MANUAL OF STANDARD PROCEDURES

PART 2 - OPERATIONS

Contents

Glossary of terms used in this manual

A	Altitude (e.g. A100 = 10,000 feet AMSL)
ACA	Australian Communications Authority
AEF	Air Experience Flight
AEI	Air Experience Instructor
AGL	Above Ground Level (See also QFE)
ALA	Aircraft Landing Area
AMSL	Above Mean Sea Level (See also QNH)
AOC	Air Operator's Certificate
ASI	Air Speed Indicator
ATC	Air Traffic Control
ATSB	Australian Transport Safety Bureau
BCAR	British Civil Airworthiness Requirements, the standard of construction to which some of the older gliders (e.g. Kookaburra) were built
CASA	Civil Aviation Safety Authority
CAIR	Confidential Aviation Incident Report
CAO	Civil Aviation Order, a functional document enabling practical use to be made of a Civil Aviation Regulation
CAR	Civil Aviation Regulation, a statutory aviation regulation of the Commonwealth of Australia
CFI	Chief Flying Instructor (Club)
CIP	Chairman of Instructor Panel (Club)
CofA	Certificate of Airworthiness
COP	Chairman of Operations Panel (GFA)
CTO/Ops	Chief Technical Officer/Operations
CTA	Controlled Airspace
CTAF	Common Traffic Advisory Frequency
DI	Daily Inspection
DTRS	Department of Transport and Regional Services
ELT	Emergency Locator Transmitter
EPIRB	Electronic Position Indicating Radio Beacon
ERSA	En-Route Supplement, Australia. A CASA document listing full information, including layout diagrams, on all licensed (and some unlicensed) aerodromes.
FAC	Federal Airports Corporation
FAI	Fédération Aéronautique Internationale
FL	Flight Level, the height reading on an altimeter with 1013.2 HPa set on its sub-scale, used only above 10,000 feet AMSL (e.g. FL200 = 20,000 feet with 1013.2 set)
FOI	Flying Operations Instruction, also Flying Operations Inspector (both are CASA terms)

GFA	Gliding Federation of Australia
HF	High Frequency
HPa	Hectopascal - the unit of pressure set on an altimeter sub-scale
JAR-22	Joint Airworthiness Requirements, Section 22 (Gliders)
IAS	Indicated Air Speed
ICAO	International Civil Aviation Organisation
IFR	Instrument Flight Rules
IH	Instructor's Handbook
IMC	Instrument Meteorological Conditions
IO	Independent Operator
Km	Kilometre
MBZ	Mandatory Broadcast Zone
Mode A	One of the operating modes of a secondary radar transponder, in which a unique code is displayed to the air traffic controller
Mode C	Another operating mode of a transponder, in which altitude-encoded information is added to the unique code already being transmitted
MOSP	Manual of Standard Procedures
MR	Maintenance Release
NGS	National Gliding School
NM	Nautical Mile
NOTAM	**NOT**ice to **A**ir**M**en - a document issued by the CASA to provide operational information to pilots which supersedes that available in other publications
OCTA	**O**utside **C**on**T**rolled **A**irspace
OSTIV	French acronym for International Gliding Scientific and Technical Organisation
OSTIVAS	OSTIV Airworthiness Standards
PPL	Private Pilot’s Licence
PS	Powered Sailplane
QFE	Altimeter setting in which the altimeter will read zero with the glider on the ground
QNH	Altimeter setting in which the altimeter will read the field's elevation above sea level with the glider on the ground
RPT	Regular Public Transport
RTO/A	Regional Technical Officer, Airworthiness
RTO/Ops	Regional Technical Officer, Operations
SAR	Search and Rescue
SSR	Secondary Surveillance Radar - a type of radar, which only shows a return to an air traffic controller from an aircraft that is equipped with a transponder. Radar, which will show "raw" returns from an aircraft's skin without the need for a transponder to be fitted, is known as Primary Radar
TAS	True Air Speed

Txpdr	Transponder, a microwave receiver/transmitter unit fitted to an aircraft which, when interrogated by an SSR, responds with a coded reply which positively identifies the aircraft and, if mode C is selected, the altitude of the aircraft
UHF	Ultra High frequency
U/S	Unserviceable
VFR	Visual Flight Rules
VHF	Very High Frequency

Amendment list

This document is periodically amended by the issue of replacement pages, each identified by page number, amendment number and effective date, or by total re-issue of a Section or the complete Manual, as appropriate. Interim amendments may be made by Operations Directives distributed to clubs.

Page No	Amendment No	Amended by	Effective date

SECTION 14 - BASIC OPERATIONAL REQUIREMENTS

14.1 Flying operations

14.1.1 General.

Gliders are not permitted to fly in cloud or at night.

14.1.2 Dual instruction.

Dual instruction must only be given by a person holding a valid GFA instructor rating and the type of instruction given must be within the limits of the rating held.

14.1.3 Permissible sites.

Glider and powered sailplane operations are permitted only on sites that meet GFA requirements.

14.1.4 Outlanding retrieves from paddocks

Consent of the landowner or his/her agent must be obtained prior to an aerotow paddock retrieve. See Operational Regulation 10.4.

Care must be taken to ensure that any vehicle movement restrictions in force during fire danger periods are observed. Fire risk potential must be assessed and considered on all occasions.

If a ground crew is not available, a launch may be carried out without one. For details see GFA Aerotowing Manual Section 7.4.2. Agreement on hook-up and signalling procedures must be reached and fully understood by both pilots prior to commencement of the launch. Closure of the canopy must not be used as the signal to proceed with the launch.

14.1.5 Smoking.

Smoking is not permitted in aircraft, near stored fuel or within 30 metres of any refuelling operations.

14.1.6 Launching of gliders.

The launching cable or rope may only be attached to the glider at the express order of the pilot.

14.1.7 Club rules and regulations.

Local rules and regulations must be displayed in a prominent position, or otherwise easily available to all pilots.

14.1.8 GFA Operations Manual.

The complete GFA Operations Manual must be kept by the club in such a way as to be available to all pilots, resident and visitors, on request.

14.1.9 Reporting of defects.

Pilots must report any defects, in-flight overstressing or heavy landings to the Duty Instructor before the glider is flown again. Pilots-in-command are responsible for entering such defects in the appropriate section of the glider's Maintenance Release, regardless of the availability or otherwise of the Duty Instructor.

14.1.10 In-flight structural damage or failure.

In the event of severe in-flight structural damage, which is obviously serious but of unknown extent, a pilot wearing a parachute is recommended to abandon the glider while sufficient height remains to do so. An example of this is the onset of severe flutter, which does not respond to the normal remedial action of changing speed.

A pilot not wearing a parachute is obviously not in a position to take this action. In this case, if control of the glider is still possible, the worst case should be assumed and the glider flown carefully to an immediate landing. When doing so, the pilot must avoid excessive flight loads, close proximity to other aircraft and built-up areas. **DO NOT CONTINUE THE FLIGHT IF SERIOUS DAMAGE IS KNOWN OR SUSPECTED.**

14.1.11 Keeping of records.

All clubs must compile and keep such logbooks, flight records and time sheets as will enable an accurate record of the club's flying operations to be maintained. These records must be made available to the RTO/Ops or the CTO/Ops on request.

14.1.12 Operations at Licensed Aerodromes.

See Operational Regulations Section 7, Sub-section 7.2.

14.1.13 Sporting events, operational factors.

Regardless of venue, all competitions, regattas or sporting events held in a region are the operational responsibility of the RTO/Ops and must comply with normal GFA requirements. This includes National and World Championship events.

Conditional upon the written permission of the CASA Regional Manager being obtained, contest finishes may descend below 500ft AGL and may then climb again to join a circuit for landing (refer to CAO 95.4, sub-section 4.3 for clarification).

In the case of a sporting event which does not have the permission of the CASA Regional Manager, gliders must comply with the regulatory requirement that they do not descend below 500ft except during the process of taking off or landing. This means that contest finishes which descend below 500ft with the intention of climbing back to circuit height are not permitted.

All competition officials who carry operational responsibilities (e.g. Safety Officer) must be approved by the RTO/Ops. In the event of a dispute regarding an operational matter, the decision of the Safety Officer must prevail.

14.1.14 Search and rescue (SAR) action

If any glider remains unaccounted for at the end of a day's operations and a message has not been received as to the whereabouts of such a glider and the safety of its crew by one hour after last light, the person responsible for the club's operation on that day must initiate SAR action by telephoning 1800 815 257.

14.1.15 Operations in remote areas

Although not a regulatory requirement (except in Designated Remote Areas), it is strongly recommended that gliders operating in remote areas carry an ELT or EPIRB, which must be activated at 2100 hrs local time in the event of outlanding without being able to make contact with the club or retrieve crew.

14.1.16 Operational Safety Audits

All clubs must be checked by RTO/Ops or delegate for the quality of their operational safety at least every two years.

14.2 Glider external markings

14.2.1 Nationality markings

There is no requirement for nationality markings (VH) to be carried on any glider operated within Australia. Nationality markings must be carried on any Australian-registered glider operated outside Australia.

14.2.2 Registration markings

The registration markings must consist of the following letters :-

(a) For registrations beginning with "G", the last two letters of the registration.

(b) All other registrations, the entire three-letter group.

14.2.3 Positions and dimensions of registration markings

Registration markings must be carried in accordance with the following positions and dimensions :-

(a) On each side of the fuselage or vertical tail surfaces. V-tails are regarded as vertical surfaces for this purpose and the markings must appear on the outward-facing surfaces. Dimensions to be at least 150mm high or two-thirds of the width of the surface.

(b) Under one wing, tops of the letters to the leading edge. Dimensions to be at least 500mm or two-thirds of the wing chord.

14.2.4 Competition or personalised markings

A competition or personalised marking on the vertical tail surfaces is permitted provided that the correct registration is applied to the fuselage and wing. Such a personalised mark must be of numeric or alpha-numeric form, to avoid confusion with the registration mark.

14.2.5 Foreign registration markings

Foreign registration markings are not permitted on an Australian-registered glider. However, if damage to the glider finish is likely to occur due to removal of foreign registration, temporary dispensation against its removal may be obtained, pending re-finishing of the glider. Contact RTO/A for details.

14.2.6 Colour of registration markings

Registration marks must be of a contrasting colour with the glider's finish colour and must be applied in accordance with Airworthiness Advice Notice (AN) 84, obtainable from GFA Secretariat.

14.3 Protection of the public

14.3.1 Warning signs

Warning signs must be provided to give clear indication of hazardous areas to members of the public who are not club members.

14.3.2 Supervision

Adequate supervision of all non-members in the vicinity of the launch/landing area must be provided.

14.3.3 Winch-driver responsibility

Winch-drivers must ensure that launching does not take place if members of the public near the winch are at risk from flying cables or ropes, taking into account the likelihood of cable-breaks.

14.3.4 Responsibility for visitors

Charter passengers or visitors undertaking glider flights as temporary GFA members must receive a safety briefing and be accompanied onto the gliding strip by a qualified club member.

14.3.5 Video cameras

Visitors' attention must be drawn to the hazards of using video cameras in launching and landing areas, due to the changed perspective of events seen through a viewfinder rather than with the naked eye.

SECTION 15 - OPERATIONAL RESPONSIBILITY

15.1 General

Decentralisation and self-discipline are the guiding principles on which the GFA structure is based. This implies that individual gliding clubs should be allowed to do whatever they can do properly and well, with minimum interference. This principle also applies to the area of responsibility of the State Association/Regional Committee.

The self-administrative responsibility taken on by the GFA for the safe and proper conduct of gliding operations by its members requires that advice, supervision and at times some degree of control be exercised to ensure that clubs operate to GFA requirements.

In the operational area, GFA holds a number of exemptions from the Civil Aviation Regulations in order to fulfil its sporting obligations while keeping safety standards at the highest possible level. These exemptions only apply when operations are carried out in accordance with GFA requirements as laid down in this Manual of Standard Procedures and the GFA Operational Regulations.

15.2 Operational responsibility at club level

As well as performing its own internal management functions, a club committee is responsible to a State Association/Regional Committee for ensuring that gliding operations are carried out to GFA requirements.

Note: *The Regional Committee is a GFA body, whose functions are normally combined with those of the State Association.*

Within a club, responsibility for operational standards and safety is devolved to the instructor or instructors. In the case where a club has more than one instructor, an Instructor's Panel is formed. This panel is responsible to the club committee for the following: -

- To meet regularly enough to keep track of training and safety within the club.
- To consider the progress and problems of all students in the club.
- To consider all aspects of club operations.
- To consider variations to pilot ratings within the club.
- To ensure standardisation of instruction, using the GFA Instructor's Handbook as the reference.
- To ensure adequate preparation of candidates for instructor training.
- To follow up the investigation of accidents and incidents and makes recommendations to prevent recurrences.

The Instructor's Panel operates under the overall leadership of a Chief Flying Instructor(CFI) or a Chairman of the Instructor's Panel(CIP), depending on the individual style of the club, thus achieving the advantages of decentralisation while retaining overall control of standards.

The CFI/CIP is chosen by the club and the appointment must be ratified by the RTO/Ops. The CFI/CIP carries the ultimate responsibility for safety and training standards within the club and is responsible for the biennial revalidation of the club's instructors, in accordance with GFA guidelines. See Section 17 (Instructor Training and Ratings) for details). For the sake of brevity, the term CFI will be used throughout the remainder of this manual to cover both titles.

15.3 Operational responsibility at State/Regional level

At State/Regional level there is a Regional Technical Officer/Operations (RTO/Ops), who is a voluntary officer of the GFA. RTO/Ops duties are as follows: -

15.3.1 Ratification of club CFI/CIP.

When a club selects a replacement CFI or CIP, it is GFA policy that the RTO/Ops is required to ratify the appointment of such persons.

15.3.2 Approval of instructor training/testing.

Before the training of an instructor commences, an application must be made to the RTO/Ops on the appropriate form (see Appendix to this Manual). The RTO/Ops will then allocate a mutually agreed Level 3 Instructor to carry out the training.

Flight tests for the issue of an Instructor rating are administered in the same way, via the RTO/Ops.

15.3.3 Ratification of competition safety officers.

Safety Officers responsible for the monitoring of operational safety in Regional, National or International Competitions are required to be ratified by the RTO/Ops.

15.3.4 Club safety audits.

All clubs in the region must be audited every two years to ensure that operational standards are being maintained. During these visits, the CFI must be checked, together with as many of the club instructors and senior pilots as possible.

Student pilots should where possible be checked, to assess training standards and effectiveness.

Applicable emergency procedures must be checked during the visit, together with any emergency equipment appropriate to the launch method.

A check of club spin-training methods and standards is essential and must never be omitted. The same applies to the airmanship standards of the club, especially lookout.

A check list is provided to the RTO/Ops for the purpose of periodic checking of clubs (See sample form, entitled "Operational Status Check List" in Appendix to this MOSP). Completed check-lists must be returned to the GFA as soon as possible after the visit has been carried out.

15.3.5 Approval of gliding sites.

Operational approval of all gliding sites in the region is the responsibility of the RTO/Ops, in conjunction with the regional Airfields and Airspace Officer. In considering such approvals, due account must be taken of aerodrome status and any CASA or other requirements which may apply. Flying Operations Instructions (FOIs) 21-1 and 21-2 contain respectively the policy and procedural guidelines for operating on Licensed aerodromes and copies of these documents will be found in the Appendix to this MOSP.

15.3.6 Record-keeping.

The RTO/Ops is responsible for keeping records of all instructors in the region. This includes AEIs and Charter pilots. This can only be done if clubs cooperate by supplying the RTO with the necessary data every two years. Reminders will be sent by GFA to all clubs when their data is required. Upon receipt of the required data, the RTO/Ops must compile a consolidated list and forward it to the GFA Secretariat before 30th September in each even-numbered year.

15.3.7 Discretionary power in instructor revalidation.

The guidelines for instructor revalidation issued by GFA may not always be met, for one reason or another. CFIs who are in doubt about revalidation of particular instructors may consult the RTO/Ops, who may exercise discretion in the waiving of certain requirements in order to permit revalidation. This discretionary power will usually be exercised subject to future conditions being met; for example, an instructor may be revalidated despite the hours or launches not meeting the requirement, on condition that the full weight of the requirement is met at the next revalidation.

15.3.8 Revalidation of lapsed instructor ratings.

Flexibility is encouraged in the handling of instructors whose rating has lapsed for any reason. The RTO/Ops must define and authorise the requirements for revalidation in each individual case. Depending on the reason for the lapse of the rating and the total experience of the person concerned, the RTO may become personally involved, delegate responsibility to a Level 3 (NGS) Instructor or require the CFI to carry out specific work with the person before revalidation. Refer to 17.1.3 for further guidance.

15.3.9 Air Display approvals.

Participation by glider pilots in air displays requires the approval of the RTO/Ops. See Op Reg 9.10 and refer to the Appendix to this Manual for a sample of the form used for this purpose. Note that GFA cannot approve aerobatics below 1,000 feet AGL and that CASA approval is required for this activity.

15.3.10 Line of responsibility.

The RTO/Ops is directly responsible to the GFA CTO/Ops (see 15.4.3.) and to the State Association/Regional Committee for the day-to-day running of GFA operational affairs.

The RTO/Ops may select one or more Level 3 (National Gliding School) instructors to assist in the various duties, which are required to be performed periodically in the region. Persons delegated by the RTO/Ops to carry out particular duties are directly responsible to the RTO/Ops for the conduct of those duties and have the same status as the RTO/Ops when acting on his/her behalf.

15.4 Operational responsibility at Federal level

15.4.1 The GFA Operations Panel.

The Operations Panel is the body responsible for the control of operational standards, safety and training in the GFA. It comprises the RTOs/Ops as the core body, with the addition of specific experts such as the Radio Officer, Airfields and Airspace Officer and the Performance Coach co-opted as required.

As well as matters which arise at Ops Panel meetings directly from core or specialist members, input is also encouraged from Regional Committees or any suitably qualified and interested bodies or individuals. Regions are encouraged to hold regular CFI Seminars or equivalent meetings to discuss operational matters prior to bringing them to the GFA Ops Panel.

15.4.2 The Chairman, Operations Panel.

The Operations Panel meets periodically, usually annually, under the leadership of the Chairman, Ops Panel (COP). The COP is a voluntary officer, elected by the Operations Panel and appointed by the GFA Council, and is directly responsible to that body for the entire operational affairs of the GFA as formulated by the Ops Panel . The COP is also a member of the GFA Executive, with full voting powers on that body.

The COP is generally responsible for the establishment of operational policy in the GFA, in consultation with the Ops Panel and the CTO/Ops. This policy is usually established during the annual meeting and normally takes the form of a recommendation to GFA Council to ratify a change of policy. The system has stood the test of time.

The COP is also responsible for negotiations at a political level on matters of operational policy which impinge on CASA or ATSB areas. Examples of this kind of policy include changes to GFA Op Regs, Civil Aviation Orders or gliding-related NOTAMs. The COP would normally be expected to attend high-level meetings with the CASA, ATSB and other government bodies to arrive at mutual agreements on policies which affect gliding.

15.4.3 The Chief Technical Officer/Operations.

The Chief Technical Officer/Operations (CTO/Ops) is an employee of the GFA and is directly responsible to the Chairman, Operations Panel for the day-to-day running of all operational matters in the Federation. Specific areas of responsibility are: -

- Approves the appointment of RTO/ops, prior to the ratification of the appointment by GFA Council or Executive.
- As Director of the National Gliding School (NGS), pursues the development of improved operational and instructional procedures and is generally responsible for ensuring that existing procedures are followed.

- Organises and supervises instructor training nationally.
- Maintains a central register of all GFA instructors.
- Collates and analyses all accident and incident reports received from RTOs/Ops and ATSB.
- Submits periodic reports to the Chairman, Ops Panel and an annual report to the GFA Council meeting, which must include a statistical analysis of gliding accidents in the preceding year.
- Attends meetings with statutory bodies as directed by the Chairman, Ops Panel.
- Produces manuals and handbooks for flying training, instructor training and general operational purposes.
- Carries out club visits in any region on the basis of RTO request, or spot checking on an opportunity basis.
- Attends meetings of the GFA Operations Panel as an advisory, non-vote-carrying member of that body.

SECTION 16 - PILOT QUALIFICATIONS, REQUIREMENTS AND PRIVILEGES

16.1 Medical requirements

16.1.1 General

For medical declaration requirements, refer to GFA Operational Regulations, Section 6.2.

