

# Trial Flights– Aerotow

Airfield looking to the east



## Airfield looking to the North West



# Format of flying

- Pre flight briefing
- Demonstration of an exercise in the air
- You attempt and practice the exercise
- Instructor helps or advises then moves on to next exercise
- Post flight debrief

# Flying exercises

1. Lookout

2. Effect of controls

○ Elevator

○ Ailerons

○ Rudder

# Flying exercises

## Lookout

Keeping a good lookout for other aircraft is essential and you will be shown the best way to do this.

# Flying exercises

## Effect of controls

### Elevator

The elevator is moved by the stick and this controls the pitch of the glider. When you move the stick forward the nose goes down, more ground is in view and you gain speed. Moving the stick back has the opposite effect. The glider is stable in pitch and will try and revert to the original speed.

# Flying exercises

## Effect of controls

### Ailerons

The ailerons, on the wing, are also moved by the stick and they roll the glider. After making sure it is clear to turn, when you move the stick (say) to the left, the glider will roll to the left until you move the stick back to the centre. The glider is banked and so turns, but you need to bring the stick back a little to keep the speed constant. The best guide to what is happening is to monitor the roll and pitch by looking over the nose.

# Flying exercises

## Effect of controls

### Rudder

The rudder is moved by the pedals. When you press on (say) the left pedal, the nose will yaw to the left but the glider does not turn. The rudder is used to keep the glider pointing in the direction you are travelling and more advanced exercises will show you how to use it in conjunction with other controls to achieve this.



# Flying exercises

On subsequent flights you can learn the following:

Rudder & adverse yaw - why we need to use the rudder in conjunction with the ailerons

Turning using all three controls - aileron, elevator and rudder

Trimmer - to make speed control easier

Using thermals if available

Circuit and landing demonstrations

# Flights

- Aerotow from 2000ft: If it is not soarable is about 15 minutes. If we can soar, flights will be up to 30 minutes
- Aerotow from Mile High: If it is not soarable is about 30 minutes. If we can soar, flights will be up to 60 minutes
- Winch launch: If it is not soarable is about 5 minutes. If we can soar, flights will be up to 30 minutes. These flights are not available unless part of a group session

# Objective

- To give you a pleasant flight. Discuss with your instructor what you would like to achieve from your flight
- For you to fly the glider as much as possible
- If you do not wish to handle the controls the instructor will demonstrate to you how the glider is flown and you can enjoy the views
- To enjoy the flight

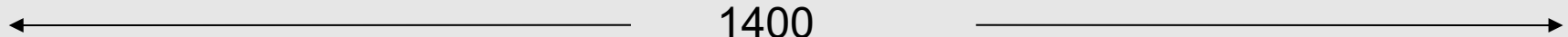
# Aerotow Operation

- Launches alongside winch launch queue
- Connected by a rope to the tug
- Launchpoint controller signals to the tug by radio to control the launch
- Glider flies in formation with the tug up to the release height

