

Southern Cross Gliding Club Inc.

SOUTHERN CROSS GLIDING CLUB INC



**PILOT TRAINING
AND OPERATIONAL BRIEFS**

JUNE 1996, Updated November 2000

PREAMBLE

The purpose of this document is to provide a handy concise reference for pilot training and privileges, and for operational procedures at gliding sites where operations are being conducted by Southern Cross Gliding Club Inc.

It embraces the minimum requirements set down by the Gliding Federation of Australia.

When interpreting anything contained in this document, due regard must be given to the current issue of the GFA 'INSTRUCTORS HANDBOOK', GFA 'BASIC GLIDING KNOWLEDGE' and relevant CARs and CAOs.

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1. TRAINING & ASSESSMENT FOR 'A', 'B' & 'C' CERTIFICATES

1.1 "A" Certificate

Requirements

1. Minimum age 15 years.
2. GFA medical declaration signed.
3. Minimum of 5 solo flights with normal landings.
4. Satisfactory check flight, which must include the following as a minimum:
 - i. An awareness of pre-spin symptoms and a demonstration of the correct action to prevent a spin developing.
 - ii. A safe circuit without reference to the altimeter
 - iii. Correct handling of selected emergencies at the discretion of the checking instructor.
5. Oral examination on basic theory and flight rules and procedures.

Privileges and Limitations

1. May only fly solo under the direct supervision of an instructor, and be subject to daily checks in accordance with the club's operations manual (see section entitled 'FLYING PROGRESS AND CHECK FLIGHTS') and a further check if headwind conditions exceed 12 knots and crosswind conditions exceed 7 knots.
2. May carry out local soaring only.
3. The foregoing may have further conditions imposed when operating SCGC aircraft. See the section entitled "FAI CERTIFICATES - EXPLANATORY NOTES"

1.2 "B" Certificate

Requirements

1. A total of 15 solo flights with normal landings, including at least one soaring flight of not less than 30 minutes duration. (**Note:** This means an *overall* total of 15 solo flights, not 15 solo flights since qualifying for the "A" Certificate), all being subject to daily checks as set down in the section entitled 'FLYING PROGRESS AND CHECK FLIGHTS'.
2. Completion of post-solo training syllabus in accordance with the Instructor Handbook, and a final assessment flight to be conducted by a qualified instructor. (Note: It is a SCGC requirement that the pilot will, by completion of his/her training to this level, be "Off Checks". See extract from the Instructor Handbook in item 4 below for sequences that need to be covered.)
3. Oral examination on basic theory, flight rules and Procedures (including GFA Ops Regs and MOSP) and basic airworthiness.
4. Post-solo training sequences which need to be covered in order to reach "Off Checks" assessment stage:
 - i. Revision of stalling sequences
 - ii. Revision of incipient and full spinning sequences

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- iii. Revision of launch emergencies.
- iv. Problem circuits (instrument failure, running out of height, different circuit directions, etc.).
- v. Cruising and descending on aerotow.
- vi. Use of flaps and retractable undercarriage, (if not covered pre-solo).
- vii. Sideslipping.
- viii. Steep turns.
- ix. Thermal centring techniques - most efficient use of lift, (if not covered pre-solo).
- x. Launch speed signals (auto/winch, does not apply to aerotow) , (if not covered pre-solo).
- xi. Crosswind takeoffs and landings.
- xii. Formal radio procedures.
- xiii. Revision of Rules of the Air.
- xiv. CTAF/MBZ procedures.

5. Other Obligations

- Daily Inspectors Certificate.
- Basic understanding of parachute handling, storage, validity, use etc.
- Basic appreciation of emergency & handling of landing out.
- Basic understanding of survival technique in the event of a landing out.

Privileges and Limitations

1. May carry out local soaring only.
2. May carry out mutual flying, subject to the following conditions:
 - i. The other occupant of the glider also holds a minimum of a "B" Certificate.
 - ii. Each mutual flight is authorised by and carried out under the direct supervision of the Duty Instructor, who shall nominate the command pilot for the flight. The command pilot shall carry out the takeoff and landing.
3. At the discretion of the Duty Instructor, undergo a check flight if headwind conditions exceed 17 knots and crosswind conditions exceed 10 knots.
4. A check flight would be required if the pilot was inexperienced in , or became non-current in difficult conditions as follows:
 - Strong winds
 - Gustiness
 - Turbulence
 - Areas of high sink
 - Stronger crosswinds
 - Wind gradient
5. The foregoing may have further conditions imposed when operating SCGC aircraft. See Section 1.7 entitled "FAI CERTIFICATES - EXPLANATORY NOTES"

1.3 "C" Certificate

Requirements

1. A total of 20 solo or mutual flights, including two solo soaring flights of at least one hours duration each. (**Note:** (i) This means an *overall* total of 20 solos or mutuals (ii) Only time in command of mutual flights can be counted toward this total.)
2. Trained and checked in ability to carry out a safe outlanding. The practical training in outlandings to include a pass in two consecutive outlanding and retrieve checks, only one of which is permitted at The Oaks or similar nearby airfields.
3. Be current in handling difficult conditions
4. Received a "passenger awareness" briefing, using the appropriate chapter & the relevant sections thereof in part 2 of the Instructors Handbook as a reference (Note: the document "The Air Experience Instructor Rating" has been incorporated into the new Instructors Handbook).
5. Undergo a final assessment flight conducted by a level II instructor.
6. Oral test on basic theory, basic navigation, basic meteorology, airways procedures, outlanding hazards, post-outlanding actions and SAR requirements
7. Oral test on precautions for cross country flying and retrieve requirements see Section 2 entitled 'CROSS COUNTRY FLYING' in this manual.
8. Demonstrate satisfactory spin entry and recovery. This may be carried dual or solo (observed from the ground) at the discretion of the supervising instructor.
9. Produce a medical certificate from a GP (preferably the family doctor), renewable every two years. (This can be substituted by a certificate obtained for a power licence).

Privileges and limitations

1. May fly cross country at the discretion of the CFI or Instructor Panel and subject to the club's operational procedures for cross country from Camden as outlined in Section 2 'CROSS COUNTRY FLYING' in this manual
2. May carry out "family/friend" passenger flights (NOT for hire or reward and not Air Experience Flights) at the discretion of the CFI or Instructor Panel and under the direct supervision of the Duty Instructor.
3. The foregoing may have further conditions imposed when operating SCGC aircraft. See Section 1.7 entitled "FAI CERTIFICATES - EXPLANATORY NOTES"

Important notes

1. The "C" certificate provides the training and basic qualification for cross-country flying and the carriage of "family/friend" passengers. However these privileges may only be exercised on any given day at the discretion of the Duty Instructor.
2. Where the requirements are nominated as the minimum, they are just that. Instructors are to be satisfied as to the level of currency and competency of the pilot prior to endorsement.

1.4 "A" Certificate Oral Examination

Basic Theory

1. How is 'safe speed near the ground' calculated? Nominate that speed for the glider you fly.
2. What is the secondary effect of the rudder?
3. What happens to the stalling speed in a turn? Why does it happen?
4. Define aileron drag and explain a) how the designer compensates for it and b) how the pilot copes with it.
5. Of the forces acting on a glider in flight, which one is used to turn the glider?
6. On a glider fitted with an elevator trim tab, which way will the tab move if the trim lever is moved forward?
7. Airbrakes are used on final approach to control what?
8. If a wing drops at the stall, what is the correct action on the part of the pilot?
9. What is the correct recovery action from a fully developed spin?
10. Define wind gradient and explain a) its effect on a glider and b) what action the pilot takes to compensate for it.
11. What usually happens to a gliders airspeed when it flies into a thermal?
12. Which is the higher figure, the speed for minimum sink or the speed for the best glide angle?
13. On a glider fitted with flaps, will downward deflection of the flaps improve the glide angle or make it worse?
14. What happens to the stalling speed when the airbrakes are opened?
15. What kind of stability does a glider have in the rolling plane?

Flight rules and procedures

1. What is the flight visibility required for Visual Meteorological Conditions (VMC) - a) Below 3,000ft AGL, b) between 3,000ft AGL & 10,000ft AMSL and c) above 10,000ft AMSL
2. If the speed falls to just above $1.3V_s$ on a winch launch and is still falling, what action is the pilot required to take?
3. Who gives way when two gliders are approaching each other a) head on b) on converging headings?
4. Assuming that the glider is not taking off or landing, what is the minimum height to fly over a built up area?.
5. What actions would a pilot take in the event of a release failure on aerotow?
6. What is the minimum vertical and horizontal separation between gliders in a thermal?
7. Who establishes the direction of circling in a thermal?
8. What action would the pilot take on running out of height in the circuit?
9. What is the 'Gliding in Progress' signal, to be located near the windsock at an airfield?
10. On which side does a glider overtake another a) when hill soaring b) at all other times?
11. Who is entitled to give the 'Stop' signal at a launch point?

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12. What action is required from a pilot before flying in controlled airspace?
13. At what stage is the airbrake or spoiler control used on final approach?
14. What is the pilots first priority immediately following a launch failure?
15. What action does a pilot take before carrying out intentional stalling or spinning, or before aerobatics?

1.4.1 "A" Certificate Oral Examination - Answers

Basic Theory

1. 1.5 times the stalling speed (1.5Vs)
2. Roll, caused by the increased speed of the outer wing.
3. It increases, because of the increase in effective weight, due to an increase in "G". This effectively increases wing loading.
4. The downgoing aileron causes an increase in induced drag, resulting in a yaw away from the direction of the intended turn (adverse yaw). The designer usually uses differential ailerons, with more upward travel than downward, to help fix the problem. The pilot ensures that enough rudder is used in coordination with the ailerons to eliminate the adverse yaw.
5. Lift: tilted in the direction of the turn when the glider is banked,
6. Up.
7. Rate of descent
8. Stick forward. Use only enough rudder to prevent yaw.
9. Full opposite rudder, stick forward until glider stops spinning. Centralise rudder and recover from dive.
10. a) Wind gradient is the reduction in wind speed near the ground, caused by ground friction. Near the ground, the glider experiences a loss of airspeed as it enters the area of wind gradient. b) The only cure is to carry extra speed during the whole approach in anticipation of the loss.
11. It increases momentarily,
12. Speed for the best glide angle is higher than the speed for minimum rate of sink.
13. Make it worse
14. It increases by 2 to 5 knots.
15. Neutral

Flight rules and procedures

1. a) 5km b) 5km c) 8km
2. Release immediately and obtain 1.5Vs in preparation for landing
3. Both turn right b) the one which has the other on its right gives way.
4. GFA rule is 1000 feet; Southern Cross rule is 1500 feet
5. Try again. If no success, move out to the left and await an acknowledgment from the tug pilot. Try again. If still no success, move back behind the tug and then up into high tow. Try again, Tug pilot will release glider when it is established in high tow.
6. 200 feet.
7. The first glider in the thermal, unless the local rules specify a particular direction near the airfield (eg comps).
8. Modify the circuit and select the best available landing area.
9. A double white cross.
10. When hill soaring, overtake on the downwind side ie between the overtaken glider and the hill. At all other times, overtake on the right.
11. Anyone who sees a hazardous situation developing.
12. The pilot requires a clearance from Air Traffic Control and must comply with the terms of that clearance.

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13. When a definite overshoot situation is seen to exist.
14. Ensure that speed is set to 1.5Vs.
15. Complete the pre-aerobatic check.

1.5 "B" Certificate Oral Examination

Basic Theory

1. A glider wing always stalls at the same ____?
2. What is lateral damping?
3. What kind of stability does a glider have in the yawing plane?
4. Define wing loading.
5. What is meant by 'laminar flow'?
6. What happened to the rate of descent in a turn?
7. What is meant by a 'speed limiting ' airbrake?
8. Define 'Aspect Ratio'
9. What is the purpose of the short length of wool or string sometimes attached to glider canopies?
10. What effect do raindrops have on the wings of a high performance glider? What action does the pilot take to compensate?
11. How does profile drag vary?
12. What causes pre-stall buffet?
13. What is the danger in banking too steeply near the ground in a strong wind?
14. What is a 'stabilised approach'?
15. The longer a glider has been spinning, the longer it might take for recovery action to be effective. True or false?

Flight rules and procedures

1. What is the 'break off point'?
2. What is the recommended minimum height to clear an obstacle on a final approach?
3. Who is entitled to give a 'take up slack' signal?
4. Who has priority, a glider taking off or a powered aircraft landing?
5. To whom must a gliding club report an accident?
6. Should you fly a glider if you have given blood the day before?
7. By what height above the ground must all stalling, spinning and aerobatics be completed?
8. What action do you take if you abandon a take off, pull the release twice but know or suspect that the cable or towrope has become entangled in the wheel or skid?
9. What does a rudder waggle on aerotow mean?
10. Above what altitude must oxygen be carried and used?
11. What action do you take if you have mishandled the landing flare and the glider is starting to gain height?
12. Assuming that you had the choice (ie airfield procedures do not take precedence), on which side of the strip would you do a circuit in a strong crosswind?

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13. Where should the pilots left hand be during every takeoff?
14. Prior to every takeoff, what clearance must be obtained by the pilot?
15. When you join the circuit, you realise that you are too high and the angle to the strip is too steep. What action do you take?

Basic Airworthiness

1. What aircraft document should be checked before flight and what information should be sought from it?
2. Where should the pilot look to find the glider's minimum and maximum weak-link strengths?
3. What action should the pilot take in the event of overstressing or overspeeding a glider in flight?
4. What is meant by "manoeuvre speed" (V_a)?
5. If flutter is encountered in moderate to high speed flight, a) what immediate action should the pilot take, b) what subsequent action after landing?
6. When checking a back release, at approximately what downward angle should the cable automatically back-release?
7. What is 'Vne'? Is it the same at all altitudes?
8. A glider must never be pulled forward or backward by its wingtips. Why not?
9. Every glider has a maximum and minimum pilot weight. Where can this information be found?
10. Under what circumstances can a pilot lighter than the permissible minimum pilot weight fly the glider?
11. Why is a weak link fitted onto a cable or towrope?
12. What is meant by the 'manoeuvring envelope'?
13. What kind of inspection must be carried out on a glider after it has been rigged?
14. What is a Form 2 inspection?
15. From an airworthiness point of view, when must aerobatics not be performed?

1.5.1 "B" Certificate Oral Examination -Answers

Basic Theory

1. Angle of attack.
2. The tendency of a wing to resist movement in roll, caused by the increased angle of attack (and thus increased lift) on the downward wing.
3. Positive stability. The glider tends to return to its original heading when the rudder pedals are deflected then released.
4. Glider weight divided by wing area.
5. A smooth, streamlined flow of air, resulting in low drag around a glider wing, as distinct from a turbulent, high drag flow.
6. It increases, because the lift is divided into two components, one acting upwards to balance out the weight, and the other acting inwards to provide the turning (centripetal) force.
7. An airbrake which will not allow the glider to exceed its maximum permitted speed (Vne). Most modern airbrake systems will limit the speed to Vne in a 30 degree dive, but no steeper.
8. Wingspan divided by chord.
9. Usually known as a 'yaw-string' it is more accurately described as an airflow direction indicator. Generally used to detect slip or skid in turns.
10. They partly destroy the laminar flow of air past the wing, resulting in an increase in stalling speed and an increase in the rate of sink. The pilot should increase speed by 5 to 10 knots to compensate and should plan on a much higher sink rate than normal.
11. As the square of the airspeed. Twice the airspeed, four times the profile drag, three times the airspeed, nine times the drag etc.
12. The turbulent airflow from the breakdown in flow over the top of the wing striking the tail.
13. The top wing is in an airmass of different speed to the bottom wing (wind gradient). At low level, turning into a strong wind causes the glider to overbank, vice versa if turning downwind. The effect may be beyond the pilot's ability to prevent it occurring.
14. A glider going in the required direction at a constant airspeed and a constant rate of descent is said to be on a stabilised approach. The best landings result from such approaches.
15. True, but it will only recover if the correct recovery action has been taken and the glider is within its CG limits.

