Irish Gliding & Soaring Association

Operational Regulations

Amended and approved by the Council of the IGSA

25th Mar 2019

These regulations will be subject to review and amendment as deemed necessary by the IGSA council

OPERATIONAL REGULATIONS

Irish Gliding & Soaring Association.

1. GENERAL

Note on 2019 Op Regs: The 2019 version of the Op reg includes many additional entries for compliance with EASA FCL licencing requirements when they become operational. In addition many of the existing Bronze cert requirements, for example requirements for initial granting and recency, have been updated to bring them into line with EASA FCL requirements.

Nothing in these regulations shall lessen or reduce any Legislation, SI, IAA or EASA regulation. In particular, EASA regulations for Licencing and Operations for Gliding are subject to period revision.

1.1 Authority

The Irish Gliding & Soaring Association requires that all clubs and individuals affiliated to the Association be bound by the following regulations.

1.2 Airworthiness

1.2.1 All gliders registered and flown in Ireland must have a valid EASA Certificate of Airworthiness (C of A) issued by the Irish Aviation Authority and current ARC or a Permit to Fly, for non EASA Aircraft, issued by the Irish Aviation Authority.

1.2.2 Visiting gliders must have an equivalent Certificate of Airworthiness issued in their own country.

1.2.3 For test flying for the purpose of issuing an equivalent Certificate of Airworthiness, an exemption may be granted by the IAA but for no other purpose.

1.2.4 The IGSA Airworthiness system is detailed in the IGSA's Continuing Airworthiness Management Exposition/Maintenance Organisation manual as approved by the IAA.

1.3 Registration of Gliders.

1.3.1 All gliders must be registered with the IAA.

1.3.2 Clubs and individuals operating gliders must register their glider(s) with the IAA. Applications for registration should be made to the IAA. Identification marks consisting of the letters EI- or EJ- and followed by the allocated three letters, must be displayed on the glider in a contrasting colour. These marks shall appear on the underside of the port wing and on the rear fuselage.

1.3.3 Registration marks need to comply with SI 107/ 2015, available here: http://www.irishstatutebook.ie/eli/2015/si/107/made/en/print.

1.3.4 Competition marks comprising the last 2 letters of the registration may be displayed on the fin and under the starboard wing and should be as large as possible.

1.3.5 Personalised competition numbers are permitted on application to the IGSA upon payment of a supplementary fee.

1.3.6 The IGSA Airworthiness Briefing Note specifies the full requirements for Registration of a Glider.

1.4 Insurance

1.4.1 All gliders operating under IGSA rules must carry Third Party Insurance cover in accordance with Articles 6 and 7 of EC 785/2004 for not less than €1,000,000. Two-seat gliders must carry an additional €1,000,000 passenger indemnity cover. In the case of visiting gliders, the club providing the launching facility is responsible for ensuring that such cover is in force by inspecting the visiting glider's valid Certificate of Insurance.

1.5 Records and Documents

1.5.1 All clubs affiliated to the IGSA shall be required to maintain the following documentation accurately and up-to-date:

- Flying Log of all club operations.
- Membership Records
- Glider Log Books (Club gliders)
- Daily Inspection Books (Club gliders)

1.5.2 Any club or operator may be required to produce to the IGSA or the IAA the above documents and records at any time and shall comply with such request within 24 hours of receipt of notice.

1.6 Medical Requirements before 8th Apr 2020

1.6.1 Before first going solo a glider pilot is required to provide a Declaration of Fitness or an EASA Class 1 or Class 2 or LAPL Medical Certificate.

1.6.2 Refer to Paragraph 7.6 for Medical Requirements for Instructors and for Passenger Carrying.

1.6.3 Solo pilots are required to furnish their CFI with a declaration of medical fitness to fly on reaching the age of 45 and at five-yearly intervals, timed from the date of the medical, thereafter until reaching the age of 70 when annual declarations will be required. The declarations may be self-declarations unless the CFI requests endorsement from a GP or aeromedical examiner (AME).

1.6.4 The IGSA medical advisor is an IAA medical examiner and any IGSA member who has been declared unfit by his/her regular doctor shall have the right to appeal to this advisor. The IGSA medical advisor has the power to reverse the decision of the applicant's doctor provided that full details of the applicant's medical history are made available.

