



4. PRESETTING Z AXIS (VERTICAL) BALANCE

When your camera is mounted onto the JR, the combined unit (camera plus JR) should balance perfectly on top of the Gimbal. But before performing this balancing act we need to make the combined unit bottom-heavy, or in other words, place the combined center of gravity of the camera plus JR below the Gimbal. Let's take a moment to understand this.

- Try balancing a cereal bowl on the tip of your finger. It's very difficult to do, because the center-of-gravity of the bowl is above your finger.*
- Turn the bowl upside down. Now it's much easier to find the balance point, and once you find it you can swing your finger from side-to-side and it won't fall off. That's because you've made the bowl bottom heavy and put its center-of-gravity below your fingertip.*

Slight bottom-heaviness is the key to Steadicam stabilization. That's what the weighted lower Spar is all about: to provide enough weight well below the Gimbal to compensate for the greater weight of your camera just above the Gimbal. You want the unit to be somewhat bottom-heavy before attempting side-to-side or front-to-back balance, or the camera will tend to flop over and hang upside-down.

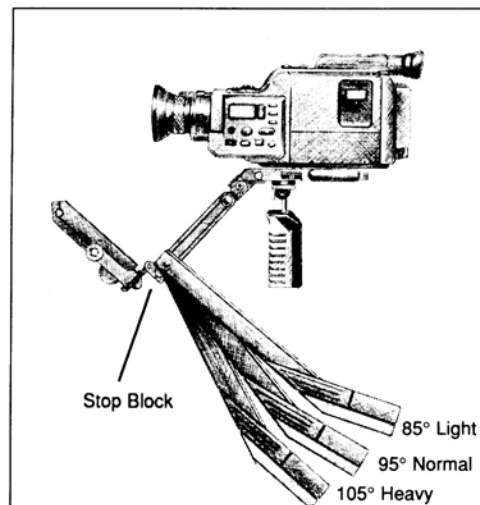
ACHIEVING BOTTOM-HEAVINESS

One: Stop Block

Because the JR accepts cameras weighing from 2 to 4 pounds, we have provided three ways of achieving appropriate bottom heaviness.

The coarsest adjustment is obtained by changing the stop block. Using the stop block marked "heavy" will cause the lower Spar to swing down 10°, thereby lowering the center-of-gravity to accommodate heavier cameras. Using the stop block marked "light" will raise the lower Spar by 10°, thereby raising the center-of-gravity to accommodate lighter cameras.

- Find the stop block recommendation for your camera in the Cookbook, and enter in this space _____.*
- Turn the JR upside-down, and note the position and function of the stop block. Flex the Spars, and observe how the tab on the stop block fits into the slot in the upper Spar. The size of the stop block determines the angle of the Spars in the open position.*
- If the light or heavy stop block is specified in the Cookbook, remove the two screws and change the stop block. Install with the recessed screw holes facing up and the tab facing forward. It is possible to put a stop block in backward, so pay attention!*



Diag. 10 Choosing the right Stop Block