16.1.3 Loss of medical fitness.

Further to the requirement of GFA Op Reg 6.2, (pilot becoming temporarily unfit to fly), a pilot suffering a physical or psychological problem which renders him/her unfit for flying is required to undergo a medical examination by that person's own GP. A medical Certificate shall be issued by that GP indicating that the problem has been treated and the person is fit to fly.

The above medical examination is not intended for a person who suffers a simple injury which will have no lasting effect after treatment. It is intended for an ailment (e.g. heart disease) where the lasting effect may not be known and a medical judgement is required that the person is fit to fly.

See also Operational Regulation 6.2.5. regarding temporary loss of medical fitness.

16.2 Basic pilot Certificates

16.2.1 The "A" Certificate

Requirements.

- Minimum age 15 years.
- GFA medical declaration signed.
- Minimum of 5 solo flights with normal landings.
- Satisfactory check flight, which must include the following :-

(a) An awareness of pre-spin symptoms and a demonstration of the correct action to prevent a spin developing.

(b) An accurate circuit without reference to altimeter.

(c) Correct handling of selected emergencies.

(d) Oral examination on basic theory and flight rules and procedures.

Privileges and limitations

- May only fly solo under the direct supervision of an instructor.
- May carry out local soaring only.

16.2.2 The "B" Certificate

Requirements

- 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).*
- Completion of post-solo training syllabus in accordance with the Instructor's Handbook.
- Oral examination on basic theory, flight rules and procedures and basic airworthiness.

  ***Note:** Power pilots holding a Student or higher licence may count 5 landings as pilot-in-command towards the "B" Certificate, but must meet the soaring requirement.*

Privileges and limitations.

- May carry out local soaring only.
- May carry out mutual flying, subject to the following conditions :-

  (a) The other occupant of the glider also holds a minimum of a "B" Certificate.

  (b) Each mutual flight is authorised by and carried out under the direct supervision of the Duty Instructor, who must nominate the command pilot for the flight.

16.2.3 The "C" Certificate

Requirements

- A total of 20 solo or mutual flights, including two solo soaring flights of at least one hour's duration each.
- Trained and checked in ability to carry out a safe outlanding.
- Received a passenger awareness briefing using the "Air Experience" section in Part 2 of the Instructor's Handbook (pages 8 to 12) as a reference.
- Oral examination on basic theory, navigation, meteorology, airways procedures, outlanding hazards, post-outlanding actions and SAR requirements.
- Satisfactory demonstration of spin entry and recovery.

Notes on requirements

1. This means an overall total of 20 solo/mutual flights.
2. Only time in command of mutual flights may count towards a "C" Certificate.

3. Power pilots holding a Student or higher licence may count 10 powered landings as pilot-in-command towards a "C" Certificate, but must meet the soaring requirements.

Privileges and limitations.

- May fly cross-country at the discretion of the CFI/CIP.
- May carry private passengers (i.e. not for hire or reward and not introductory flights under GFA temporary membership), under the provisions of a Private Passenger Rating as described in 16.2.4.

16.2.4 Private Passenger Ratings

Private Passenger Ratings Levels 1 and 2 are an adjunct to the C Certificate and they permit the holders of such certificates to carry passengers when carrying out a private flight. A private flight is a flight carried out on behalf of the pilot alone and specifically not acting as the agent or on the behalf of a gliding club or organization. As a consequence of this, it is a requirement that the pilot pay at least his/her equal share of the costs of the flight. The requirements and limitations of the two Private Passenger Ratings are as follows:

Level 1

- Logbook endorsed by CFI for the carriage of private passengers, subject to direct authorisation by duty instructor on each passenger-carrying flight or group of flights;
- Handover of control to passenger not permitted;
- 90 day recency requirement in addition to normal GFA requirements.

Level 2

- Minimum of 150 hours total gliding experience;
- Logbook endorsed by CFI for private passenger-carrying without direct authorisation by duty instructor;
- 90 day recency requirement in addition to normal GFA requirements.

16.3 Other pilot Certificates

After the "C" Certificate, the GFA follows the international sequence of FAI Silver, Gold and Diamond badges, plus the various GFA and international diplomas. Details of the international badges will be found in Section D of the FAI "Sporting Code", which can be obtained from the FAI Certificates Officer or downloaded from the GFA web page.

16.3.1 Holders of FAI Certificates.

Pilots holding Certificates higher than a "C" Certificate (i.e. Silver badge and above) shall be deemed to meet every aspect of the foregoing GFA requirements, with the proviso that the final jurisdiction on any operation rests with the Duty Instructor on any given day.

16.3.2 Charter pilots.

A club or organization which holds an Air Operator's Certificate (see 16.4) issued by CASA may carry out "hire and reward" passenger operations, provided such passengers are carried by pilots holding a GFA Charter rating and compulsory insurance and other requirements are met. See GFA Operational Regulations Section 7.3 for details of all aspects of charter flying, including the requirements for a Charter rating.

Note: *The holder of a GFA Instructor rating is not automatically the holder of a Charter rating. A separate logbook endorsement by the club CFI is necessary for the Charter rating.*

16.3.3 Official observers

Although not a pilot qualification in itself, Official Observers are the FAI representatives for the purpose of overseeing all flights claimed for FAI badges. Official Observers are appointed by the FAI Certificates Officer, on recommendation by a club committee.

16.4 Air operator certificates

An Air Operator Certificate (AOC) is necessary in order for a club to carry out charter operations. A charter operation is defined as any operation which carries passengers purely for hire and reward, without them becoming GFA members. AOCs are issued by CASA, on application from individual clubs. CASA will only issue an AOC if the terms of a "compliance statement" are met.

Under no circumstances may pilots other than charter-rated pilots be used to carry passengers for hire and reward under the terms of an AOC. See also Operational Regulations, Section 7.3.

16.5 Concessions for glider pilots wishing to obtain a powered aircraft licence

A glider pilot who is the holder of an FAI Silver badge or higher qualification may obtain considerable concessions against the number of hours of training required to obtain a licence.

There is no set minimum of hours a pilot is required to complete in powered aircraft before attempting the flight test for the issue of a Private Pilot Licence. Consult the CFI of the Aero Club chosen for obtaining the licence and an assessment will be made of the amount of training likely to be needed.

16.6 Disciplinary measures and appeal processes

Where a member of the GFA has contravened the applicable CARs, CAOs, GFA Operations Manual or local club rules or procedures, the club CFI/CIP may suspend, cancel or vary the member's flying privileges. The appeal process for the affected member in this case is the club's instructor panel and/or committee.

In the case where a member continues to operate in contravention of any of the above actions, or where contraventions are particularly serious in nature or number, the club CFI/CIP may refer the matter to the RTO/Ops, who may suspend, cancel or vary whichever of the member's pilot or instructor ratings are considered appropriate.

Where pilot/instructor ratings are suspended, cancelled or varied in accordance with the previous paragraph, the member shall have the right to appeal in writing to the GFA Operations Panel (via the Chairman) within 14 days of the decision being Notified to the member and shall have the right of access to all evidence upon which the decision was based.

In the interests of natural justice, if an appeal is lodged within the 14 day period, any penalty which may be considered appropriate shall not take effect until the appeal has been heard. If the appeal is upheld, the proposed penalty shall be altered or rejected. If the appeal is dismissed, the penalty shall take immediate effect.

Where an RTO/Ops has evidence that there is an immediate risk of a member intending to act so as to compromise operational safety or in contravention of CARs, CAOs or other legislation, the RTO/Ops may suspend the member's flying privileges for a period not to exceed seven days for the purpose of the prevention of commission of such an act and shall fully report such suspension to the Chairman of the GFA Operations Panel as soon as possible.

If considered necessary, an RTO/Ops may extend a period of suspension imposed under the previous paragraph for a further period not to exceed seven days, for the same purpose. This extension shall also be fully reported to the Chairman of the Operations Panel as soon as possible.

Where a member has pilot or instructor ratings suspended, cancelled or varied in accordance with the preceding two paragraphs, the member shall have the right of appeal to the GFA Operations Panel (via the Chairman) and shall have access to all the evidence upon which the decision was made.

Where a member has appealed to the Operations Panel in accordance with the foregoing provisions, the Chairman of the Operations Panel shall request the President of the relevant State Association to participate in the appeal process.

Notification to the member under these provisions shall be served in writing, but verbal notice given to the member prior to the service of written notification shall be of the same effect and shall be effective immediately.

SECTION 17 - INSTRUCTOR TRAINING AND RATINGS

17.1 General

Training of Air Experience Instructors (AEIs) is carried out at club level, by the club CFI or suitable delegate, in accordance with the GFA Instructor Handbook.

Training of Levels 1 and 2 instructors is carried out by persons who hold Level 3 (NGS) authority. Such training may be carried out on a decentralised basis within clubs, or courses may be convened if there are enough candidates to warrant it, the required NGS staff personnel are available and the necessary number of gliders and tugs can be organised to satisfactorily cover the syllabus.

General requirements, privileges, limitations and revalidation details of the various instructor ratings are as follows :-

17.1.1 Air Experience Instructor (AEI)

Requirements.

- Minimum age 16 years
- 50 hours total gliding experience, or 200 launches in the case of a winch/autotow pilot. Power pilots may count 10% of their power flying hours towards this total after 10 hours or 50 launches have been gained.
- "C" Certificate.
- Trained within the club by an instructor of at least Level 2 rating, in accordance with the syllabus on pages 8 to 12 in Part 2 of the GFA Instructor's Handbook.

Privileges and limitations.

The purpose of an Air Experience Instructor rating is to carry out Air Experience Flights (AEFs) as defined in 17.1.2. The pilot may demonstrate the glider's controls to the person undertaking the AEF and may hand over control to that person, subject to the following conditions: -

- The AEI must carry out all launches, circuits, approaches and landings.
- The AEI is not authorised to allow the other person on the controls below 800ft AGL.

Revalidation requirements

Biennial flight check with CFI or delegate. 40 hours total gliding in the preceding two years. 3 landings within the preceding 90 days, of which 1 must be in a similar type to that used for the AEF. Revalidated by logbook endorsement and shown on biennial return to RTO/Ops.

17.1.2 Definition of Air Experience flight

An Air Experience flight is defined as carriage of a person who is a member of the GFA (which may be short-term or introductory membership, as defined from time to time by the GFA Council) for the purpose of experiencing the sport of gliding.

17.1.3 Levels 1 and 2 Instructors.

The AEI rating is the highest instructor authority, which can be obtained within a club. For the Levels 1 and 2 ratings, more formal involvement by the GFA National Gliding School (NGS) is called for.

Instructor training is carried out in three stages, viz:

1. Preparation by club. This is carried out in accordance with the "Club Preparation" section on page 28 of Part 1 of the GFA Instructor's Handbook. Club preparation is followed by an application for instructor training, made on the appropriate form, which can be obtained from the RTO/Ops. A sample form will be found in the Appendix to this Manual.

   Note: *Instructor training may not commence until this form has been submitted to the RTO/Ops and a Level 3 (NGS) Instructor allocated for the purpose by the RTO/Ops.*

2. The training itself. When a Level 3 (NGS) Instructor has been allocated by the RTO/Ops to a candidate or group of candidates, mutual arrangements are made for these persons to come together to enable instructor training to commence. This training continues for as long as necessary to produce the required standard, but experience has shown that it should not be prolonged unnecessarily and a maximum of 10 weekends should not be exceeded. The training is recorded by the Level 3 Instructor in an NGS Flight Progress Record. When training is complete, the Level 3 instructor forwards the completed Flight Progress Record to the RTO/Ops.

3. On receipt of the completed Flight Progress record, the RTO/Ops allocates an independent Level 3 Instructor to carry out a Rating test on the candidate. The results of this Rating Test are recorded on a Final Flight Test Report and this triplicated form is sent to the RTO/Ops. If the Rating Test is successful, the RTO/Ops issues the appropriate logbook sticker to the candidate, via his/her club.

Important notes:

1. The coordinator of instructor training in a region is the RTO/Ops. No instructor training should take place without the RTO's knowledge and approval.

2. When a rating test has been successfully completed, the Level 3 (NGS) Instructor who carried out the test should endorse the candidate's logbook at the appropriate level. This will serve as interim authority for the candidate to serve as an instructor, pending receipt of the logbook sticker from the RTO/Ops.

17.1.3.1 Level 1 Instructor

Requirements.

- Minimum age 18 years.
- 75 hours total gliding with a minimum of a C Certificate. Power pilot credits as for AEI rating.
- Prepared by club in accordance with Part 1 of Instructor's Handbook, with appropriate form signed by club CFI.
- Adequate knowledge of Parts 1 and 2 of the Instructor Handbook, which will be tested by oral examination during the instructor-training process.
- Trained by Level 3 (NGS) Instructor in accordance with Part 1 of Instructor's handbook.
- Rating Test carried out at the end of training by Level 3 Instructor, who should if possible be a different instructor from the one carrying out the training.
- Initial issue of rating by RTO/Ops, on recommendation of NGS Instructor who carried out the Rating Test. Notified by logbook endorsement, in the form of a standard GFA sticker.
- Subject to biennial revalidation, carried out by club CFI.

Privileges and limitations.

- Authorised to instruct all sequences in Part 2 of the Instructor's Handbook.
- May only give instruction under the supervision of an instructor holding a Level 2 or higher rating.
- May not approve initial solo flight.
- May not take charge of a club's operations.

Revalidation requirements

40 hours or 150 launches in the two-year period, which must include a minimum of 20 hours or 60 launches instructing. Of this total, at least 5 hours (25 launches) of instructional time must be completed in the six months prior to revalidation.

Biennial check of instructional skills by CFI. Revalidation notified by logbook sticker (issued by CFI) and listed on the biennial revalidation return to RTO/Ops.

17.1.3.2 Level 2 Instructor

Requirements

- 100 hours total gliding, with credits for power flying as for Level 1 rating.
- Silver C, but with the proviso that a waiver against holding this badge may be granted by the RTO in the case of an instructor from a club unable to carry out cross-country flying.
- Club certification (on appropriate form) that the person has performed satisfactorily as a Level 1 Instructor and that all basic training sequences have been carried out to the satisfaction of the Instructor Panel.

- Comprehensively checked by club CFI prior to requesting an upgrading.
- Upgrading (incorporating a rating test) carried out by NGS Instructor, who must make a recommendation to the RTO/Ops for the issue of a Level 2 rating.

Privileges and limitations.

- Authorised to instruct all sequences in Part 2 of the Instructors Handbook and to supervise Level 1 Instructors carrying out training work.
- Authorised to approve first solo flight.
- Authorised to take charge of a club's operations.
- Authorised to carry out duties of CFI if ratified by RTO/Ops.
- Notification and revalidation requirements as for Level 1 Instructor

17.1.4 Level 3 (NGS) Instructor

Requirements

- Minimum of 200 hours instructing.
- Minimum of two year's continuous service as a Level 2 Instructor.
- Gold C with Diamond Goal.
- Recommended to RTO/Ops by CFI.
- If RTO/Ops agrees with CFI's recommendation, initially trained by accompanying an experienced Level 3 Instructor during instructor-training sessions and acting in the capacity of an understudy to that Level 3 Instructor.
- For standards-setting and standardisation purposes, attendance at a regional seminar/flying programme of the National Gliding School.
- Notified by logbook endorsement. Subject to biennial revalidation, carried out by the CTO/Ops.

Note: *Only sufficient Level 3 appointments will be made to meet the anticipated instructor-training workload assessed by the RTO/Ops.*

Privileges and limitations

- Authorised to carry out the training of instructors at the request of RTO/Ops and in accordance with the Instructor Handbook and NGS documentation as amended from time to time.
- Authorised to carry out Rating Tests of Level 1 and Level 2 Instructors at the request of the RTO/Ops.
- Authorised to carry out biennial Operational Status Checks on gliding clubs at the request of the RTO/Ops.

Revalidation requirements

- Biennial revalidation, normally conditional on attending a regional seminar/flying programme of the National Gliding School and Notified by logbook sticker issued by the GFA Director of Operations.

17.1.5 Ground supervisory instructors

A “non-flying” rating, utilising instructors who are grounded for temporary or permanent medical reasons and who are interested in using their supervisory skills and experience to assist in the running of their clubs.

Requirements

- Have held a minimum of a Level 2 instructor rating for a time-span of at least two revalidation periods (4 years);
- Be in possession of all relevant up-to-date operational documentation;
- Approved, and recommended to RTO/Ops, by club CFI.
- Initial issue and revalidation
- Initial issue shall be by RTO/Ops and Notified by logbook endorsement. Biennial revalidation shall be by club CFI and Notified by logbook endorsement.

Privileges and limitations

- May exercise all privileges of a Level 2 instructor except those related to actual flying duties.

17.1.6 Lapsed instructor ratings

Lapsed instructor ratings (e.g. pilots returning from interstate or overseas, or simply a period of inactivity) may be reinstated by the RTO/Ops after ensuring adequate recency in club or private gliders, followed by sufficient retraining to ensure up-to-date knowledge and flight proficiency as an instructor.

A flight check must be carried out by the CFI and an application made to the RTO/Ops for re-issue of the rating. The rating may be restored at the discretion of the RTO/Ops, who may request particular details of the person's recent flying activities and/or specify retraining by a Level 3 Instructor and/or a return to instructing via a temporarily lower rating than the one previously held.

17.1.7 General notes on instructor ratings

The initial issue of a Level 1 or Level 2 rating shall only be carried out by the RTO/Ops, on the recommendation of the Level 3 Instructor carrying out the Rating Test.

Biennial revalidation of Levels 1 and 2 ratings shall be carried out by the CFI and the appropriate logbook stickers issued. This must be done by 31st August in the revalidation year.

A list of instructors and their revalidation status must be forwarded by each CFI to the RTO/Ops as soon as possible thereafter.

Reminders will be sent by GFA to all clubs at the appropriate time.

Holders of instructor rating (except ground instructors) hold automatic passenger-carrying privileges, as follows :-

AEI and Level 1 rating: - Passenger carrying level 1

Level 2 and Level 3 rating: - Passenger carrying level 2

IMPORTANT NOTE. *The CFI is responsible for ensuring that instructors in his/her club are revalidated promptly, the appropriate logbook sticker issued and the list of instructors forwarded to the RTO/Ops. Failure to comply with any of the above actions may compromise the cover afforded those instructors by the GFA Broad-based and Contingent Liability Insurances.*

17.1.8 Overseas instructor ratings

There is a reciprocal agreement between GFA and certain overseas countries whose instructor training standards are known. These change from time to time and it is not appropriate to list them in this manual. Contact RTO/Ops for

guidance in each individual case. The RTO/Ops is required to issue a GFA Instructor Authorisation to each instructor whose qualifications are accepted and such persons must become members of the GFA.

17.1.9 Selection of new instructors

As well as meeting the requirements of Part 1 of the Instructor's Handbook, an Instructor Panel should give careful consideration to the temperamental suitability of proposed new instructors at the selection stage.

Effective instruction requires a high personal standard of integrity, honesty and fairness, together with the desire to obtain and use the rating in the service of the club and the GFA. It is not appropriate that a pilot desire or be issued with a rating as a status symbol. The personal qualities cannot be reliably assessed during instructor-training and should be assessed by the club panel/CFI before the candidate is proposed to the RTO/Ops. Club panels should remember that that, once issued with a rating, that instructor will become a member of the club panel and that removal of the rating is (rightly) made difficult and dependent on natural justice and hard evidence. The new instructor will then, in the first instance, be the responsibility of that club panel.

Experience has shown that it is better to cope with a short-handed panel than to include an inappropriate instructor on that panel.

At the same time, Instructor's Panels can be very parochial and narrow-minded. This should not be allowed to exclude good instructor candidates because they have at some stage disagreed with Panel decisions for good and sufficient reasons.

17.1.10 Relationship between Instructor Panel and Club Committee

The Committee of a gliding club is responsible for the general management of a club, which includes the activities of the Instructor's Panel. However, a Committee should be very careful not to rule on matters outside its technical competence.

On the other hand, an Instructor's Panel which works in isolation and does not keep the Committee in the picture on important matters is likely to acquire a reputation as a secret society. This invariably causes problems within a club and disrupts the smooth running of all club activities. The remedy for both extremes is obvious.

SECTION 18 - COACHING ACTIVITIES

18.1 General

In addition to basic flying instruction, a system of sporting coaches exists, the purpose of which is to provide pilots with ongoing soaring and cross-country training. Such coaches do not necessarily have an instructing background, although a minimum of an AEI rating is required. The training given is intended to assist pilots from C Certificate standard through to advanced racing techniques applicable to championship flying.

It goes without saying that, while all arms of the gliding movement are expected to contribute to the maintenance of a safe operation, operational control and safety-related matters remain at all times the province of the relevant operational authority responsible for the operation; that is in most cases the club panel of instructors.

