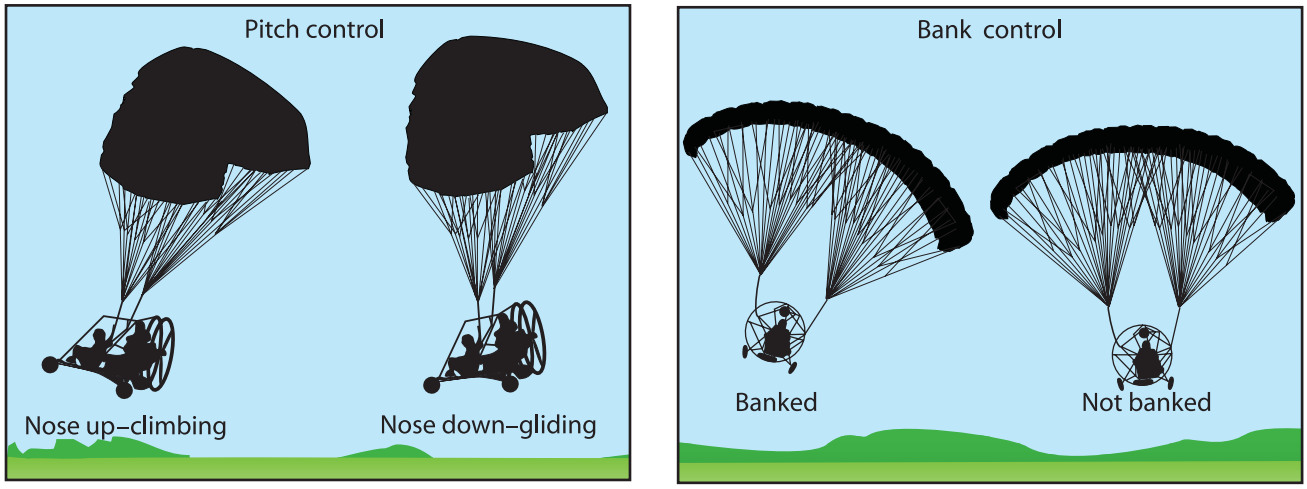

Figure 6-3. PPC attitude is based on relative positions of the aircraft on the natural horizon.

Straight-and-level flight is flight in which a constant heading and altitude are maintained. It is accomplished by making immediate and measured corrections for deviations in direction and altitude from unintentional slight turns, descents, and climbs. Level flight, at first, is a matter of consciously fixing the relationship of the position of some portion of the PPC, used as a reference point, with the horizon. In establishing the reference points, place the PPC in the desired position and select a reference point. No two pilots see this relationship exactly the same. The references will depend on where the pilot is sitting, the pilot's height (whether short or tall), and the pilot's manner of sitting. It is, therefore, important that during the fixing of this relationship, you sit in a normal manner; otherwise the points will not be the same when the normal position is resumed.

In learning to control the aircraft in level flight, it is important to use only slight control movements, just enough to produce the desired result. Pilots need to associate the apparent movement of the references with the forces which produce it. In this way, you can develop the ability to regulate the change desired in the aircraft's attitude by the amount and direction of forces applied to the controls.

The pitch attitude for level flight (constant altitude) is usually obtained by selecting some portion of the aircraft's nose as a reference point, and then keeping that point in a fixed position relative to the horizon. [Figure 6-4] Using the principles of attitude flying, that position should be cross-checked occasionally against the altimeter (if so equipped) to determine whether or not the pitch attitude is correct. If altitude is being gained or lost, the pitch attitude should be readjusted in relation to the horizon and then the altimeter rechecked to

Figure 6-4. Nose reference for straight-and-level flight.

determine if altitude is now being maintained. The application of increasing and decreasing throttle is used to control this attitude.

In all normal maneuvers, the term "increase the pitch attitude" implies raising the nose in relation to the horizon (by increasing power); the term "decreasing the pitch attitude" means lowering the nose (by decreas-