

# Gliding Australia Training Manual

## Pilot Guide



### Unit 11 Introduction to Soaring

## Unit 11 - Introduction to Soaring

### WHAT THIS UNIT IS ABOUT

Congratulations on taking on the challenge of the sport of gliding. You've made great progress with your training. The aim of this unit is to introduce you to soaring and what can be achieved by progressing through GPC training and beyond. It aims to inspire you to continue training and show what the sport can offer in the longer term.

You'll also refine your new essential aircraft handling skills (maintaining a constant nose attitude, and angle of bank and flying towards a point) and be introduced to thermal soaring.

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

- GPC Unit 7 Straight flight, various speeds, trim
- GPC Unit 8 Sustained turns, all controls
- GPC Unit 9 Lookout scan procedures

### KEY MESSAGES

- ☐ Soaring is not just about safely taking off and landing. There are many opportunities such as flying advanced aircraft types, cross country flying, mountain flying, flying competitions, badges and records, and aerobatics. Training is available for all of these pathways.
- ☐ Soaring in thermals is a key skill essential for longer duration flights and cross country flying.
- ☐ More advanced soaring concepts are trained in the GPC syllabus after solo.
- ☐ Soaring is a great sport where you never stop learning.

### PILOT GUIDE FOR THIS UNIT

Where do you want to go with the sport?

The sport of gliding (soaring is a better term) is not just about safely taking off and landing. There are many opportunities such as flying advanced aircraft types, cross country flying, mountain flying, flying competitions, badges and records, and aerobatics. Training is available for all of these:

- ☐ By completing the GPC syllabus, you'll be a competent soaring pilot – able to fly independently, fly family and friends, and soar cross country.
- ☐ Fancy flying an open class glider, flying in the French Alps, flying with enough ballast to sink a ship, or flying upside down? Beyond the GPC syllabus is an advanced training syllabus that will introduce advanced cross country flying, mountain flying, competitive soaring, badges and records, aerobatics and many more topics.
- ☐ It doesn't stop there – you'll never stop being challenged and learning in this sport.

The gliding pathways that you can follow are listed in the GPC Logbook.

#### Thermal soaring

Soaring in thermals is a key skill essential for longer duration flights and cross country flying. Gliders fly cross country by climbing in thermals and cruising to the next thermal; climbing again etc. There are other ways to fly cross country but thermal soaring is most common.

Thermals are columns of rising air, so to climb in them you'll need to circle in the rising column. And to do that you'll become an expert at thermal centring. Take a quick look at *GPC unit 30 Thermal*

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*Centring Techniques.* As part of Introduction to Soaring you'll be introduced to two thermal centring methods discussed there:

1. Using feel
2. Using the variometer

### FLIGHT EXERCISES FOR THIS UNIT

If the weather is suitable, you'll be taken on a fantastic cross country flight and be introduced to identifying thermals, centring them, and flying a task. Enjoy the experience.

If a cross country flight is not possible, make sure that you come back and do a cross country flight with an instructor or coach as soon as the weather allows. Many clubs have cross country camps – these are a fun and great way to experience cross country flight.

Review the flight. What did you enjoy most about it? What else do you want to do? Your trainer will help you achieve your goals but you'll need to put in the effort. It's a rewarding experience.

### THINGS YOU MIGHT HAVE DIFFICULTY WITH

COMMON PROBLEMS	
Problem	Probable Cause
<input type="checkbox"/> Speed varying in turns	<ol style="list-style-type: none"> <li>1. Flying using airspeed indicator instead of nose attitude relative to the horizon</li> <li>2. Not trimmed correctly</li> </ol>

### HOW DO YOU DEMONSTRATE COMPETENCE?

- ☐ Describe the pathways that you can take in the sport and to set some goals beyond flying solo.
- ☐ Demonstrate basic aircraft control including cruising at a constant attitude and heading; maintaining a constant attitude while rolling into a turn; and maintaining constant angle of bank and attitude in a sustained turn.
- ☐ With trainer guidance, demonstrate basic thermalling skills by identifying a thermal and performing basic thermal centring with minor corrections.

### RESOURCES & REFERENCES

- ☐ Unit 30 Thermal centring techniques
- ☐ Unit 31 Thermal entry

### SELF-CHECK QUESTIONS

Use these questions to test your knowledge of the unit.

1. What are the pathways available in the sport of gliding?
2. What is the most common way that gliders can fly long cross country distances?
3. What are two standard techniques for centring a thermal?