Flight rules and procedures.

1. The point at which upper-air exercises are terminated and full commitment is made to the circuit, approach and landing.
2. 50 feet, or about 1 wingspan
3. Only the pilot or someone definitely known to have been delegated this responsibility by the pilot
4. **Any** aircraft landing has priority over any aircraft taking off.
5. The Bureau of Air Safety Investigation (BASI) on the Australia-wide number 1 800 011 034 and the RTO/Ops. The accident must be reported immediately.
6. No. The recommended recovery period is 24 hours.

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7. 1000 feet. (Note: Southern Cross rule is 1,500 feet)
8. Shout 'STOP' (very loudly), open airbrakes fully and hold stick fully forward. If possible, apply wheel brake
9. Airbrakes or spoilers or tail chute extended. Check as appropriate.
10. Above 10,000ft amsl.
11. Close airbrakes, stop the backward movement of the stick to prevent the glider ballooning any higher. If the balloon is a really bad one (and momentary) forward movement may be required, but exercise great care with this. Carry out the landing further down the field.
12. On the downwind side.
13. Near the cable release.
14. "All clear above and behind "
15. Move out straightaway, then resume parallel track with strip further out. Airbrakes may be used if a gross error has been made, but beware of gliders underneath in the circuit joining area.

Basic Airworthiness

1. Maintenance Release (GFA form 1). Check expiry date of MR, check minor and major defect pages and check that the Daily Inspection has been signed for.
2. On a placard in the cockpit.
3. Do not allow to fly until inspected by a qualified person, Seek advice of authorised inspector. If none available, leave matters in the hands of the Duty Instructor. **DO NOT NEGLECT TO REPORT IT TO SOMEONE.**
4. Manoeuvre speed (V_a) is the speed above which full control deflection is not permitted. It is imposed to protect the structure. Over V_a , only one third deflection is permitted on the ailerons and rudder, and the use of the elevator is limited to the extent required to keep the glider within its permitted "G" loadings.
5. a) Slow down, b) ground the glider and report the incident, c) change underpants.
6. About right angles to the fuselage. The important thing is that the cable does not have to be pulled backwards to actuate the back-release, If it needs such an extreme angle to make it work, there may be something wrong with it.
7. "Velocity Never Exceed" , the maximum permitted speed of the glider in smooth air. It reduces with height because of reducing air density with height. Consult glider flight manual for details.
8. It puts too much strain on the wing root fittings because of the long leverage.
9. On the cockpit placard.
10. Only when the required ballast is carried in accordance with the placard, and then only if the ballast is capable of being properly secured.
11. To protect the glider structure in the event of a launch overstress.
12. The envelope of speeds and G loadings within which it is safe to fly the glider and outside of which damage or failure of the structure may occur.
13. A Daily Inspection.
14. The Annual Inspection for the revalidation of the gliders' certificate of airworthiness.
15. In rough air

1.6 "C" Certificate Oral Examination

Basic Theory

1. Assuming adequate entry speed, how much G is capable of being produced in a 60 degree banked turn?
2. If a glider is not fitted with an elevator trim tab, how is trimming carried out?
3. What is "ground effect"?
4. What is autorotation and what causes it?
5. If you blow lightly into the total energy venturi of a variometer system, which way would you expect the vario needle to move?
6. You are in a gentle turn with the bank slowly increasing and the stick coming steadily back at a constant nose attitude. What is likely to happen if the stick continues to come back?
7. What is meant by a balanced turn?
8. What effect does aspect ratio have on induced drag?
9. A glider is flying at 60 Kt into a 20kt headwind with a reading of 2kts down on the variometer. The airfield is 10NM away. What height will you have on arrival at the field if you set off home at 4,000ft?
10. What is the optimal bank for minimum height loss in a turn at 1.5Vs?
11. Which is the best wing for the ground crew to hold onto during a crosswind takeoff?
12. What is the effect of water ballast on a) stalling speed b) climb performance and c) glide angle?
13. Why are there two rings fitted to the end of a launching rope or cable?
14. What is the dominant control in incipient spin recovery?
15. In a crosswind landing using the crab method of approach, are the controls crossed when the glider touches down?

Flight Rules and Procedures

1. What is meant by the "non-maneuvring area"?
2. Which way does the aiming point move if the glider is overshooting?
3. When is a glider permitted to fly in the following areas?
 - a. Danger Area
 - b. Restricted Area
 - c. Prohibited area?On which chart will these areas be found?
4. What action must a pilot take if he loses sight of the tug during aerotow?
5. At what height above the ground must selection of an outlanding area be made on a cross country flight?
6. What wind indicators are available to assist a pilot on an outlanding?
7. What is the most common circuit planning fault in early attempts at outlanding?

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8. What are the five "S 's" for choosing an outlanding paddock?
9. What are the minimum paddock standards for an aerotow retrieve from an outlanding?
10. What precautions are necessary when flying cross country on days of total fire ban?
11. What are the implications of landing out and failing to contact crew by radio or telephone by last light?
12. Name three basic precautions to take when giving an introductory flight to a relative or friend
13. What extra equipment must a glider carry for operations in a Designated Remote Area?
14. What qualifications does a glider pilot need to communicate with Air Traffic Services?
15. What are the horizontal and vertical extents of an MBZ? What do the initials stand for?
16. Is it mandatory for a glider to carry and use a radio in a CTAF? What do the initials stand for?

Basic Soaring Meteorology

1. At what rate (in degrees Celsius per 1,000ft) does a thermal cool as it rises in clear air? What is the name given to this rate?
2. What is meant by "atmospheric stability"?
3. What is "water vapour"?
4. What is the "Dew point"?
5. If a thermal is capped by a cloud, what does the cloud consist of?
6. What happens to a thermal inside a convection cloud?
7. What is the "Coriolis force"?, and what is its effect on a wind blowing from a high pressure to low pressure area?
8. In which direction does the wind blow around an anticyclone?
9. A cyclone is an extreme form of what?
10. What is the effect of an increase in height on a) air temperature, b) air pressure, c) air density
11. Which is likely to generate the most hazardous weather for gliding, a warm front or a cold front?
12. In what kind of pressure pattern is subsidence likely?
13. What is the effect of subsidence on thermal development?
14. What is a "downburst" or "microburst"? Where are they likely to be found on and what does a glider pilot do about them?
15. Are the conditions following the passage of a cold front likely to be good or bad for soaring?

1.6.1 "C" Certificate Oral Examination - Answers

Basic Theory

1. 2G
2. By an internal spring bias in the nose up or nose-down sense
3. The partial cancellation of wing downwash caused by proximity to the ground. This results in a reduction in induced drag and an effectively flatter glide-angle.
4. Autorotation is the tendency of an asymmetrically-stalled glider to rotate continuously in the rolling plane. Spinning is an autorotative manoeuvre with the nose pointing steeply down. It is caused in the first instance by the loss of lateral damping on a stalled wing.
5. Up.
6. The glider will probably spin.
7. A properly coordinated turn without slip or skid.
8. The higher the aspect ratio (ie the 'skinnier' the wing), the lower the induced drag.
9. 1,000 feet (effective glide angle over the ground is 1 in 20: 10 nautical miles would take 0.5 of a mile of height , which is 3,000 feet.
10. Theoretically 50 degrees, but for practical purposes, 45 to 50 degrees.
11. The downward wing, because it is easier to help a pilot out of a groundloop situation.
12. a) It is increased b) it is degraded c) It remains the same but occurs at a higher airspeed.
13. To ensure that the pull exerted by the small ring on the hook is always straight and not at an angle.
14. The elevator.
15. Yes, to counter the secondary effect of the rudder when drift is kicked off.

Flight rules and procedures.

1. The area of sky within which, if a launch failure occurred, the glider would be too high to land ahead within the remaining strip length and too low to manoeuvre to join a circuit.
2. Downwards in the canopy.
3. a) Anytime with care b) Only in compliance with specified conditions c) Never. These areas will be found on Visual Enroute Charts(ERC's) and Visual Terminal Charts(VTC's). There are also a few VNC charts available with these areas marked on them.
4. Release immediately.
5. 2000 feet AGL
6. Cloud shadows on ground, drift in circuit (Note that these two will give wind at height, which will be a useful guide, but not quite the same as the surface wind). Wind shadows on dams, dust behind cars on dirt roads etc,
7. Too steep an angle, cramping the circuit.
8. Size slope, surface, stock and surroundings. The latter check should pay particular attention to Single Wire Earth Return (SWER) lines.
9. Authorised Landing Area (ALA) standard, but in any case a minimum length of 600 metres.

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10. Non-sparking skids must be fitted to gliders. No aerotow retrieve because of fire danger from tug exhausts. Retrieve cars confined to roads and not permitted in paddock, unless it is ploughed and then only with the farmers clearance.
11. The crew will be compelled to initiate Search And Rescue (SAR) action.
12. No aerobatics or steep turns, gentle thermal turns. Keep flights short on rough or very hot days.
13. An Emergency Locator Transmitter (ELT). Equipment for a water-still.
14. Logbook endorsement as a GFA radio operator.
15. 15NM radius, up to 5,000ft; MBZ stands for Mandatory Broadcast Zone.
16. No, but if it is carried in the glider, you are required to monitor the CTAF frequency and broadcast if necessary. CTAF stands for Common Traffic Advisory Frequency.

Basic Soaring meteorology - Answers

1. 3 degrees per 1,000ft: The Dry Adiabatic Lapse Rate.
2. A temperature structure in the atmosphere whereby a rising thermal will tend to reach temperature equilibrium with its surrounds and therefore stop rising.
3. The invisible moisture present in the atmosphere to some extent at all times.
4. The temperature at which water vapour condenses into visible water droplets into the atmosphere.
5. Visible water droplets (not water vapour).
6. It increases its rate of ascent due to the release of latent heat when water vapour changes its state to visible water droplets at the dew point.
7. The effect of the Earth's rotation on wind, causing an otherwise straight flow of wind to turn into spiral patterns around areas of high and low pressures.
8. Anti clockwise in the Southern Hemisphere.
9. Depression,
10. They all decrease with height.
11. A cold front (blustery winds, rain, possible thunderstorms).
12. An anticyclone.
13. It tends to inhibit thermal development.
14. An extremely string down draft, causing locally strong surface winds which are often hazardous. They are found on the edges of thunderstorms, often at a considerable distance from the storm itself. Glider pilots must avoid them at all costs, although the downburst itself may be invisible. They are sometimes marked by areas of rising dust where they reach the ground.
15. Good (unstable air with enough moisture to form cumulus clouds).

1.7 FAI CERTIFICATES: EXPLANATORY NOTES

These notes are to be read in conjunction with the privileges and limitations outlined within the section entitled 'PROCEDURES FOR TRAINING AND ASSESSMENT FOR 'A', 'B' AND 'C' CERTIFICATION' and apply to pilots who have qualified for the various certificates, have made the claims and who actually hold the appropriate endorsements

Pilots who hold the FAI C Certificate

The GFA has, subject to individual club requirements, granted to pilots who hold the C Certificate, concession to carry family or friend passengers without the need for a separate rating. The SCGC, however, requires pilots wishing to carry family or friend passengers to have a separate Passenger Rating.

Pilots who hold the FAI B certificate

The GFA has, subject to individual club requirements, granted pilots who hold the B Certificate permission to engage in mutual flying. The SCGC, however, requires pilots wishing to engage in mutual flying to be "Off Checks".

Pilots who hold the FAI A certificate

Pilots who hold the A Certificate are required to fulfil the SCGC daily and other checking requirements.

Further comments

Reciprocal rights may be granted to overseas pilots in each of the certificate categories, subject to the discretion of the club instructor panel. This applies also to visiting pilots from clubs within Australia. In either case, the minimum requirements as adopted by the SCGC will prevail. (See the section on visiting pilots).

2. CROSS COUNTRY EXPEDITIONS

Requirements

1. Requirements for cross country ratings from Camden and other sites are set out in this manual under Section 3 entitled "Flying Progress and Check flights"
2. Pilots wishing to fly cross country should have their car fitted with a tow bar and standard tow ball, 7-pin utilux connection and mud flaps. Anti-sway bars enhance safety, and the fitting of them should be considered.
3. Pilots intending to fly cross country must arrange their own retrieve . The car, fuelled, with keys, the trailer with all fittings and sufficient crew **must** be arranged prior to the gliders departure.
4. Normally at Camden, one glider will be available for long distance cross country attempts. The aircraft must be booked before the day in question and the pilot is to have the approval of the CFI. Period approvals for experienced cross country pilots are available.
5. For the purposes of the above, any flight outside of gliding range of the operating field is considered a cross country flight.
6. For any such flight the aircraft must contain adequate tie-down gear.
7. For towing gliders, the following notes are of interest:
 - a. club gliders should be towed only by cars of adequate weight: 2.5L cars or larger are suitable for towing two seaters and 1.5L cars or larger weighing more than 20 cwt are suitable for single seaters.
 - b. the car must be in good condition - steering, suspension, tyres and brakes must be checked prior to the journey.
 - c. the trailer must be checked prior to the journey with attention to brakes, wiring, tyres (including spares) and fittings, and must have a current registration sticker properly displayed.
 - d. the weight on the trailer at the drawbar should be about 30 or 35 kg. As the trailers are long, a balanced load is very important. Do not add extra load to the rear end of the trailer after it has been hitched to the car and make sure adequate weight is on the front end to assist in steering. Distribute people and luggage forwards in the car as necessary.
 - e. exercise the following actions:
 - stop several times in the first 20 km to check all the fittings and connections.
 - avoid sudden acceleration or braking.
 - never coast downhill with the car out of gear.
 - if sway develops, correct with gentle smooth turns of the steering wheel and with slow deceleration. DO NOT BRAKE!
 - take great care when turning corners or making U-turns to allow for the entire length of the trailer.
 - remember the length of the trailer when overtaking. You must have enough time and space to return the car and trailer to its correct lane.
 - do not follow other rigs in close convoy: you must allow room for overtaking cars to pull in between you and the rig in front.
 - when pulling off the road for any reason, watch for deep gutters and overhanging awnings.
8. Rain and storms:
 - a. gliders should not be taken out in the rain.

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- b. should the rain be intermittent, or prolonged, wooden gliders should be kept in the hangar.
 - c. all take-offs will cease when a storm front is within five miles of the field.
 - d. when operating away from Camden, the pilot(s) in charge of the aircraft must ensure that the gliders are adequately secured. If a storm blows up during the night and a glider is just tied down, enough people should go to the field to safeguard the glider either by putting it under cover or in its trailer. In extreme weather conditions, the trailer itself should be put under cover. In no case should fibreglass gliders be left staked down outside during prolonged rain periods.
9. Outlandings near Camden:
- a. All solo pilots should become familiar with recommended outlanding areas near Camden in case of enforced outlanding.
 - b. Aero-tow retrieves from paddocks within 10 miles from Camden are illegal, except with the permission of the Regional Director of CASA. In general they should not be carried out.
 - c. Aero-tow retrieves outside 10 miles from Camden will be carried out only if they do not interfere with the utilisation of gliders at Camden and if those tug-pilots nominated by the tug master to do such outlanding retrieves are available.
 - d. The prospective glider pilot in any such aero-tow retrieve attempt must be approved by the CFI or instructor-in-charge.
 - e. Remember, the safest retrieve is a trailer retrieve.

3. FLYING PROGRESS AND CHECK FLIGHTS

1. The following are minimum requirements only. However, the criteria for progression to each stage include not only meeting the minimum requirements, but also having achieved a certain **STANDARD**. The instructor's panel believes that most pilots will need more flying than the minimum to reach the required standard.
2. If any of the following rating or conversion checks is failed, *the pilot must have at least six more flights before applying for a further check*. It is emphasised here that this applies to rating and conversion checks, and the pilot would only be failed if, in the opinion of the instructor, he/she had some safety issue fault that could not be eradicated during the checking process which may involve more than one flight.
3. If any aircraft is unavailable for an extended period, the normal progression through the fleet may be varied on application to the CFI.

