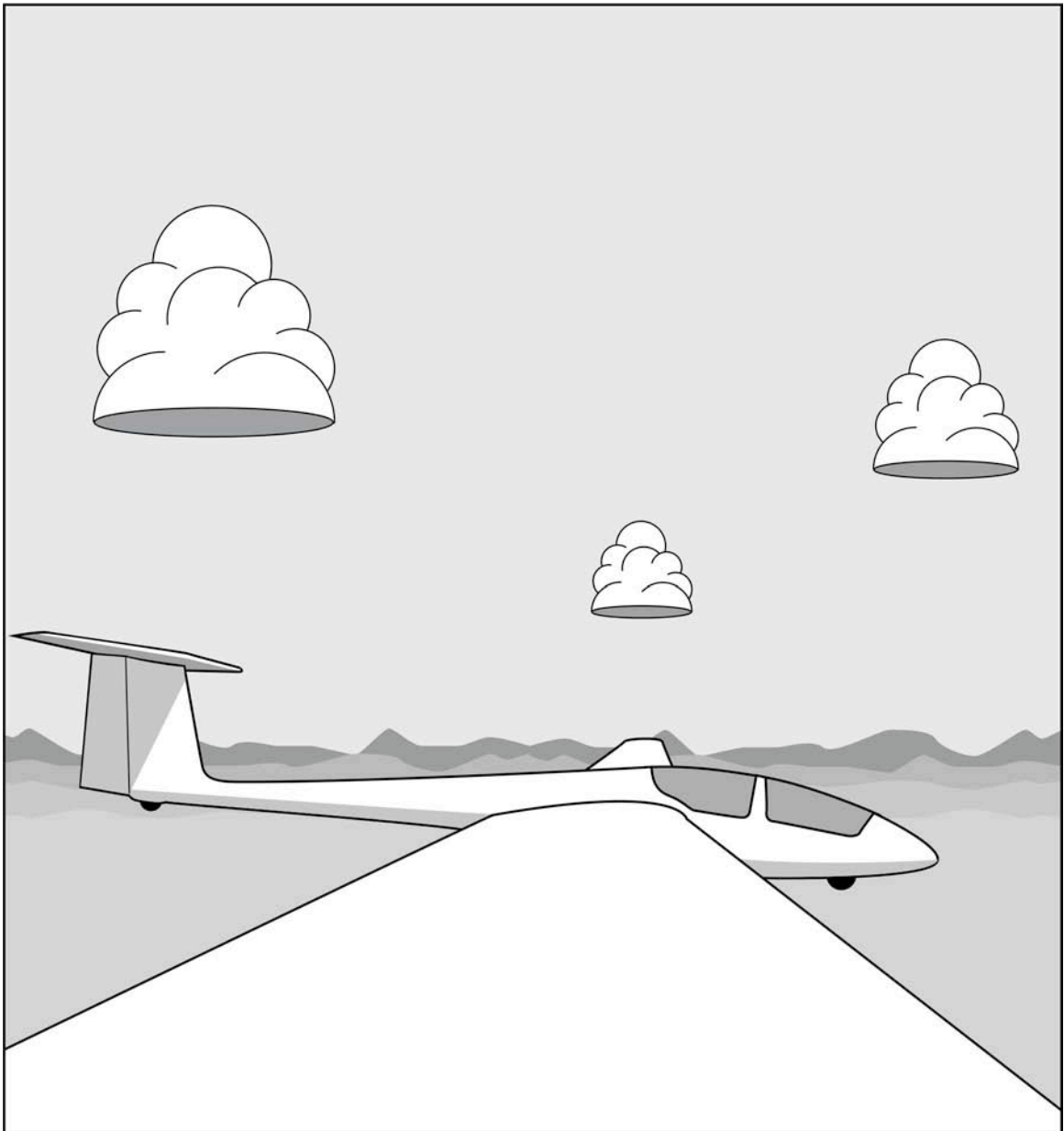


CHAPTER 4: IN-FLIGHT MANEUVERS

In this chapter, you will learn about the portion of flight between when the glider releases from the tow plane and when it enters the traffic pattern for landing.

In the first few lessons in this chapter, you will learn the basics of how to control the glider with the stick and rudder pedals, how to maintain a constant airspeed, and how to do gentle turns. Once you have mastered these basic skills, you will move on to more advanced maneuvers.



4.1 Transferring Control of the Glider

Purpose

Whenever two people fly together, whether a student and an instructor or two licensed pilots, it is essential that they know who is in control of the glider. A miscommunication can lead either to both pilots struggling against each other on the controls, or to the glider not being controlled at all. In this lesson, you will learn the procedures for passing control of the glider back and forth between you and your instructor.

Procedure

When critical information is communicated, it is important that confirmation be given that the information has been heard. When telling you to take control of the glider, your instructor cannot assume that you have heard and are complying until you respond that you have the controls. Similarly, after telling you to relinquish the controls, your instructor cannot be sure that you have heard and are complying until you reply that you are off the controls. For this reason, it is important that each time you take or relinquish the controls, you verify your actions verbally.