1.6.5 If in the course of the period preceding the next declaration of medical fitness the pilot can no longer meet the requirements for the renewal of such declaration he or she shall inform the CFI before next flight. A re-declaration may be required.

1.6.6 EASA Class 1 or 2 or LAPL medical certificates are acceptable for solo or mutual flying or passenger carrying.

1.7 Medical Requirements from 8th Apr 2020

1.7.1 All solo pilots must have a valid EASA Class1 or Class2 or LAPL medical.

1.7.2 Refer for Part-MED for full details.

1.8 Bronze Certificate and Cross country requirements

1.8.1 The requirements for the Bronze certificate and Cross Country endorsements are set out in the Appendices B, C and D.

1.9 Recent Experience requirements – passenger carrying

1.9.1 See Section 6.1.3 and 6.1.4

2. Regulations

All club regulations, in addition to the IGSA regulations but not in place of them or contrary to them, must be posted in a visible place in the club premises.

2.1 Irish Aviation Authority.

Members should be familiar with the following IAA documents:

- SI No. 72 /2004 (Rules of the Air)
- SI No. 107/2015 (Nationality and Registration of Aircraft)
- SI No 324/1996 (Airworthiness of Aircraft) and amendments 102/1997 and 684/2003
- SI 61/2006 (Operations)
- SI 333/2000 and 683/2003 (Pilot Licencing)

All relevant SI and other aeronautical notices are available on the IAA website on the Publications Page. The IAIP – Integrated Aeronautical Information Package is available at http://iaip.iaa.ie/iaip/IAIP_Frame_CD.htm . Members should refer to the IAA website and IAIP for definitive and up to date information.

2.2 EASA Regulations

- Basic regulation – 2018/1139
  https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32018R1139

- Regulation 1178/2012 and amendments
  - PART-FCL
  - PART-MED
  - PART-DTO
  - Regulation 1178/2012 and amendments
  - Easy Access Rules Part-FCL
- PART M/PART-66 – Regulation 1321/2014 and amendments
  - Easy Access Rules - PART-M and PART-66

2.3 IGSA Airworthiness Procedures Manual.

2.3.1 The I.G.S.A. Airworthiness Procedures Manual forms part of these Operational Regulations. It covers the following areas:

- Registration of Gliders
- Approval of Glider Types
- Renewal of Airworthiness Review Certificates
- Chief Technical Officer
- Qualifications and appointment of Inspectors
- Test Flights
- Other areas relating to Airworthiness.

3. DEFINITIONS

3.1 Definitions

3.1.1 Glider (Sailplane)

"A heavier than air non-powered aircraft deriving its lift from aerodynamic reactions on surfaces which remain fixed under given conditions of flight."

3.1.2 Night

Night commences one half-hour after sunset and ends one half-hour before sunrise.

3.1.3 VFR

Visual Flight Rules

3.1.4 IFR

Instrument Flight Rules

3.1.5 VMC

Visual Meteorological Conditions

3.1.6 IMC

Instrument Meteorological Conditions

3.1.7 Altitude

A vertical distance of a level, a point, or an object considered as a point, measured from Mean Sea Level.

3.1.8 Height

- The vertical distance of a level, a point, or an object considered as a point, measured from a specified datum.
- The vertical dimension of an object.

3.1.9 Controlled Airspace

An airspace of defined dimensions designated by the appropriate authorities within which air traffic control service is provided to IFR and, depending on the classification, VFR flight.

3.1.10 Control Area (CTA)

A controlled airspace extending upwards from a height specified by the appropriate authority above the surface of the earth.

3.1.11 Control Zone (CTR)

A controlled airspace extending upwards from the surface of the earth.

3.1.12 Pilot-in-Command

The pilot responsible for the operation and safety of the aircraft during flight time.

3.1.13 Flight Visibility means

The visibility forward from the cockpit of an aircraft in flight.

3.1.14 Flight duration

Flight is deemed to commence from the moment the glider moves for the purpose of taking off until the glider comes to rest after landing.

4. Flying Regulations and Recommend Practices

4.1 Landing Off-site

4.1.1 Nothing in these Regulations shall operate or have effect so as to confer on any person the right to land in any place as against the owner thereof or other persons having any right thereto or any Estate or interest therein, or

4.1.2 Derogate from or prejudice the right or remedies at law or in equity of any person in respect of any injury to persons or property caused by any aircraft.

