

Figure 11-4. Flare is measured relative to the pilot's leg length.

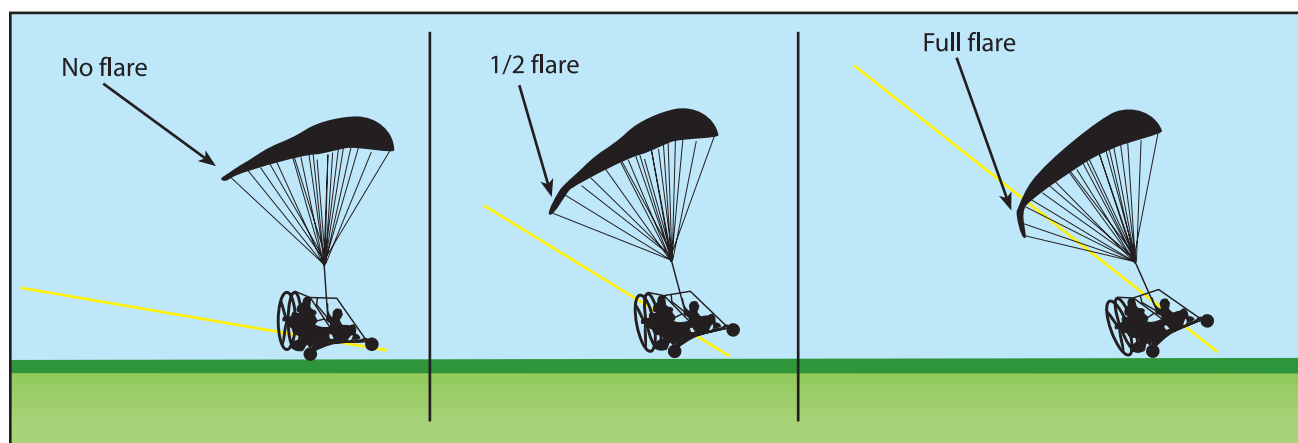


Figure 11-5. The steeper the descent rate, the greater the need for flare.

Touchdown

The touchdown is the gentle settling of the powered parachute onto the landing surface. The roundout and touchdown should be made with the engine slightly below level flight power levels. As the powered parachute settles, the parachute is flared to smooth out the landing.

Some pilots may try to force or fly the powered parachute onto the ground without flaring. It is paradoxical that the way to make an ideal landing is to try to hold the powered parachute's wheels a few inches off the ground as long as possible. In most cases, when the wheels are within a foot or less off the ground, the powered parachute will still be settling too fast for a gentle touchdown; therefore, this rate of descent must be retarded by the use of flare. [Figure 11-6]

Flare is accomplished by pushing both steering bar tubes simultaneously. That pulls the entire trailing edge of the parachute down. That increases drag, lowers the forward speed, and most importantly (for land-

ing) increases the lift of the parachute. The amount of flare needed depends on the rate of descent right before landing. If the rate of descent is very gradual, very little flare is needed. Conversely, in an engine-out situation a lot of flare is required. Accurately determining how much flare is needed for a given situation is developed with practice. A general rule is to begin the flare one second before you would otherwise touch the ground.

Flare is used rather than engine power because the wing is much more responsive in controlling descent and pitch than engine power. When you add flare, the drag on the wing increases and the wing quickly responds by rotating backwards and increasing its pitch angle. In order to achieve the same effect with engine power, you add throttle, the propeller speeds up, and the thrust pushes the cart (which is much heavier than a parachute) forward of the wing. It is easier to change the inertia and positioning of a 25-pound wing than a 500+ pound cart-engine-pilot-fuel assembly.