A. Rating Requirements:

FIRST SOLO:

- training completed in all sequences as set down in the Instructors Handbook
- Pre-solo assessment & solo authorisation to be delivered by a Level II or higher rated instructor who shall be satisfied that the student satisfied the assessment criteria as outlined in the handbook under the sub-headings of "Responsibility", "Communication", "Orientation", "Skill" and "Safety", and has adequate skill in the following:
 - reasonably accurate turns
 - good judgement in respect of altitude
 - good judgement around the circuit
 - reasonably accurate speed assessment by relationship to sound and attitude
 - some experience in flying with air speed indicator and altimeter blanked out
 - consistently good take-offs, launches and landings
 - flying in high and low tow
 - spin recovery
 - emergencies (cable breaks, wing waggle, hook up etc.)
 - knowledge of Rules of the Air, & all area limits
- power pilots with no previous gliding experience will have at least 10 dual flights before going solo.

CHECK SOLO:

- a dual check prior to solo flight for a minimum of the first 5 solos.

DAILY CHECKS:

- a dual check prior to each day's solo flying for a minimum of the first 15 validated daily checks after completion of Check Solo. (**Note:** some days may require further checks if difficult conditions arise)

OFF CHECKS:

- two consecutive validated checks with different qualified level II or higher instructors in different aircraft on different days.
- the requirements for issue of a GFA "B" certificate. Item 4 as set down beforehand in this manual are those requirements which need to be satisfied under this heading.

HANGAR FLIGHTS

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- at least two passed hangar flights with an instructor.
- approval of the duty instructor of the day
- normal approach, then airbrakes closed and glider floated up to the end of the runway, allowing sufficient runway ahead to roll to a stop without the use of the wheelbrake.

PASSENGER RATING:

- Any Level 2(Q) or above instructor has the authority to temporarily suspend passenger ratings pending investigations by the club's Instructors Panel, which has the power to suspend passenger ratings for any period it considers necessary. The above authorities are not to be used vexatiously and will be exercised in the interests of safety. Pilots exhibiting an irresponsible attitude obviously will be risking their rating.
- Requirements for a SCGC Passenger rating, in addition to the GFA's requirement of a C Certificate, are as follows:
 1. A recommendation to the Instructors Panel by any instructor. The pilot's name will be noted in the Instructor's Panel Minutes so that instructors not present at that meeting have the opportunity to object to a Passenger Rating for that pilot at the next meeting.
 2. A minimum of 50 hours total gliding, including at least 40 hours solo.
 3. A recommendation by an instructor and approval by the instructors panel. This normally requires that the pilot's name be noted in the minutes of the Panel Meeting so that instructors not present at that meeting have the opportunity to consider the recommendation.
 4. First check flight with a qualified instructor including spins and passenger awareness briefing as per part 2 of the Instructors Handbook
 5. Second check flight with qualified instructor on presentation of satisfactory medical certificate.

BACK SEAT RATING :

- a minimum of 10 passenger flights
- at least two flights from the back seat with an instructor.
- a check with a Level 2(Q) instructor

CROSS COUNTRY ANY SITE

- GFA requires a pilot to hold the FAI C Certificate to be permitted to fly cross country, subject to the agreement of the instructor in charge.
- In addition to the GFA requirement, SCGC requires pilots operating under the authority of the SCGC or with SCGC equipment, to undergo the cross country training, outlanding checks, and assessment before flying cross country. Currency requirements for cross country flights are listed below in Section 3C.

CROSS COUNTRY FROM CAMDEN:

- To go south of Bargo requires:
 - a Silver C or better
 - a check for cross country flying from Camden

CARRYING WATER:

- See under "Astir" and "Jantar 2" below

INDEPENDENT OPERATOR RATING:

- a Silver C or better.
- demonstrated knowledge of rigging, trailering and basic meteorology.
- approval by the instructor's panel.

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- log book endorsement by CFI.
- annual revalidation by CFI

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B. Aircraft Conversion Requirements:

Unless otherwise sanctioned and log book endorsed by the CFI or his delegate, the requirements listed hereunder are to be met. Also, a full briefing is to be carried out by a competent pilot who is current on type.

JUNIOR:

- a minimum of 10 solo flights, including at least one in each of the two seat types.
- conversion check with a Level 2 instructor, including spins and a briefing on parachutes.

PILATUS (Now syndicate owned but available for hire by SCGC)

- a minimum of one one-hour flight.
- a minimum of 5 Junior flights, three of which are to be observed and noted in logbook, particularly regarding smooth touch-down.
- a check with a Level 2 instructor, including spins

ASTIR:

A. Without Water Ballast

- a minimum of 10 Junior flights.
- a check with a level 2 instructor in an IS28 with zero flap setting on landing and with special emphasis on keeping safe flying speed to commencement of round out on approach and holding off within 0.6 metres above the runway.
- a check with a level II instructor, including spins

B. With Water Ballast

- a minimum of 10 flights without water ballast on type and a thorough briefing by a conversant pilot on options in the event of an emergency (eg low level launch failure).
- a check with a Level 2 instructor, including spins

JANTAR 2:

A. Without Water Ballast

- a minimum of 40 hours solo.
- a minimum of 10 Astir flights, the last 3 of which must meet currency requirements and the last one of which is to be observed and passed by a level II instructor.
- a check with a Level 2 instructor, including spins

B. With Water Ballast

- a minimum of 10 flights without water ballast on type and a thorough briefing by a conversant pilot on options in the event of an emergency (eg low level launch failure). Pilot must ensure a tug of minimum 250HP is used.
- a check with a Level 2 instructor, including spins

C. Currency Requirements:

NOT CURRENT:

- A check is required before solo flight by pilots with:
 - under 100 hrs who have not flown for 30 days.
 - over 100 hrs who have not flown for 90 days.

NOT CURRENT ON TYPE:

- Before *local* flight in a previously flown single seater, at least one check flight is required (at the discretion of the instructor in charge) by pilots with:
 - under 100 hrs who have not flown that aircraft for 30 days
 - over 100hrs who have not flown that aircraft for 90 days.
- Before *cross country* flight in a previously flown single seater, at least three (local) flights in that aircraft in the previous two months is required.

OUTLANDING CHECKS:

- an outlanding check is required before cross country flight by all pilots who have not had an outlanding check in the previous 12 months

ANNUAL CHECKS:

- a check with a level II instructor or higher is required by all pilots, including instructors, who have not had (and passed) a check in the previous 12 months.

RANDOM CHECKS

- all pilots can expect a check at any time

4. PASSENGER GUIDELINES

IF PILOT HAS PASSENGER RATING

A passenger rated pilot, either front seat or back, only has the right to fly family or friends. This rating must be endorsed in the log book. Cost sharing with family and friends is legal and approved by the CASA. Such flights are covered by the GFA BBL Insurance policy providing \$250,000 indemnity plus the Club's aircraft policies top-up the cover to currently \$5,000,000 on two seaters.

Under no circumstances should the passenger rated pilot fly people not genuinely in the category of family or friends.

CHARTER RATED PILOTS

Under the Club's procedures, an AEI rated pilot or above, and endorsed with a Charter Passenger rating in their log book is covered by the Club's Air Operator's Certificate and is able to fly non-GFA members as fare paying passengers. During such a flight the passenger is **NOT** permitted to take over the controls. The flight is under the protection of the Carrier's Liability Act, which currently has a legislated claim limit on the Club of \$500,000, of which \$250,000 is met by the BBL policy, with a top up policy to \$500,000.

TRIAL INSTRUCTIONAL FLIGHTS

The Club's policy is to treat all non-family and friends passenger paying flights as trial instructional flights because the Club's intention is to introduce the passenger to the sport of gliding. This requires that all pilots hold a rating of AEI or above so they are able to legally hand over control (above 800ft AGL) to the passenger.

The Club does not conduct 'joyflight' operations although under the Club's procedures it is CASA endorsed to do so because it has a charter rating. The word joyflight is interpreted by the Income Tax Commissioner as a flight made which generates a profit for the Club. We can and have demonstrated that such flights made by non-Club members do not make a profit because the passenger has not paid a membership subscription which does subsidise the Club and enables it to make an overall profit. However to avoid any possible confusion, all non-family and friends passenger paying flights are TIF's

When conducting TIF's the Club does not have the protection of the Carrier's Act limited liability, and is exposed to unlimited Common Law claims. However the Club is protected by the BBL policy to \$250,000, the Club's top-up cover. In the event of the claim exceeding \$500,000, then the GFA Contingent Liability policy which currently has a \$5,000,000 additional indemnity, but for instructors only, not for passenger rated pilots.

5. S.C.G.C. AEROBATICS TRAINING & ENDORSED PILOT PRIVILEGES

(POLICY SET 2 May 1994)

- I. Aerobatics training is available to pilots holding minimum qualifications of Silver C badge and passenger rating to S.C.G.C. requirements.
- II. Aerobatics training in our 2 seater aircraft is restricted to simple manoeuvres - spins, loops, lazy 8's, wingovers and chandelles. Once endorsed, pilots can engage in these manoeuvres in any of the aircraft they are endorsed to fly and within the limitations imposed by the particular aircraft's manual.
- III. Pilots competent in the above manoeuvres are entitled to training (Subject to CFI approval) in the following aerobatics:
 - a) Wingovers approaching and near to a stall turn.
 - b) Climbing half roll and pull through.
- IV. Highly experienced, competent and current pilots, firstly trained and endorsed in power aircraft for stall turns, barrel rolls, inverted flying, slow rolls are, (subject to panel approval and checking out by an instructor nominated by the C.F.I. and further, subject to duty instructor approval on the day,) permitted to perform those of the above manoeuvres for which they are endorsed, and in the Pilatus only.
- V. From time to time, the club is requested to put on an aerobatic display. Be they either simple or advanced aerobatics, they will be performed only by suitably qualified pilots drawn from the top echelon of advanced aerobatic endorsed pilots. Such pilots will firstly need to satisfy the instructors panel that their level of competency is adequate to train up for the manoeuvres intended to be performed, and prior to the event, produce evidence of RTO permission (and, where appropriate) CASA permission.
- VI. All endorsements are subject to validation annually (This includes training and checking pilots).
- VII. All training and/or checking in and performance of advanced aerobatics require pilots to be wearing parachutes.

6. STANDARD RADIO COMMUNICATIONS PROCEDURES - GLIDER OPERATIONS - CAMDEN

All operations to be conducted on QNH broadcast on Camden ATIS (125.1 MHz)

CAMDEN TUGS

"Camden Ground, glider tug ...with glider... to....ft Ready" (frequency 121.9MHz)

"Camden area traffic, glider tug ... left 2500 climbing to ..." (frequency 121.1MHz)

This advisory call on area flight service frequency, would alert aircraft transiting the gliding area or conducting a practice NDB approach.

"Camden Ground, glider tug ... base"(frequency 121.9MHz)

GLIDERS

GLIDERS BELOW 2500' & WITHIN 3NM SHALL CONDUCT ALL OPERATIONS ON 121.9MHZ (See separate requirements for MBZ)

Gliders operating outside 3nm or at or above the control zone ie 2500ft while local, remain on 121.9 with frequent monitoring of, and broadcasting on the area flight service on 124.55 MHz and respond to any traffic if separation advice is required. Lengthy transmissions between gliders, tugs and the pie cart would be made in a glider frequency, eg 122.7 MHz and on completion gliders would return to 121.9 or local area frequency as appropriate.

"Camden Ground, glider ... Entering the zone" (frequency 121.9MHz)

Passing 2000ft and within 2nm, this call is required if intending to stay within the zone.

"Camden Ground, glider ... Leaving the zone" (frequency 121.9MHz)

When a glider has encountered a thermal and wishes to leave the Camden Control Zone, either vertically or horizontally, this call is required.

"Camden Ground, glider ... entering downwind for runway xxx" (frequency 121.9MHz)

When a glider approaches the downwind leg for a landing, this call is required.

ORDER OF PRIORITY:

- **AVIATE**
 - **NAVIGATE**
 - **COMMUNICATE**
-
- Note and observe, having regard to the above order of priority, the requirements of the CASA
 - Respond immediately to any emergency call from ATC, for example 'ALERT ALERT FOXTROT BRAVO INDIA YOU HAVE A TWIN ON COLLISION COURSE THREE O'CLOCK YOUR HEIGHT'
 - Only respond to ATC requests for acknowledgment if safety is not compromised by so doing: if the pilot is overloaded advise ATC to standby if possible. If the pilot lands before it is safe to acknowledge or give a standby call, the pilot should then contact the tower to explain the situation.
 - When becoming aware of imminent danger affecting other airspace & runway users, give immediate warning, for example 'ALERT ALERT GLIDER ON LATE BASE TUG ABOUT TO COLLIDE FROM ABOVE & BEHIND'

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ENROUTE SUPPLEMENT AUSTRALIA (ERSA)

Camden Airport's Special Procedures section contains the following information:

GLIDING OPERATIONS

- A. CAUTION: Glider ops HJ. Notified on ATIS during TWR HR. Outside TWR HR, gliders operate on MBZ.
- B. Within the CTR, CONTRA CIRCUITS IN OPERATION. Gliders operate south of the extended centreline of the active runway. Outside of the CTR, they operate throughout the surrounding and overlying airspace, OCTA.
- C. Gliders within the CTR shall conduct operations on the nominated TWR, or the MBZ. OCTA they may monitor appropriate TWR or area frequency or 122.7.
- D. Glider launch and landing areas are south of RWY 10/28, parallel to RWY 06/24 and 10/28. CAUTION: Gliders landing on glider strip 24 cross RWY 28 Threshold.
- E. ATC responsibilities to aircraft engaged in gliding activity are limited to passing relevant traffic information after the intention to land has been notified.
- F. The normal GAAP requirements on entry to the CTR do not apply to gliders. Gliders shall report entering the CTR and downwind.

.....

BEWARE OF POWER TRAFFIC WITHIN GLIDER AREA!

Note that:

- A. All power traffic is required to obtain ATC clearance for operations within Camden CTR.
- B. Outside Camden CTR, gliders share airspace with all sorts of power traffic.
- C. There is an established NDB let down and missed approach procedure affecting the glider area with which all glider pilots should be absolutely familiar, the following diagram illustrates
 - the holding pattern at or around 3000ftQNH
 - the horizontal plan form & vertical profile on let down
 - the track out route for a missed approach

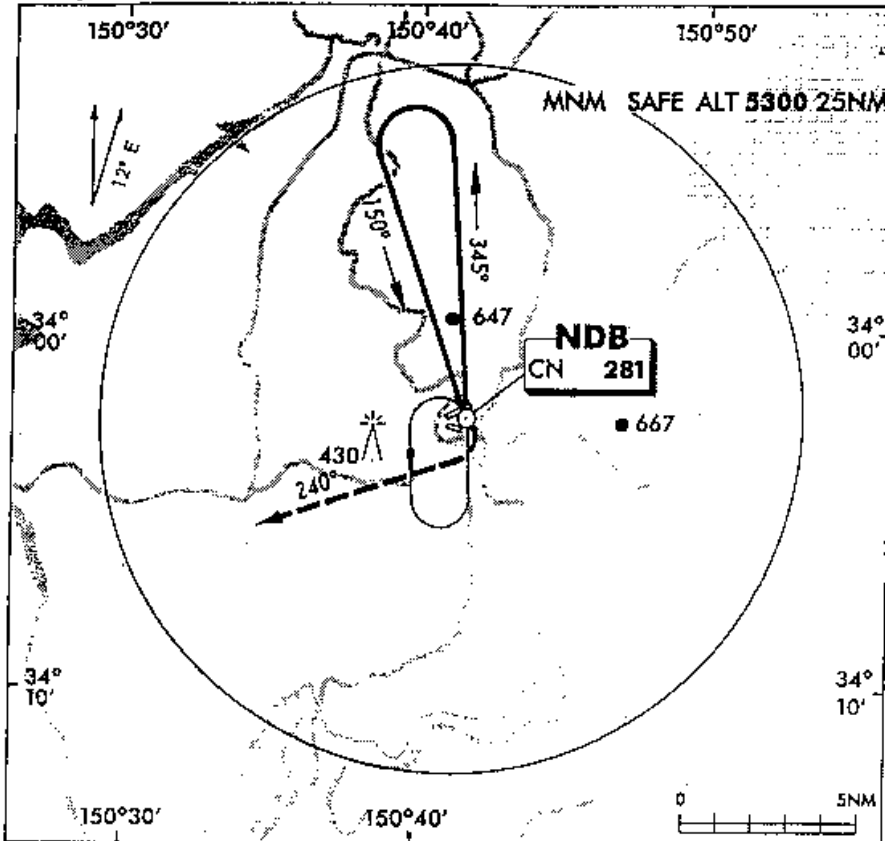
It should be understood that the holding pattern stretches out a good four nautical miles south of the airfield (ie right where we do a lot of flying) and that the missed approach climbing from around 1500ft QNH passes through 'our' air space to the west.

