE: This is not designed to be a replacement of reading the instructions or watching the DVD. You should do both and go back from time to time and review both.

A couple words of caution: Do not force or over-tighten anything. Never support the weight of the camera mounted on your Merlin by resting the lower spar weights on anything. When you fold it up, make sure you open the caliper release ring (Merlin²) before you fold. Pull it back toward you and rotate counter clockwise. Then hold the stage with your left hand and the lower spar with your right with your thumb on the folding caliper hinge.

Merlin² Diagram



Try not to skip ahead. Please complete each step in order before moving to the next step.

1 - Add a couple of strips of Gaffer's tape to the bottom of the camera to keep the camera from moving on the dovetail camera mounting plate. Unfold the Merlin and lock the caliper release ring (Merlin²) by turning it clockwise until it clicks into place (Original Merlin uses caliper release lever). Remove the dovetail camera mounting plate from the Merlin.

2 - Find the center of gravity of the camera. On a flat surface, place something round that rolls freely like a Bic[®] pen and set the camera on top of it to find the balance point front to back and side-to-side. Note where that point is and line it up with the letter H on the dovetail camera mounting plate.

Merlin Quick Start Guide

3 – With your camera's center of gravity point lined up on the letter H, note which hole on the plate is closest to camera's tripod mount and using the larger silver screw, mount the camera in that hole (with an HD SLR it's typically M, N or O). Make sure the screw is tight. The flat edge of the plate goes toward the front of the camera.

4 - Start with the fore-and-aft and side-to-side trim rollers in about the middle of the stage.

5 - The Merlin comes with 9 weights. On the lower spar, put on the starter weight (looks like a finish weight, but with a threaded hole in the front), add appropriate middle weights and add the finish weight. Knowing the total weight of the camera and added accessories is important.

- Rule of thumb: One middle weight on the bottom for each pound of camera payload. (Camera complete with lens and any added accessories, i.e. filters, batteries, microphone, etc.)
- At the front of the folding caliper hinge, if the payload is 3 pounds or less, put on the other finish weight. If 4 pounds or more, put on one middle weight and finish weight.

6 - With payload of 2-3 pounds, start with arc about in the middle. Don't forget to loosen the two locking knobs at the folding caliper hinge BEFORE turning the caliper adjusting knob to adjust the arc size. If you do not loosen them first, you will damage the hinge joint. With payload of 4-5 pounds, start with arc open all the way.

7 - On the top of the stage, you will see numbers. Mount the front of the dovetail camera mounting plate on the Merlin in the middle of the stage (#0 on Merlin, #5 on Merlin²) and lock into place. Camera lens should be pointing toward the front finish weight.

8 - Make adjustments to get the camera to sit relatively level.

- For example, if camera is tipping dramatically forward, move the plate back. If camera is tipping dramatically back, move the plate forward. If camera is tipping only slightly forward or back, use the fore-and-aft trim roller to balance. If the camera is tilting left or right, use the side-to-side trim roller under the stage in the back to balance.

9 - DROP TIME IS THE KEY. If you get the drop time right, everything else HAS to be right.

How to determine the correct drop time:

Hold the Merlin handle with your right hand and hold the lower spar straight out sideways with your left hand. Then let go to check how long it takes to go from sideways, back to the bottom. Stop the swing once it goes past the bottom. It should be not too fast, not too slow. The DVD talks about 1 second, but since everyone perceives one second differently, you need to watch the DVD where it shows Garrett Brown demonstrating drop time (DVD, Section 7, at the 4:00 mark). If you get it to LOOK like that, you are good.

If your drop time is too fast, make the arc smaller by turning the caliper adjusting knob counter clockwise. If your drop time is too slow, make the arc larger by turning the caliper adjusting knob clockwise. (Don't forget to loosen the two locking knobs on the caliper hinge first and re-tighten when done).

Keep in mind that when you change the arc, the weights do not move straight up or down, they move at an angle. So after you change the arc, re-trim to make the camera sit level again.

Merlin Quick Start Guide

NOTE: There are three ways to change the drop time.

One is to adjust the arc.

The second is to add or remove weights. If you cannot get the drop time right by moving the arc up or down, and the drop time is off dramatically, then add more weight to make the drop time faster or take off weight to make the drop time slower. Then readjust the arc.

The third is by making a fine adjustment to the guide ring once you get the drop time close. Press the guide latch button on the front of the guide ring. This will allow you to rotate the guide ring. Clockwise makes the drop time faster and counterclockwise makes the drop time slower. Since this is a fine adjustment, it may take more than one turn to see a difference. Do not unscrew the guide ring all the way.

10 - The last step is to make sure you are dynamically balanced. Check the drop time again and make sure the lower spar weights and front finish weight move together. If the bottom weights move dramatically first, the rig is back heavy, so move the plate forward slightly and then re-trim. If the front weight moves dramatically first, the rig is front heavy, so move the plate back and re-trim. Do not drive yourself crazy with this. It does not have to be perfect. You just do not want dramatic front or back movement. Once you have checked this, fine tune your trim adjustments to make sure you are level.

If the drop time is right, the Merlin will do its job. Anything else is operator error.

To limit the possibly of operator error, here are some tips.

By nature, when people walk, they shift their weight from left to right, which can cause sway.

To limit the effect, try this.

- A. Pretend you have a glass of water on your head and you cannot spill a drop. This will keep the core of your body still.
- B. When you walk, put your heel down first, then roll your feet to your toes. If you have been trained as a handheld camera operator and you have a habit of keeping your knees bent to aid in stabilizing the camera, change back to walking upright and relaxed. Also, do not walk sideways. Walk forward and backward and swivel the camera using the guide ring above the gimbal of the rig to keep your subject in frame.
- C. Use two hands. It is much easier and more accurate than one handed. If you are right handed, the right hand holds the handle, the left hand is the index finger on the front of the guide ring above the gimbal and the thumb is on the back of the guide ring. **YOU NEED TO USE A VERY, VERY, VERY LIGHT TOUCH WITH YOUR LEFT HAND.** Do not steer the rig. Let it do its job. Your left hand is just there to help guide it or keep it on your subject as you move.
- D. Relax your body, arm and wrist. Try not to be rigid. Let the Steadicam be a natural extension of you.

If you use a zoom, just zoom, then use fore-and-aft trim to get it back to balance. If you change lenses and the lens is close to the same weight, again just use fore-and-aft trim to get back to balance. If the lens weighs significantly more or less, you will add or take off weights or move the arc up or down to rebalance for the correct drop time. Once your drop time is close after you change lenses, you can also make a fine adjustment by rotating the guide ring as noted in #9 above.

Remember: This is an acquired skill, but the first day using the Merlin you will get better results than anything you could do handheld and you will get better every time you use it.



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