18.2 The GFA Performance Coach

The Performance Coach is responsible to the Chairman of the GFA Sports Committee for planning of the coaching programme, appointment of RTOs/Sport and may also be appointed as the coach to the Australian team competing in the World Championships.

18.3 RTO/Sport

The Regional Technical Officers/Sport are responsible to the GFA Performance Coach for the implementation of the coaching programme at regional level.

Although not normally expected to be a problem, in the event of an operational or safety-related dispute in coaching activities at Regional level, the decision of the RTO/Ops shall prevail over that of the RTO/Sports.

18.4 Club coaches

Club coaches are nominated by their clubs, ratified by CFIs and appointed by RTO/Sport. As stated, Coaches must hold a minimum of an AEI rating and the requirements of this rating must be adhered to during the conduct of coaching activities. Club Coaches are responsible to the RTO/Sport for the implementation of the coaching programme at club level.

In the event of a safety-related dispute in coaching activities at club level, the decision of the Duty Instructor/Instructor Panel shall prevail over that of the Club Coach or Coaches.

18.5 Further information

The developed coaching programme will be found in the Manual of Standard Procedures, Part 4 (Sporting).

During the course of coaching development, enquiries about the coaching programme should be directed to RTOs/Sport in the relevant region. The addresses and contact numbers of RTOs/Sport can be found by enquiring at the GFA Secretariat.

SECTION 19 - INDEPENDENT OPERATIONS

19.1 Level 1 Independent Operator

19.1.1 In accordance with GFA Operational Regulation 6.3.4, a pilot holding a Silver badge or higher qualification may be authorised by logbook endorsement to fly a sailplane without being supervised by a Level 2 Instructor. An RTO/Ops has the discretion to waive the Silver badge requirement for pilots deemed to have equivalent experience and qualifications.

19.1.2 A pilot with an Independent Operator endorsement in the logbook, who also holds a Private Passenger rating may carry private passengers independently.

19.1.3 A pilot with an Independent Operator endorsement who also holds a Charter or AEI rating may carry out independent Charter or AEF flights.

Note: *In the case of 19.1.2. and 19.1.3. above, a CFI may decide to impose special conditions on the conduct of flights in these two categories. For example, he/she may require telephone contact prior to each occasion of conducting such operations to obtain direct authorisation.*

19.1.4 In the case of an Independent Operator flying at a site which has a Level 2 Instructor present, Independent Operator privileges do not apply and the Level 2 Instructor's jurisdiction must prevail.

19.1.5 When operating from a site with a resident gliding club, Independent Operators are subject to the requirements of the resident club.

19.1.6 In the case of more than one club operating from a particular site, the resident clubs must ensure that an appropriately qualified person is appointed on any given flying day to oversee the activities of visiting pilots.

19.1.7 Independent Operators are subject to competency check at least annually, as per normal GFA practice.

19.1.8 A club issuing Level 1 Independent Operator authority to a person is responsible for that person's operations, even when the person is operating independently.

19.2 Level 2 Independent Operator

19.2.1 Unlike the Level 1 Independent Operator authority, where club responsibility of independent operations is of primary importance, holders of Level 2 Independent Operator authority are solely responsible for all aspects of their operations when operating independently.

Requirements for initial issue of Level 2 Independent Operator authority are :-

- FAI Silver or higher badge;
- Flight Radiotelephone Operator Licence or GFA Radio Operator logbook endorsement;
- A minimum of 200 hours command time in gliders, which may include powered sailplanes and power-assisted sailplanes. 10% of powered aircraft command time may be counted towards this requirement;
- Club committee approval;
- Oral examination on airways and radio procedures, SAR requirements and accident/incident reporting procedures;
- Be in possession of GFA Airways and Radio Procedures for Glider Pilots and all relevant current aeronautical charts and documentation (e.g. ERSA).

19.2.3 Initial issue of Level 2 Ind. Op. authorisation shall be by logbook endorsement by CFI/CIP.

19.2.4 Annual revalidation of Level 2 Ind. Op authority is by annual flight check as per GFA Op. Reg. 6.3.5. This may be done by any Level 2 or higher rated instructor who is familiar with the L2 Ind. Op's operations.

19.2.5 Holders of Level 2 Independent Operator authority are solely responsible for all aspects of their operations while operating independently. This includes airways clearances, tower clearances, SAR notification and accident/incident reporting.

SECTION 20 - AIR DISPLAY APPROVALS

20.1 General

As stated in Operational Regulation 9.10., approval by CASA and RTO/Ops is necessary for glider pilots to participate in air displays at which members of the public are present. CASA will normally accept at face value any approval issued by an RTO/Ops.

Air display approvals may be issued in one of two ways, viz:

20.1.1 Individual approval.

Approval for participation in a public Air Display must normally be on an individual basis for each display occasion. The aircraft type and intended manoeuvres to be performed must be nominated on the application for approval. Application forms are available from the RTO/Ops or the GFA Secretariat.

20.1.2 Blanket approval

Blanket approval for selected pilots, well known to the RTO/Ops, may be issued, subject to the following :-

- The glider in use to be flown within its limitations.
- Aerobatic manoeuvres to be completed by 1,000ft AGL or 2,000ft AGL if conducted within 2NM of the Aerodrome Reference Point (ARP) of a licensed aerodrome. Aerobatics below these heights requires separate CASA approval.
- Pilots holding blanket display approval must notify the RTO/Ops of participation in a display.
- The conditions of the display briefing must be adhered to.
- Blanket display approval must be Notified by logbook endorsement.
- The logbook endorsement must be renewed every two years. If the endorsement is not renewed, the pilot reverts to individual approval as at 20.1.1. above.

The number of blanket approvals issued will be very low. Most pilots participating in air displays will be in the category of individual approval. Only those pilots with a known record of excellent performance and conduct at air displays will receive blanket approval.

20.1.3 Minimum height for aerobatic manoeuvres.

Display aerobatics in gliders must adhere to the same rules as non-display aerobatics, i.e. the manoeuvres must be completed by 1,000ft AGL (2,000ft AGL within 2NM of the Aerodrome Reference Point of a licensed aerodrome). Approval to conduct aerobatics below this height is not the prerogative of the GFA and such approval must be sought from CASA.

SECTION 21 - TEST AND EVALUATION FLYING

21.1 Test flying

Test flying is defined as the flying of a new type of glider which has not previously been flight-tested and approved. As the nature of the handling characteristics of the glider are unknown, the pilot will be called upon to explore them across the entire design envelope.

The test-flying requirements of new glider types are contained in GFA Airworthiness Advice Notice (AN) 98, "Flight Testing New Glider Designs". That document must be used as the reference for all test flying.

Only pilots authorised as GFA Test pilots may carry out test flying as defined above.

Test pilots are appointed by the GFA Director of Operations and the appointment must be Notified by letter.

21.2 Evaluation flying

Evaluation flying is not in the same category as test flying, as the glider's characteristics are known and the pilot will be required to establish whether they have changed in any way from their original values.

Evaluation flying includes the following: -

1. The first example of a type-Certificated glider to be flown in Australia.
2. Any glider being evaluated for satisfactory flight characteristics following a Form 2 inspection or any other maintenance or repair work.

Evaluation flights are functional tests to assess whether the glider's handling characteristics are normal and that all systems e.g. airbrakes, flaps, etc, function in the correct manner, i.e. as originally Certificated.

In the case of two-seat gliders, the second seat may be occupied during evaluation flying, provided that both pilots are qualified glider pilots. No passengers are permitted on evaluation flights.

Test pilot authority is not required for carrying out evaluation flying, as defined above. Any suitably experienced pilot who has familiarised him/herself with the aircraft's characteristics, via experience on type or by study of the relevant manuals, may carry out this work, at the discretion of the club CFI.

20.3 Test flying information

Copies of OSTIVAS, BCAR and JAR-22 are available for purchase from the GFA Secretariat.

SECTION 22 - OPERATION IN AUSTRALIA BY FOREIGN PILOTS AND FOREIGN-REGISTERED GLIDERS

22.1 Foreign pilots

Regardless of whether the glider(s) concerned in any given operation are registered in Australia or a foreign country, foreign pilots operating in Australia must be qualified for the tasks contemplated, be in current flying practice and must be members of the GFA.

Foreign pilots must be provided with a comprehensive briefing on Australian procedures (general and local) before flying as pilots-in-command. In particular, information on operations on licensed aerodromes and associated MBZ/CTAF procedures must be provided in clearly-understandable written form to each pilot.

Site checks must be provided for those foreign pilots who have not operated at that site before.

Competency checks must be carried out on foreign pilots, at the discretion of the operator.

Foreign pilots must be provided with a safety and survival briefing if they have not operated in Australia before.

Communications with Air Traffic Control or other airspace users must be in the English language.

Foreign operations in Australia must meet all aspects of normal GFA operational requirements, including applicable CARs, the provisions of CAO 95.4 and the GFA Operations Manual.

22.2 Foreign-registered gliders.

The temporary import and subsequent export of any foreign-registered glider(s) is the responsibility of the owner(s) and/or pilot(s) concerned.

SECTION 23 - LAUNCHING

23.1 Winch and auto-tow launching

23.1.1 Vehicle requirements

Any vehicle used for launching gliders, whether winch or towcar, must have adequate protection for the driver and co-driver against the ingress of launching wire, especially that occurring under tension such as a cable-break. Such protection must consist of a combination of sheet metal, wire cage material and armoured transparencies (e.g. polycarbonate or toughened glass) appropriate to the design and dimensions of the winch or launching vehicle.

Winch-drivers must ensure that members of the public are not permitted to remain in close proximity to the winch when launching is in progress.

The winch or autotow vehicle, together with its associated wires or ropes, must receive a Daily Inspection before flying commences. This inspection must consist of, as a minimum, checking that there is sufficient fuel, oil and water in the vehicle and that the engine is warmed up and running properly. The vehicle must be fitted with a serviceable fuel contents gauge or simple dipstick.

There must be provision for cable cutting or releasing. The equipment for the purpose must be serviceable, effective and capable of being operated without leaving the safety of the cab.

23.1.2 Launching wires/ropes

The glider end of winch and autotow wires or ropes must be fitted with linked rings of a design approved by GFA (refer to MOSP Part 3, Airworthiness, for approved rings). The rings must be inspected before flying commences and must not be used if damaged or distorted.

If solid wire is to be used, the recommended standard for such wire must be "Range 2 Spring Steel". The two common diameters of this material in use for glider-launching purposes are 2.8mm and 3.15mm, either of which is suitable and easily obtainable from spring manufacturers listed in the "Yellow Pages".

The launching wire or rope must be inspected at least daily and determined to be in a safe condition.

If a drogue parachute is fitted to the launching wire, the minimum distance between the drogue and the rings shall be 5 metres.

The drogue parachute must be of such a design that it has no tendency to fully or partially open during the launch.

If a two-drum winch is used, only one glider may be attached to a cable at any one time. The idle cable must be separated from the live cable by at least one wingspan and it must be securely anchored.

In a multiple-cable operation, the cables must be laid out, and the first glider to be launched must be so positioned that the first cable pulls apart from the second cable under tension. This ensures that there is no risk of cables becoming crossed during the launching process.

23.1.3 Weak links.

A weak link is mandatory and the specified breaking strength placarded in the glider cockpit and on the glider's external surface adjacent to each release hook. See Airworthiness Advice Notice (AN) 75.

The weak link must be placed on the glider side of the drogue, so that the drogue is pulled well clear of the glider in the event of a weak link break.

The "Tost" weak link system is recommended. Knots in wire may only be used instead of a weak link if the knotted wire has been tested and the results are available for inspection. Each new batch of wire must be separately tested.

23.1.4 Ground signals for winch and autotow.

These signals are defined as follows :-

"Take up slack" (self-explanatory).

"All out" (in some regions "full power") - this signal means all the slack is out of the wire and the launch may proceed.

"Stop" (self-explanatory).

Hand signals from the pilot to the wingtip holder are not recommended, on the basis that they distract the pilot from keeping control of the glider when things can be happening very quickly and they also detract from the ability to release the cable quickly should the need arise.

The following is the standard procedure to be used :-

1. After attaching the cable and ensuring all clear above and behind, pilot signifies ready for take-off by giving a thumb-up signal with the left hand. This is confirmed verbally by the expression "pilot ready for take-off".
2. Crew member (who must be adequately trained or under supervision) raises wingtip and gives take-up-slack signal if satisfied that it is still clear. This signal should be given verbally as well as visually, to ensure that all persons around the launch point are in no doubt that a launch is taking place. Pilot keeps left hand as close to release as possible.
3. When cable has tightened sufficiently, wingtip holder gives all-out (full power) signal, again verbal as well as visual. The pilot will have no input to this signal.

The stop signal may be given by anyone who believes that the launch should not take place for any reason. It may be given by the pilot, the wingtip holder or by a bystander who sees something which nobody else has noticed. No person should hesitate to give a stop signal if in any doubt about the safety of the operation. When a stop signal is given, the pilot releases the cable immediately.

23.1.5 Communication between launch point and winch/towcar

An adequate method of communication must be established between the launch point and the winch or tow-car, to relay the above signals. The alternative methods of signalling are listed here.

Radio.

If used for launch signals, the radio must be external to the glider, typically in the pie-cart. In this way, problems external to the glider and unseen by the pilot can be detected and the launch stopped (e.g. airbrakes unlocked). For this reason, the use of the glider's internal radio for launch signals is prohibited. Terminology to be used is as described above.

For autotowing, a normal loudspeaker in the vehicle is usually adequate to enable the tow-car driver to hear the signals clearly. For winch-launching, the noise level may be too high for this to be relied upon and a headset is recommended. It is especially important to be able to hear a stop signal, which may be given after full power has been applied.

Telephone.

Terminology is the same as for radio and the same principles apply to the use of headsets in a high-noise environment.

Single bat.

"Take up slack" - Bat moved from side to side in an underarm motion across the body.

"All out" ("Full power") - Bat moved from side to side over the head.

"Stop" - Bat held stationary above the head.

Two bats.

"Take up slack" - One bat moved up and down alongside the body.

"All out" - Two bats moved up and down each side of the body.

"Stop" - Two bats held up over the head.

The single bat method is generally easier than the two bat method. However, in summer conditions where mirage effects may distort signals, the two bat system may have advantages in making signals less confusing over winch-launch distances. Bats should be large and of a colour contrasting with the local environment.

Lights.

"Take up slack" - Morse dashes.

"All out" - Morse dots.

"Stop" - Steady light.

A single "Aldis" type light is ideal for signalling over long distances. In mirage conditions, a second light may be added, in which case the "All out" signal becomes morse dashes on two lights instead of one. As with two bats, this eliminates confusion. Car headlights work very well for signalling, but obviously this removes the option of doubling up in difficult signalling conditions.

Wing-waggling.

"Take up slack" - Glider rocked laterally by moving wingtip up and down.

"All out" - Wings held level.

"Stop" - Wing down.

Wing-waggling must not be used unless a back-up stop signal is available (e.g. bat), to cover the case of a stop signal being required after the wing has left the wingtip holder's hand. An example of where this might occur is the case of a glider's tailskid picking up the second wire of a pair on a crosswind take-off.

23.1.6 Winch/autotow signals during launch.

Too fast - while still below upper speed limit, glider yawed until response obtained from winch/car driver. If no response and speed continues to rise toward limit, glider releases.

Too slow - while still above 1.3Vs, glider nose lowered and the glider rolled from side to side. If no response and speed continues to fall toward 1.3Vs, glider releases.

23.1.7 Winch/autotow airfield specifications.

The minimum field length for winch launching is 1,200 metres. RTO/Ops approval of strip required before operating. The airfield should be clear of obstructions in the take-off and landing directions.

The minimum field length for autotow operations is 1,600 metres. The strip should be smooth enough to drive a car or truck at 100km/hr. Obstruction requirements as for winch launching. RTO/ops approval required as for winch-launching.

Consideration will be given to reducing the above strip length for autotowing if the operational situation warrants it. An example of a case for reduction of strip length is autotowing with polypropylene rope, which does not need a drogue to stabilise it after release. This eliminates the need for a long "run-off" to keep tension in the rope after release and potentially reduces the strip requirement by up to 250 metres. The RTO/ops has discretionary power to vary strip length in any individual case.

Winch launching is more awkward. There will normally be no concession against the 1,200 metre requirement, because of the risk that a short strip can promote early rotations into excessively steep climbs. Any concession that may be granted will be a very minimal one.

23.1.8 Winch/autotow drivers.

Winch and tow-car drivers must be properly trained by club members with appropriate experience and must remain under supervision until all emergency situations have been experienced or adequately simulated. Winch or tow-car drivers who are under training are not permitted to launch gliders on charter flights (see also GFA Op Reg 7.3.3 (c) (iv).

23.1.9 Winch/auto launch emergency training (pilots)

During pre- and post-solo training, all likely launch failure cases, e.g. Wire/rope breaks and engine failures must be adequately simulated during the launch, in accordance with the Instructor's Handbook. These exercises must be carried out at a variety of heights, to ensure flexibility of response on the part of pilots under training. It is not sufficient to carry out this training solely by simulating the failure cases in free flight at altitude.

23.1.10 "Kiting" during winch-launching

The practice of kiting during winch-launching potentially endangers members of the public who have nothing to do with the gliding operation. As kiting is only possible during strong wind conditions, a cable-break (or running to the end of the cable on the winch) means the certainty of the cable drifting downwind well outside the confines of the gliding site, crossing public roads or becoming entangled with power-lines outside the airfield. Innocent parties may thereby become electrocuted or otherwise killed or maimed. For this reason, the practice of "kiting" is prohibited.

23.2 Aerotow launching.

23.2.1 Tug aircraft.

The tug aircraft must be approved by CASA for glider-towing and the release mechanism must be of an approved type (see MOSP Part 3, Airworthiness). The release must be functionally checked each day before flying commences.

One or more mirrors must be fitted to the tug aircraft to enable the pilot to see the glider during towing.

23.2.2 Towropes.

The required length for an aerotow rope is 55 metres and only GFA approved rings are permitted. See Airworthiness Advice Notice (AN) 75.

Ropes shorter than 55 metres are only permitted for the following purposes :-

- For aerotow retrieves from outlanding paddocks.
- As the shorter rope of a double-tow pair.
- For wave-flying in rotor conditions.

23.2.3 Weak links.

A weak link is mandatory and must normally be placed at the tug end, provided that the specified weak link strength for the tug also suits the glider. If the specified weak link strength for a heavy glider is greater than the specified strength for the tug, the operator is stuck with the weaker of the two values. If the specified strength for a light glider is less than that specified for the tug, a separate weak link of the correct glider strength must be inserted at the glider end, in addition to the one already in place at the tug end.

Glider weak link strengths are placarded in the cockpit. For tug weak link strengths, consult the tug flight manual towing supplement.

See also Airworthiness Advice Notice (AN) 75.

22.2.4 Tug pilots.

Tug pilots are required to hold an approval to tow gliders and the training for this approval is specified in CASA Flying Operations Instruction (FOI) 21-4, a copy of which appears in the Appendix to this Manual.

A glider-towing approval remains valid as long as the pilot's licence remains valid, provided the recency requirements are met. These requirements are specified in FOI 21-4.

When engaged in glider-towing operations, the tug-pilot is deemed to be the pilot-in-command of the entire combination.

23.2.5 Approved Persons.

Approved Persons are defined as experienced tug pilots who hold CASA authority to train and check tug pilots. Training and revalidation requirements for Approved Persons will be found in FOI 21-4.

The main duty of Approved Persons is the initial training of tug pilots in accordance with FOI 21-4. An additional duty is the revalidation of any tug pilot who fails to meet the specified recency requirement.

23.2.6 Tugmaster.

The tugmaster of a gliding club is responsible for ensuring the serviceability and availability of tug aircraft within the club. He/she is also responsible for the training and standards of the club's tug pilots. It is desirable, though not essential, that the tugmaster is an Approved Person. If not, it will obviously be necessary for the club to have access to an Approved Person for routine checking and monitoring of flying and towing standards.

23.2.7 Aerotow ground signals.

The signals for aerotowing are the same as for the bat signals used in winch/auto launching, except that a bat is not normally used. The short distance between the glider and the tug means that the underarm and overarm signals can be easily seen without a bat.

The procedure to be used between cockpit and wingtip holder is the same as for winch and autotowing, i.e. the wingtip holder controls the launch after the pilot has confirmed ready for take-off. Once again, anyone can give a stop signal if necessary.

Two external signallers will normally used in aerotowing, one at the wingtip of the glider and the other positioned forward and to one side of the tug. The wingtip holder gives the signals as appropriate and the forward signaller relays the signals to the tug pilot.