When your instructor wants you to take control of the glider, he will say, "You take it", and you should reply by saying "I have it". Your instructor will reply, "I'm off". An exchange between an instructor and a student is illustrated in Figure 4.1. The instructor (in the back seat) is handing control of the glider to the student.

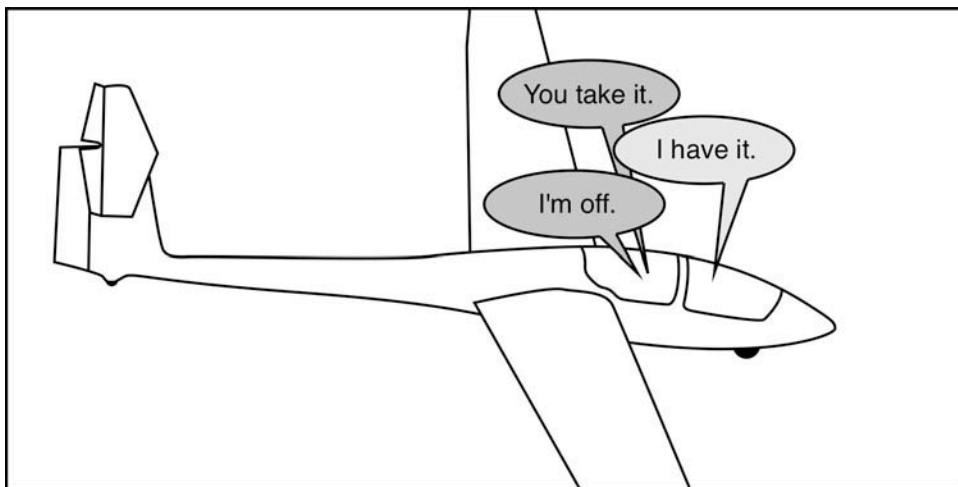


Figure 4.1 – Confirming the transfer of the controls

Likewise, when your instructor says, "I have it," you should confirm that you are relinquishing the controls by saying, "I'm off."

If you are ever confused about who is supposed to be in control, ask.

Common Errors

- Failure to verify that you have relinquished the controls
- Failure to verify that you have taken the controls

Completion Standard

This lesson is complete when you consistently verify each transfer of the controls between you and your instructor.

4.2 Scanning for Traffic

Purpose

We share airspace with aircraft of all types. It is every pilot's responsibility to see and avoid other traffic. In this lesson, you will develop the habit of constantly and effectively scanning for traffic.

Procedure

Aircraft that are at your approximate altitude and therefore are a possible collision hazard will appear near the horizon. You should concentrate your scan for traffic in this area.

When you are in straight flight, any aircraft that is on a collision course with you will appear stationary in your field of vision. There will be no apparent relative motion between you and the other aircraft.