4.2 Flying in Controlled Airspace

4.2.1 Before gliding commences, the Instructor or person responsible shall contact the appropriate Air Traffic Control Authority when clearance is required to operate gliders in Controlled Airspace. The precise area and vertical limits of any clearance should be made clear.

4.2.2 Within Controlled Airspace the ATC clearance must be adhered to. If the clearance is inappropriate for a glider, e.g maintain a constant height, inform the ATC unit and seek a new clearance.

4.2.3 Clearance by ATC to operate gliders in controlled airspace will only be granted for VFR flights.

4.3 Items dropped from a glider

4.3.1 Nothing shall be dropped from a Glider other than persons by parachute in an emergency, articles for the purpose of saving life, ballast in the form of fine sand or water, cables during winch- and car-launching operations, and aero-tow ropes following a break or release by a towplane.

Rule 5 (SI 72/04)

4.4 Flying under the influence of intoxicating liquor/drugs

4.4.1 No person shall pilot a glider while under the influence of intoxicating liquor or any narcotic or drug by reason of which his/her capacity so to act is impaired.

4.5 Safety Restraint Harness

4.5.1 No person may fly in a glider unless they have individual safety restraint harnesses which must be worn and kept fastened for the duration of the flight.

4.6 Heavy Landings

4.6.1 A pilot responsible for a heavy landing or where damage to the glider is suspected must report to the duty instructor, who will ensure that the glider is inspected before it is flown again.

4.7 Minimum Age

4.7.1 A person under the age of 16 years may not act as Pilot-in-Command of a glider. (FCL.100, FCL.200).

4.7.2 Before his/her first solo flight, a student pilot shall be at least 14 years of age. (FCL.020 (b)(2))

4.8 Airworthiness

4.8.1 All gliders shall be fitted with automatic back releasing hooks for auto- and winch- launches. Locking of hooks is prohibited.

4.9 Launching Equipment

4.9.1 All equipment used for launching, including wire rope or cable, must have been inspected and approved as serviceable each day before being used. Winches and tow cars shall as a minimum be checked for sufficient fuel, oil, and water for the proposed launches, and in the case of a winch that a serviceable cable cutting device is available at the winch.

4.9.2 In the case of a car-launching system a reliable release mechanism must be incorporated in the towing vehicle and should be checked for serviceability.

4.9.3 Launching with either winch or car which does not have the above-mentioned cutting or release mechanism is prohibited.

4.9.4 A weak link not exceeding that which is specified in the TDCS of the glider to be launched shall be used.

4.9.5 A cable parachute or other drag device shall be connected to the cable, when steel or plasma cable is used, in such a way that it will not be nearer than 6 metres to the cable release mechanism on the glider. A parachute is not required when 'Parafil' is used with auto launches.

4.9.6 The glider end of all launch cables must be fitted with linked rings designed to fit the release mechanism on the glider. Distorted or cracked rings must not be used.

4.9.7 On cable winches, the engine must not be run while work is being carried out on any cable.

4.9.8 Where a danger exists of persons or vehicles crossing a runway on which cables are being used, adequate warning notices must be displayed.

4.9.9 On multi-drum winches the end of the left-hand cable as seen from the glider shall be coloured red, if cable runs are nearer to each other than 60 metres.

4.9.10 Only one glider may be attached to a cable at any one time. After every launch the used cable must be drawn in to the winch before another cable is used.

4.10 Glider Operational Safety

4.10.1 A glider shall not be operated in a negligent or reckless manner so as to endanger life or property.

4.10.2 A glider shall not be positioned for take-off on an active runway unless it safe to do so.

4.11 Hazardous Conditions in Flight

4.11.1 A pilot on meeting hazardous conditions in flight shall as soon as possible report to the appropriate Air Traffic Control, information which may be helpful to the safety of other aircraft.

4.12 Right of Way

4.12.1 The aircraft which has the right of way shall maintain its heading and speed.

Rule 11(1) SI 72/04

4.12.2 Converging

When two aircraft are converging at approximately the same altitude, the aircraft that has the other on its right shall give way, except as follows:-

4.12.3 Powered aircraft give way to airships, gliders and balloons.

4.12.4 Airships give way to gliders and balloons.

4.12.5 Gliders give way to balloons.

4.12.6 Powered aircraft give way to Aircraft towing other aircraft or objects.

4.12.7 Approaching head-on

When the aircraft are approaching head-on each shall alter its course to the right.

