

Flying the Horizon 1

As personally satisfying as the building process is, the real fun comes in flying the **Horizon 1**. Open the door on the right hand side of the fuselage and slide into the rear pilot seat. You are surprised at the amount of leg and headroom available in the cockpit. The controls feel natural with center mounted sticks and spring tensioned rudder pedals for both the pilot and passenger. A glance at the nicely finished panel shows that there is plenty of room for all the optional instruments you could ever want in a basic aircraft.

Taxiing down to the end of the runway, you are impressed with the positive ground handling provided by the Horizon's steerable tail-wheel. Even on the rough taxiway, the 15" diameter pneumatic tires and the rubber shock cord landing gear absorb the bumps well.

You should hold short of the end of the runway, stand on the optional brakes and do a quick full power run-up.

Lining up with the runway you slowly advance the throttle to the stop. The **Horizon 1** responds instantly. Neutralizing the stick brings the tail-wheel up almost immediately and the aircraft levitates into the air at about 40 mph after a ground roll of about 350 feet. An indicated air-speed of 55 mph produces a climb rate in excess of 600 fpm and good forward visibility. A maximum performance climb will produce more than 700 fpm with two on board, but the visibility over the nose is more restricted.

Lowering the nose to establish straight and level flight, you find that the **Horizon 1** cruises "hands off" between 80-90 mph depending on the throttle setting. At the upper end of this cruise range the fuel flow is only about 4 gallons per hour providing a fuel economy of more than 20 miles per gallon. You suddenly become aware that you and your friend have been conversing in a normal tone of voice. The noise level is quite low in the **Horizon 1** when compared to other aircraft in this category.

Rolling into a steep bank turn, the aircraft responds smoothly. There is no tendency for the angle of bank to tighten up once the controls are neutralized and only a slight amount of back pressure is required to maintain altitude. The roll rate from 45° to 45° is about 3 seconds. The **Horizon 1** has good response to control input while maintaining positive stability in all axis during normal flight. Fisher believes that stable slow speed flight characteristics are one of the most important safety factors in light aircraft design, and this is where the **Horizon 1** really shines. Pulling the power off and raising the nose, the elevator becomes mushy and a slight buffet begins at about 40 mph. Stalls are very docile and occur at 38 mph clean and about 32 mph with 30° of flap. There is no tendency to drop a wing, as long as the ball is centered. The aircraft recovered immediately when the stick back pressure is released.

Approach to landing can be flown at any comfortable speed above 55 mph, slowing to 50 on final. If you require a steep angle of descent you can either add 30° of flaps or the aircraft slips nicely. At about touchdown, you slowly retard the throttle, flare slightly and the **Horizon 1** touches down at about 40 mph in a perfect wheel landing. Pull the power off, the stick back and the tail wheel drops for positive ground handling. The **Horizon 1** can also be landed in a 3-point attitude, but the wheel landing is so simple it seems the natural thing to do.

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