Naturally, while the missed approach is within controlled air space, the ATC will maintain separation, but outside this space, the onus is upon the glider pilot to maintain a good lookout, because the power pilot is 'under the hood', and his instructor can be too preoccupied to see us.

We have had some worrying near misses.

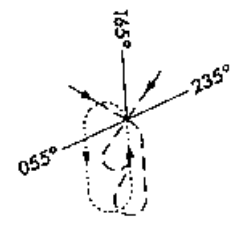
NDB* CAMDEN, NSW (YSCN)

Changes: Note 4.



ATIS	125.1	281
MTAF	120.1	(AH)
TWR	120.1	
SMC	121.9	

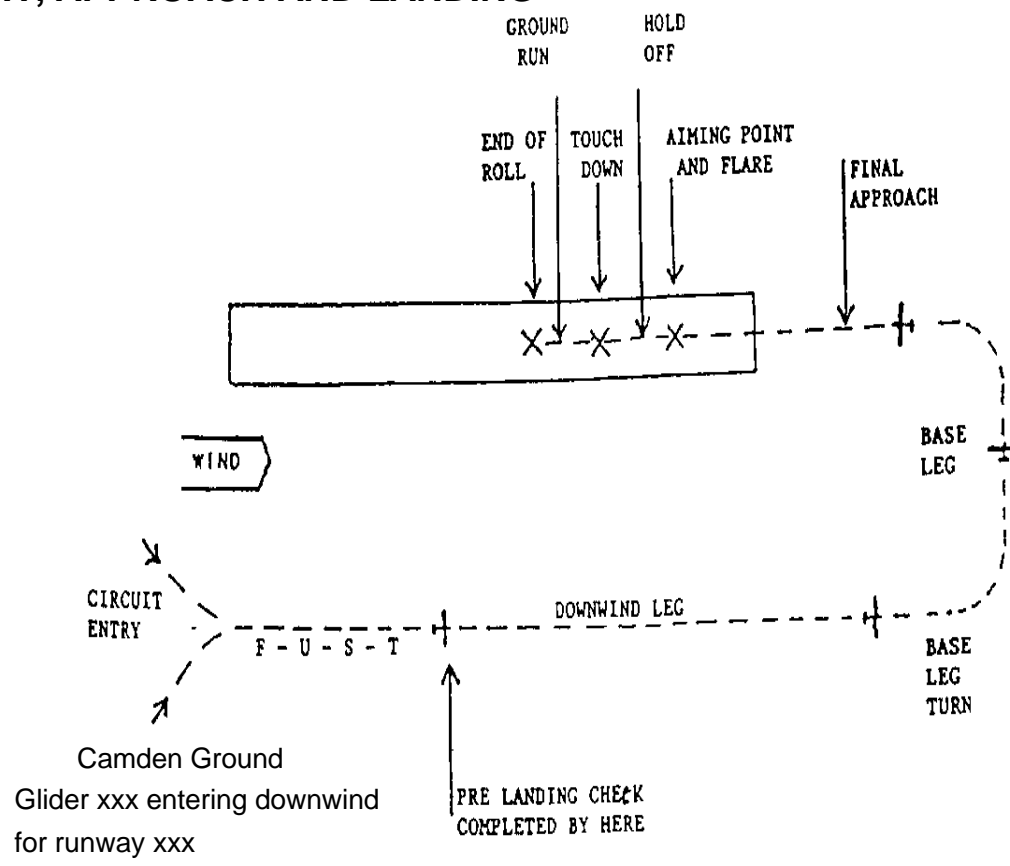
HOLDING AT NDB



TR IN	TURN	TIME	MIN ALT	DME LMT
345°	Left	1	3000	

Bearings are Magnetic Elevations in Feet AMSL

GLIDER CIRCUIT, APPROACH AND LANDING



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6(continued) WHEN THE TOWER IS NOT OPERATIONAL

When the tower is not operational Camden Airport becomes what is referred to as a De-Activated Control Zone which is subject to CASA imposed Mandatory Broadcast Zone (MBZ). The radio frequency to use in these circumstances is the tower frequency (120.1)

Only two calls are required for normal power traffic - on taxi and inbound. There is a greater emphasis on listening as opposed to talking.

Other calls by power traffic can be made at pilot's discretion where particular local circumstances dictate for arranging separation from other aircraft.

The CASA have given verbal approval for us to implement the following discretionary radio calls:

- A. Tug pilots - take off with information "Glider tug AC type, registration and runway"; base leg position with "Glider tug AC type registration, base for runway direction"
- B. Glider pilots - monitor the tower frequency 120.1 , respond to other traffic calls, if necessary, in the interests of separation and make downwind call with information "glider, registration, downwind for runway direction"

It is mandatory for all aircraft when operating in a MBZ to be equipped with a radio capable of accessing the required frequency and for the pilot to be trained, tested and certified by log book endorsement as competent in radio procedures.

Hand held radios will be approved for use outside controlled airspace (OCTA) below 5000ft by pilots of aircraft whose operations do not normally require the carriage of radio. Pilots should be aware of the limitations of hand holds, particularly the lack of an external antenna.

When a control zone is de-activated it automatically becomes OCTA.

The MBZ zone for Camden is identical to the control zone ie 2000ft AGL vertically and 2 miles radius.

For MBZ's other than Camden, the advised procedures are:

- A. **Tugs:** “**All stations ...(airfield name): Glider tug xxx with glider nnn taxiing (airfield name) runway zz for (intentions) eg right crosswind departure to the south releasing at 3000**”
This would apply more so at country airfields where high speed 210 IAS traffic may be inbound. Giving details of intentions is always wise, and should be included at Camden in the interest of safety.
- B. **Tugs & gliders**
use circuit advisory broadcasts as above, and also inbound calls at the MBZ/CTAF boundary
“**All stations ...(airfield name): Glider nnn Northeast of (airfield name) at 5000’ inbound.**”

.....

WHEN THE TOWER IS OPERATIONAL

See the following CAA document ENTITLED “OPERATING PROCEDURES AND INSTRUCTIONS FOR GLIDERS AT CAMDEN, NSW” issued February 1989

Note that current practice is to obtain clearance for retrieving gliders by radio, rather than the light signals from the tower described in Para 15 of the CASA document. Note also that the path described in Paras 13.2 and 13.3 were appropriate for the location of the club's hangar at that time: they are not applicable to the current club hangar.

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6(continued) WHEN THE TOWER IS OPERATIONAL



OPERATING PROCEDURES AND INSTRUCTIONS FOR GLIDERS AT CAMDEN, NSW.

DATE OF ISSUE: FEB. 1989

WHEN THE TOWER IS OPERATIONAL (continued):

Page 1

OPERATING PROCEDURES AND INSTRUCTIONS FOR GLIDERS AT CAMDEN, NSW.

1. GENERAL

1.1 Camden is designated as a General Aviation Control Zone. All relevant General Aviation Aerodrome Procedures (GAAP) apply.

1.2 Camden Control Zone dimensions are:

(a) 2 nautical miles radius from the Aerodrome Reference Point;

(b) from ground level to 2000' AMSL.

1.3 These procedures have been designed to accommodate simultaneous operations by gliders and powered aircraft, by day, when VMC exist in Camden CTR.

2. DEFINITIONS

2.1 Powered aircraft section: that portion of Camden Control Zone reserved for powered aircraft operations.

2.2 Glider section: that portion of the Camden Control Zone reserved for glider operations.

2.3 Glider area: that portion of Camden aerodrome reserved for glider operations.

2.4 Duty Runway: The runway nominated for powered aircraft on the ATIS. This will normally be that whose direction is most nearly into wind.

3. DIVISION OF CAMDEN CONTROL ZONE

3.1 Camden CTR is divided into a section for powered aircraft and a section for gliders.

3.2 The boundary between the two sections is a line drawn across the CTR, along the line of the southern edge of the Duty Runway.

3.3 The powered aircraft section lies to the North of the boundary line.

3.4 The glider section lies to the South of the boundary line.

WHEN THE TOWER IS OPERATIONAL (continued):

Page 2

3.5 All aircraft, power and gliders, shall strictly confine operations to their respective sections of the CTR.

3.6 No glider operations are permitted overhead the Control Tower in the CTR.

4. DIVISION OF CAMDEN AERODROME

4.1 All glider operations shall take place from the two glider areas, which are south of and parallel to Runway 06/24 and Runway 10/28.

5. RADIO REQUIREMENTS

5.1 Powered aircraft, including glider tugs, must be fitted with radio requirement capable of maintaining satisfactory two-way communication with Camden Tower and Camden Ground.

5.2 Glider tugs shall use Camden Ground frequency 121.9 MHz for all operations.

6. PRACTICE AND LETDOWNS

6.1 The overshoot for the instrument approach takes powered aircraft through glider section of the CTR. The duty controller will permit such operations only when glider traffic and work-load allows the manoeuvre to be completed in safety.

7. TOW AIRCRAFT OPERATING PROCEDURES

7.1 For all operations in the gliding area, the tow aircraft shall be treated as a glider - that is, it may take off from and land on the area reserved for gliders, and may operate in the glider section of the CTR, and is exempt from the requirement to obtain a landing clearance prior to landing on the glider area.

7.2 Nothing in these instructions shall prevent the tow aircraft from operating in the powered aircraft section of the CTR, provided it complies with the rules for operation of powered aircraft.

7.3. If it is necessary to drop a tow rope, it shall be dropped in the glider area, in the current landing direction.

7.3 The tow aircraft shall obtain a clearance for each takeoff, and, to facilitate identification, shall prefix the base call with the phrase "glider tug".

WHEN THE TOWER IS OPERATIONAL (continued):

Page 3

- 7.5 The tow aircraft shall not, except in emergency, release a glider in the powered section of the CTR.
- 7.6 The tow aircraft shall be responsible for its own separation while operating in the glider section of the CTR or on the glider area of the aerodrome. However, traffic information may be given if considered necessary.
- 7.7 If the tow aircraft must orbit to give way to a glider, it shall do so into the glider section.
- 7.8 After takeoff, except in emergency, the tow aircraft glider combination shall climb straight ahead, and shall not turn below 500' AGL, or tow over populated areas, such as Camden or Elderslie, below 1500' AGL.

8. GLIDER OPERATING PROCEDURES

- 8.1 Gliders, except in emergency, shall at all times operate only on the glider area of the aerodrome and in the glider section of the CTR.
- 8.2 Gliders are not exempt from the provisions of CAR 157 (flight over populous areas).
- 8.3 Gliders are exempt from the provisions of CAR 155 as far as the minimum height for recovery is concerned (1000' in lieu of 3000').
- 8.4 Any low level simulated cable breaks shall be notified to, and approved by, the Tower before takeoff.
- 8.5 Gliders entering or exiting the Camden CTR shall do so via the glider section.
- 8.6 When within Camden CTR all gliders or combinations of tow aircraft and gliders shall provide lateral separation of at least 600 metres from the extended centre line of the Duty Runway.
NOTE: Due to the proximity of Runway 10/28, this restriction does not apply to the take-off and landing phase of operations from the glider area 10/28.

9. CIRCUIT PROCEDURES

- 9.1 The Duty Runway for powered aircraft shall determine the direction of glider operations, which shall be conducted in the same direction from the glider area parallel to the Duty Runway.

WHEN THE TOWER IS OPERATIONAL (continued):

Page 4

9.2 OPERATIONS FROM RUNWAY 28

9.2.1 The circuit for powered aircraft shall be a right hand circuit.

9.2.2 The circuit for gliders shall be a left hand circuit.

9.2.3 If the glider area is occupied, tow aircraft may land on Runway 28, after obtaining a clearance to do so.

9.3 OPERATIONS FROM RUNWAY 10

9.3.1 The circuit for powered aircraft shall be a left hand circuit.

9.3.2 The circuit for gliders shall be a right hand circuit.

9.3.3 If the glider area is occupied, tow aircraft may land on Runway 10, after obtaining a clearance to do so.

9.4 OPERATIONS FROM RUNWAY 06

9.4.1 The circuit for powered aircraft shall be a left hand circuit.

9.4.2 The circuit for gliders shall be a right hand circuit.

9.4.3 If the glider area is occupied, tow aircraft may land on Runway 06, after obtaining a clearance to do so.

9.4.4 Departing tow aircraft/glider combinations shall track towards Camelot homestead to avoid the 06 glider circuit joining area.

9.5 OPERATIONS FROM RUNWAY 24

9.5.1 The circuit for powered aircraft shall be a right hand circuit.

9.5.2 The circuit for gliders shall be a left hand circuit.

9.5.3 Departing tow aircraft/glider combinations shall not turn into a left hand circuit before they reach the south western side of Werombi Road, to avoid flying over Carrington Hospital.

10. TRAFFIC INFORMATION AND ALERTING

10.1 An alerting service shall be provided between powered aircraft and glider traffic when the Controller considers it necessary. This service shall be extended to the tow aircraft when approaching, landing on, or manoeuvring in the glider area.

WHEN THE TOWER IS OPERATIONAL (continued):

Page 5

11. GLIDER CIRCUIT JOINING AREA

11.1 In order to accomplish a successful approach and landing a glider must enter and turn in a suitable area in which to lose altitude prior to entry into the circuit. This area is known as the circuit joining area.

11.1.1 Three circuit joining areas, clear of any built-up areas have been designated at Camden.

11.2 The circuit joining area for landing in the 06 direction is an area East of Macquarie Grove Road, north of the town and south of the sand mining area.

11.3 The circuit joining area for landing in the 10 direction is an area centred about midway between Camden Showground and the southern sewerage treatment works, and clear of the town.

11.4 The circuit joining area for landing in the 24 or 28 direction is an area bounded by Werombi Road, Smalls Road and The Oaks Road.

11.5 Tow aircraft shall avoid these areas at all times.

11.6 All gliders operating in the circuit joining areas must, except in emergency, avoid manoeuvring on, or close to, the extended lines of the glider area in use, so as not to force a tow aircraft into any unnecessary and violent avoiding action.

12. RETRIEVAL OF GLIDERS

12.1 After any abnormally long landing a car may be used to retrieve the glider. If the car remains outside the markers at all times, no clearance for that retrieval is required.

13. GROUND HANDLING OF GLIDERS

13.1 At the commencement of gliding activities each day the gliders shall be towed by car to the designated glider area.

13.2 For the 24, 06 and 28 directions, the gliders shall proceed initially via the taxiway to the end of the sealed apron, thence over the bridge and via the perimeter road to the launching point. The return journey shall be the reverse.