There is sometimes a temptation to omit the forward signaller, especially when using tugs with good all-round visibility, e.g. Pawnee. This temptation should be avoided, as the forward signaller can often see things which are missed by the wingtip holder. The forward signaller must never be omitted in busy gliding operations which are combined with power-flying operations.

23.2.8 Aerotow signals during launch.

23.2.8.1 Tug emergency, glider must release.

This "wave-off" signal consists of a rolling of the tug aircraft from side to side. Note that the signal is a definite rolling motion of the aircraft, not just a waggling of the ailerons. Upon recognising a wave-off signal, the glider pilot MUST RELEASE IMMEDIATELY. The tug pilot will only give the glider pilot the opportunity to release in this way if there is time to do so. If the emergency is sudden and /or catastrophic, the tug-pilot will release the glider from the tug end without warning. For this reason, if the tug-pilot is considerate enough to give a wave-off signal, the glider pilot is duty bound to release without delay.

23.2.8.2 Glider release failure.

If the glider fails to release when the pilot has pulled the release knob, and further attempts prove fruitless, the glider is flown out to the left side of the tug and is held in that position. The tug pilot feels the tug's tail being pulled around and realises the problem when the glider stays in its new position. The tug pilot then acknowledges the glider pilot's predicament by a wave of the hand.

Upon receipt of the tug pilot's wave, the glider pilot returns the glider to the normal low-tow position behind the tug. The glider is then flown up through the slipstream into the high-tow position and held there. The tug pilot then releases the rope from the tug end.

The glider is flown back to the aerodrome with the rope attached, taking the precaution of ensuring a high approach over all obstacles to avoid snagging the rope.

23.2.8.3 Double release failure.

If the above signal is given and the full procedure followed, the glider should be released from the tug without further problems. However, there is an outside chance that the rope may also fail to release at the tug end. In this case the tug will begin a gentle descent towards the circuit area of the aerodrome.

Upon recognising that a descent has commenced, the glider pilot will realise that a double failure has occurred. Sufficient airbrake is used to keep the towrope tight and to maintain station in low-tow during the descent.

The glider is landed in normal fashion, and the appropriate braking method (wheelbrake, skid) used to bring the entire combination to a halt. The tug pilot does not use the tug's brakes during the landing roll, allowing the glider to provide all the braking action.

23.2.8.4 Airbrakes open.

If the glider takes off with the airbrakes unlocked and they suck open during the climb, the tug pilot will detect a reduction in the rate of climb. If the airbrakes are very powerful and the tug not so, the climb may never begin. In this case the glider must release early, so as not to endanger the entire combination. If the glider pilot does not take this action, the tug pilot will do so.

If the combination gets off the ground, but the rate of climb is abnormally low, the tug pilot will check in the mirror to see whether the glider's airbrakes have opened. The signal for open airbrakes is a waggle of the tug's rudder. The glider pilot will then check the airbrakes and close them if they are open. Note that the rudder-waggle is not as pronounced as the rolling of the wings; the tug does not have to be yawed, just a rhythmic waggling of the rudder is sufficient for this signal.

If a rudder-waggle signal is received and the glider's airbrakes are checked and found to be locked, there may be something wrong with the tug which is not yet obvious to the tug pilot. In this case, having checked the airbrakes, the glider pilot should anticipate that he might be receiving a wave-off fairly soon, as the problem makes its presence felt.

On gliders fitted with tail-chutes, this item might be the cause of a rudder-waggle. If a signal is received and the airbrakes are found to be closed and locked, the tail chute should be jettisoned. If it has in fact deployed, this will fix the problem; if it has not deployed and the problem is elsewhere, nothing is lost because the tail-chute will remain within its tail fairing. The glider pilot must remember that the chute has been jettisoned when coming in to land.

23.2.9 Airfield specifications for aerotowing.

Refer to Op Reg 8.4 for airfield requirements for aerotowing.

Aerotow operations from Government or Licensed aerodromes must be conducted in accordance with Flying Operations Instructions (FOIs) 21-1 and 21-2, copies of which will be found in the Appendix to this manual.

In general, any new permanent or semi-permanent aerotow operation (e.g. lengthy summer camp) requires RTO/Ops approval, regardless of meeting the airfield requirements stipulated above. This obviously does not apply to aerotow retrieves from paddocks, which belong in the realm of pilot responsibility. Remember that the tug-pilot is the command pilot of an aerotow combination.

23.2.10 Aerotow launch emergency training.

During pre- and post-solo training, all likely launch failure cases must be practised, in accordance with the Instructor's Handbook. Rope-breaks and wave-offs must be practised at a variety of heights during the launch.

23.2.11 Double towing.

Towing of two gliders with one tug aircraft may be carried out subject to the following requirements :-

- Adequate strip length, width and obstacle clearance.
- Wingtip holders to be positioned at outer wings.
- Forward signaller essential.
- Water ballast must not be carried.
- The short rope to be a minimum of 35 metres long and the long rope minimum 65 metres long. Ropes to be connected to tug aircraft in such a way that, if jettisoned by the tug pilot, the ropes will separate. This can be done without difficulty, but because of different release installations, a single recommendation cannot be made in this manual. Contact CTO/Ops if specific advice is required.
- Prior to take-off, if there is any crosswind, the glider on the short rope must be placed on the upwind side of the tug.
- The glider with the most efficient ground-braking system (skid or wheelbrake) must be placed on the long rope, in case the short rope breaks during the take-off run.
- The more experienced pilot must fly the glider on the long rope (in case of a take-off emergency requiring a rapid reaction to release the rope).
- When the combination is airborne, both gliders must fly directly behind the tug, the glider on the short rope flying in high-tow, the glider on the long rope in low-tow.
- At the releasing stage, the glider in high-tow on the short rope must release first and ensure that an immediate clearing turn is made.
- In the event of a wave-off, the gliders break to the respective sides from which they commenced the launch.
- In the event of release failure in the first glider, the pilot must fly the glider out to the left to warn the tug pilot and the pilot of the other glider. Upon receipt of acknowledgment from the tug pilot, the glider is returned to normal high-tow, whereupon the glider on the long rope releases and clears away. The tug pilot then releases the short-rope glider from the tug end.
- If the glider on the long rope has not released and cleared away within 10 seconds of the glider on the short rope returning to the normal high-tow position, the tug pilot must assume that it has also failed to release and must release the ropes at the tug end. If connected to the tug in the prescribed manner, the ropes will separate cleanly after release.

23.3 Bungy launching

Bungy launching is not in general use in Australia and the necessary elastic ropes are not obtainable locally. There are special requirements for bungy sites and the conduct of this method of launching. Any operator who obtains an imported bungy rope and has found a site from which to conduct such operations must seek the approval of the CTO/Ops, who will ensure that the correct methods are applied. Bungy launching operations must not take place without approval.

23.4 Reflex launching

Reflex launching is no longer considered a satisfactory launch method and permission for such launching may not be granted.

23.5 Self-launching

See Section 26.

SECTION 24 - AIRFIELDS AND AIRSPACE

24.1 Airfields and Airspace Officers

24.1.1 GFA Airfields and Airspace Officer

This is an elected voluntary position, responsible to the GFA Council through the Operations Panel for the following :-

- To ensure the continuance of the maximum amount of freedom for gliding operations in accordance with GFA policy.
- To attend CASA/Industry airspace consultative meetings when necessary, to ensure adequate representation of gliding interests.
- To coordinate the activities of Regional Airfields and Airspace Officers in assisting clubs to obtain access to adequate sites for their operations and to ensure that the regional personnel liaise with the relevant RTO/Ops to ensure that such sites meet operational requirements.
- To act as the Convenor of the GFA Airfields and Airspace Committee and to organise meetings of that committee as required.

24.1.2 Regional Airfields and Airspace Officers

These are voluntary positions elected by State Associations/Regional Committees. Duties are similar to those of the GFA Airfields and Airspace Officer, but on a regional basis.

24.2 Airfields

Gliding operations (except aerotow retrieves) must only take place from an area which has been approved by the RTO/Ops.

Gliding operations (except for “one-off” aerotow retrieves) shall take place on licensed aerodromes only with the permission of the owners. Operations must be in accordance with GFA Operational Regulation 7.2 and Flying Operations Instructions (FOIs) 21-1 and 21-2, issued by CASA. Copies of these FOIs appear in the Appendix to this Manual.

At all permanent or semi-permanent gliding sites, the standard "Gliding in Progress" signal (double white cross) must be displayed during the period that operations are taking place.

Specific requirements for site dimensions will be found in section 23.1.7 (winch/auto operations) and 23.2.9 (aerotow operations).

Unless specifically approved by the Civil Aviation Safety Authority, a gliding site must not be located (a) within a Control Zone or Class C airspace, (b) within 10 nautical miles of an aerodrome with a published instrument approach or (c) within 5 nautical miles of a licenced aerodrome, a military aerodrome or an aerodrome under the control and management of CASA.

24.3 Airspace

24.3.1 General

This manual gives an outline of the classes of Australian airspace. For comprehensive information on operating procedures in the various classes of airspace, all pilots are strongly urged to acquire a copy of the excellent "VFR Flight Guide", published by CASA.

24.3.2 Classes of Australian airspace

Airspace is classified alphabetically according to the level of service available. The classification is as follows :-

Class C.

Controlled airspace comprising all airspace above Flight Level (FL) 200 (20,000 feet on an altimeter sub-scale setting of 1013.2 Hectopascals). Class C airspace also extends downwards from FL 200 in "steps" reaching ground level in the immediate vicinity of busy capital city airports which handle large public transport aircraft. Aircraft operating under the Visual Flight Rules (VFR), including gliders, are permitted to operate in Class C airspace, provided the following requirements are met :-

- VHF radio on the relevant frequency is carried;
- A clearance from Air Traffic Control has been obtained to operate in that airspace;
- If the Class C airspace is within radar coverage, a Secondary Surveillance Radar (SSR) transponder with Mode C (altitude encoding) facility is carried.

Pilots of gliders operating in Class C airspace are required to hold a Flight Radiotelephone Operator's Licence or the equivalent GFA logbook endorsement.

Class C airspace is depicted on En-Route Charts, Low (ERCs (L)), Visual Navigation Charts (VNCs) and Visual Terminal Charts (VTCs).

Class D.

This is controlled airspace which surrounds some airports with a control tower but where the traffic density does not jusAEFy the installation of radar. This airspace relies on specified procedures for traffic alerting and separation. Equipment requirements are less stringent than for Class C

For gliders, VHF radio and Air Traffic Control clearance are required. A transponder is not required. Pilot radio-operating qualifications as for Class C.

Class E.

Controlled airspace, but only controlled for IFR traffic. IFR and VFR flights are permitted. IFR flights are subject to ATC clearance and are separated from other

IFR flights. Clearance not required for VFR flights. All flights receive traffic information as far as practicable. Radio not required for gliders, but carriage of radio is strongly recommended in this airspace and, if carried, the appropriate frequency should be monitored.

Class G.

Uncontrolled airspace. IFR and VFR flights permitted and receive flight information service if requested. Radio not required for gliders, except in MBZs .

MBZ.

Mandatory Broadcast Zone. An area surrounding an uncontrolled aerodrome in Class G airspace, or a controlled military or civil aerodrome after the tower has closed for the day. Dimensions are usually 15NM radius us up to 5,000ft AGL, or the vertical and horizontal dimensions of the previous tower airspace. The carriage and use of VHF radio is mandatory at all times in an MBZ area, and this includes gliders. Dimensions and frequencies are published in the En Route Supplement Australia (ERSA) document.

CTAF area.

Common Traffic Advisory Frequency area. An area surrounding an uncontrolled aerodrome in Class G airspace (generally, but not necessarily, 5NM radius up to 3,000 feet AGL), in which radio-equipped aircraft (including gliders) are required to monitor the CTAF frequency (published in ERSA) and respond to calls as appropriate. Non-radio aircraft (including gliders) may operate in a CTAF area.

SECTION 25 - RADIO

25.1 GFA radio policy

25.1.1 General.

It is the general policy of the GFA that a blanket requirement for the mandatory carriage and use of radio Outside of ConTrolled Airspace (OCTA) is not appropriate for operations under the Visual Flight Rules (VFR) in Visual Meteorological Conditions (VMC).

Gliders may operate OCTA without radio from ground level to A100 (10,000ft QNH). However, refer also to GFA Operational Regulation 7.4.9, which encourages gliders to monitor the area VHF frequency above 5,000 feet, but does not make it mandatory.

25.1.3 Radio as an adjunct to safety.

Notwithstanding the general GFA radio policy, there are times when sensible use of radio under certain circumstances is a useful adjunct to safety. While there is no measurable risk of collision between a glider and a powered aircraft in en-route cruising flight, there is a demonstrated risk at "choke points" in the circuit area of some aerodromes.

With this in mind, it is a GFA requirement that any glider entering the circuit area of an uncontrolled aerodrome serviced by high speed, high capacity Regular Public Transport (RPT) aircraft must carry VHF radio and make a broadcast on the CTAF frequency immediately before entering the circuit. Aerodromes in the above category are relatively few and the ones that do exist will be idenAEFied by GFA and publicised to all members.

25.1.3 Radio in CTAF/MBZ areas.

CTAF areas

Gliders may operate in CTAF areas without a radio (except in the case of the RPT-serviced aerodromes referred to in 25.1.2). However, if a radio-equipped glider operates in a CTAF area and the appropriate frequency is available on the radio, the pilot must ensure that this frequency is monitored and calls are responded to as appropriate.

Radio-equipped gliders are (a) not permitted to switch off serviceable radios and regard themselves as non-radio aircraft when operating in a CTAF area, and (b) not permitted to use one of the gliding frequencies in a CTAF area (unless the designated CTAF frequency is a gliding frequency).

MBZ areas

Gliders operating in MBZ areas are required to monitor the MBZ frequency at all times and respond to calls as appropriate. Non-radio operations are not permitted.

25.1.4 Standard CTAF/MBZ radio calls

Required calls for all aircraft in an MBZ and radio-equipped aircraft in a CTAF are: -

For departing aircraft

1. For powered sailplanes, a “taxiing” call nominating the intended departure runway. In the case of gliders and/or tugs operating from a fixed point on or near one of the runways and which do not do any taxiing, a “taking off” call is sufficient. Gliders must prefix their callsigns with the word “glider”. Tugs must prefix their callsigns with the words “glider tug” and must add at the end of the call “with glider in tow”.
2. For powered sailplanes, a call when entering the runway for take-off.

For arriving aircraft

1. An “inbound” call, which should be made before occupying the MBZ/CTAF airspace.
2. A ‘joining circuit” call at a point appropriate to the joining pattern and preferably before entering the downwind leg.

25.2 Frequency allocation

25.2.1 Primary gliding frequencies

The three VHF frequencies on permanent allocation to gliders are 122.5, 122.7 and 122.9 Mhz. Pilots using any of these frequencies are not required to hold a Flight Radiotelephone Operator's Licence, nor do they need a GFA logbook endorsement to operate a radio. Use of these frequencies is restricted to purely gliding-related matters, such as routine messages during cross-country flights or for search and rescue purposes.

25.2.2 Additional temporary gliding frequencies

Additional frequencies may be allocated for the exclusive use of gliders for short periods. e.g. National Championships. Any organisation needing extra frequencies on a temporary basis for any purpose should contact the GFA Radio Officer, rather than attempt to conduct individual negotiations with the ACA.

25.2.3 ATC frequencies

Apart from the permanent glider frequencies and the occasional allocation of additional frequencies for glider use, the rest of the aeronautical VHF band (118 to 135.975 Mhz) is the province of Air Traffic Control (ATC). Use of these frequencies requires the pilot to hold a Flight Radiotelephone Operator's Licence or the equivalent GFA logbook endorsement.

25.3 GFA radio operator's logbook endorsement

Pilots may obtain the above endorsement at any stage in their training. The reference document is "Airways and Radio Procedures for Glider Pilots", available from the GFA Secretariat.

Following study of the above document, an oral examination on radio usage and procedures must be conducted and, if the candidate's level of competence is satisfactory, the logbook is endorsed.

Oral examinations may be carried out and logbook endorsements made by Level 1 or higher rated instructors who themselves hold either a Flight Radiotelephone Operator's licence or a GFA logbook endorsement.

Candidates who successfully pass the oral examination must have their logbooks endorsed: -

> "This is to certify that (name).....…….....has successfully passed an oral examination in radio usage and procedures and is approved to operate VHF flight radiotelephone equipment carried in gliders".

The logbook endorsement must carry the instructor's printed name, instructor level, signature, club and date.

SECTION 26 - POWERED SAILPLANES

26.1 General

A powered sailplane is a glider fitted with an engine which enables it to self-launch. The exact definition, including performance criteria, of such a machine will be found in CAO 95.4.

26.2 Powered sailplane training

Because of the wide range of sub-types within the broad designation of "Powered Sailplane", it is difficult to establish a training syllabus to suit all requirements. However, an attempt must be made and the training requirements are tailored to the likely use of the powered sailplane, as far as this is possible.

26.3 Training glider pilots in powered sailplanes

Powered sailplanes may be used to carry out the GFA glider pilot training syllabus in accordance with the Instructor's Handbook and the GFA Powered Sailplane Manual. When claiming GFA or FAI Certificates using powered sailplanes, the requirements of this manual and the FAI Sporting Code must be met.

26.4 Conversion of glider pilots to powered sailplanes

26.4.1 Operation of a powered sailplane purely for self-launching purposes.

There is no specific need for extra flight training - careful study of the Flight Manual requirements will alert the pilot to any special behaviour the glider may exhibit (for example, very high drag in the case of a retractable-engine glider flown with the engine extended but switched off or windmilling). The Flight Manual will also lay down the exact procedure for extending and retracting the engine, so there is no need to specifically cover this.

As far as ground training/briefing is concerned, specific requirements are as follows: -

- Fuel system management, including checking for contamination by water or any other foreign substance.
- Recognition of carburettor icing, how to predict its formation, how to recognise it when it occurs and how to get rid of it.
- Take-off performance, with particular reference to recognition of density-altitude problems and the interpretation of any take-off performance information or charts which are supplied in the Flight Manual.
- A clear understanding that the presence of an engine does not confer the right to reduce any margins in the decision heights for outlanding. The record shows that the decision to terminate a cross-country flight and restart the engine to return to base must be made earlier than a normal outlanding decision, not later.

26.4.2 Operation of a powered sailplane as a "Touring" aircraft.

This needs a greater depth of training in a wider range of subjects, because pilots in this category will be using the aircraft for touring purposes in a manner similar to a light aircraft, as permitted by CAO 95.4. They are therefore sharing the air with other powered aircraft whose pilots receive considerable training in engine and fuel management, airways procedures and other matters of relevance to powered cross-country flight before receiving their licences.

Powered sailplanes can be operated by pilots who do not hold licences at all and it is reasonable that such pilots are trained to an equivalent level of knowledge as their powered counterparts, despite being unlicenced.

It must also be borne in mind that power-on cross-country operations may take place in weather conditions not previously encountered during cross-country soaring operations.

Deteriorating weather conditions may become a factor to be considered by pilots of these aircraft. It is imperative that such flights be discontinued if weather is becoming unsuitable for safe flight, and a landing carried out while it still safe to do so.

26.4.3 Training/conversion requirements for pilots of powered sailplanes used for "touring" purposes

Local flying and engine-off cross-country flying.

Trained as glider pilots in accordance with the normal GFA training syllabus and qualified in accordance with the GFA Pilot Certificates. In addition, trained in accordance with 26.4.1 above.

Engine-on cross-country flying.

As for local flying with the following requirements in addition :-

1. Private or higher licence, or a Pilot Certificate, with cross-country endorsement, issued by the Australian Ultralight Federation.

OR

2. "C" or higher Certificate and trained, tested and logbook endorsed in the following additional items.
   - Radio requirements in all classes of airspace
   - ICAO cruising levels in all classes of airspace
   - GFA radio operator endorsement
   - Transponder requirements in applicable airspace classes
   - Minimum fuel reserves
   - Daylight and darkness graphs
   - Flight notification requirements in all airspace classes
   - MBZ requirements
   - An awareness that a flight must not be continued into deteriorating weather

26.4.4 Special warning for "engine-on" cross-country operations

Because many powered sailplanes have engines which are not aero-engines and may not be as reliable as those fitted to powered aircraft, it is prudent that engine failure should be anticipated at all times and they should not be flown outside of gliding range of a known safe landing area until it is certain that they can reach the next one along track.