4.12.8 Overtaking

The aircraft being overtaken has the right of way, and the over-taking aircraft shall alter its course to the right.

4.12.9 Landing

When landing the lower aircraft has the right of way, but may not cut in front of another which is on final approach, nor overtake that aircraft. If the pilot is aware that the other aircraft is making an emergency landing he/she shall give way to it. Nothing in these rules shall relieve the pilot-in-command from the responsibility of such actions as will best avert a collision.

4.13 Line Features

4.13.1 Gliders following roads, railways, canals or other line features shall keep such line features to their left.

4.14 Thermaling

4.14.1 A glider joining another in a thermal shall circle in the same direction as that established by the first.

4.15Flying in Cloud near a Gliding Site

4.15.1 No glider may enter cloud within a radius of 9 kilometres/5 nautical miles of a gliding site except from at least 200ft. below the lowest part of that cloud. To enter cloud, regulation 4.16 applies.

4.16Cloud Flying

4.16.1 No glider may enter cloud unless:-

(a) All its occupants are wearing serviceable parachutes and have been instructed in their use. This does not apply if the glider is fitted with a Ballistic Recovery System.

(b) The glider's TCDS permits cloud flying.

(c) The instrumentation as specified in the TCDS for cloud flying is installed and serviceable.

(d) The pilot is aware that no other glider has entered cloud within 1500 meters in the previous 5 minutes.

(e) A radio call is made announcing the intention to enter the cloud.

(f) After 8th Apr 2020: Holder of SPL/LAPL(S) must have a Cloud Flying rating.

4.17Flights above 12,000'

4.17.1 No flights shall be carried out above 12,000 ft. unless serviceable oxygen equipment is carried on board and available to all occupants with a gauge visible to the pilot. The use of oxygen is recommended above 10,000' or above 8000' for prolonged periods of time.

4.18Pilot In Command Responsibility

4.18.1 The pilot-in-command of the glider shall have final authority as to the disposition of an aircraft while he/she is in command.

Rule 18, Art.13 SI 72/04

4.19Flight Visibility

4.19.1 For a glider to fly under VFR outside controlled airspace and 1000 ft. or more above the ground or water it must remain:-

4.19.2 When above 3,000ft (900metres) it must remain at least 1,500 meters (1 NM) horizontally and 300 metres (1,000 ft) vertically from cloud and in a flight visibility of not less than 2 nautical miles (5 kms).

4.19.3 When below 3,000 ft- (900 metres) in must remain in a 'flight visibility' of not less than 2 nautical miles (3 kms.) and in sight of the surface.

Art. 34 SI 72/04

4.20Flight Restrictions

4.20.1 Gliders shall not be flown over areas where there are flight restrictions, the particulars of which have been duly notified by the appropriate authority except in accordance with the conditions of the restrictions or by permission of the appropriate authority.

4.21Simulated Instrument Flight Instruction

4.21.1 A glider shall not be flown under simulated instrument flight conditions unless

- Fully functioning dual controls are installed in the aircraft, and
- A pilot holding an Instructor's Rating occupies a control seat to act as safety pilot for the person who is flying under simulated instrument conditions. The safety pilot shall have adequate vision forward and to each side of the aircraft.

4.22 Aerobatic Flight

4.22.1 All its occupants are wearing serviceable parachutes and have been instructed in their use. This does not apply if the glider is fitted with a Ballistic Recovery System.

4.22.2 The glider's TCDS permits aerobatics and lists the manoeuvres allowed and these are listed on a placard in the glider..

4.22.3 The instrumentation as specified in the TCDS for aerobatic flying is installed and serviceable.

4.22.4 No glider shall be flown aerobatically so as to constitute a hazard to air traffic.

Rule 8 (1) SI 72/04

4.22.5 Gliders shall not be flown aerobatically over cities or settlements or over an open-air assembly of persons, except with the permission of the Irish Aviation Authority and subject to any conditions or limitations contained in such permission.