WHEN THE TOWER IS OPERATIONAL (continued):

Page 6

- 13.3 For the 10 direction the gliders may proceed via the grass taxiway leading to RWY 10/28. They shall stop short of RWY 10/28, and obtain a clearance to cross, either by radio or by light signal, from the Tower. After receiving the clearance, they shall cross the runway and the glider area, thence turn right and follow the line of markers on the southern side of the 10 glider area. The return journey shall be the reverse, and clearance to cross must be obtained, either by radio or by light signal, prior to crossing the glider area and RWY 10/28. Prior notice to the Duty Controller is required when intending to use this route. An alternative route is via the southern side of 10 glider area until joining the perimeter road. (Reciprocal when proceeding for takeoff.)
- 13.4 Weekend operations on 06 or 24 glider areas shall be from the southern side. Mid-week operations may be conducted from the northern side if required to even out wear of the strip.
- 13.5 After a "Hangar Flight" on 10 or 06 the gliders shall return via the perimeter road as shown in para. 13.2.
- 13.6 The above rules apply to gliders equipped with mechanical "wing walkers", except that if the glider car has no radio and requires to cross Runway 10/28 via the taxiway a clearance shall be arranged beforehand by phoning the Tower.
14. DUTY PILOT
- 14.1 The Duty Pilot is responsible for the following:
- 14.1.1 Co-ordination and communication with the Control Tower, and maintenance of a continuous listening watch on the Tower frequency;
- 14.1.2 Safety lookout for any irregular or dangerous handling of gliders;
- 14.1.3 Keeping order in the glider area by organising speedy retrieving, and having the required ground crew for the job;
- 14.1.4 Ensuring that all members of the public remain well clear of the launch area, and of parked tow aircraft;
- 14.1.5 Ensuring that the car parking area and the gliding area are kept tidy and clear of litter, and that smokers exercise caution and guard against grass fires.

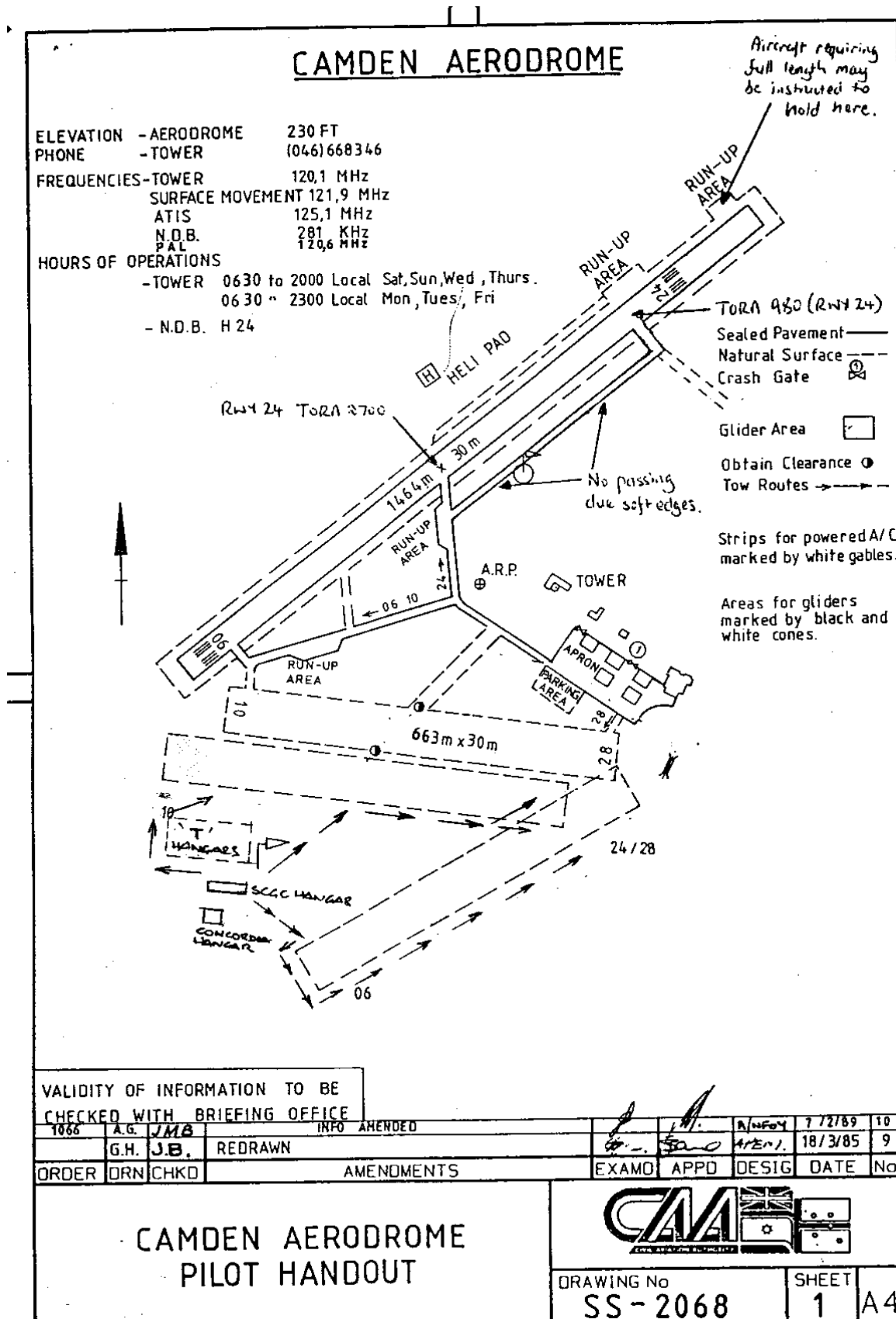
WHEN THE TOWER IS OPERATIONAL (continued):

Page 7

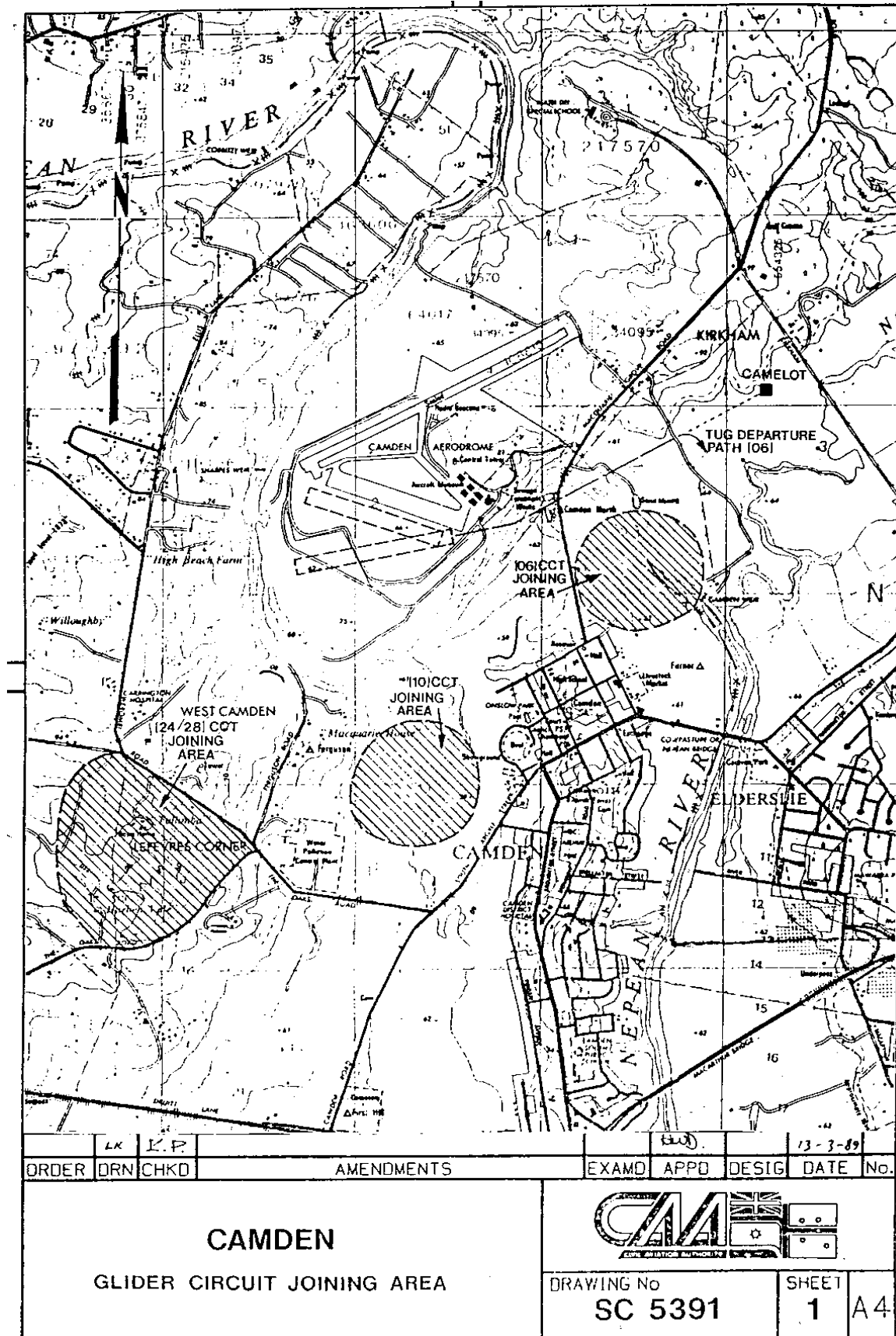
15. **SIGNALS**

- 15.1 For operations involving handling and movement of gliders on the ground at Camden only, the following signals from the Tower apply:
 - 15.1.1 Steady Red Light: Stop and hold position.
 - 15.1.2 Flashing Green Light: Clear to cross the runway or strip.
 - 15.1.3 Flashing White Light: Return to the Hangar. Note: This signal would only be used if it is obvious that a glider is being towed in the wrong direction.
- 15.2 When the 28 direction is being used for operations a white bar, made of plastic sheeting, shall be placed across the threshold of the 24 direction as an indication that the 24 direction is not to be used.

WHEN THE TOWER IS OPERATIONAL (continued):



WHEN THE TOWER IS OPERATIONAL (continued):



7 CHECK FLIGHT ADVICE

ADDITIONAL AREAS CHECKED

*Instructor to comment on pilot's performance
(GOOD, PASS, PRACTICE REQUIRED, FAIL)*

- CROSSWIND T/OFF
- ROPE BREAK PROCEDURES
- UNDERCART UP OR R.U.T
- HIGH TOW
- HANG UP
- WAVE OFF
- RUDDER WAG
- AEROBATIC CHECK
- STALLS
- 2nd EFFECT AILERONS
- 2nd EFFECT RUDDER
- INCIPIENT SPINS
- 2 TURN SPINS
- SPIRAL DIVE
- STEEP TURNS
- REVERSING TURNS
- COME OUT ON A HEADING
- VARY BANK, CONSTANT SPEED
- VARY SPEED, CONSTANT BANK
- THERMALING WITH OTHER GLIDERS
- ROLLING ROUND A POINT
- FLAPPED LANDING
- LONG FINAL
- MODIFIED CIRCUIT
- CROSS WIND LANDING
- ALTIMETER BLANKED OFF
- AS.I. BLANKED OFF
- RULES OF THE AIR
- LOCAL CIRCUIT PROCEDURES AND RULES
- KNOWLEDGE OF AREA LIMITS
- KNOWLEDGE OF HEIGHT LIMITS
- PASSENGER RATING RESPONSIBILITIES

CHECK FLIGHT ADVICE

PILOT to complete these details

Pilot's Name:

Type of Check: Date

Dual Time: hours. Solo time: hours

HAND TO INSTRUCTOR BEFORE FLIGHT

INSTRUCTOR to complete these details

Conditions: A/c flown:

If check is not up to standard IN ANY ONE of the following, it is automatically failed.

- 1 Cockpit checks
- 2. Look-out
- 3. Speed control
- 4 spin entry and recovery
- 5. Breakoff point safe habits
- 6. Circuit planning
- 7. Speed control in circuit
- 8. Two point landing

CHECK PASSED COMMENTS:
FAILED

INSTRUCTOR'S NAME (Print)

SIGNATURE:

(SEE OVER)

PLEASE PLACE IN C.F.I.'s BOX

ANNUAL CHECK FLIGHT ADVICE

Pilot's Name:

Date.....

Dual Time:hours. Solo time: hours

HAND TO INSTRUCTOR BEFORE FLIGHT

INSTRUCTOR to complete these details

Pilot characteristics listed below need to be assessed (refer to Instructors Handbook pages 105 to 108 for details)

LOOKOUT	
AIRMANSHIP	
LAUNCH	
COORDINATION	PASS/FAIL
SPINNING	
CIRCUIT, APPROACH & LANDING	
SENSITIVITY TO LOW 'G'	

(Altimeter blanked during the above assessment is recommended)

ANNUAL REVALIDATIONS

Notwithstanding a pass on 'annual check' separate endorsement is required for:

CHARTER RATING	PASS/FAIL
PASSENGER CARRYING PRIVILEGES	PASS/FAIL
INDEPENDENT OPERATOR PRIVILEGES	PASS/FAIL
BASIC AEROBATIC PRIVILEGES	PASS/FAIL
ADVANCED AEROBATIC PRIVILEGES	PASS/FAIL

INSTRUCTOR'S NAME (Print)

SIGNATURE:

PLEASE PLACE IN C.F.I.'s BOX

8 ALTIMETRY

General

- *The altimeter is an instrument fitted to a glider which measures its vertical position in the atmosphere.*
- *The altimeter depends for its operation in the change in atmospheric pressure with height. It is in fact nothing more than a simple aneroid barometer, calibrated to read in feet instead of hectapascals (HPa) of mercury.*
- *The settings and procedures described here apply to aircraft operating under the Visual Flight Rules (VFR).*

Altimeter settings

- *To be of any use, the altimeter must have a reference pressure to measure from. There is a special sub-scale on the dial of the altimeter on which to set this reference pressure. Once it is set, the instrument will measure with reasonable accuracy the vertical distance above that reference. As has already been stated, the vertical distance is measured in feet, not metres as one might expect in a metric country.*
- *The pilot may set one of three reference pressures on the altimeter*
 - *Aerodrome level pressure, known as QFE, at which the altimeter will read zero when the glider is on the ground at the aerodrome. Until GFA Ops Directive 1/93 was issued (in 1993) this was the most common setting used by gliders in Australia.*
 - *Mean sea level pressure, known as QNH, at which the altimeter will read the aerodrome's level above sea level when the glider is on the ground. GFA Ops Directive 1/93 requires that all gliders operating below 10,000 feet set their altimeters to QNH, bringing gliding into line with other airspace users.*
 - *Standard atmospheric pressure, which the internationally-agreed standard setting of 1013.2 HPa is set on the altimeter sub-scale. All aircraft flying above 10,000ft are required to operate with this setting on their altimeters, to give a common reference above that level.*
- *If QFE (aerodrome level pressure) is set on the altimeter, the instrument is said to measure height.*
- *If QNH (mean sea level pressure) is set on the altimeter, the instrument is said to measure altitude.*
- *If the Standard Pressure Setting (1013.2 HPa) is set on the altimeter, the instrument is said to measure flight level. This setting is technically known as QNE, but that particular expression is seldom used.*

Altimetry procedures

- *Glider pilots do not regard the altimeter as a dependable aid to accurate height measurement. The reason for this is the nature of cross-country flying in gliders, which may result in an outlanding in strange terrain with very little warning. The terrain over which they are flying may be at quite a different level from the terrain at the takeoff point, pilots are therefore trained to estimate their height above the local terrain by eyeball alone and they become surprisingly accurate at doing this. The altimeter is only used as a "coarse" guide to height.*