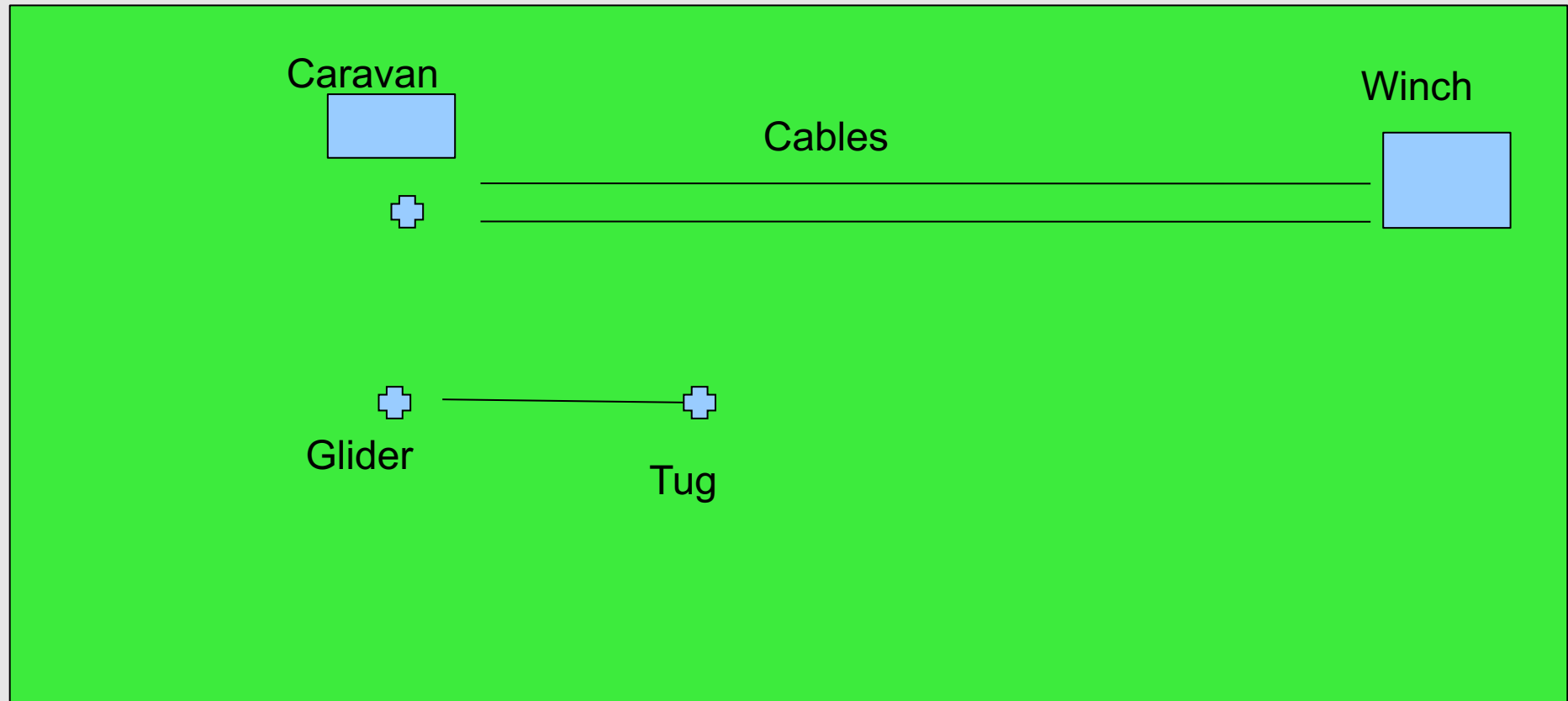
# Winch Operation

- Launches on the side of the field
- Connected to a powerful winch at the end of the field
- Launchpoint controller signals to the winch by radio to control the launch

Wind ←



1400 metres



Caravan

Winch

Cables

Glider

Tug

Not to scale

# Safety on the field

- Cables on the ground run from the winch to the launchpoint and drop from the glider after the launch
- Propellers - tug and motorglider – avoid.
- Aircraft landing – you will not hear them so lookout in all directions
- Tug rope – trails behind and below the tug on approach to land
- Keep a good lookout
- If in doubt – ask someone

# Glider retrieve

- You will be retrieved off the field by a buggy and the glider is towed back to the launchpoint. The safest way is to walk back with the instructor.



# Refreshment

- Teas coffee and chocolate bars in caravan

# Ground handling

- Push only on leading edges of wings and nose
- Never push on trailing edges
- Pull glider with canopy open
- Careful of canopy – fragile and expensive
- Held by one wing only - my wing/your wing
- Gliders are vulnerable to strong winds on the ground and need to be parked correctly

# Parachutes

- Worn for all flights
- Remove after getting out of the glider on the ground
- In real use – jettison canopy – undo harness – exit aircraft – pull ripcord

# Instruments

## Air speed indicator



# Instruments

Altimeter



# Instruments

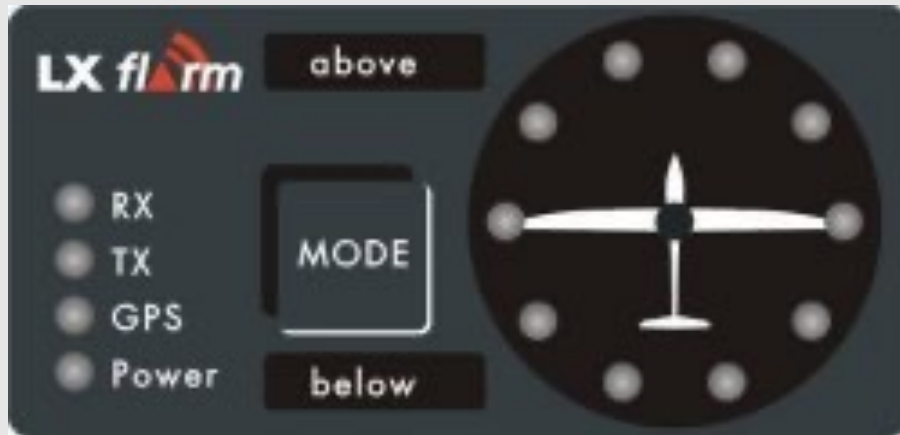


Variometer – shows rate of climb or descent

Two types

- Mechanical
- Electrical with audio output

# Instruments



Flarm anti collision indicator.  
Gives audible and visual  
warnings of threats

# Jargon

- You have control / I have control. The instructor will explain. It's so you know who is flying the glider.
- Attitude. This is the term for the amount of ground in view between the nose of the glider and the horizon and is your best guide to control the glider
- My wing / your wing. The instructor will explain. We hold one wing only on the ground and this is to communicate who is to hold the wing



# After the flight

- Your instructor will discuss with you the flight and answer any questions you may have
- You will be given a 30 day temporary full membership card which allows you to come back and fly at normal full member rates
- We hope that this flight will have shown you how easy it is to fly a glider and how you perhaps could take to learning to fly

# Trial Lessons

## Enjoy the flight!