26.5 Conversion of power pilots to powered sailplanes

Power pilots holding a Restricted Private or higher licence, or a Pilot Certificate issued by the Australian Ultralight Federation may fly powered sailplanes as pilot-in-command under the auspices of the GFA under the following conditions :-

1. The person is a member of the GFA or has undertaken in writing to maintain and operate the aircraft in accordance with the standards of the GFA (CAO 95.4).
2. The person must have gained a "C" Certificate in addition to his/her licence or pilot Certificate in order to fly a powered sailplane cross-country.
3. The conversion is carried out as appropriate to the intended mode of operation and the logbook appropriately endorsed.

26.6 Instructing in powered sailplanes

An instructor who is qualified in either or all of the various categories of powered sailplane may exercise the privileges of his/her instructor authorisation in powered sailplanes. The logbook endorsement notifying the powered sailplane conversion must supplement the Instructor logbook sticker to act as the authority for instructing in powered sailplanes.

It is left up to each individual instructor to become sufficiently familiar with all modes of operation of any given type of powered sailplane before attempting to give instruction in it.

26.7 Power-assisted sailplanes

These are gliders fitted with retractable power-plants which are not capable of being used for launching, but only produce sufficient power to give a small rate of climb (about 1 M/S, 2 knots) once they are in the air. All of them must be launched by aerotow or winch/auto tow and they are not approved for self-launching. The intention is to provide a glider so fitted with a facility to "self-retrieve" and thus obviate the need for a trailer retrieve. In line with their self-retrieving purpose, most machines of this type do not have any facility for starting the engine on the ground and are reliant on a "windmilling" air start to get them going. The exact definition of a power-assisted sailplane ("turbo" sailplane in Europe) will be found in CAO 95.4.

In most cases, there is no engine management required in these machines by Basic design, as they are designed as simple "on-off" installations with no throttle and a folding propeller which unfolds automatically as the engine extends. The only control is a simple decompressor which allows the propeller to start windmilling. In machines of this type, no special requirements are necessary for training and conversion, beyond careful study of the Flight Manual.

However, the evolution of powered sailplanes and power-assisted sailplanes is a continuous process and there may be variations to the above operating mode in some designs. Although the Basic design parameter remains, i.e. that the glider cannot self-launch, but only self-retrieve (otherwise it becomes a powered sailplane), extra engine-management tasks may be introduced from time to time by various designers and a good working knowledge of the engine operating requirements is obviously necessary before flying such a machine cross-country.

26.8 Use of non-instructors to carry out powered sailplane conversions

Many powered sailplanes are individually or syndicate owned. In such circumstances it is possible that the local club instructors are not familiar with the type or have even flown it. There is therefore a need for flexibility in converting pilots to machines which are based on site but are not part of the club fleet, while still retaining club control of the overall operation.

Each case must be considered on its merits. If a non-instructor is clearly the preferred person to carry out a conversion to type, based on intimate knowledge of the type in question, the sequence of events is as follows: -

1. The club selects the non-instructor(s) to carry out powered sailplane conversions, through the medium of the CFI.
2. CFI contacts RTO/Ops, who approves the selection.
3. RTO/Ops provides letter of approval to the selected person.
4. Conversion to the type is then authorised at club level by a Level 2 or higher rated instructor (generally a club's Duty Instructor of the day), but carried out by the non-instructor so authorised.

SECTION 27 - ACCIDENTS, SERIOUS INCIDENTS AND INCIDENTS

27.1 General

In accordance with the Air Navigation Act 1920 Part 2A it is mandatory to report all accidents, serious incidents, incidents and occurrences involving civil aircraft

operations in Australia and Australian-registered aircraft overseas to the Australian Transport Safety Bureau (ATSB).

27.2 Definitions

27.2.1 Accident

An occurrence associated with the operation of an aircraft, which takes place between the time any person boards the aircraft with the intention of flight until all such persons have disembarked, in which:

1. Any person suffers death or serious injury.
2. The aircraft incurs substantial damage or structural failure.
3. The aircraft is missing or inaccessible.

27.2.21 Serious incident

An occurrence associated with the operation of an aircraft that affects or could affect the safety of the operation of the aircraft or that involves circumstances indicating that an accident nearly occurred. Examples include near-collisions, serious undershoots, pilot incapacitation and like occurrences.

27.2.3 Incident

An occurrence, other than an accident or serious incident, associated with the operation of an aircraft that affects or could affect the safety of operation of the aircraft. In practice this definition is broadly interpreted and the incident reporting system accepts any reports, requests, complaints and suggestions which relate to aviation safety.

27.3 Notification

27.3.1 Accidents and serious incidents

The pilot-in-command, the owner, the operator and (if applicable) the hirer are each responsible for ensuring that notification of an accident or serious incident to ATSB occurs with the minimum of delay, by the quickest means possible. A written report should be submitted to ATSB as soon as practicable after the event.

Accident/serious incident hotline	**1800 011 034**

A sample GFA simplified accident report form will be found in the Appendix to this manual.

This number operates 24 hours a day, every day of the year. If there is difficulty with the number, initial notification may be made to the nearest ATC unit or the local police, who will notify ATSB on your behalf.

The minimum information required in the initial report is :

- Aircraft make, model and registration
- Full names of owner and operator
- Full name of pilot-in-command
- Date and time of the accident
- Point of departure, point of intended landing and the nature of the flight

- Location of the accident
- Number of persons on board and the number/names of persons injured or killed
- Nature and cause of the accident, as far as is known
- Description of damage to aircraft
- Description of the terrain at the accident site, in terms of accessibility

27.3.2 Incidents

The pilot-in-command, the owner, the operator and (if applicable) the hirer are each responsible for ensuring that notification of an incident is made to ATSB within 48 hours of the occurrence, using the same hotline number, forms and guidelines as for accidents.

27.4 Regional ATSB contacts

As well as the hotline number already mentioned at 27.3.1 for reporting accidents and incidents, there are three regional offices of ATSB, as follows :-

Brisbane- Tel: (07) 3838 9901; fax (07) 3832 1386;
Sydney - Tel: (02) 9283 1540; fax (02) 9283 1679;
Perth - Tel: (08) 9479 1655; fax (08) 9479 1550

27.5 Additional reporting requirement

In addition to the above statutory requirements, it is a GFA requirement that accidents and incidents are reported to the RTO/Ops of the relevant region at or around the time they are reported to ATSB. With this in mind, the forms supplied to clubs are in triplicate groups (1 copy to ATSB, I copy to RTO/Ops, 1 copy retained by club).

27.6 Custody of aircraft

When an accident occurs, the aircraft is deemed to have come into the custody of the Secretary of the DTRS and it must not be moved except with the permission of the Secretary or authorised representative (usually ATSB). However it is permissible to extricate persons or animals and to "take such action as is necessary to protect the wreckage from further damage and to prevent danger to aircraft, other transport or the public". Other items, goods, baggage, personal items from the cockpit, etc, may only be removed from the wreckage under the supervision of the police or an authorised officer.

On completion of the investigation of an accident, the aircraft will be released by ATSB.

27.7 Confidential Aviation Incident Reporting (CAIR)

This is a service which allows incidents to be reported without divulging the name of the person making the report. The number of this service is 1800 020 505, which operates during office hours. Outside these hours an answering machine is provided.

SECTION 28 - OPERATIONS DIRECTIVES AND OPERATIONS ADVICE NOTICES

28.1 General

Operations Directives and Operations Advice Notices may be issued by the GFA to notify changes to procedures or alert pilots to possible problems.

28.2 Operations Directives

Operations Directives (ODs) are generally mandatory in nature and have the same status as the GFA Ops Manual itself. ODs eventually become incorporated into amendments of the Ops Manual which are carried out from time to time.

Operations Directives are of two kinds, viz.: -

28.2.1 Operations Directives approved by CASA.

If an Ops Directive has an effect on the CASA-approved Op Regs (e.g. changes to certain pilot or instructor requirements), CASA approval of the Ops Directive is necessary. This is normally easy and quick to achieve and is processed by the CTO/Ops.

28.2.2 Other Operations Directives

If the Ops Directive has no effect on the Op Regs, but only affects the MOSP, CASA approval is not required. Processing again by CTO/Ops.

28.3 Operations Advice Notices

Operations Advice Notices (OANs) are generally advisory in nature and are used when it is more appropriate to recommend than to mandate.

SECTION 29 - APPENDIX TO MOSP

29.1 Sample operational forms

These sample forms should be regarded at notional only and may not represent the latest version available. This is particularly true of CASA documents, over which GFA has no control. Check with RTO/Ops, CTO/Ops, FAI Certificates Officer or GFA Secretariat if in doubt.

- A, B and C Certificate application forms.
- Application for instructor training, Level 1.
- Application for instructor upgrading Level 1 to Level 2.
- Application for Air Display approval.
- Simplified GFA accident/incident report form.
- Operational Status Check List.
- Flying Operations Instruction 21-1, approval for gliding operations on licensed aerodromes (CASA document).
- Flying Operations Instruction 21-2, procedures for gliding operations on licensed aerodromes (CASA document).
- Flying Operations Instruction 21-4, glider-towing permits (CASA document).
- Aerodrome marking for glider operations.
- Schedule 1 of Civil Aviation Regulations - Medical Standards.

THE GLIDING FEDERATION OF AUSTRALIA

GLIDER PILOT CERTIFICATE APPLICATION FORM

(A, B AND C CERTIFICATES)
PLEASE USE BLOCK CAPITALS

SURNAME .....

GIVEN NAME(S) .....

GFA NUMBER (IF KNOWN) .....

CERTIFICATE NUMBER (B AND C APPLICANTS) .....

DATE OF BIRTH .....PLACE .....

NATIONALITY .....

ADDRESS .....

.....

TELEPHONE NUMBER .....

CLUB .....

I hereby apply for the gliding certificates indicated in the appropriate sections overleaf.

SIGNATURE .....DATE .....

This application form should be sent to the GFA/FAI Certificates Officer as detailed in the current issue of the "Australian Gliding" Yearbook.

The cost for each certificate claimed may vary from year to year. Consult "AG" Yearbook or contact GFA/FAI Certificates Officer for details.

In the case of claims for more than one certificate on this form, only the badge appropriate to the highest qualification will be sent.

Note: There is no requirement for a photograph to appear on the A, B or C certificates. However, two passport photos will eventually be required by FAI for the Silver and higher badges. If you wish, you may send photos with this claim for inclusion on your certificate, or you may leave it until you claim the Silver badge.

INSTRUCTOR CERTIFICATION

"A" CERTIFICATE

I hereby certify that the applicant has fulfilled the following requirements:

1. Has completed five solo flights with normal landings.
2. Has completed the pre-solo training syllabus in accordance with the MOSP and the Instructor's Handbook.
3. Has been successfully examined on basic theory and flight rules and procedures.
4. Has signed a GFA Medical Declaration Form (or has counter-signature of parent/guardian).

INSTRUCTOR'S NAME.....

SIGNATURE.....

CLUB.....DATE.....

"B" CERTIFICATE

I hereby certify that the applicant has fulfilled the following requirements:

1. Has completed 15 solo flights with normal landings, including at least one solo soaring flight lasting 30 minutes.
2. Has completed the post-solo training syllabus in accordance with the GFA Instructor's Handbook.
3. Has been successfully examined on basic theory, flight rules and procedures and basic airworthiness.

INSTRUCTOR'S NAME.....

SIGNATURE.....

CLUB.....DATE.....

"C" CERTIFICATE

I hereby certify that the applicant has fulfilled the following requirements:

1. Has completed 20 solo or mutual flights, including two solo soaring flights of at least one hour's duration each.
2. Has been successfully examined on basic theory and flight rules and procedures.
3. Has received a "passenger awareness" briefing.
4. Has been trained and checked in safe outlanding practices.
5. Has been checked for satisfactory entry and recovery techniques in fully developed spins.

INSTRUCTOR'S NAME.....

SIGNATURE.....

CLUB.....DATE.....

(Issue 2, June 2000)

APPLICATION FOR INSTRUCTOR TRAINING - LEVEL 1 RATING

DETAILS OF FLYING EXPERIENCE

Name	Date of birth
Address	
Phone (home and work)	
Club	
Gliding hours (total)	(Last 12 Months)
Launches (total)	(Last 12 Months)
Badges (or part badges) held	
Power flying experience (hrs)	Tug-pilot?
Powered sailplane experience	
No of flights in back seat of glider	
AEI or Charter rating? If so, experience (hrs)	

CLUB PREPARATION

CFI to sign that the candidate has been prepared for instructor training and that a satisfactory standard has been attained in the following areas:

Airmanship
Flying accuracy
Soaring ability
Circuit planning without use of altimeter
Approach control
Consistently good two-point landings
Stalling
Spinning
Conversant with "Basic Gliding Knowledge"
Conversant with GFA Op Regs and MOSP
Current in all applicable launch emergencies
Has acquired Instructor's Handbook
Has been coached in commanding the glider by talking alone in accordance with the paragraph "potential ability to communicate" in the Handbook.

Name of CFI	
Club	
Signature	Date

FORWARD THIS APPLICATION FORM TO RTO/OPS

APPLICATION FOR INSTRUCTOR UPGRADING - LEVEL 1 TO LEVEL 2

DETAILS OF FLYING EXPERIENCE

Name	Date of birth
Address	
Phone (home and work)	
Club	
Gliding hours (total)	(Last 12 Months)
Launches (total)	(Last 12 Months)
Instructing hours (total)	(Last 12 Months)
Badges (or part badges) held	
Power flying experience (hrs)	Tug-pilot?
Powered sailplane experience	

CLUB CERTIFICATION

CFI to certify that the candidate has performed satisfactorily as a Level 1 instructor in all pre- and post-solo instructional sequences.

In addition, at least one check flight shall be carried out by the CFI prior to the upgrading work being carried out by a Level 3 (NGS) Instructor. The check flight shall ensure that the candidate is free from basic flying faults and is considered satisfactory for upgrading.

Finally the CFI is to certify that candidate has at least 12 month's service as a Level 1 instructor, during which a minimum of 25 hours or 100 launches as an instructor must have been completed. (Note: the 12 month period may be lowered in special cases, at RTO/Ops discretion, but the hours/launches requirement must be met.

Name of CFI	
Club	
Signature	Date

FORWARD THIS APPLICATION FORM TO RTO/OPS

THE GLIDING FEDERATION OF AUSTRALIA

REQUEST TO RTO/OPS FOR AIR DISPLAY APPROVAL

Definition of Air Display - flights performed before members of the public who have assembled to witness those flights as a result of advertisement or invitation, whether an admission fee is charged or not (source - GFA Operational Regulations, Section 3, "Definitions").

Notes:

1. CAA approval is also required (GFA Operational Regulation 9.10 and Civil Aviation Regulation 156).
2. RTO/Ops is not authorised to grant approval for aerobatics to be carried out below 1,000 feet AGL.

Name	
Address	
Tel Numbers	Fax
Club	

Location of display
Date of display
Glider type and registration
Applicant's gliding experience
Instructor rating?
Previously flown in displays, Y/N If so, when was last time?
List manoeuvres to be performed (Note: Pilot is responsible for ensuring that the glider is flown within its manoeuvre envelope and that intended manoeuvres are permitted by the glider's C of A)

Applicant's signature	
Club approval	CFI/CIP

RTO/Ops Comments and/or limitations		
Application approved	(RTO/Ops)	Date

GFA ACCIDENT/INCIDENT REPORT

Distribution: 1 copy BASI, 1 copy RTO/Ops, 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 seat collapse or otherwise fail?

COMMAND PILOT'S DESCRIPTION OF CIRCUMSTANCES

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CLUB CFI'S COMMENTS

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RTO/OPS COMMENTS

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GFA COMMENTS

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THE GLIDING FEDERATION OF AUSTRALIA

OPERATIONAL STATUS CHECK LIST

For biennial quality audits on club operations

Sat Satisfactory, needs no attention
Accept Acceptable, needs some attention; specify
Unsat Unsatisfactory, needs immediate attention; specify
N/A Not assessed

Use "comments" sections to specify corrective action

Name of club	
Site name and location	
Name of CFI	
Officer carrying out check	Date

GLIDERS

Maintenance release/DI Book
Placards, speed and manoeuvre loadings
Placards, weight and balance, including front/rear pilot weights for two-seaters
Glider airworthiness and general condition
Comments

AIRFIELD

Type of airfield (e.g. licensed, private)
Airfield owned by
Combined glider/power/parachute operation? Specify
Length of strip(s)
Obstructions
Protection of the public
Published procedures (e.g. CTAF/MTAF)
Comments

LAUNCHING

Aerotowing

Type of tug(s)
Tug condition
Flight manual towing supplement in aircraft?
Rope length
Weak links
Towing and descent patterns
Pilot standards and airmanship
Comments

Winch/auto launching

Serviceability of winches/launching vehicles
Type of cable or rope in use
General condition of cable/rope (No of knots, etc)
Weak links
Trace lengths
Rings (type, condition)
Emergency equipment (cable-cutting devices, etc)
Separation of cables at launch point
Anchoring of dead cable at launch point
Signalling (state method in use)
Standard of winch/towcar driving
Standard of winch/towcar driver training
Comments

Self-launching

Type(s) of powered sailplanes in use
Powered sailplane training
Powered sailplane conversions
Powered sailplane pilot logbook entries
Independent powered sailplane operations
Comments

OPERATIONAL SAFETY

Launch-point discipline
Cockpit checks
Signalling from cockpit
Airmanship
Take-offs and transitions to full climb (winch/auto)
Aerotow technique and accuracy
Circuits, approaches and landings
Cross country flying
Aerobatics
Cross-wind operations
Emergencies
Integration with power operations
Integration with other operations (e.g. parachutists, etc)
Knowledge and conduct of CTAF/MTAF procedures, if applicable
Knowledge of radio requirements
Radio discipline (glider and CAA frequencies)
Comments

FLYING INSTRUCTION

Airmanship training
Briefings and debriefings
Quality of demonstrations
Handover/takeover discipline
Conformity of training to Instructor Handbook
Stalling
Incipient and full spinning
Circuit training (including running out of height)
Soaring competence
Standardisation of instruction
Post-solo training and checking
Flying without Instruments
Instructor rating validity and currency
Instructor single-seater currency
Instructor cross-country currency
Instructor training requirements (are they being adequately met by the National Gliding School?)
Instructor panel meeting frequency
Comments

PASSENGER FLYING

Charter Flying

Air Operator Certificate (AOC) current and on display
GFA Op Regs readily available for perusal
First aid kit available at launch point
Charter Rating validity and currency
Appropriate aircraft in use for charter (as per AOC)
Comments

Air Experience Flights

AEI rating validity and currency
Knowledge of AEI section of Instructor Handbook
Comments

Private Passenger Flying

Knowledge of C Certificate passenger privileges and limitations
Supervision of Private Passenger Operations
Comments

INDEPENDENT OPERATIONS

Instructor's knowledge of Independent Operator requirements
Ind. Ops. taking place? (define in "comments")
Ind. passenger carrying ops (refer GFA Ops manual)
Ind. Operator annual revalidation
Comments

FOREIGN PILOTS

GFA membership of pilots
Provision of written briefing material
Quality and content of above material
Provision of site checks
Provision of competency checks
Method of checking cross-country and outlanding competency
Understanding of English language
Comments

OVERALL COMMENTS

Signature	Date

FLYING OPERATIONS
INSTRUCTIONS

No. 21-1
Issue 4

July 1992

APPROVAL FOR GLIDER OPERATIONS AT GOVERNMENT AND LICENSED AERODROMES

CONTENTS

1 - INTRODUCTION

1.1 - Gliding operations conducted from Government and licensed aerodromes require the approval of the relevant CAA SR&S District Office. This Instruction provides guidance on the manner in which applications for approval should be assessed.

1.2 - With the planned changes to the licensing requirements for aerodromes shortly to be implemented, it is likely that CAA approval will no longer be required at many previously licensed aerodromes. The information here and in FOI 21-2 will form a useful guide for the conduct of gliding operations at these aerodromes.

1.3 - Persons wishing to conduct a gliding operation at a Government or licensed aerodrome should consult with the aerodrome operator, aerodrome committee or other operators based at or regularly using that aerodrome, to develop a plan for the integration of gliding with other aerodrome traffic. The Authority will be able to advise on aspects of that plan and approve an acceptable arrangement.

1.4 - The procedures to be adopted by a gliding operation will be determined by the nature and volume of peak traffic flows during the proposed period of gliding operations. District Offices are encouraged to make use of specialist knowledge held by Central Office Flying Operations Section.

