

# Gliding Australia Training Manual

## Pilot Guide



### Unit 1

### Lookout Awareness

## Unit 1 Lookout Awareness

### WHAT THIS UNIT IS ABOUT

To develop the primacy of effective lookout,

To develop the application of the basic Rules of the Air for collision avoidance.

### WHAT ARE THE PRE-REQUISITES FOR THIS UNIT?

This unit should be read in conjunction with GPC Unit 9, Lookout Scan Procedures, which deals with scanning techniques, and you may wish to read on with Unit 4 – Orientation and Stability.

### KEY MESSAGES

#### Lookout

- An effective lookout is the most important element of Airmanship and safety in the air.
- Lookout is our highest priority in avoiding collisions with other gliders and aircraft.
- Throughout training, the highest standards of lookout are insisted on every flight.

#### Collision Avoidance

- We use lookout in conjunction with listening to the radio to identify other aircraft that might pose a hazard; this technique is called “Alerted See and Avoid”.
- Head must be kept turning and eyes focused mainly outside the cockpit.
- When flying, any sightings of other gliders and aircraft must be reported.
- An aircraft on a collision course with you will appear to be stationary, on a constant relative bearing.

#### Rules of the Air.

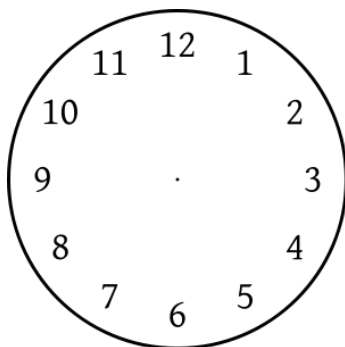
- You must learn and apply the basic Rules of the Air (see more in GPC Unit 23 – this unit will be covered later but the basic rules of the air are listed in that unit)
- Who gives way to whom

### PILOT GUIDE FOR THIS UNIT

- Safety is the major priority and collision with other aircraft is by far the biggest risk.
- An effective lookout reduces this risk significantly.
- Situational Awareness is:
  - What has happened recently?
  - What is happening now?
  - Projecting to: What might happen in the future? (Getting ahead of the aircraft.)
  - For example, you see a towplane & glider taking off below you, predict where it will be as you fly towards the circuit. Will you potentially have a conflict?
- Vision is restricted by:

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- an individual's eyesight performance,
- dirty canopy,
- poor weather/haze/sun,
- the glider's airframe,
- take actions to improve these deficiencies.
- Look for and identify other aircraft. "Tell me whenever you see something".
- The clock code:



- 12 o'clock means directly ahead, 3 o'clock means directly to the right, 6 o'clock means directly behind, and 9 o'clock means directly to the left.
- It is further defined by high or low.
- (e.g. I see a glider at **10 o'clock, high**)
- Handover/Takeover protocol – don't be lax about this! "You have control" "I have control".

### Limitations of vision

Sitting in the front seat of a glider:

- Look ahead (12 o'clock);
- Each wingtip;
- Behind each wingtip (when turning you need to look here);
- Vertically above the glider;
- Look down – how can you see below you?
- Move your head in order to see properly.

## FLIGHT EXERCISES FOR THIS UNIT

- Look for specific ground features, in a range of directions – ahead, to each side, behind the wing, below, behind, clouds directly above.
- Make sure you are moving your head accordingly.
- Note by turning the glider you can see places not previously visible (below and behind)
- If other aircraft are flying, try and spot aircraft before your instructor. Point out where they are using the clock code.

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- Your instructor may let you come on the controls with them or let you take control.
- On those occasions, the instructor will handover to you and have you confirm taking over and handing over.
- On circuit, take notice of the use of radio, if any traffic tell your instructor what you heard and what you see.
- Identify key features and lookout.
- Relax in the cockpit and try to confidently turn your head and body.

### THINGS YOU MIGHT HAVE DIFFICULTY WITH

- Ensure positive transference of control. "You have control" "I have control"
- Move your head. Scan by moving your head rather than just shifting their eyes.
- Given that the likeliest threat is along the horizon, that is where you should be focusing your scan.
- This will also improve your speed control and coordination.
- Looking down the wing whilst turning can lead to disorientation and poor speed control.

### HOW DO YOU DEMONSTRATE COMPETENCE?

- Explain the priority of lookout to avoid collisions through see and avoid.
- Describe and recognise potential collision risk in flight.
- Describe the use of radio for alerted see-and-avoid.
- Explain Situational Awareness at all times in flight.
- Discuss the risks of excessive focus on instruments and devices.
- Demonstrate limits of vision and how to look in difficult to see airspace. (above, below, behind, when turning).
- Demonstrate the use of the clock code to report other aircraft and identify prominent landmarks.
- Describe the importance of checking airspace before commencing any manoeuvre.
- List the rules of the air applicable to aircraft safe separation; (head to head actions, give way to the right, overtaking on the right, no flying over the top of someone).
- Maintain radio listening watch and provide their interpretation of traffic location and intentions.

### RESOURCES & REFERENCES

- Australian Gliding Knowledge pages 240 to 247
- GFA MoSP 2 Operations
- GFA OSB 2\_12 Lookout for Glider Pilots
- GFA OSB 2\_14 See & Avoid for Glider Pilots

## SELF-CHECK QUESTIONS

Use these questions to test your knowledge of the unit.

1. How do you ensure positive transference of control?
2. Where is 9 O'clock Low?
3. List three things that limit vision.
4. Why is lookout important?
5. What is meant by "Alerted See & Avoid"?
6. What is meant by "Situational Awareness"?