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- *However, the purpose of the altimeter is not solely to provide a height readout to the pilot for his own purposes; An aircraft in any given piece of airspace may be interested. for collision avoidance reasons, in the altitude of other aircraft in close proximity. For this reason, the various settings were devised and are used in the normal course of flying by powered aircraft.*
- *Glider pilots should be aware of the procedures used by all airspace users, in order to fit into the total system as smoothly as possible. The system works as follows :-*
 - *ALL powered aircraft cruising, climbing or descending below 10,000ft will be on the QNH (mean sea level) altimeter setting. This may be an aerodrome QNH if the aircraft has departed from a major aerodrome with tower facilities or it may be an "Area" QNH given for a designated area by the Air Traffic Services personnel. The Area QNH may be obtained on request on the Area VHF frequency. When the QNH settings in use, all altimeter indications are altitudes.*
 - *For aircraft climbing, 10,000ft is the upper limit of operations on the QNH altimeter setting and is known as the transition altitude. Any aircraft climbing above this altitude will re-set the altimeter to the standard setting of 1013.2 HPa.*
 - *For aircraft descending, 11,000ft is the lower limit of operations on the standard pressure setting of 1013.2 HPa and is known as the transition level. Any aircraft descending below this level will re-set the altimeter to the Area QNH.*
 - *Since 11,000ft is the first of the "Flight Levels" it is referred to, not as 11,000ft, but as Flight Level One-one-zero (FL110). All Flight Levels are referred to in a similar way.*
 - *The airspace between the transition altitude and the transition level is known as the transition layer. It varies in thickness according to the Area QNH and is not available for cruising flight.*
 - *To re-cap, aircraft operating below the transition altitude use the QNH altimeter setting and refer to their vertical positions as altitudes. Aircraft operating above the transition level use the standard pressure setting and refer to their vertical position as flight levels. From 1st September, 1993, this procedure also applies to gliders.*
 - *It is worth noting that the altimeter should read aerodrome elevation plus or minus 100ft, (or plus or minus 110ft if the aerodrome is above 3300ft AMSL)*

8.1 AIRSPACE CLASSIFICATION

On 7th December 1995 the first stage of the ICAO based airspace classifications became effective in Australia. The various classifications have differing requirements regarding control authorisation, radio, transponders, visibility and distance from cloud. The airspace details current at November 2000 are as follows:

Airspace Type	Clearance requirement	Radio	Transponder	VMC Criteria
Class C Controlled Airspace	Yes	Yes	Yes (in radar coverage)	Vis: 8km above 10,000FT AMSL, 5km below 10,000FT Distance from cloud 1.5km horiz, 1000ft vert
Class D Controlled Airspace	Yes	Yes	Yes (in radar coverage)	Vis: 5km Distance from cloud 1.5km horiz, 1000ft vert
Class E Controlled Airspace	No for VFR; Yes for IFR	Yes	No	Vis: 8km above 10,000FT AMSL, 5km below 10,000FT Distance from cloud 1.5km horiz, 1000ft vert
GAAP Controlled Airspace	Yes (take off clearance, circuit entry or transit instruction)	Yes	No	Clear of cloud, 5km vis
Class G Uncontrolled Airspace	No	Yes for IFR, and VFR in MBZ or using reduced VMC criteria *	No	Vis: 5km below 10,000 FT AMSL Distance from cloud 1.5km horiz, 1000ft vert between 3,000FT-10,000FT AMSL Clear of cloud and in sight of ground if at or below 3,000FT AMSL or 1,000FT AGL whichever is the greater.

Class C or D airspace exists around all controlled aerodromes except those at which General Aviation Airport Procedures (GAAP) apply.

Class G airspace covers our uncontrolled airspace.

CTAF's (Common Traffic Advisory Frequencies) are established at all uncontrolled licensed aerodromes. These frequencies are not monitored by the CASA. Non-radio aircraft may operate within a CTAF, but hand held radios are approved for use in these areas and their use is encouraged, The usual size of a CTAF is 5NM radius and up to 3000ft above ground level (AGL)

MBZ's (Mandatory Broadcast Zones): As the name implies, carriage and use of radio is mandatory in these areas. Approved hand held radios are acceptable and the frequencies are not monitored by the CASA. The usual size of a MBZ is 15 NM radius up to 5000ft AGL. The common CTAF frequency over most of the country is 126.7MHz.

9 GFA OPERATIONS DIRECTIVE 2/93 - LAUNCH SIGNALS

Background

A tradition has evolved over a number of years whereby signals are given by a pilot to a launch-point signaller by means of a variety of hand-signals. Typical of these signals are a hand-down wave for "take-up slack" and a hand-up wave for "all-out" (full power). Other signals, such as one-finger for take-up-slack and two fingers (!) for all-out appear from time to time.

All such signals have the serious drawback that they distract the pilot from two vital tasks which must be monitored at this critical time. The two tasks are to keep control of the glider when things can be happening very quickly, and to release the cable if it becomes necessary.

As proof that such distractions do occur, most instructors can relate stories about pilots still waving their hands or poking two fingers into the air as they pass two or three hundred feet on the launch.

Some operations, for reasons related to their integration with intensive power traffic on the same airfield, give the responsibility for signals to the wingtip holder after initially declaring themselves ready for take-off. The safety record of such operations is just as good as those insisting on the full range of signals coming from the pilot. In any case the pilot always has the ultimate sanction of releasing the rope or cable if things go wrong.

Revised procedure

Hand signals from the cockpit are abolished, to be replaced by the following procedure;

- 1. After attaching rope/cable and ensuring all clear above and behind, pilot signifies ready for take off by giving a thumbs-up signal. This is confirmed verbally by the expression "pilot ready for take-off".*
- 2. Crew member (who must be adequately trained or acting under supervision raises wingtip and gives take-up-slack signal if satisfied that it is still clear. Pilot keeps hand as close to release as possible.*
- 3. When rope/cable tight, wingtip holder gives all-out (full power) signal. There is no need for pilot input to this signal, as the pilot actions under (1) above signify readiness for take-off, not just for the taking up of the slack.*
- 4. For winch/auto launching, there shall be loud verbal confirmation of take-up-slack and all-out signals from wingtip holder to signaller and vice-versa. This acts as feedback to the pilot that the signals are proceeding and also alerts all people at the launch point that a launch is under way.*

The pilot always has the option of pulling the release if unhappy with any aspect of the take-off and, as usual, any person around the launch point may shout "Stop" if necessary.

This directive became effective as of 5th October 1993.

10 VISITING PILOTS

1. *Visiting pilots may fly club aircraft provided the pilot:*
 - a. *is a current flying member of another club and GFA and has a logbook available for inspection.*
 - b. *passes the usual club check with a suitable instructor for the aircraft and is made fully conversant with the area, circuit procedures and emergency procedures to conform with power traffic.*
 - c. *has an indemnity release admitting responsibility for damage up to the insurance excess, currently \$500 to \$1000, depending on the value of the aircraft.*
2. *Visiting pilots are restricted to flying types with which they are already familiar. Normal SCGC conversion requirements apply for aircraft which the visitor has not previously flown.*
3. *Visiting pilots who satisfy all the above conditions may continue to fly club aircraft solo during subsequent visits provided that:*
 - a. *the pilot is in current flying practice.*
 - b. *less than 6 months has elapsed since the initial club check.*
4. *Pilots who visit the club on a regular basis will be asked to join the club.*
5. *Visiting solo pilots who hold A, B or C Certificates must satisfy the SCGC's additional requirements prior to exercising endorsements they hold regarding passenger carrying and / or cross country flying, and particularly flying cross country from Camden.*

10.1 AID TO BRIEFING FOR VISITING PILOTS AT CAMDEN

Note: *these notes are an aid to briefing only. Authorising Instructors are required to ensure that they brief fully, and visiting pilots are required to be aware of all applicable local and club rules.*

Area and height limits:

1. *Keep out of the power portion of the Camden control zone at all times. For our purposes the zone is 2,500ft high and five miles across. The main runway is one mile long.*
2. *NEVER exceed 4,500ft AMSL (above mean sea level ie on QNH - set the altimeter to 230 feet before take off) in the glider zone. This goes down to 2500 feet about four miles east of Wedderburn. It goes up to 7500 feet about 2 miles east of The Oaks. Study a map before launching and carry one when flying.*

Circuits:

1. *We use three manoeuvring areas for our three landing directions. You may manoeuvre further upwind of these areas, but fly through them as you pass downwind so as to conform to our local traffic pattern. The required strip is indicated by our (Southern Cross) pie cart, which is usually at either end of 06/24, but occasionally may be on the 10/28 strip if the wind is strongly east or west. If so, be very careful on the base and final not to infringe the power runway which is then immediately beside the gliders runway.*
2. *If in any doubt, call Camden ground before you start downwind to confirm the direction in use.*
3. *NEVER fly up (the wrong way) the downwind leg below 1,000 feet. We prefer a check-point of 500 to 600 feet, but some aircraft may fly higher circuits for training purposes.*

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Radio:

1. *Radio must be carried and switched on at all times in the zone. You must have a radio endorsement to fly solo at Camden. The procedures currently in use are outlined in the relevant section of this manual.*
2. *Study the radio notes carefully for the full current official words on radio procedures.*
3. *We usually don't use dive brakes on the final turn. Aim for a half dive brake angle on final. Our circuit procedures are standard GFA procedures, but our method of teaching encourages more path adjustment than at some sites, so be wide awake in the circuit.*
4. *Separation from other traffic in the circuit may require the pilot to pull dive-brakes, speed up and go in early. Alternatively, if there are gliders just ahead and below or of lower performance, find a little reduced sink, slow down and let the other traffic get well ahead. Please do not land down the middle of the strip, but as close as possible on the side furthest from the pie cart. We stack towards the pie cart, not away from it.*
5. *We do NOT thermal in the circuit area below 1,500 feet QNH.*

General.

1. *Going out of gliding range of the field (cross-country) or performing aerobatics requires specific permission from the instructor in charge.*
2. *No aerobatics are permitted in the control zone.*
3. *Practice 'competition' final glides are NOT permitted in the Camden control zone: any such final glides must be completed above the zone.*
4. *Visiting (and SCGC) pilots are expected to pay the insurance excess (\$500-\$1,000) if any damage occurs to a SCGC glider in their care.*
5. *Visitors from clubs based away from Camden are welcome to fly once or twice with us, but if based in Sydney for a period or wish to fly more often, are requested to contact the membership secretary for our special arrangements for such cases. All flying must be paid for, on the day, before leaving the field.*

11 WAVE CAMP NOTES

Pre-camp briefing

The Expeditions Officer or the CFI will approve the person to run the camp. The first pre-camp briefing will be held at least one month before the camp to allow time to check on equipment and will deal with the following items:

1. *Qualifications and restrictions, for example the requirements for the Bunyan(Canberra Gliding Club) wave camp are:*
 - *A Silver C, a cross country rating and current outlanding practice.*
 - *To have a Bunyan site check*
 - *All gliders to be fitted with radio and oxygen.*
 - *Pilots to have suitable warm clothing*
 - *That there be suitable tie-down equipment for gliders and trailers.*
2. *The theory needed for the camp to be supplied to new participants, and a recapitulation to previous attendees*
3. *Local information on the camp site, such as accommodation alternatives, cooking facilities and so on, be provided.*
4. *The requirements for personal kit to be outlined.*
5. *Accommodation to be booked*
6. *Organise for a tug and tug pilot if required.*
7. *Allocate people to check on, and organise equipment.*
8. *Organise a second briefing closer to the camp to check readiness.*

Equipment

1. *Parachutes, check currency (Note: 3 weeks must be allowed for repacking)*
2. *Tie downs*
 - *twins 12 big pegs*
 - *singles 9 big pegs*
 - *tugs 5 tug pegs**All with 2 metres of rope attached.*
3. *Control locks for tug - 2 elevator, 2 aileron, 1 rudder.*
4. *Outlanding kit for each aircraft: hammer, pegs, rope and a holdall.*
5. *Batteries: one for each aircraft and a spare with a charger for each battery*
6. *A multimeter*
7. *Barographs, with foils, blackening kit, camphor, and hair spray for fixing.*
8. *Forms:*
 - *log book*
 - *Camp sheets (specific to each camp)*
 - *Check sheets*
 - *Claim sheets*

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9. Tug: (in association with the tugmaster)

- *Oil*
- *Tyres and tubes (main and tail)*
- *Spark plugs*
- *Tow rope (with plastic sleeve)*

10. Aircraft

- *Has the aircraft sufficient hours for the camp?*
- *DI books*
- *Spare tubes for main and tail wheels*
- *Gap tape: wide for Pilatus and 18mm for others*
- *Special tail removal tool for Pilatus, and 2 x 8mm wing bolts*
- *IS28 rigging tool) and 2 x 10mm wing bolts*
- *Spare safety pins*
- *Oxygen equipment fitted to all aircraft*
- *A mask and microphone assigned to each aircraft (in a bag and marked)*
- *Oxygen bottle refilling pipes and regulator checked and available*
- *Clear view panels (or plastic sheet to make them) plus 18mm magic tape*
- *Sealing tape for cockpit edges*

11. Aircraft general

- *Grease for wing pins & control connections*
- *Clean cloth & methylated spirits*
- *Ocky straps for barographs etc.*

12. Trailers

- *Check the registration is current*
- *Check lights and globes*
- *Check tyres and spare tyre*
- *Ensure that a suitable jack and wheel brace is available*
- *Check there is sufficient rope and padding to secure the aircraft*
- *There must be shackles and a 7 pin utilux cable*
- *A tie down kit of 5 pegs with rope is required.*

13. Maps

- *1:100,000 topographical maps for the area.*

A master map for each camp site should be built up in Camden showing outlanding sites, control boundaries and any other relevant information

14. A list of radio frequencies should be obtained

12 PRE-FLIGHT CROSS-COUNTRY CHECKLIST

1. Date
2. Pilot in command
3. Nominated task.....
4. Glider registration
5. Duty Instructors' approval
6. Retrieve crew (car keys)
7. Duty pilot advised
8. Trailer registration and number plates checked.....
9. Trailer checked and attached to car. All lights working,
tyres inflated, trailer accessories for glider, tools, aileron
and rudder chocks, ramps, safety pins, covers.....
10. I have rigged, derigged and trailered this glider.
11. If entering controlled airspace: ATC advised, MBZ/CTAF procedures
12. Maps, pencils, navigation equipment.....
13. Oxygen if required
14. Radio and battery
15. Parachute.....
16. Barograph number.....
 - Smoked
 - Sealed by.....
 - OO number.....
 - Last calibrated
17. Tie down kit.....
18. First aid kit.....
19. Food and water
20. Landing away certificate
21. Camera sealed
22. Goal declaration signed
23. Sunglasses.....
24. Warm clothing
25. Ready cash including phone charge.....
26. Telephone reporting points
27. Torch.....
28. Pre-flight briefing for NOTAM and MET (Verbal(BN or ML),AVFAX, DECTALK)
29. Any other requirements.....

13 OUTLANDING REPORT

Date of flight

Pilot in command

Glider type

Registration VH-

Location.....

.....

.....

Name of property and/or owner.....

Phone number

Name of nearest town.....

Name of road nearest glider.....

Distance from town

Is glider visible from road?

Latitude and longitude.....

Time of landing

Any other details.....

.....

Aerotow retrieve required?.....

Trailer retrieve; crew chief.....

Location of car keys.....

If making a badge claim, the details above must be certified by two independant witnesses:

Witness 1

Witness 2

Name

Name

Address

Address

Phone

Phone

Signature

Signature

14 GUIDELINES FOR THE COLLECTION OF EVIDENCE IN THE EVENT OF AN ACCIDENT OR SERIOUS INCIDENT

In the event of an accident or serious incident:

A. FIRST ACTIONS

1. Attend to any injured party

It is hoped that someone trained in first aid would be available at every site. In the absence of such advice provide first aid - refer to the St John Ambulance Handbook. Copies can be obtained through any trained personnel or apply direct to St John Ambulance First Aid Training. First Aid Training is readily available through this service. Call the ambulance and tell them how many people are injured and some idea of the nature of those injuries.

2. Look for psychological trauma.

Reassure all involved. Do not allow any speculation as to what occurred at this time and certainly no recriminations. Remember that those only peripherally involved may have suffered some psychological trauma. Nevertheless, set priorities and deal with the need. Remember it may not be the obvious case which needs immediate attention.

B. INITIAL REPORTING

Do not move the wreck except as required to preserve life, tend or prevent further injury , or in case it presents a hazard to others or animal life.