1.5 - The CAA document 'Rules and Practices for Aerodromes' (RPA) Volume IIa, Chapters 7 and 11, specifies the dimensions and markings of aerodromes for gliding operations and should be read in conjunction with this Instruction. Airports Inspection Sections are able to advise on aerodrome layout.

1.6 - Areas of the aerodrome approved for gliding operations will be determined by District Offices in consultation with the gliding organisation and aerodrome operators, and marked on the aerodrome plan.

1.7 - Standard procedures for use in gliding operations at Government and licensed aerodromes are outlined in FOI 21-2. The procedures to be adopted should be determined by District Offices in consultation with aerodrome operators and the gliding operation. Proposed variations to standard procedures should be discussed with Central Office Flying Operations Section. This will ensure compatibility with standard procedures and adequate promulgation for the safety education of aerodrome users.

2 - GENERAL CONDITIONS

2.1 - When considering an application to conduct gliding operations on a regular basis from a Government or licensed aerodrome the following factors should be considered:

(a) siting and layout of the aerodrome;

(b) existence and level of utilisation of radio navigation aids;

(c) the organisation of the surrounding airspace;

(d) the composition and timing of existing traffic movements; and

(e) the proposed amount of gliding traffic and the method(s) of launch.

2.2 - Where regular gliding operations from Government or licensed aerodromes have been approved the gliding activity shall be notified in AIP ERSA as follows:

(a) where contra-circuit procedures are in operation the circuit direction from each runway shall be specified;

(b) where launching is by aerotow and a common circuit direction applies the location of the gliding strip shall be specified, e.g. "Gliding OPS HJ JF within RWY strip" or "Gliding OPS HJ. Gliders operate common circuit direction from separate strips alongside RWS";

(c) Where launching is by winch or car-tow this shall be included by the phrase "Wire launching";

(d) the scale of the gliding operation may be a consideration in the selection of the dimensions and frequency for the aerodrome CTAF, to enhance the ability of gliding traffic to be 'on frequency'.

NOTE: Consideration is being given by the CAA and GFA to the use of a common CTAF frequency (other than 126.7 MHz) at aerodromes where gliding occurs.

2.3 - Occasional gliding operations for particular events or specified periods of time may be approved at aerodromes, including aerodromes other than those where regular gliding operations occur, provided that adequate notification is given to permit NOTAM action. The standards and procedures in this Instruction and FOI 21-2 are applicable.

2.4 - Scheduled or unscheduled glider outlandings and subsequent aero-tow launches are permitted at aerodromes at which regular gliding operations are not established provided the glider is operated so as to cause minimum disturbance to normal aerodrome traffic.

3 - SPECIFIC CONDITIONS

3.1 - Glider Runway Strips

3.1.1 - Gliding operations shall normally take place from a designated glider runway strip of the dimensions specified in RPA. The use of other parts of the aerodrome as emergency landing areas is permissible.

3.1.2 - Where space permits, a glider runway strip shall be located outside the existing runway strip, with the glider and tug circuit in the same direction as the normal powered-aircraft circuit. In this situation take-offs and landings on the two runway strips must not occur simultaneously. An aircraft may, however, land or take off from one runway while another aircraft is stationary or taxying on the other.

3.1.3 - When space permits at a location, and where the balance and total volume of powered and gliding movements warrants it, the glider runway strip may be so located as to permit contra-circuits to be flown.

3.1.4 - A glider runway within the existing runway strip shall only be permitted where insufficient space exists to place it outside the runway strip and where peak powered traffic movements are light enough that conflictions can be readily avoided by only brief delays. Runway strip markers may be moved to permit additional space for gliding operations.

3.1.5 - If a glider runway strip is unserviceable due to aerodrome works or soft wet surface, gliding operations from an existing runway may be permitted at sites where total movements are light enough to avoid confliction. In such a situation, gliding operations shall be conducted so as to cause minimum disturbance to other traffic.

3.2 - Where approval is sought for gliding operations at a controlled aerodrome, appropriate procedures for the control of gliding traffic shall be developed in consultation with the Airways Operations unit and Regional Office prior to such approval being given.

3.3 - Launch Method

3.3.1 - Gliders may be launched by aerotow from any aerodrome where gliding operations are approved, or on an ad-hoc one-off basis from other aerodromes as specified in paragraph 2.4.

3.3.2 - Gliders may be launched by wire (either winch or car-tow) at aerodromes where powered aircraft movements are light enough that this does not cause conflictions, provided:

(a) if launch cables must cross any runway or taxiway to provide sufficient length of cable run for the operation, they do so to the minimum extent necessary for the operation and the aerodrome entry in ERSA draws attention to this fact; and either

(b) the glider runway strip is located outside the runway strip; or

(c) where the glider runway strip is located within the runway strip and markers are moved to accommodate it, all cables are laid out and winch equipment remains at least 21 metres from the runway edge outside the normal portion of runway strip.

NOTE: this figure is the spacing from runway edge to runway strip markers where an 18 metre runway lies in a 60 metre strip.

3.4 - Ground Handling

3.4.1 - No aeroplane, glider or vehicle shall be permitted on a glider runway or runway strip unless it is:

(a) an aircraft taking-off, landing or taxying; or

(b) a glider or gliders lined up ready for launch and attended by a competent crew; or

(c) a vehicle actually engaged in launching or towing a glider, or towing a glider launch cable.

NOTE: a glider being towed by a vehicle is considered to be an aircraft taxying.

3.4.2 - Adequate parking and tie-down facilities for tug aircraft, gliders and vehicles shall be provided outside the glider runway strip.

4 - COMPETITIONS AND FLYING MEETS

4.1 - A District Office shall ensure that the gliding organisation has obtained permission to hold a competition or flying meet from the aerodrome operator, and that a person has been nominated as organiser. The organiser shall ensure that the competition or flying meet is conducted in accordance with any conditions specified by the District Office and/or the aerodrome operator.

4.2 - Operations from within an existing runway strip, as outlined in paragraphs 3.1.4 and 3.1.5, are suitable only where gliding activity is not conducted on an intensive basis. Where it is intended to significantly exceed this for a short period, e.g. for a competition, course or flying meet, approval for the event must be sought from the District Office at least 21 days in advance and special conditions may be imposed (refer to FOI 21-2).

4.3 - Where it is proposed to conduct a gliding competition at an aerodrome and the competition will not generate more traffic than the approved regular gliding operations, the District Office shall be notified of the dates and contest area at least 21 days in advance to permit NOTAM action to be taken. Daily route details of gliding competition tasks shall be notified to the responsible Flight Service unit prior to launching so that these details may be provided to other traffic.

4.4 - A competition or flying meet at an aerodrome may well generate 75% or more of all movements during the period of the event. If this is likely, it is recommended that the gliding contest official frequency be promulgated as the CTAF for the contest period in order to minimise conflictions on the aerodrome and in the circuit area. There is the probability otherwise of gliders not being equipped with the regular CTAF frequency. The NOTAM advising this should also alert other users to the likelihood or desirability of gliders and tug aeroplanes using a non-standard circuit direction to expedite traffic flow.

4.5 - CAO 95.4 paragraph 4.3 provides for gliders taking part in approved competitions to approach the finish line (at the aerodrome) lower than 500 feet, subject to certain conditions. District Flight Operations Managers now have the delegation to approve this. The delegation should only be exercised for State, National and International competitions where the request is supported by the GFA Director of Operations.

4.6 - A District Office may approve the establishment of a temporarily displaced threshold for powered traffic for a special event such as a gliding competition provided:

(a) a NOTAM is issued;

(b) gliders are parked at least 60 metres behind the displaced

(c) threshold; and

(d) the full length of the runway can be made available on 20 minutes notice for the movement of an aircraft which operationally requires the full length.

4.7 - An application for a permanently-displaced threshold for powered aircraft to facilitate a regular gliding operation should be referred to Central Office (Attention: Flying Operations Section) together with District Office comment. The position of the displaced threshold should be at least 60m ahead of the most forward position from which glider tug aeroplanes are permitted to line up to commence the launch of a glider.

5 - REFERENCES

5.1 - File F90/1606

5.2 - RPA Volume IIa

5.3 - FOI 21-2

5.4 - Sponsor: Flying Operations Section

FLYING OPERATIONS
INSTRUCTIONS

No. 21-2
Issue 4

July 1992

PROCEDURES FOR GLIDERS OPERATING FROM GOVERNMENT AND LICENSED AERODROMES

CONTENTS

1 - INTRODUCTION

1.1 - The purpose of this Instruction is to specify the operating requirements applicable to gliding operations conducted at Government and licensed aerodromes. The information in this Instruction and FOI 21-1 will also form a useful guide for operations at unlicensed aerodromes.

1.2 - This Instruction should be read in conjunction with FOI 21-1 which specifies the manner in which applications to conduct gliding at Government or licensed aerodromes should be assessed, and the CAA document 'Rules and Practices for Aerodromes' (RPA) Volume IIa, Chapters 7 and 11 which details the aerodrome requirements in respect of surfaces, dimensions and markings for gliding operations.

1.3 - The procedures adopted for gliding operations at any aerodrome will be determined by the District Office in consultation with the aerodrome operator and gliding operator. Whilst the procedures contained in this Instruction are suitable for most locations, it is recognised that some sites may have particular needs which are best satisfied by special procedures.

2 - CONTROL

2.1 - At controlled aerodromes responsibility for the control and integration of glider and other traffic rests with Air Traffic Control. These procedures will be developed in consultation with the gliding operator, SR&S District and Central Offices, and the ATS unit and Regional Office.

2.2 - At non-controlled aerodromes responsibility for the conduct of gliding operations shall rest with a person (normally the Chief Flying Instructor of the gliding organisation) nominated by the gliding organisation and accepted by the District Office. CAA acceptance will ensure that the District Office has confidence in the ability of the nominee to assume this responsibility. This person shall:

(a) accept responsibility for ensuring the gliding operations at that site are conducted in accordance with the operating conditions and limitations specified in the approval; and

(b) liaise with the aerodrome operator and other aerodrome users to achieve a harmonious working relationship.

3 - OPERATING PROCEDURES

3.1 - The operating procedures adopted will depend to a large extent on the aerodrome layout and availability of additional space, together with the nature, timing and volume of other aerodrome traffic. Whilst no particular movement numbers are specified, there will be a point at which any given traffic arrangement will reach effective saturation.

3.2 - The three standard arrangements are:

(a) Single strip operations, (small operations only) where gliders (and tug aeroplanes if launch is conducted by aerotow) and other aircraft operate from runways within a common runway strip;

(b) Dual strip operations, (the preferred standard) where gliders (and tug aeroplanes) and other traffic operates to a common circuit direction from separate, closely spaced runway strips; and

(c) Parallel runway operations, (very busy aerodromes) where gliders and tug aeroplanes operate to a contra-circuit pattern from other traffic, using separate parallel runway strips with centre-lines at least 120 metres apart.

3.3 - Gliders shall give way to other aircraft on the aprons and taxiways whilst being ground-handled.

3.4 - Gliders shall not carry out aerobatics (including spins) below 2000' a.g.l. within 2nm of the aerodrome reference point.

3.5 - Gliders thermalling or performing continuous 360° turns below 1500' a.g.l. within 2nm of the downwind end of the runway in use shall monitor the aerodrome CTAF or MTAF frequency. They shall conform to the general circuit pattern, give way to powered circuit traffic and cease thermalling if necessary to maintain adequate separation.

4 - DUAL STRIP OPERATIONS

4.1 - This is the preferred and most practical arrangement for all locations where space and traffic density are not limiting considerations. The glider runway strip may abut directly onto the main runway strip or be separated by less than 120 metres between centre-lines. In this event the normal take-off and landing separation minima specified in AIP OPS will apply as if all operations were being conducted from the same runway, but an aircraft stationary or taxying on one runway strip does not affect operations on the other.

4.2 - If a glider runway strip is established on only one side of the main runway strip, consideration should be given to promulgating circuit directions such that the glider runway strip is always on the inside of the circuit. This will avoid traffic for the glider runway strip crossing the main runway centreline on final. (See Diagram 1).

Diagram 1

5 - SINGLE STRIP OPERATIONS

5.1 - This arrangement may be permitted where space does not permit dual runway operations and peak powered traffic movements are light enough that conflictions can be avoided by only brief delays. Where the glider runway lies within a single runway strip, both runways will be deemed to be occupied when an aircraft is taxying or stationary within the runway strip or is
on final approach to either runway. Aircraft shall have priority to use the runway strip in the following order:

(a) gliders landing;

(b) powered aircraft landing;

(c) powered aircraft taking-off;

(d) gliders taking-off or being launched; and

(e) any aircraft taxying.

5.2 - Take-off and landing operations of tug aeroplanes within the glider runway strip shall be confined to the glider runway (i.e. not within 10 metres of the edge of the glider runway strip).

5.3 - Notwithstanding paragraph 5.1 above, where a displaced threshold has been established on the runway for powered aircraft operations and gliders are stationary behind and not closer than 60 metres to the displaced threshold, a powered aircraft may land on the runway provided no glider has commenced a take- off run or is on final approach or landing roll.

5.4 - Notwithstanding paragraph 5.1 above, a powered aircraft may commence a take-off run on the runway from a position ahead of a stationary glider or tug aircraft on the glider runway. (See Diagram 2)

6 - PARALLEL RUNWAY (CONTRA CIRCUIT) OPERATIONS

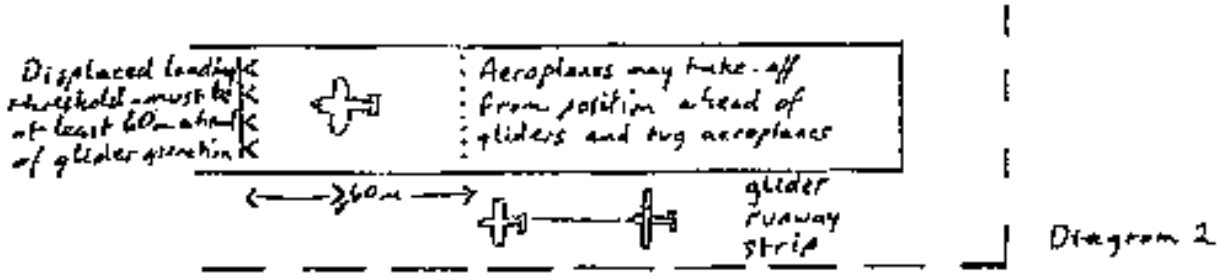


Diagram 2

6.1 - Where the volume and timing of aerodrome traffic is such that conflictions in use of the runway strip(s) cause frequent or prolonged delays, the use of parallel runways separated by at least 120 metres, and promulgation of contra-circuit procedures, will alleviate this. However, it should not be implemented at aerodromes with only a light traffic density, because of

(a) the complexity of this arrangement, particularly where intersecting runways exist;

(b) its constraints on use of airspace; and

(c) its propensity for being misunderstood by pilots who are unfamiliar with this style of operation.

6.2 - Where contra-circuits are employed from runways spaced at least 120 m apart, simultaneous day VFR operations on both runways are permitted.

6.3 - Where contra-circuits are in use gliders should make every effort to avoid flying in the powered aircraft circuit, and vice-versa, below 2000' a.g.l.

7 - WINCH AND VEHICLE TOW LAUNCHING

7.1 - Wire-launching, by winch or car-tow, may be carried out at aerodromes which meet the requirements of FOI 21-1 paragraph 3.3.2.

7.2 - Winches, tow-cars and associated vehicles shall be so positioned that whilst parked they do not occupy any portion of the runway strip or taxiways, nor infringe a 5% take off gradient. Infringement of the 1:7 transitional surfaces may, however, be permitted. The launch cable shall not remain deployed across any crossing runway or taxiway for any longer than the minimum required for the actual launching of a glider.

7.3 - Winches and tow-cars shall be conspicuously marked (preferably painted either orange-and-white chequers or bright yellow) and shall display one or more white strobe lights whenever the launch cable is moving. Associated vehicles shall display a yellow rotating beacon when being used.

7.4 - The drivers of all winches or tow-cars shall be trained in accordance with a syllabus of training which covers normal and emergency procedures and the requirements of this Instruction. Additionally, all winch or tow-car drivers operating at aerodromes shall be qualified to operate a VHF transceiver on the VHF frequency promulgated for use in the circuit area (i.e. MTAF, CTAF or Area frequency).

7.5 - Launching operations shall cease and the wire shall be retracted or removed at least 21 metres from the runway edge whenever an aircraft not associated with the gliding operation joins the circuit, taxies for take-off or is expected to arrive in the next five minutes.

7.6 - Launching may recommence when an aircraft not associated with the gliding operation has taxied clear of the runway strip (and glider runway strip if applicable) or has departed.

7.7 - Where wire launching takes place from a glider runway within an expanded runway strip the wire shall not be deployed on, nor the tow-car or cable retrieve vehicle driven on, that portion within 21 metres of the runway edge. All such operations shall be confined to the outer portion.

7.8 - Whenever a winch or tow-car is unattended the launch cable shall be retracted or parked off the glider runway outside the strip markers.

8 - NOTIFICATION AND COMMUNICATION

8.1 - The operator of the launch equipment (tug aeroplane, winch or tow-car) shall listen out continuously on the frequency promulgated in ERSA for use in the circuit area (CTAF, MTAF or area VHF) during launching and shall broadcast his/her intentions prior to commencing each launch or sequence of launches. The launch shall not proceed if it appears likely to conflict with
other traffic.

8.2 - A white double cross symbol shall be displayed in the aerodrome signal circle whenever gliding operations are in progress.

8.3 - Details of the gliding operation shall be advised in AIP-ERSA, specifying days of operation, situation of glider runway strips, whether wire launching occurs and other significant information. The Inspector (Sport Aviation), Flying Operations Section in Central Office is the co-ordinator for this information.

8.4 - Gliders operating within the area promulgated for CTAF procedures at an aerodrome served by RPT (including 'commuter' airline services) shall maintain a communications watch on the CTAF published for that aerodrome, and respond to relevant broadcasts made by other aircraft.

8.5 - Gliders which are unable to comply with paragraph 8.4 during a cross-country flight shall not enter the area promulgated for CTAF procedures at an aerodrome served by RPT.

8.6 - Gliders and tug aeroplanes are required to comply with MTAF procedures where they are promulgated, and to comply with CTAF procedures in the area promulgated when they are equipped with the notified frequency.

9 - COMPETITIONS AND FLYING MEETS

9.1 - When approval is given to conduct an event involving more gliders than the regular approved operation, the organiser of that operation shall ensure that any special operating conditions prescribed for the event are complied with. Particular conditions may relate to:

(a) notification of the daily operation to a nominated Airways Operations unit and/or other aerodrome users;

(b) displacement of runway thresholds;

(c) circuit patterns to be flown;

(d) provision of radio listening watch on a nominated frequency.

NOTE: the CTAF may be changed for a contest or flying meet to coincide with the gliding contest frequency, so that all aerodrome traffic monitors a common frequency.

9.2 - Recommended variations to standard operations are listed in FOI 21-1 or may be negotiated between the gliding organisation and District Office concerned. Officers in Central Office are available to assist or arbitrate if necessary, and should be consulted to arrange appropriate promulgation of details prior to implementation.

10 - REFERENCES

10.1 - CAO 95.4

10.2 - FOI 21-1

10.3 - RPA Vol IIa

10.4 - File F90/1606

10.5 - Sponsor: Flying Operations Section

FLYING OPERATIONS
INSTRUCTIONS

No. 21-4
Issue 5

15 August 1992

GLIDER TOWING PERMITS

CONTENTS

1 - INTRODUCTION

1.1 - Permits issued pursuant to CAR 149(1) to authorise a person to act as pilot in command of an aeroplane towing a glider or approvals to train pilots for the issue of a permit shall be issued in accordance with the requirements of this Instruction.

1.2 - In this Instruction the term 'approved pilot' means a CAA Examiner or a pilot approved by the Authority to train and test applicants for a glider towing permit.

2 - VALIDITY OF APPROVALS AND PERMITS

2.1 - Approvals to train pilots for the issue of glider towing permits shall remain in force for two years from the date of initial issue.

2.2 - Permits to tow gliders, issued on or after 1 July 1988, shall remain in force for the period of validity of the holder's flight crew licence (aeroplanes), subject to the holder meeting the recency and renewal provisions of this Instruction.

2.3 - Permits to tow gliders, issued prior to 1 July 1988, shall expire at the end of the first validity period of the holder's flight crew licence following 30 September 1988. A replacement permit may be issued on successful completion of the review in paragraph 4.4 (b) of this Instruction, and payment of the appropriate fee to the Authority.