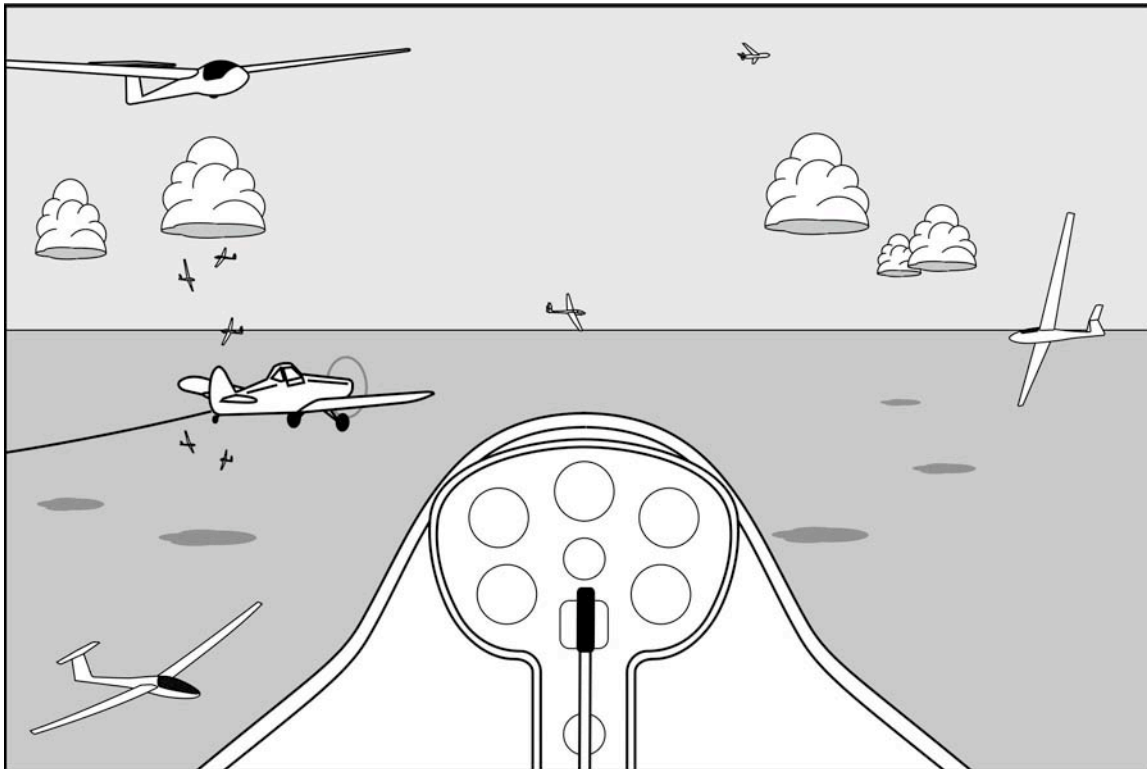


Figure 4.2 – Concentrate your scan near the horizon. The aircraft of most concern in this view are the tow plane near the horizon on the left and the glider on the horizon to the right.

When initiating a turn, you must look not only in the direction of the turn, but also in the opposite direction. Faster aircraft could overtake you once you have turned. Remember, a glider is about the slowest thing in the sky without feathers!

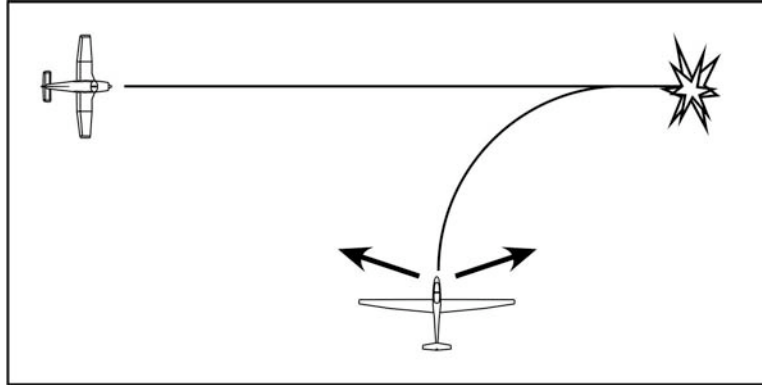


Figure 4.3 – Look in both directions before initiating a turn.

During a turn or while thermaling, it is important to continually clear the area for approaching traffic. To do this, you first gaze at a fixed point on the horizon in the direction of the turn. As the turn proceeds, the nose will eventually be pointing in the same direction you are gazing. You can quickly check the airspeed, variometer, yaw string, and pitch angle. Then, pick another point on the horizon and repeat.

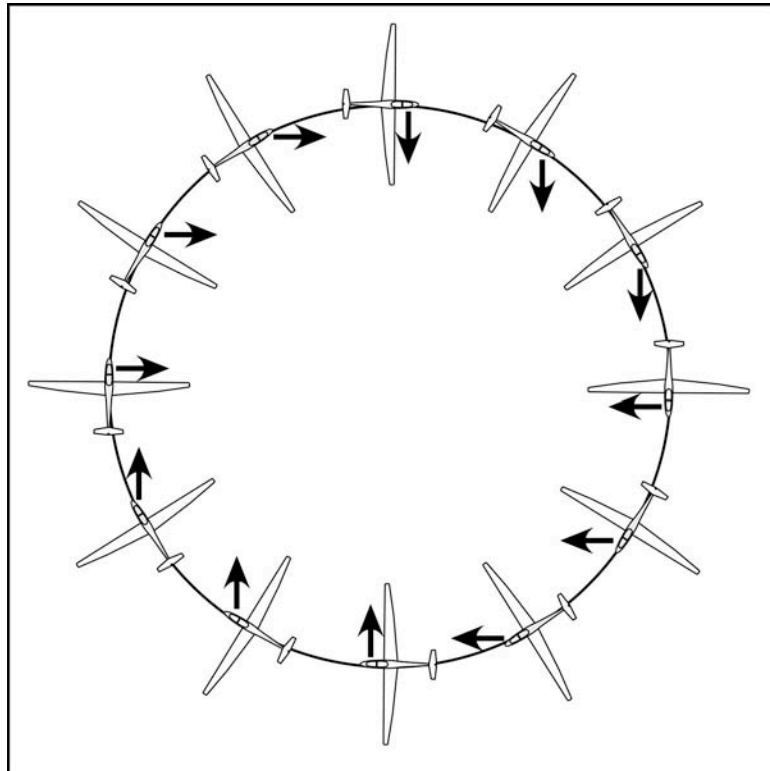


Figure 4.4 – To scan for traffic when thermaling, look at the horizon in the direction of the turn and wait for the nose of the glider to align with your view. Check the instruments and pitch angle, and repeat.

For bank angles of 45° or greater, you should clear the area in 90° segments as illustrated in Figure 4.4. For shallower bank angles and thus lower turning rates, you should clear the area in about 45° segments.