Do not allow speculation as to causes by anyone and, so far as is possible, discourage discussion especially between important witnesses.

Do not allow recriminations by anyone. Remember the person you stop may well be most thankful you prevented them from saying what should not have been said.

Determine **briefly** what happened - prepare two or three one liners and then

- i. Ring and report to BASI; you should have the number available- it is 008 011 034 (or 008 020 616 in Canberra only).*
- ii. Ring and report to the RTO/Ops/ If you cannot get the RTO immediately then attend to other urgent matters and try again later. If still unsuccessful, ring the DOO, Mike Valentine (018 999 431) or the Chairman of the Operations Panel.*
- iii. If neither of these are available, leave a message on the Secretariat phone and ring someone from the State association. Do not worry if still unsuccessful.*

All relevant phone numbers are on the cover sheet of the new accident forms.

C. IF BASI ATTENDS

If BASI attends then follow instructions and leave the investigation to them.

Collect sufficient information along the following lines for our (GFA) information - but remember that we have no legal authority.

Discourage speculation and suggest relevant witnesses prepare a report (for BASI) according to the following guidelines below("if BASI does not attend")

D. IF BASI DOES NOT ATTEND

Remember firstly: we have no authority - nor do we have any means of establishing any right to investigate should, for example, the police be involved. However we would wish to secure certain information relevant to the accident or incident before it is lost.

IF BASI RELEASES THE WRECK - DO NOT MOVE IT YET

1. SELECT A COORDINATOR

This coordinator should be the most experienced instructor (or pilot in the absence of a suitably qualified instructor) who is not involved in the accident. This would often be the instructor in charge of the day.

Frequently the instructor in charge of the day will have been coordinating the initial reporting and may well have been involved in the accident subsequent to the actual occurrence. In some cases then, the instructor in charge may elect to appoint an independent coordinator. Independence is important - but experience is also necessary. Frequently the choice will be a compromise. The information provided by the instructor in charge would still be collected and is obviously relevant. The coordinator is (only) required to do that - coordinate.

Choose someone and do so explicitly and without further delay.

If possible, and when possible, inform the RTO of your choice.

2. DETERMINE WHAT HAPPENED

The first and basic principle of any investigation is - determine what happened first before any consideration of why it happened.

Determining what happened consists of obtaining witness reports and an examination of the physical evidence.

2.1. WITNESS REPORTS - *it would be normal to collect these first.*

During this stage the following are very important:

- a) *Carefully distinguish between what happened and interpretation or speculation as to why it happened. This is not as simple as it may seem. For example, in the statement " the pilot drifted down wind and as a result was too low arriving back at the airfield" - the facts are i) the pilot was downwind. ii) In the view of the witness the A/C arrived back at the A/F too low. The rest is interpretation which infers a cause. It would be appropriate to ask how the witness came to the conclusion that the A/C was too low and then check this opinion with other witnesses. This check is valid only if these views were not expressed prior to the interview.*

- b) *For this and other reasons, - as far as possible interview each relevant witness carefully and independently. Ask for a written statement - now, not later - and make notes of the interview and obtain agreement that these notes encapsulate what was actually seen.*

It is unfortunate that you can expect separate witnesses to give very different descriptions of the same events. Do not be surprised at this or suspect any intent - it is the consequence of poor observation and/or post accident stress.

It is also an unfortunate fact that, in an attempt to understand and explain the apparently unexplainable, the witnesses will firstly think of a possible explanation; then the evidence which would support that view; and then - in a very short time - convince him/herself that this evidence was in fact witnessed. A witness report taken sometime after the event can be

Southern Cross Gliding Club Inc.

expected to suffer from this phenomenon to some extent - unless written notes as to what was seen were prepared at the time.

Finally, corroboration by someone who has heard another explanation or witness report is not reliable corroboration.

- c) *Do not ask for or accept opinions as to cause at this time. Do not consider cause yourself - unless you have completed the determination of what happened. In fact, unless you have some experience, do not consider cause at all.*

2.2.PHYSICAL EVIDENCE

- a) *Examine the wreck. This should be carried out by someone with airworthiness qualifications and who is familiar with the type. In the absence of this experience, do not move the wreck until someone who has this experience has examined it or it is released by the RTO or DOO.*

Without disturbing the wreckage, determine the following:

- i) *Before disturbing anything in the wreck, photograph the wreck from all angles*
- ii) *Establish the integrity of all flying controls plus airbrakes. flaps, trim and cable release systems.*
- iii) *Establish that the structure was correctly rigged and intact at the time of impact (ie that structural failure or loss of major component did not occur in flight)*
- iv) *Establish whether any injury was caused by cockpit installations, either original fitments or subsequent additions (eg turn point cameras, drinking water etc)*
- v) *Find all ballast and cockpit contents, especially instruments. If outside the wreck, carefully note the position and measure the distance from wreck.*

Finally, if in any doubt at all, do not touch. Any piece moved means potential information lost.

- b) *Construct a diagram of the accident/incident and, if appropriate, a crash scatter diagram.*

Find all impact marks. Measure all relevant distances and make a diagram to approximate scale and mark all distances on this diagram

MAKE NO ASSUMPTIONS AS TO WHAT IS IMPORTANT AND WHAT IS NOT, AS THIS DEPENDS ON THE CAUSE. COLLECT ALL PHYSICAL EVIDENCE AND NOTE THE POSITION OF ALL OBJECTS, EVEN THOSE WHICH SEEM TO CLEARLY HAVE NOTHING TO DO WITH THE ACCIDENT

3. COLLATE THE EVIDENCE

- a) *Summarise what you have found*
- b) *Keep and collate witness reports*
- c) *Summarise the physical evidence*

Then, and only if you are satisfied with the competence of those who examined the wreck, you may move the wreck - carefully - so as to do minimum damage to any potential evidence.

Report to the operator and the RTO

*Remember: the operator directly responsible for the operation is responsible for the report. This usually means the operator responsible for the **SITE**.*

15 GFA ACCIDENT/INCIDENT REPORT FORMS

SIMPLIFIED ACCIDENT/INCIDENT REPORTING FORMS

Three copies of each report are required, 1 to BASI, 1 to RTO/OPS and 1 to be retained by the club.

The report forms are grouped in threes and are of carbonless paper, to enable copies to be made without inserting separate carbon paper between sheets.

Use this cover under the third copy of each group, to avoid a copy being transferred to the next triplicate set.

Use only a ball-point pen and be sure to press firmly.

Add any supplementary information you wish (diagrams. etc.) on a separate sheet if necessary.

Address of the Bureau of Air Safety (BASI)

*BASI Central Office, PO Box 967, Civic Square Canberra 2608
FAX: 02 6247 3117*

BASI contact number for initial reporting of accident/incident 1 800 011 034 Ask for "Air Safety Duty Officer" in your region and the diverter system will put you through.

RTO/Ops addresses and telephone numbers

QLD - John Clayton, 2/388 Old Cleveland Road, Coorparoo 4151. Tel (07) 397 5819 (H).

NSW - Daryl Connell, 72 Stephen Drive, Woonana 2157. Tel (042) 84 3338 (H).

Vic/Tas - Kevin Olerhead, RMB 6047, Stawell 3380. Tel (053) 58 3448 (H).

SA/NT - Eric Price, 10 Dimboola Court, Craigmore 5114. Tel (08) 255 4707 (H).

WA - Bryn Howe, 19 Mackie Road, Roleystone 6111. Tel (09) 397 6419 (H).

15 GFA ACCIDENT/INCIDENT REPORT

COMMAND PILOT'S DESCRIPTION OF CIRCUMSTANCES

CLUB CFI'S COMMENTS

RTOOPS COMMENTS

GFA COMMENTS

GFA ACCIDENT/INCIDENT REPORT

Distribution: 1 copy BASI, 1 copy RTOOps, 1 Copy retained by club

Date and time of accident
Glider type
Registration
Owner/Operator
Maintenance release expiry date
Command pilot name
Total experience
Experience on accident type
Date of last dual check
Pilot rating held
Degree of injury - command pilot
Degree of injury - student/passenger
Degree of injury - other persons
Nature of flight
Departure point
Intended landing point
Nature of accident
Degree of damage
Cause of accident (if known)
Met. conditions
Cockpit ballast carried
Did harness fail?
Did seat collapse or otherwise fail?

16 Civil Aviation Orders Section 95.4 EXEMPTION FROM PROVISIONS OF THE CIVIL AVIATION REGULATIONS

COMMONWEALTH OF AUSTRALIA
CIVIL AVIATION AUTHORITY

CIVIL AVIATION ORDERS
PART 95
SECTION 95.4
Issue 4

AMENDMENT No. 85
COMMENCEMENT DATE: 10 JANUARY 1996

Section 95.4, Issue 4, of the Civil Aviation Orders, titled "EXEMPTION FROM PROVISIONS OF THE CIVIL AVIATION REGULATIONS - GLIDERS, POWERED SAILPLANES AND POWER-ASSISTED SAILPLANES" was amended on 18 December 1995. The amendment was notified in the Commonwealth of Australia Gazette on 10 January 1996 and came into operation on that date.

The amendments have been incorporated into the existing text of section 95.4. To keep your Orders up to date please REPLACE existing pages 1 to 4 of Section 95.4 with the attached replacement pages 1 to 4.

An explanation of the amendments is set out below.

AUTHORITY

Civil Aviation Orders are made by the Civil Aviation Safety Authority under the Civil Aviation Regulations.

EXPLANATORY NOTE

For many years gliding clubs have been issued an Air Operator's Certificate (AOC) which permits them to conduct charter operations which involve taking a single passenger in a 2-seater glider for "joy flights". CASA can see no reason why the clubs should not continue to do so. As charter operations are prescribed under regulation 206 of the Civil Aviation Regulations as being a commercial purpose for the purposes of subsection 27(9) of the Civil Aviation Act 1988, and operator must hold an AOC to engage in these operations.

The existing section 95.4 of the CAOs does not adequately deal with the conditions applicable to charter operations by gliders (sailplanes, power-assisted sailplanes and powered sailplanes). To overcome this problem, section 95.4 has been amended to remove all reference to charter operations by gliders and a new CAO (section 95.4.1) has been issued to deal specifically with charter operations by gliders. The Gliding Federation of Australia has been consulted in the preparation of the amendments.

Southern Cross Gliding Club Inc.

COMMONWEALTH OF AUSTRALIA
CIVIL AVIATION AUTHORITY

CIVIL AVIATION ORDERS
PART 95
SECTION 95.4
Issue 4

EXEMPTIONS FROM PROVISIONS OF THE CIVIL AVIATION REGULATIONS - GLIDERS, POWERED SAILPLANES AND POWER-ASSISTED SAILPLANES

EFFECTIVE: 1 June 1989

SUB-SECTIONS

1 - Applicability
2 - Definitions
3 - Exemptions

3A - Licence not required
4 - Conditions

1 - APPLICABILITY

This Section of the Civil Aviation Orders applies to gliders, powered sailplanes and power-assisted sailplanes used for:

- (a) *sporting and recreational purposes;*
- (b) *practical flight instruction conducted in accordance with GFA Operational Regulations.*

2 - DEFINITIONS

In this Section -

“GFA means the Gliding Federation of Australia, a Company Limited by Guarantee and incorporated under the Companies Ordinance of the Australian Capital Territory 1962.

“GFA Operations Regulations” means the regulations prepared by the GFA and approved by the General Manager, Standards Development of the Civil Aviation Authority, containing the procedures and instructions necessary to ensure that gliders, powered sailplanes and power-assisted sailplanes to which this Section applies comply with those Civil Aviation Regulations applicable to those aircraft, and with the conditions specified in Subsection 4 of this Order.

“Glider or sailplane” means a non-power-driven heavier-than-air aircraft, deriving its lift in flight chiefly from aerodynamic reactions on surfaces remaining fixed under given conditions of flight.

“Power-assisted sailplane” means an aircraft meeting glider certification standards, fitted with auxiliary power insufficient to meet the take-off requirement specified for a powered sailplane and capable of only limited duration powered flight. The rate of climb of a power-assisted sailplane at the manufacturer’s maximum take-off weight, under ISA conditions at sea level, shall not exceed 1 metre per second.

“Powered sailplanes” means a powered aeroplane which meets the following limitations:

- (a) *The design value of the ratio of the maximum mass (w), in kilograms, to the square of the wing span (b) in metres does not exceed 3 kg/m².*

[= maximum].

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- (b) *The minimum climb rate is 300 metres in 4 minutes.*
- (c) *The minimum sink rate does not exceed:*
 - (i) *1.0 metres per second for single seat powered sailplane; or*
 - (ii) *1.2 metres per second for a two seater powered sailplane.*
- (d) *The minimum glide slope at maximum landing mass with spoilers/dive brake fully extended must not exceed one in seven (1:7) at 1.3 V_{sa} (stall speed in landing configuration).*
- (e) *The maximum number of seats is two.*

3 - EXEMPTIONS

In pursuance of the powers vested in it by Regulation 308 of the Civil Aviation Regulations, the Civil Aviation Authority hereby exempts aircraft to which this Section applies from compliance with the provisions of:

- (a) *Regulations 16, 17 and 18;*
- (b) *Part 5 of the Regulations;*
- (d) *Sub-regulations (1), (2) and (3) of Regulation 83 in respect of VHF equipment;*
- (e) *Sub-regulation (1) of Regulation 92;*
- (f) *Paragraphs (a) and (e) of Sub-regulation (1) of Regulation 133;*
- (g) *Paragraph (d) of Sub-regulation (1) of Regulation 139;*
- (h) *Regulation 142 in respect of photographs taken to verify that the aircraft as flown to a predetermined point;*
- (i) *Sub-regulation (1) of Regulation 150 insofar as the dropping of towing and/or drag increasing devices is concerned;*
- (j) *Paragraph (a) of Sub-regulation (3) of Regulation 155: when beyond 2 nautical miles from a Government or licensed aerodrome, provided that the acrobatic flight takes place at a height of not lower than 1000 feet above the highest point of the terrain or any obstacle thereon within a radius of 600 metres of a line extending vertically below the aircraft; and when within 2 nautical miles of a Government or licensed aerodrome, provided that the acrobatic flight takes place not lower than 2000 feet above the aerodrome, unless the prior approval of an Assistant General Manager (Safety Regulation) or a Manager Flying Operations of the Civil Aviation Authority has been obtained;*
- (k) *Sub-regulation (3) of Regulation 162 only insofar as an aircraft to which this Section applies, which is overtaking a glider, powered sailplane or power-assisted sailplane engaged in ridge or hill soaring, shall pass between the ridge or hill and the overtaken aircraft and may alter its heading to the left for the purpose;*
- (l) *Sub-regulation (1) of Regulation 163 insofar as proximity in the air to another glider, powered sailplane, power-assisted sailplane or aeroplane which is being used to aero-tow a glider or power-assisted sailplane is concerned;*
- (m) *Paragraphs (d), (f) and (g) of Sub-regulation (1) of Regulation 166, provided that an aircraft operating in the circuit area of a Government or licensed aerodrome must, as far as practicable, make all turns in the established circuit direction.*

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(n) Sub-regulation (3) of Regulation 173 provided that at all times whilst above flight level 200 the aircraft maintains the distance from cloud and flight visibility specified for flight between 5000 feet above sea level and flight level 200, and operated to the FULLSAR position reporting procedures specified in AIP;

(o) Sub-regulation (2) of Regulation 207 insofar as the carriage of a gyroscopic turn and slip indicator and an outside air temperature indicator as prescribed in Civil Aviation Order 20.18 Appendix I is concerned;

(p) Regulation 210 insofar as advertising of flying training to qualify for a pilot standard specified in the GFA Operation Regulations is concerned;

(q) Regulation 213 provided that aircraft used in charter operations shall be maintained in accordance with the procedures specified in the GFA Operation Regulations;

(r) Regulation 215;

(s) Regulation 216;

(t) Regulations 226,227, 228 and 229 insofar as persons qualified or instructed in accordance with the GFA Operational Regulations are concerned;

(u) Sub-regulation (1) of Regulation 243 in respect of operations in areas where the carriage of radio is not required by Civil Aviation Order 20.8; and

(v) Regulation 246 in respect of aircraft being launched using external power sources;

and specifies the conditions set out in Sub-Section 4 of this Section as the conditions to be complied with by such aircraft.

