Small Basket Sensations

By Bob LeDoux

I had the opportunity to fly a Boland 24 by 36 basket while at the 1994 Experimental Fly out in Vermont. This wasn't my first experience in flying a small balloon. Since 1988 I have been flying a 30-inch square basket with interior tanks. (See *BBJ* issue 17, page 2.) If you are considering flying a small system there are a few things you might want to consider.

Ride baskets are made big and heavy to provide a sense of security to passengers. While we recognize that high sides as making passengers feel secure, we often don't recognize the contribution made by weight. The large mass provides sensations closely approximating the security one senses while walking or standing on the ground.

The pilot contemplating flying one of the very light systems must be prepared for much different sensations. The pilot represents a significant portion of the mass contained in the balloon basket. Because of this, the basket will tend to react to pilot movements. Isaac Newton's second law of physics really comes into play: for every action there is an opposite and equal reaction.

In a small basket one turns one's head or upper body, and the basket rotates in the opposite direction. Shift one's weight across the basket, and the basket, jumps away in the opposite direction. It's much like the movements one feels while moving in a very small boat or on a skateboard. For the pilot with limited flight experience, or with a tendency towards insecurity these sensations can be troubling. The sensation results because the center of gravity in the human body is fairly high, generally at around or above the hip level. As the body moves it rotates around the center of gravity. This is why the legs go flying when one slips on ice

My small basket weighs about 230 pounds, fueled and ready to fly. I am not insecure in the air but I find my movements to be deliberate and precise. Just the act of moving to the opposite side of the basket to look over the side, creates considerable movement.

I am deliberate because the basket sides stand about 36 inches above the interior floor. At my 69-inch height, the basket top rail comes to about my belt line. My wife, who stands 62 inches tall, finds the basket interior more secure than do I. I often crouch while moving in the basket, to keep my center of gravity low.

My basket supports the burner load ring with a one-inch diameter rattan pole at each corner. This is a lightweight although fairly flexible support system. I find myself grabbing an upright, or a tank ring as I move around to provide a fixed reference as the basket shifts. When flying a Boland system with its flexible cable support, I realized just how much I have come to reference using the solid structure of the supported burner ring.

Understand that these sensations are unique to these smaller baskets. When flying our larger Aerostar Rally basket, I am amazed by the difference in the sensations. Flying a small basket solo also contributes to the differences. Other persons in the basket increase the basket mass and reduce the movement tendency.

I also find other sensations are more acute in the small basket. The rumble of the burner is quite evident through the floor, something much less evident in the larger baskets.

Given the choice of flying our larger AX-7 or one of the small balloons, I much prefer flying the small balloons. I am comfortable with the difference between the systems. But if you are new to the small basket world, you should give consideration to the fact that the sensations are going to be much different. This doesn't mean that the small basket is more dangerous, but you may find it feels less secure.

Most pilots can adjust to the differences and will be comfortable in these alternative systems. A few pilots may not be able to accept the different sensations. You might want to try a flight in one of these systems before you make the time and financial commitment to owning one.

Here are some things that can make the adjustment easier. Making the basket sides a bit higher may result in a more secure feeling. This is particularly true if you are a tall pilot. An extra fuel tank will reduce the tendency for the basket to wobble.