3 - PREREQUISITES FOR THE ISSUE OF A GLIDER TOWING PERMIT

3.1 - An applicant for permission to tow gliders shall:

(a) hold a valid restricted private pilot or higher category licence;

(b) have a minimum of 100 hours aeronautical experience on either aeroplanes or gliders of which at least 33 hours must be on aeroplanes;

(c) have received dual instruction in gliders sufficient to have achieved a standard of skill and knowledge of procedures in aerotowed flight comparable to that of a solo glider pilot;

(d) have completed a course of glider towing training comprising at least 5 hours dual, in-command under supervision or solo under the supervision of an approved pilot to the syllabus specified at Appendix V;

(e) pass an oral examination, conducted by an approved pilot, in normal and emergency glider towing procedures as specified in the GFA Manual of Standard Procedures and the limitations specified in the GFA Operational Regulations;

(f) have been assessed as competent in accordance with the flight test report contained in Appendix I; and

(g) submit an application for a permit on the form shown at Appendix I.

4 - GLIDER TOWING PERMITS

4.1 - Glider towing permits may be issued as Basic Glider Towing Permits or Advanced Glider Towing Permits (see Appendix II) in accordance with the following:

(a) applicants who hold a private pilot licence endorsed with an area restriction will have this restriction included in their Glider Towing Permit;

(b) applicants who have completed the syllabus of training for the Advanced Glider Towing Permit specified in Appendix V and have at least 30 hours glider towing experience as the holder of a Basic Glider Towing Permit may be issued with an Advanced Glider Towing Permit.

4.2 - Privileges

(a) A glider towing permit authorises the holder to operate an aeroplane in glider towing operations within 600 metres horizontally and 500 feet vertically of another aeroplane engaged in glider towing operations or a glider, powered sailplane or power-assisted sailplane, but not within 200 metres horizontally or 200 feet vertically except in the case of establishing such separation from a glider which has just been released from being towed by that aeroplane.

(b) A basic glider towing permit entitles the holder to tow

not more than one glider at a time, from an established aerodrome only (i.e. a Government or licenced aerodrome or a surveyed and permanently marked authorised landing area).

NOTE: The holder of an unrestricted PPL or higher licence may conduct cross-country towing for such an aeroplane.

(c) An advanced glider towing permit entitles the holder to conduct multiple towing, and to launch gliders from unmarked paddocks meeting the appropriate standard as an authorised landing area.

4.3 - Validity

(a) Permits issued on or after 1 July 1988 shall be valid for the period of validity of the holder's flight crew licence (aeroplanes), subject to the holder meeting the recency provisions of this Instruction.

NOTE: It shall be the responsibility of the holder of a permit to ensure that he/she meets the requirements for currency of his/her permit.

(b) Where the holder has not exercised the privileges of a glider towing permit for a period in excess of two years the permit shall lapse.

4.4 - Recency

The holder of a glider towing permit may act as pilot in command in glider towing operations of an aeroplane for which his/her pilot licence is valid, provided he/she meets the following requirements:

(a) In the preceding six months has completed either

(i) at least ten flights in command of an aeroplane towing a glider; or

(ii) one flight acting as pilot in command of an aeroplane towing a glider under the supervision of an approved pilot.

(b) A pilot who cannot comply with sub-paragraph (a) above but who has acted as pilot in command of an aeroplane in glider towing operations in the preceding two years shall satisfy an approved pilot of his/her ability to safely tow gliders and his/her knowledge of current glider towing procedures by passing an appropriate flight and oral test. The approved pilot shall endorse the pilot's log book accordingly.

4.5 - Re-issue of a lapsed permit

(a) A lapsed glider towing permit may be re-issued when the holder has completed at least three hours within a six-month period, of training with an approved pilot to the syllabus at Appendix V. The approved pilot shall certify the completion of this training in the form at Appendix I and the applicant shall submit it to the Authority with the appropriate fee.

(b)(i) Where a glider towing permit which was formerly an advanced glider towing permit is re-issued the holder's privileges are limited to those of a basic glider towing permit.

(ii) The privileges of an advanced glider towing permit may be restored after the holder has completed the greater of 10 hours or 40 flights in glider towing operations since re-issue of the permit and his/her log book has been endorsed accordingly by an approved pilot.

5 - PREREQUISITES FOR APPROVAL TO TRAIN AND EXAMINE APPLICANTS FOR GLIDER TOWING PERMITS

5.1 - An applicant seeking approval to train and examine applicants for glider towing permits shall:

(a) hold a valid unrestricted private pilot or higher category licence;

(b) have held a valid Advanced glider towing permit for at least twelve months and have at least 50 hours aeronautical experience towing gliders;

(c) have a minimum of 175 hours aeronautical experience on aeroplanes and gliders of which at least 100 hours shall be on aeroplanes;

(d) satisfactorily demonstrate to a CAA Examiner his/her ability to impart knowledge of the normal and emergency procedures applicable to glider towing operations and demonstrate the flying techniques specified in the syllabus of training at Appendix V; and

(e) submit an application for approval to the Authority on the form shown at Appendix III.

6 - APPROVALS TO TRAIN AND EXAMINE APPLICANTS FOR GLIDER TOWING PERMITS

6.1 - Approvals to train and examine applicants for glider towing permits shall be issued in the format shown at Appendix IV and:

(a) shall be valid for two years from the date of issue or, if renewed in the six months preceding the expiry date of a current approval, for two years from that date;

(b) may be issued following a satisfactory demonstration to a CAA Examiner or renewed following a satisfactory demonstration to a CAA Examiner or other approved person (see 6.2 below) of his/her ability to impart knowledge of the normal and emergency procedures and a satisfactory demonstration in a 2-place tug aircraft of the flying techniques specified in the syllabus of training at Appendix V.

(1) the satisfactory demonstrations must be conducted during the six months immediately preceding the issue or renewal of an approval; and

(ii) an application for approval must be submitted to the Authority on the form shown at Appendix III.

NOTE: It shall be the responsibility of an approved pilot to ensure that he/she meets the requirements for renewa1 of his/her approval.

6.2 - A Grade 1 Flight Instructor who is an approved person may conduct the tests described in 6.1 (b) above for renewal only. Consideration may be given to approving Grade 2 Flight Instructors for this purpose at the discretion of the AGM (Safety Regulation) in the Field Office having jurisdiction over that pilot's licence.

6.3 - Approval to train and examine applicants for a glider towing permit incorporates an Advanced Glider Towing Permit.

7 - REFERENCES

7.1 - File F88/1446

7.2 - Sponsor: Inspector Sport Aviation, Operator Certification, on behalf of Standards Development Division.

_____

Supersedes FOI 21-4, Issue 4 dated 11 March 1990.

Appendices I, II, III, IV, V attached

APPENDIX I
APPLICATION FOR GLIDER TOWING PERMIT
(CIVIL AVIATION REGULATIONS 149(1), 150(2)(a) and 163(3))
(INITIAL ISSUE)

Applicant's DetailsName: (please print) .....

Pilot Licence: ..... (Category) ..... (Number) .....

Aeronautical experience: .....(Aeroplanes).....(Gliders).....(Glider Towing)

Issue date of previous Glider Towing Permit (if applicable).....

Signature: .....Date: .....

Declaration by Approved Pilot

The above named applicant has been instructed in glider towing operations in accordance with the syllabus of training contained in Appendix V of the Civil Aviation Authority Flying Operations Instruction 21-4.

I have examined this applicant in accordance with the Flight Test Report overleaf and am satisfied that he/she has a good understanding of the normal and emergency procedures and limitations for glider towing operations as specified in the GFA Operational Regulations and the GFA Manual of Standard Procedures.

I have examined the applicant's pilot log book(s) and certify that he/she has logged the aeronautical experience shown above.

I am satisfied that the applicant has achieved an adequate standard in gliders insofar as aerotowing procedures and skill are concerned.

I recommend that the applicant be issued with a Basic/Advanced* Glider Towing Permit.

Signature of Approved Pilot .....

Name: (please print) .....

Pilot Licence: (Category) ..... (Number) .....

Recommendation of Gliding Club

This gliding club will make use of the applicant's approval.

Signature: .....

Name: (please print) ..... (Position) .....

Name of Club: .....

FLIGHT TEST REPORT

INTRODUCTION

The aim of this flight test is to prove the candidate's ability

to safely and competently handle the aircraft in glider towing operations in accordance with the syllabus of training specified in Appendix V of Flying Operations Instructions 21-4.

At the examiner's discretion any items considered unsatisfactory may be repeated but all items of the test must be assessed as safe before a permit can be issued. An unsatisfactory final performance of any test item or procedure will result in an overall fail assessment for the flight test.

The test may be discontinued at any point where a fail assessment is made. A fail assessment will be recorded if the examiner concludes that the applicant lacks the knowledge or skill necessary to safely undertake glider towing operations.

To achieve a pass assessment the candidate must demonstrate sound judgement in the application of emergency procedures to actual or simulated emergency situations.

Flight Test Report
(Basic Glider Towing Permit)

I certify that the candidate.....(name) has demonstrated the following skills to me:

[ ] Explained the privileges and limitations of the Basic Glider Towing Permit.

[ ] Stated the relevant operating limitations listed in the flight manual of the aeroplane in which the test was conducted.

[ ] Demonstrated appropriate pre-flight inspection procedures for inspection of tug aircraft and towing equipment.

[ ] Stated fuel reserve requirements.

[ ] Solved take-off problem using Flight Manual Glider Towing Supplement to extract information.

[ ] Executed pre-flight actions including correct adjustment of mirrors.

[ ] Applied checklists and performed vital actions.

[ ] Stated towing airspeeds for various glider/tug combinations.

[ ] Taken into account the performance implications of water-ballasted gliders.

[ ] Executed norma1 and crosswind take-offs with glider in tow.

[ ] Controlled attitude to maintain a speed appropriate to the glider/tug combination and the conditions, reacting only to trends in airspeed and evening out transient changes in speed caused by turbulence;

[ ] Demonstrated selection of a suitable climb path to take account of wind, position of sun, forced landing areas, aerodrome traffic pattern and desired release point.

[ ] Used mirrors to monitor glider position.

[ ] Maintained positive lookout.

[ ] Demonstrated a complete understanding of the standard signals between aeroplane and glider, and reacted without hesitation to any signals given.

[ ] Confirmed the release of the glider before turning left to commence descent.

[ ] Avoided shock-cooling the engine during descent.

[ ] Maintained an appropriate descent airspeed having regard to conditions.

[ ] Selected a suitable descent path to rejoin circuit taking other traffic into account, and made appropriate radio calls.

[ ] Executed a normal approach and landing, taking the trailing tow rope into account or dropping it as necessary.

[ ] Correctly responded to emergency situations:

    [ ] Stop signal during take-off run

    [ ] Partial power failure during ground run

    [ ] Glider airbrakes deployed

    [ ] Situation requiring order for glider to release

    [ ] Glider unable to release

[ ] Double hook up (landing an tow not required for test)

[ ] Demonstrated an ability to tow a glider in cruise.

[ ] Demonstrated an ability to descend with a glider in tow.

[ ] Cross-country towing (unrestricted PPL holders and above only)

    [ ] Solved a cross-country retrieve problem taking into account fuel requirements, towing speed, weather conditions and daylight remaining.

[ ] Executed a simulated cross-country tow of a glider with correct selection of airspeed, with due regard to turbulence, during all stages of flight.

In addition to the above, the candidate.....has:

[ ] Explained the privileges of Advanced Glider Towing Permit.

(a) Cross-country towing (unrestricted PPL holders and above only)
Note: may also be applicable to UPPL holders seeking issue/renewal of a Basic Glider Towing Permit.

[ ] Solved a cross-country retrieve problem taking into account fuel requirements, towing speed, weather conditions and daylight remaining.

[ ] Executed a simulated cross-country tow of a glider with correct selection of airspeed, with due regard to turbulence, during all stages of the flight.

(b) Outlanding retrieve

[ ] Demonstrated ability to carry out an aerial inspection of a selected paddock to determine whether or not a glider could be aero-towed from it.

[ ] Executed a precautionary inspection and was aware of the value of dropping the tow rope before landing.

[ ] Executed a safe take-off from a selected paddock towing a glider, with no ground crew and using agreed signals for the launch commands.

[ ] Demonstrated awareness of responsibility to land owners.

(c) Multiple towing

[ ] Demonstrated a good working knowledge of the requirements and techniques for multiple glider towing operations, including briefing of glider pilots (Flight demonstration not required).

Remarks:

I recommend the applicant be approved to conduct

[ ] Cross-country towing (UPPL holders only)

[ ] Outlanding retrieve

Note: RPPL holders may conduct an outlanding retrieve from designated training area.

[ ] Multiple towing.

Approved Pilot.....

Name: (Please print).....

APPENDIX II

COMMONWEALTH OF AUSTRALIA

CIVIL AVIATION AUTHORITY

BASIC GLIDER TOWING PERMIT

CIVIL AVIATION REGULATIONS 149(1), 150(2)(a) AND 163(3)

Permission is granted for (name) .....
the holder of (category) ..... Pilot Licence No .....
to act as pilot in command whilst engaged in glider-towing conducted in accordance with the procedures and limitations specified in the GFA Operational Regulations and the GFA Manual of Standard Procedures.

The holder of this permit may operate an aeroplane in glider towing operations within 600 metres horizontally and 500 feet vertically of another aeroplane engaged in glider towing operations or a glider, powered sailplane or power-assisted sailplane, but not within 200 metres horizontally and 200 feet vertically except in the case of establishing such separation from a glider which has just been released from being towed by that aeroplane.

The holder of this permit is not authorised to:

(a) aerotow retrieve gliders that have outlanded on other than established aerodromes;

(b) in the case of pilots who hold a Private Pilot Licence endorsed with an area restriction, aerotow gliders at a distance in excess of five nautical miles from the reference point of, or from the approved flying training area associated with, the aerodrome from which he/she departed on a particular flight; or

(c) aerotow more than one glider per flight.

Unless suspended, cancelled or varied by an appropriately authorised delegate of the Authority, this permit shall remain valid for the period of validity of the holder's flight crew licence, subject to the holder meeting the recency provisions prescribed by the Authority.

....
Delegate of the Authority Date

APPENDIX II (Cont'd)

COMMONWEALTH OF AUSTRALIA

CIVIL AVIATION AUTHORITY

ADVANCED GLIDER TOWING PERMIT

CIVIL AVIATION REGULATIONS 149(1), 150(2)(a) AND 163(3)

Permission is granted for (name) .....
the holder of (category) ..... Pilot Licence No .....
to act as pilot in command whilst engaged in glider towing conducted in accordance with the procedures and limitations specified in the GFA Operational Regulations and the GFA Manual of Standard Procedures.

The holder of this permit may operate an aeroplane in glider towing operations within 600 metres horizontally and 500 feet vertically of another aeroplane engaged in glider towing operations or a glider, powered sailplane or power-assisted sailplane, but not within 200 metres horizontally and 200 feet vertically except in the case of establishing such separation from a glider which has just been released from being towed by that aeroplane.

This permit is valid for:

(a)* cross-country towing

(b)* outlanding retrieve

(c)* multiple towing

* Delete if not applicable.

In the case of pilots who hold a Private Pilot Licence endorsed with an area restriction, aerotow gliders at a distance in excess of five nautical miles from the reference point of, or from the approved flying training area associated with, the aerodrome from which he/she departed on a particular flight.

Unless suspended, cancelled or varied by an appropriately authorised delegate to the Authority this permit shall remain valid for the period of validity of the holder's flight crew licence, subject to the holder meeting the recency provisions prescribed by the Authority.

....
Delegate of the Authority Date

APPENDIX III

APPLICATION FOR APPROVAL TO TRAIN AND EXAMINE

APPLICANTS FOR GLIDER TOWING PERMITS
(INITIAL ISSUE AND RENEWAL)

Applicant's Details:

Name: (please print) .....

Address .....

Pilot Licence ..... (Category) ..... (Number)

Issue date of Advanced glider towing permit .....

Aeronautical experience ..... (Aeroplanes) ..... (Gliders)

..... (Glider towing)

Signature ..... Date .....

To be completed by Examiner

Demonstration of ability to impart knowledge of the normal and emergency procedures specified in the GFA Operational Regulations and GFA Manual of Standard Procedures and to transfer skills to pilots training for the issue of a permit to tow gliders was conducted
at on / / .

Issue of approval recommended / not recommended

Signature ..... Date .....

Name: (please print) .....

APPENDIX IV

COMMONWEALTH OF AUSTRALIA

CIVIL AVIATION AUTHORITY

GLIDER TOWING TRAINING APPROVAL

CIVIL AVIATION REGULATIONS 149(1), 150(2)(a) AND 163(3)

Approval is granted for (name) .....
the holder of (Category) ..... Pilot Licence No.....
to act as pilot in command of glider towing operations, and to conduct dual flight training for glider towing operations in accordance with the GFA Operational Regulations and the GFA Manual of Standard Procedures and to certify as to the competence of pilots he/she has trained.

The holder of this permit may operate an aeroplane in glider towing operations within 600 metres horizontally and 500 feet vertically of another aeroplane engaged in glider towing operations or a glider, powered sailplane or power-assisted sailplane, but not within 200 metres horizontally and 200 feet vertically except in the case of establishing such separation from a glider which has just been released from being towed by that aeroplane.

Unless suspended, cancelled or varied by an appropriately authorised Delegate of the Authority this approval shall remain valid for two years from the date affixed below.

....
Delegate of the Authority Date

APPENDIX V

SYLLABUS OF TRAINING FOR GLIDER TOWING

1 - APPLICABILITY

1.1 - This syllabus specifies the flight training objectives which must be met by an applicant for a Basic or an Advanced Glider Towing Permit.

1.2 - Trainees must meet the minimum aeronautical experience, as applicable, specified in this Instruction prior to being issued with a Glider Towing Permit.

2 - BASIC GLIDER TOWING PERMIT

2.1 - Demonstrate ability to prepare an aeroplane for flight in glider-towing operations.

2.1.1 - Know the privileges and limitations of the Basic Glider Towing Permit.

2.1.2 - Understand the tug pilot's responsibility for the overall safety of a glider towing operation.

2.1.3 - Know the separation requirements for gliders.

2 1.4 - Know how to carry out a daily inspection of the tug aircraft tow hook and release mechanism.

2.1.5 - Be able to inspect the ropes, release rings and weak links; and

(a) select appropriate equipment for the towing task; and

(b) apply the requirements of:

(i) tug aircraft flight manual;

(ii) glider limitations on aerotowed flight;

(iii) GFA MOSP; and

(iv) GFA Operational Regulations;

2.1.6 - Manage the tug fuel system and calculate the fuel consumption whilst towing gliders.

2.1.7 - Know the ground signalling procedures specified in the GFA MOSP.

2.1.8 - Use the Flight Manual Glider Towing Supplement to calculate required distance and tug loading constraints for given glider/strip/wind conditions.

2.2 - Normal towing techniques in the following phases of flight:

2.2.1 - Take-off

(a) respond to appropriate signals;

(b) monitor expected take-off performance and take appropriate action in the event of not achieving expected performance; and

(c) use mirrors to monitor glider position.

2.2.2 - Climb

(a) control attitude to maintain a speed appropriate to the glider/tug combination and the conditions, reacting only to trends in airspeed and evening out transient changes in speed caused by turbulence;

(b) handle engine using power settings required having regard to normal operating and cooling considerations;

(c) maintain a good lookout;

(d) select a climb path to minimise towing into sun and to take advantage of available forced landing areas and areas of lift, whilst staying within safe range of airfield for glider having regard for wind direction and strength and desired release position;

(e) avoid confliction in the circuit area;

(f) use correctly-adjusted mirrors to monitor glider position;

(g) be able to tow a glider in either the high-tow or low-tow position without being affected by an out-of-station glider or transitions between high and low-tow; and

(h) on release of glider

(i) confirm release

(ii) look out and clear airspace

(iii) turn left and commence descent, avoiding abrupt manoeuvres or shock cooling of engine.

2.2.3 - Cruise and descend on tow

(a) selection of appropriate speeds having regard to glider placard speed and controllability in turbulence.

2 2.4 - Descent

(a) select suitable airspeed and power settings; and

(b) maintain positive lookout, select an appropriate

descent path and make necessary radio broadcasts.

2.2.5 - Circuit rejoin

(a) demonstrate good airmanship with emphasis on lookout, fitting into traffic flow, appropriate use of radio, carry out checks and choose suitable landing area as applicable.

2.2.6 - Approach and landing

(a) have regard to presence of trailing rope, obstacles and aircraft on the ground;

(b) be prepared to go round if necessary; and

(c) be aware of option to release rope before or during approach or go-round, and confirm release or fly appropriate landing path.

