

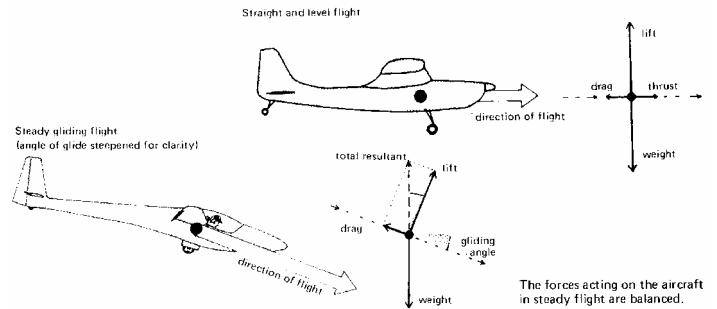
STRAIGHT GLIDE

Aim: To learn how maintain a straight glide at a constant speed and in balance.

This exercise develops the basic skills required to achieve flight in a straight line (on a constant heading) at a steady speed. We need to be able to do this as we often have the need to fly in this configuration. This basic exercise is the foundation of several phases of flight including takeoff, gliding between lift sources, flying the circuit, approach and landing.

Flying Straight:

To fly straight, we pick a reference point or feature out ahead of us on the horizon. Then, keeping the wings level, we should fly straight towards it. If a wing drops slightly, the glider will turn towards the lower wing so this can be detected by looking out ahead at our reference point on the horizon.

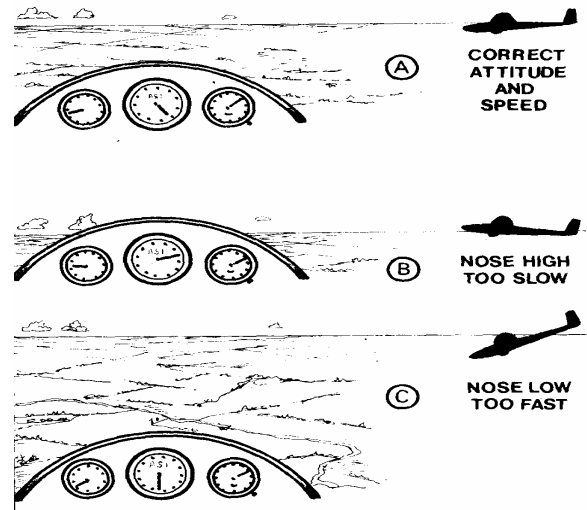


Flying at a Constant Speed:

We want to keep the speed constant, without chasing the reading on the ASI. This is done by maintaining a *constant nose attitude* or pitch attitude. If the nose is too high, the speed reduces, the glider sounds quieter and controls feel lighter. Conversely, if the nose is too low, we accelerate and the glider sounds a little noisier for the increase in airflow and the controls are a little heavier and more sensitive.

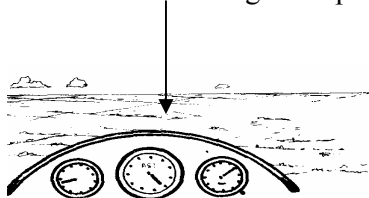
We need to reselect the nose attitude to where we think it should be for the speed we want, hold it there and retrim...which we will cover in another lesson!!... and then check the ASI to see what speed we have.

Make small, deliberate corrections to the nose pitch attitude.

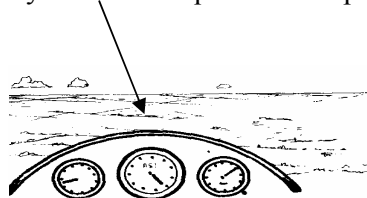


Flying in Balance:

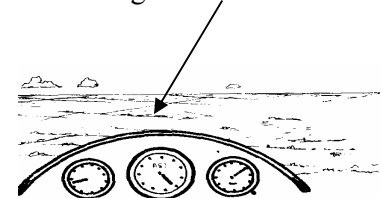
We can use the string to help decide if any rudder is required to keep us in balanced flight as follows:



We are in balance



We need a little right rudder to straighten the string



We need a little left rudder to straighten the string

Incidentally, we often hear this exercise called *straight and level*. This term is really a hangover from flying powered aircraft and strictly speaking is not achievable in a glider as we are constantly descending through the air we are in.

Need To Know:

- How to achieve and maintain a straight glide at a constant speed and in balance.
- How to return to this glide if displaced from it.

Further Reading:

- The Glider Pilots Manual. by Ken Stewart. Steady glides.