3A - LICENCE NOT REQUIRED

3A.1 - For the purposes of paragraph 20AB(1)(b) of the Act, a person is authorised to perform a duty essential to the operation of an aircraft to which this section applies without holding a flight crew licence if he or she complies with the conditions set out in subsection 4,

3A.2 - In spite of paragraph 3A.1, a person must hold a flight radiotelephone operator licence if he or she makes airborne radio transmissions.

4 - CONDITIONS

4.1 - An aircraft to which this Section applies shall not be operated except:

(a) by an individual who is a member of the GFA, or an organisation which is affiliated with the GFA, or a person or organisation who has undertaken in writing to maintain and operate the aircraft in accordance with the standards of the GFA;

(b) in accordance with the rules, orders, directions, standards and operational procedures contained in the GFA Operational Regulations and other applicable manuals and written directives of the GFA; and

(c) by a pilot who is qualified in accordance with the standards specified in the GFA Operational Regulations and subject to the limitations which are specified in the GFA Operational Regulations as being appropriate to the qualification held by the pilot in command.

4.2 - An aircraft to which this Section applies shall not be operated under the Instrument Flight rules or at night.

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4.3 - *Gliders, powered sailplanes and power-assisted sailplanes participating in a gliding competition which has been approved in writing by an Assistant General Manager (Safety Regulation) or a Manager Flying Operations of the Civil Aviation Authority may, when within 5 kilometres of the finish line, descend below 500 feet above the ground whilst:*

- (i) keeping the finish line in sight; and*
- (ii) clearing all obstacles by at least 50 feet; and*
- (iii) then land straight ahead across the finish line; or*
- (iv) cross the finish line without descending lower than 50 feet above the ground or any obstacle thereon and with sufficient energy to complete a circuit prior to landing.*

4.4 - *Gliders, powered sailplanes and power-assisted sailplanes engaged in ridge or hill soaring may fly at a height below 500 feet above the ground, but no closer to terrain or any obstacles thereon than the distances specified in the GFA Operation Regulations.*

4.5 - *Except with permission in writing of the Group General Manager (Safety Regulation) of the Civil Aviation Authority and in accordance with any conditions specified in that permission to minimise hazard to other aircraft persons or property on the ground or water, an aircraft to which this Section applies shall not be flown:*

- (a) (i) over water beyond safe gliding distance from a suitable landing area; or*
 - (ii) in the case of a powered sailplane or power-assisted sailplane being operated under power beyond gliding range from land, unless the provisions relating to flight over water specified in AIP RAC/OPS are complied with;*
- (b) for the purpose of dual instruction unless:*
 - (i) the instruction is imparted by a person holding a valid instructor authorisation issued by the GFA; and*
 - (ii) the type of instruction given is within the privileges and limitations specified in the GFA Operational Regulations as being appropriate to the authorisation held by the instructor; or*
- (c) on private passenger-carrying operations unless:*
 - (i) the pilot is qualified in accordance with the specifications contained in the GFA Operational Regulations; and*
 - (ii) the flight is conducted in accordance with the standards and procedures specified in the GFA Operational Regulations.*

4.6 - *Powered sailplanes and power-assisted sailplanes to which this Section applies shall carry engraved placards in the cockpit in full view from every control seat. These placards shall bear the words as follows:*

- (i) in the case of a powered sailplane:*

“THIS POWERED SAILPLANE MUST BE OPERATED IN ACCORDANCE WITH THE PROVISIONS OF CAO 95.4 AND THE GFA OPERATIONAL REGULATIONS”; or

- (ii) in the case of a power-assisted sailplane:*

“1. THIS POWER-ASSISTED SAILPLANE MUST BE OPERATED IN ACCORDANCE WITH THE PROVISIONS OF CAO 95.4 AND THE GFA OPERATIONAL REGULATIONS.

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2. TAKE-OFFS USING ONLY INSTALLED ENGINE POWER ARE PROHIBITED.”

Note: Attention is directed to the fact that the exemptions granted by this Section do not confer on the operator of an aircraft to which this Section applies any rights as against the owner or occupier of any land on or over which the operations are conducted, nor prejudice in anyway the rights or remedies which a person may have in respect of any injury to persons or damage to property caused directly or indirectly by the aircraft.

Civil Aviation Orders Section 95.4.1 GLIDERS ENGAGED IN CHARTER OPERATIONS

COMMONWEALTH OF AUSTRALIA
CIVIL AVIATION SAFETY AUTHORITY

CIVIL AVIATION ORDERS
PART 95
SECTION 95.4.1
Issue 1
EFFECTIVE: 22 DECEMBER 1995

**EXEMPTION FROM PROVISIONS OF THE CIVIL AVIATION REGULATIONS - GLIDERS
ENGAGED IN CHARTER OPERATIONS**

SUBSECTIONS

- | | |
|--|---|
| 1 - Interpretation | 5 - Conditions applicable to the holder of a charter glider |
| 2 - Exemption | authorisation |
| 3 - Licence not required | 6 - Conditions applicable to the operator of charter glider |
| 4 - Issue of charter glider
authorisation | flights
Appendix 1 |

1 INTERPRETATION

1.1 - In this section, unless the contrast intention appears:

“CFI” means:

- (a) the operator’s chief flying instructor; or
- (b) the operator’s instructor panel chairperson;

“GFA” means the Gliding Federation of Australia (A.C.N. 008 560 263);

“glider” means:

- (a) a sailplane; or
- (b) a power-assisted sailplane; or
- (c) a powered sailplane;

“glider pilot” means a person who:

- (a) is a member of the GFA; and
- (b) holds a C gliding certificate issued by the GFA;

“level 2 GFA instructor” means a person who holds a level 2 instructor authorisation issued by the GFA:

“operator” means an incorporated gliding club which:

- (a) is affiliated with the GFA; and
- (b) engages in charter operations’

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“power-assisted sailplane” has the same meaning as in section 95.4;

“powered sailplane” has the same meaning as in section 95.4;

“sailplane” has the same meaning as in section 95.4.

2- EXEMPTION

2.1 - Subject to paragraph 2.2, a glider engaged in charter operations, or a person who is in, on or otherwise associated with the operation of, a glider engaged in charter operations, is exempt:

(a) from compliance with the following provisions of the Civil Aviation Regulations:

- (i) regulations 16, 17 and 18;*
- (ii) Part 5;*
- (iii) paragraphs 133(1)(a) and e;*
- (iv) paragraph 139(1)(d);*
- (v) regulations 213 and 216; and*

(b) from compliance with subregulations 83 (1), (2) and (3) of the Civil Aviation Regulations in relation to the use of VHF equipment; and

(c) from compliance with subregulation 150(1) of the Civil Aviation Regulations in relation to the dropping of towing or drag increasing devices; and

(d) from compliance with paragraph 155(3)(a) of the Civil Aviation Regulations on condition that:

(i) if the acrobatic flight takes place more than 2 miles from a licensed aerodrome - the flight does not take place at a height of less than 1000 feet above the highest point of the terrain or of any obstacle on the terrain within a radius of 600 metres of a line extending vertically below the aircraft; and

(ii) if the acrobatic flight takes place 2 miles or less from a licensed aerodrome - the flight does not take place at a height of less than 2000 feet above the aerodrome; and

(e) from compliance with paragraph 157(1)(b) when a glider is engaged in ridge or hill soaring; and

(f) from compliance with subregulation 162(3) of the Civil Aviation Regulations to the extent that, if a glider is overtaking another glider engaged in ridge or hill soaring, the overtaking glider:

- (i) must pass between the ridge or hill and the overtaken glider; and*
- (ii) may, if necessary, alter its heading to the left to do so; and*

(g) from compliance with paragraphs 166(1)(d), (f) and (g) of the Civil Aviation Regulations on condition that a glider operating in the circuit area of a licensed aerodrome must, as far as practicable, make all turns in the established circuit direction; and

(h) from compliance with subregulation 207(2) of the Civil Aviation Regulations in relation to the carriage of:

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(i) a gyroscopic turn and slip indicator; and

(ii) an outside air temperature indicator; and

(i) from compliance with regulations 226, 227 and 229 of the Civil Aviation Regulations in relation to a person who:

(i) holds qualifications issued by the GFA; or

(ii) has been appropriately instructed by a person who holds qualifications issued by the GFA; and

(j) from compliance with subregulation 243(1) of the Civil Aviation Regulations except when the glider is operating:

(i) in controlled airspace; or

(ii) in an area known as a mandatory broadcast zone; or

(iii) within an area known as the common traffic advisory frequency area around an aerodrome which is used for regular public transport operations; and

(k) from compliance with regulation 246 of the Civil Aviation Regulations in relation to a glider which is launched using an external power source.

2.2 - The exemptions are subject to the condition that the remaining provisions of this Order are complied with.

2.3 - Paragraph 2.1 does not apply to a person in, on, or otherwise associated with the operation of, an aircraft that is towing a glider.

3 - LICENCE NOT REQUIRED

3.1 - For the purposes of paragraph 20AB(1)(b) of the Act (Flying aircraft without a licence etc.), a person is authorised to perform any duty essential to the operation of a glider without holding a flight crew licence, except making airborne radio transmissions on aeronautical HF frequencies.

4 - ISSUE OF CHARTER GLIDER AUTHORISATION

4.1 - A person must not pilot a glider engaged in charter operations unless he or she:

(a) holds a charter glider authorisation issued by a CFI that certifies that the person meets the requirements set out in Appendix 1; and

(b) the charter glider authorisation has not stopped having effect under paragraph 4.4.

4.2 - A charter glider authorisation must be entered in the glider pilot's log book.

4.3 - A charter glider authorisation has effect for the period, not exceeding 2 years and 5 months, stated in it.

4.4 - A charter glider authorisation stops having effect:

(a) if the authorisation is suspended by a CFI; or

(b) is the pilot ceases to meet the requirements of Appendix 1; or

(c) at the end of the period stated in it; whichever happens first.

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4.5 - A charter glider authorisation must not be renewed unless the glider pilot has satisfactorily completed a flight test conducted by a level 2 GFA instructor.

5 - CONDITIONS APPLICABLE TO THE HOLDER OF A CHARTER GLIDER AUTHORISATION

5.1 - The holder of a charter glider authorisation must not operate a glider unless, in the 3 months preceding the charter flight, he or she has been at the controls of a glider of the kind undertaking the flight for a least 3 take-offs and 3 landings.

5.2 - The holder of a charter glider authorisation must not operate a glider under I.F.R. or at night.

5.3 - The holder of a charter glider authorisation who is flying a glider engaged in ridge or hill soaring must not fly at a height of less than 100 feet within 100 metres of a person, a building, and a public road.

5.4 - The holder of a charter glider authorisation must not fly a glider over water beyond a safe gliding distance from a suitable landing area.

5.5 - The holder of a charter glider authorisation:

- (a) must plan a charter operation so as to land at the place from which it departed; and
- (b) in the case of a power-assisted sailplane or a powered sailplane - must have the aircraft's engine in operation during all times that the aircraft is out of gliding range of the aerodrome from which it took off; and
- (c) except in an emergency - must not land a glider anywhere except the aerodrome from which it took off.

5.6 - The holder of a charter glider authorisation must not undertake a charter flight as pilot in command of a glider:

- (a) less than 24 hours after he or she has donated blood; or
- (b) if he or she is temporarily unfit due to taking medication; or
- (c) if he or she is temporarily unfit due to illness or injury; or
- (d) if he or she becomes aware that he or she may have, or be subject to, diabetes, epilepsy, fits, recurrent fainting, giddiness, blackouts, high blood pressure or heat disease.

5.7 - If an illness or injury referred to in subparagraph 5.6(c) persists for more than 30 days, the holder of the charter pilot authorisation must not undertake a charter flight as pilot in command until the holder has been certified fit to do so by a medical practitioner.

5.8 - Despite subparagraph 5.6(d), the holder of a charter glider authorisation may undertake a charter flight as pilot in command if a medical practitioner certifies that he or she is fit to do so.

5.9 - If the holder of a charter glider authorisation suffers severe head injuries, the holder must not exercise the privileges of the authorisation until he or she has been certified fit to do so by a medical practitioner.

5.10 - If the holder of a charter glider authorisation customarily wears sight correction spectacles, the holder must have a spare set of spectacles readily accessible during a glider flight.

6 - CONDITIONS APPLICABLE TO THE OPERATOR OF CHARTER GLIDER FLIGHTS

Southern Cross Gliding Club Inc.

6.1 - The operator of a power-assisted sailplane that is engaged in charter operations must ensure that it has engraved placards bearing the following words in the cockpit in full view of, and legible from, each seat:

"1. THIS POWER-ASSISTED SAILPLANE MUST BE OPERATED IN ACCORDANCE WITH THE PROVISIONS OF CIVIL AVIATION ORDER 95.4 AND 95.4.1.

2. TAKE-OFFS USING ONLY INSTALLED ENGINE POWER ARE PROHIBITED."

6.2 - The operator of a powered sailplane that is engaged in charter operations must ensure that it has engraved placards bearing the following words in the cockpit in full view of, and legible from, each seat:

"THIS POWERED SAILPLANE MUST BE OPERATED IN ACCORDANCE WITH THE PROVISIONS OF CIVIL AVIATION ORDER 95.4 AND 95.4.1."

6.3 - An operator must ensure that:

(a) each of its glider pilots who engage in charter operations holds a charter glider authorisation; and

(b) each other person who assists with the charter operations is appropriately trained and qualified to give the assistance.

6.4 - An operator must ensure that, before each charter flight, each glider passenger:

(a) receives a safety briefing; and

(b) is clearly instructed that he or she must not manipulate or interfere with the glider's controls.

6.5 - The operator of a glider that is engaged in charter operations must ensure that:

(a) the glider carries a fire extinguisher; and

(b) the glider carries a first aid kit.

6.6 - Subparagraph 6.5(a) does not apply:

(a) to a sailplane without electrical system; or

(b) to a sailplane with an electrical system if the electrical system:

(i) has a master switch; and

(ii) is protected by a fuse near the battery.

6.7 Subparagraph 6.5(b) does not apply to a sailplane if the operator's ground personnel who are engaged in launching the sailplane have ready access to a first aid kit.

MAKING DATE: 18 December 1995

GAZETTAL DATE: 22 December 1995

COMMENCEMENT DATE: 22 December 1995

APPENDIX 1

QUALIFICATIONS FOR THE ISSUE OF A CHARTER GLIDER AUTHORISATION TO A GLIDER PILOT

1. A glider pilot must have at least 60 hours of gliding experience, of which at least 5 hours must be as pilot in command of a 2-seater with both seats occupied.
2. A glider pilot must demonstrate competence in the following flight sequences:
 - (a) a normal launch and release or, in the case of a powered sailplane, normal take-off.
 - (b) recognising, and recovering from, stalls and spins induced by the examiner;
 - (c) the practical application of flight rules and procedures;
 - (d) flying a normal circuit without reference to an altimeter;
 - (e) flying a normal circuit without reference to an airspeed indicator;
 - (f) the applicable emergency procedures during launch, or take-off, and in flight.

3. When carrying out the sequences required under clause 2, the glider pilot:

(a) may be required to sit in either seat of the glider; and

(b) must complete all sequences without:

(i) fault in lookout or handling technique; or

(ii) harsh use of the controls.

4. A glider pilot must hold an authorisation issued by the GFA that permits the pilot to carry out daily inspections on the type of glider used in charter operations.

5. A glider pilot must hold:

(a) a class 2 medical certificate; or

(b) a medical certificate issued by a medical practitioner which certifies that the pilot is not suffering from any medical condition that would make him or her unfit to fly a glider in charter operations.