2.3 - Make correct and competent response to simulated emergency situations,
as listed below:

2.3.1 - "STOP" signal on take-off run

(a) close throttle and apply brakes if no risk of glider running on into tug;

(b) release rope if glider out-of-station; and

(c) taxi well ahead of glider before stopping.

2.3.2 - Partial power failure and aborted take-off

(a) release glider;

(b) use power and strip length remaining to keep clear of glider, stop as far ahead as necessary; or

(c) if airborne at safe height and not descending, release glider or order it to release at safe position in circuit, keeping in range of forced landing areas.

2.3.3 - Airbrakes open on glider

(a) assess height and position;

(b) if combination is in danger, release the glider;

(c) when appropriate and if combination is not in danger, signal with rapid rudder waggle, repeat if necessary;

(d) be aware of possible consequences of incorrect response by glider pilot if signal given at critical stage of launch and combination is not in danger.

2.3.4 - Order to glider pilot to release

(a) be aware of circumstances where signal is appropriate;

NOTE: A signal is not appropriate in the event of sudden and complete engine failure;

(b) signal by exaggerated rocking of wings without significant heading change; and

(c) release glider from tug if no response.

2.3.5 - Glider unable to release

(a) recognise signal by glider pilot;

(b) acknowledge;

(c) return glider to safe location (e.g. over aerodrome); then

(d) release glider after it has adopted high-tow position; or

(e) if a 'double hook-up' occurs reduce power and descend for landing.

NOTE: Demonstration of landing on tow is optional during training and not required for the flight test.

2.3.6 - Know requirements for practice of emergency procedures

(a) all practice emergencies to be briefed and agreed prior to launch; and

(b) unarranged signals to be regarded as real emergencies.

3 - ADVANCED GLIDER TOWING PERMIT

3.1 - Demonstrate ability to prepare an aeroplane for flight in advanced glider-towing operations.

3.1.1 - Know the privileges and limitations of the advanced glider towing permit.

3.1.2 - Understand the tug pilot's responsibility for the overall safety of a glider towing operation.

3.1.3 - Know the requirements for the operation of aeroplanes in glider towing

(a) separation requirements of gliders;

(b) ALA requirements

3.1.4 - Determine whether a cross-country tow (UPPL holders only, may also apply to Basic permit) or aerotow retrieve can be conducted

(a) fuel requirements; and

(b) having regard to daylight and weather conditions and reduced speed when towing.

3.2 - Demonstrate normal techniques in the following phases of flight:

3.2.1 - Assessment of suitability of paddocks having regard to size, slope, surface, stock, and surroundings with particular regard to obstacles, especially power lines (SWER etc.) and clear approach and take-off paths

3.2.2 - Pre-landing procedures:

(a) inspection run

(b) dropping rope before landing.

3.2.3 - Take-off safely from a selected paddock towing a glider;

(a) use adequate length

(b) take-off without ground crew

(c) use suitable agreed signals

(d) crosswind if paddock orientation requires.

3 2.4 - Responsibility to land owners.

3.3 - Knows the procedures to conduct multiple towing:

NOTE: Demonstration of multiple towing is optional during training and flight test, but the candidate must know the requirements for double towing.

3.3.1 - Assess the suitability for multiple towing of:

(a) tug power (take-off and climb performance);

(b) runway/strip width and length;

(c) weather conditions; and

(d) weight and compatibility of gliders;

3.3.2 - Brief glider pilots for double towing; and

3.3.3 - Know the requirements of the GFA Operational Regulations and MOSP:

(a) rope lengths;

(b) crosswind technique and glider positioning;

(c) normal release procedure; and

(d) emergency release procedures.

MARKING OF GLIDER RUNWAY STRIPS

1. When gliding operations are being conducted at an aerodrome, a signal consisting of a double white cross is to be displayed in the signal circle, as shown in Figure 1.
2. Where the glider runway strip is located wholly or partly within an existing runway strip for powered aircraft, the width of the glider runway strip is to be fixed on the one side by the edge of the runway for powered aircraft, and on the other by the existing runway strip markers adjusted as necessary, as shown in Figures 2 (a) and (b).
3. Where a glider runway strip is located outside an existing runway strip for powered aircraft, the glider runway strip is to be marked with boundary markers of a conspicuous colour other than white as shown Figure 2 (c).
4. Where an end of a glider runway strip is not alongside the end of an existing runway strip for powered aircraft, an additional white double cross on a black background is to be displayed 20m in front of the glider strip end markers as shown in Figures 2 (b) and (c).

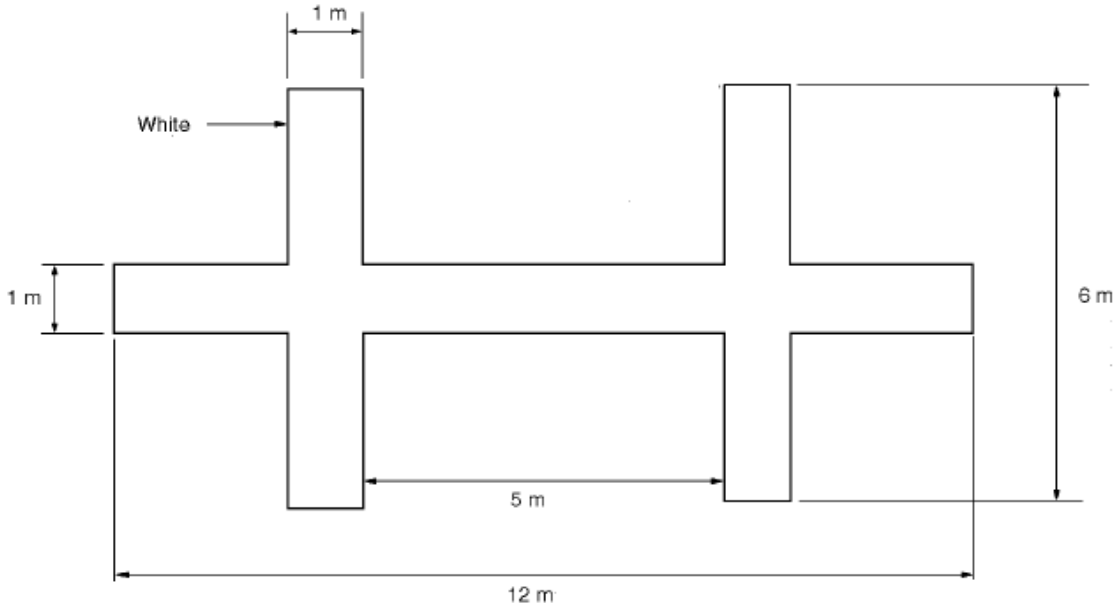
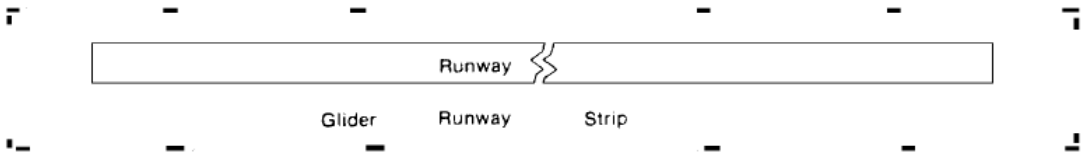
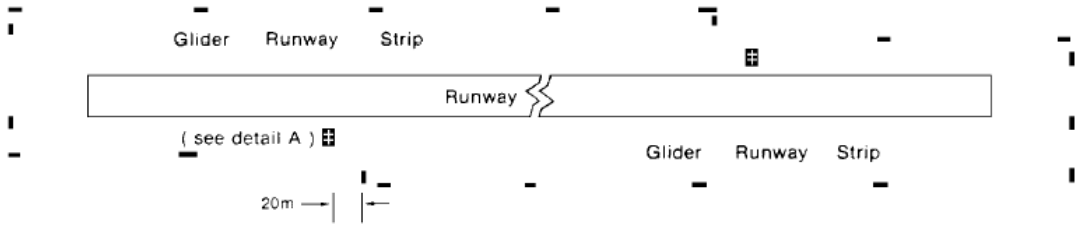


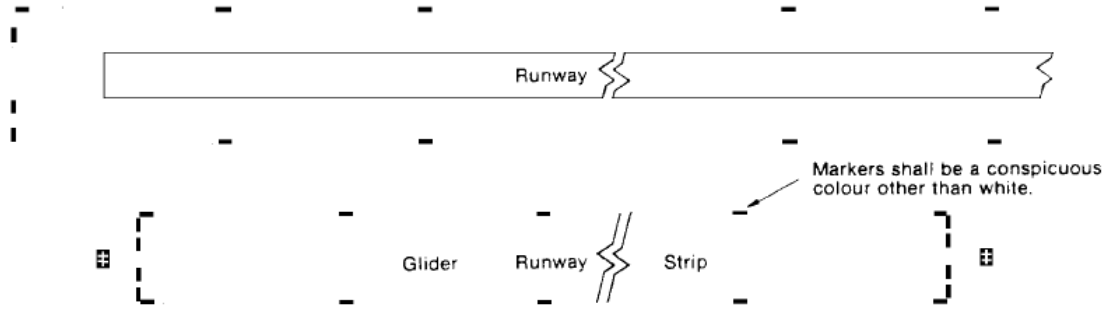
Figure 1



(a) Glider runway strip taking up the full length of powered aircraft runway strip (no signal marking required)



(b) Glider runway strip taking up part of the powered aircraft runway strip



(c) Glider runway strip outside an existing powered aircraft runway strip

Figure 2

SCHEDULE 1

Regulation 6.04

MEDICAL STANDARDS

PART 1

GENERAL MEDICAL REQUIREMENTS

The following are the general medical requirements referred to in Parts 2, 3, 4 and 5.

Absence of certain abnormalities, disabilities etc.

1. A person must be free from:
   (a) any congenital or acquired abnormality; and
   (b) any disability or disease that is active or latent; and
   (c) any wound, injury or sequelae resulting from an operation or an accident;
   that entails a degree of functional incapacity or a risk of incapacitation, which is likely to interfere with the safe exercise of privileges, or performance of duties, under the licence that the person holds or has applied for, as the case may be.

Mental fitness

2. A person must have no established medical history or clinical diagnosis of:
   (a) a psychosis; or
   (b) alcoholism; or
   (c) drug dependence or the use of illicit drugs; or
   (d) any personality disorder of a significant degree; or
   (e) a mental abnormality or neurosis of a significant degree;
   that is likely to interfere with the safe exercise of privileges, or performance of duties, under the licence that the person holds, or has applied for, as the case may be.

Nervous system

3. A person must have no established medical history or clinical diagnosis of:
   (a) a progressive or non-progressive disease of the nervous system, the effects of which are likely to interfere with the safe exercise of privileges, or performance of duties, under the licence that the person holds or has applied for, as the case may be; or
   (b) epilepsy; or
   (c) any disturbance of consciousness for which there is no satisfactory medical explanation and which may recur.
4. A person must not suffer from the effects of head injury or neurosurgical procedures that are likely to interfere with the safe exercise of privileges, or performance of duties, under the licence that the person holds or has applied for, as the case may be.

Cardiovascular system

5. A person must not possess any congenital or acquired abnormality of the heart that is likely to interfere with the safe exercise of privileges, or performance of duties, under the licence that the person holds or has applied for, as the case may be.

6. The systolic and diastolic blood pressures of a person must be within normal limits but drugs approved by the Director of Aviation Medicine may be used to maintain the blood pressure within normal limits.
7. A person must have no significant functional or structural abnormality of the circulatory tree.

Respiratory system

8. A person must not suffer from any congenital or acquired condition of the respiratory system that is likely to interfere with the safe exercise of privileges, or performance of duties, under the licence that the person holds or has applied for, as the case may be.
9. A person must have full and free respiratory function without the use of drugs which act on the respiratory organs.

Alimentary system and metabolic disorders

10. A person must not suffer from:
    (a) any defect (congenital or acquired); or
    (b) the effects of a trauma or an operation; or
    (c) any disease process;

    of the digestive system (including its adnexae) that is, or are, likely to interfere with the safe exercise of privileges, or performance of duties, under the licence that the person holds or has applied for, as the case may be.
11. A person must be free of all metabolic, nutritional or endocrine disorders that are likely to interfere with the safe exercise of privileges, or performance of duties, under the licence that the person holds or has applied for, as the case may be.
12. A person who suffers from diabetes mellitus may be assessed as meeting the medical standard if the approved person conducting the relevant examination is satisfied that the diabetes is satisfactorily controlled without the use of any anti-diabetic drug.

Reticulo-endothelial system

13. A person must not suffer from an enlargement of the spleen that causes a significant displacement below the costal margin.
14. A person must not suffer from any:
    (a) localised or generalised enlargement of the lymphatic glands; or
    (b) diseases of the blood; or
    (c) immune deficiency disorders;

    that is, or are, likely to interfere with the safe exercise of privileges, or performance of duties, under the licence that the person holds or has applied for, as the case may be.

Urinary system

15. A person must not display any signs or symptoms of disease of the genitourinary system that is likely to cause incapacitation during flight.
16. A person must not have any sequelae of disease or surgical procedures on the kidneys or the urinary tract that are likely to cause incapacitation during flight.
17. The kidneys and urinary tract must be free of all significant obstructions due to stricture or compression.

Gynaecological and obstetrical

18. A person must be free of severe menstrual disturbances that have not responded to medical treatment and that are likely to interfere with the safe exercise of privileges, or performance of duties, under the licence that the person holds or has applied for, as the case may be.
19. A person who is pregnant may be assessed as meeting the medical standard if the approved person conducting the relevant examination is satisfied that the pregnancy is not likely to interfere with the safe exercise of privileges, or performance of duties, under the licence that the person holds or has applied for, as the case may be.
20. An assessment under paragraph 19 is valid only for the period that the Director of Aviation Medicine specifies in writing.

Skeletal system

21. A person must be free of any active disease of the bones, joints, muscles or tendons that is likely to interfere with the safe exercise of privileges, or performance of duties, under the licence that the person holds or has applied for, as the case may be.
22. A person must be free of all serious functional sequelae (whether congenital or acquired**)** of the bones, joints, muscles or tendons that are likely to interfere with the safe exercise of privileges, or performance of duties, under the licence that the person holds or has applied for, as the case may be.

Ear, nose and throat

23. A person must be free of:
    (a) all active pathological processes of the internal ear or of the middle ear; and
    (b) all permanent obstructions of the Eustachian tubes; and
    (c) all permanent disturbances of the vestibular apparatus.
24. A person must not have any serious malformation, or any serious condition of:
    (a) the buccal cavity; or
    (b) the upper respiratory tract;

    that is likely to interfere with the safe exercise of privileges, or performance of duties, under the licence that the person holds or has applied for, as the case may be.

Hearing requirements

25. A person must be free of any hearing defect that is likely to interfere with the safe exercise of privileges, or performance of duties, under the licence that the person holds or has applied for, as the case may be.
26. A person must not, when in a quiet room, have a hearing loss in either ear of more than:
    (a) 35dB at any of the frequencies of 500 Hz, 1,000 Hz or 2,000 Hz; or
    (b) 5OdB at 3,000 Hz;

    unless the person passes a speech test, or an operational check, by an approved person carrying out the examination in an aircraft of similar ambient noise level to that in which the relevant person is or will be operationally involved.

Visual requirements

27. A person's eyes and their adnexae must function normally.
28. A person's eyes must be free of all congenital or acquired conditions that are likely to interfere with the safe exercise of privileges, or performance of duties, under the licence that the person holds or has applied for, as the case may be.
29. A person must have normal fields of vision.
30. A person must have a distant visual acuity of 6/9 or better in each eye separately and 6/6 or better binocular (whether with or without correcting lenses).
31. A person must be able (whether with or without correcting lenses) to read binocularly an N5 chart (or its equivalent) at a distance selected by the person (being a distance in the range of 30 to 50 centimetres) and be able to read binocularly an N14 chart at a distance of 1 metre.
32. A person must have a near point of accommodation no further than 30 centimetres with or without correcting lenses.
33. A person who uses contact lenses to meet the visual standards set out in paragraphs 27 to 32 (both inclusive):
    (a) must be able to wear those lenses for twice the projected length of flight time or duty time for the person without deterioration in visual acuity or discomfort; and
    (b) if the lenses used are of the hard or gas permeable variety—must be demonstrated able to read at least 6/9 with a pair of spectacles binocularly immediately after removal of the lenses.

Colour perception

34. A person must be able to demonstrate the ability to distinguish readily those colours the perception of which is necessary for the safe exercise of privileges, or performance of duties, under the licence to which the medical standard applies.
35. A person who readily identifies a series of pseudoisochromatic plates of the Ishihara 24 plate type in daylight or in artificial light of similar luminosity will satisfy the requirements of paragraph 34.
36. A person must not make more than 2 errors for the purposes of paragraph 35.
37. A person who makes more than 2 errors for the purposes of paragraph 35 must be able to readily identify aviation coloured lights displayed by means of a Farnsworth colour perception lantern.
38. For the purposes of paragraph 37 a person must
    (a) make no errors on 1 run of 9 pairs of lights; or
    (b) make no more than 2 errors on a sequence of 2 runs of 9 pairs of lights;
    on the Farnsworth Lantern.
39. A person who fails the Farnsworth lantern test may be assessed as meeting the medical standard if all relevant coloured lights are correctly identified in a simulated operational situation test of a kind determined by the Director of Aviation Medicine.

PART 2

MEDICAL STANDARD NO. 1

What is medical standard no. 1?

2. Medical standard no. 1 consists of all the general medical requirements set out in Part 1.

PART 3

MEDICAL STANDARD NO. 2

What is medical standard no. 2?

2. Medical standard no. 2 consists of the general medical requirements set out in Part 1, subject to the following modifications:

(a) omit paragraph 9;

(b) omit paragraph 12, substitute the following paragraph:

"12. A person who suffers from diabetes mellitus may be assessed as meeting medical standard no. 2, if:

(a) the approved person conducting the relevant examination is satisfied that the condition is satisfactorily controlled without the use of any anti-diabetic drug; or

(b) where an oral anti-diabetic drug is used to control the condition:

(i) the person provides evidence that he or she is undertaking on-going supervision and control of the condition; and

(ii) the oral drug is approved by the Director of Aviation Medicine.";

(c) omit paragraph 26, substitute the following paragraphs:

"26. A person must (whether with or without a hearing aid) be able to hear with both ears an average conversational voice in a quiet room while at a distance of 2 metres from the approved person conducting the examination and while looking away from the examiner so that lip reading cannot be used.

"26.1 If a person fails to meet the standard in paragraph 26, the person must pass an operational check by the approved person conducting the examination in an aircraft of similar ambient noise level to that in which the person is operationally involved." ;

(d) omit from paragraph 30 the words "visual acuity of 6/9 or better in each eye separately and 6/6 or better binocular" and substitute the words "visual acuity of 6/12 or better in each eye separately and 6/9 or better binocular".

PART 4

MEDICAL STANDARD NO. 3

What is medical standard no. 3?

2. Medical standard no. 3 consists of the general medical requirements set out in Part 1, subject to the following modifications:
   (a) omit paragraph 9;
   (b) omit paragraph 12, substitute the following paragraph:
   "12. A relevant person who suffers from diabetes mellitus may be assessed as meeting medical standard no. 3 if:
      (a) the approved person conducting the relevant examination is satisfied that the condition is satisfactorily controlled without the use of any anti-diabetic drug; or
      (b) where an oral anti-diabetic drug is used to control the condition:
         (i) the person provides evidence that he or she is undertaking on-going supervision and control of the condition; and
         (ii) the oral drug is approved by the Director of Aviation Medicine.";
   (c) omit paragraph 13;
   (d) omit "during flight" from paragraphs 15 and 16, substitute "while the person is on duty";
   (e) omit subparagraph 23 (b);
   (f) omit all the words after "examination" from paragraph 26;
   (g) omit paragraph 39.

PART 5

CONDITIONS APPLICABLE TO CERTAIN MEDICAL CERTIFICATES

Use of correcting lenses

1. If a medical certificate is granted to a person who needs correcting lenses to satisfy the requirements of paragraph 31 of the general medical requirements, the person must use those correcting lenses while performing duties, for which the medical certificate is required.
2. In the case of a person who is required to meet medical standard no. 1 or 2, the correcting lenses may be incorporated into 1 spectacle frame or be a combination of contact lenses and lenses incorporated into 1 spectacle frame.
3. In the case of a person who is required to meet medical standard no. 1 or 2, a spare pair of spectacle lenses for each pair of correcting lenses required must be within reach of the person while the person is performing duties essential to the operation of an Australian aircraft during flight time.