Rule 8 (1) SI 72/04

4.22.6 Training in aerobatics must be given on a dual-controlled two-seater glider by an instructor experienced in aerobatics. The two-seater and the first single seater in which the pupil carries out aerobatics must be fitted with a serviceable accelerometer. When a glider has exceeded the maximum recommended stress for the glider, the pilot-in-command must report this to the duty Instructor. The glider must be inspected before the next flight and the appropriate entry made in the Log Book.

4.22.7 The holder of an LAPL(S) or SPL must have an aerobatics rating.

Rule 8 (1) SI 72/04

4.23 Formation Flying

4.23.1 Gliders shall not be operated in such proximity to other aircraft as to create a collision hazard. A glider shall not be flown in formation except by prearrangement by pilots in command.

4.24 Congested Areas

4.24.1 Gliders shall not be flown over congested areas of cities, towns, settlements or over an open air assembly of persons, at less than:-
(1) a height of 450m. above the ground or water, or

(11) a height of 300m. above the highest obstacle within a radius of 600m. from the glider, or

(111) such height as would permit, in the event of an emergency arising, a landing to be made, clear of the area, without undue hazard to persons or property on the surface, whichever height is the greater.

4.24.2 Elsewhere, closer than 150m to any person, vehicle or structure at a height of less than 150m above the ground or water. This rule shall not apply to a glider whilst hill soaring, for normal landing or take-off at airfields or for the purpose of saving life. .

Rule 3 (3) SI 72/04

4.25 Chief Flying Instructor (Head of Training)

4.25.1 Each club shall inform the IGSA of the name of its Chief Flying Instructor, who shall be the holder of a current IGSA Class I Instructor's Rating (Ref 7.2.1), with CFI endorsement. In the case of a DTO, a head of training will be appointed. (DTO.GEN.210(a)(2))

4.26 Registration of Instructors

4.26.1 The CFI shall register all the Club Instructors with the IGSA before they give instruction.

4.27 Instructional Syllabus

4.27.1 All instruction shall be given in accordance with the IGSA Syllabus.

4.27.2 Initial training up to first solo is detailed in APPENDIX A – Bronze Syllabus. All exercises must be completed and recorded in the student's progress book and signed-off by an instructor (FCL 115, FCL 210)

4.27.3 The Bronze Certificate Theory syllabus is detailed in APPENDIX C. (FCL 120,FCL 215) Study shall consist of a series of classroom lectures and self study . A score of at least 75% is required in all papers. Topics covered are

- Air Law
- Instruments
- Human Factors and performance
- Meteorology
- Navigation
- Principles of flight
- Communications

4.27.4 Skills test. Each student shall undertake a skills test (the General Flying Test), with a Class 1 Instructor. The test is described in APPENDIX B (FCL 125, FCL 235)

4.27.5 IGSA Cross Country Endorsement is an extension to the Bronze Certificate that is required before a pilot may undertake Cross-country flights. The content of the requirements is set out in APPENDIX D

4.28Chief Flying Instructor's Responsibility

4.28.1 The CFI shall have overall responsibility for all matters concerning flying at or from the Club site and no flying shall take place without the CFI's authority. The CFI's decision in flying matters is final.

From 8th April 2020m the CFI will also be the Head of Training in the DTO.

4.29Log-Books

4.29.1 All pilots are required to keep an accurate and up-to-date Log Book of their flying. Entries to include date, duration of flight, aircraft type, training undertaken (dual), Instructor's comments. In addition the place of take-off and landing, P1 and P2 details, aircraft registration should also be recorded. Student pilots must present their logbooks to the instructor prior to any dual or solo flights under supervision.

4.29.2 A DTO shall keep copies of the logbook including student progress records for at least 3 years. (DTO.GEN.220)

4.30Deputies to the CFI

4.30.1 The CFI may appoint deputies to carry out his/her instructions if absent but remains responsible for all flying activities.

4.31Declaration of Competence

4.31.1 Before 8th Apr 2020: Before going solo, a pilot must have a Declaration of Competence entered in his/her Log Book and signed by a Class I Instructor.

4.31.2 From 8th Apr 2020: Before going solo, a pilot must have as a minimum completed instruction satisfactorily – exercises 1 to 12 (AMC FCL.110.S and 210.S) and is authorised by an unrestricted FI(S).

4.32 Flying Supervision

4.32.1 All club flying shall be carried out only under the supervision of the CFI or his/her delegate.

4.33 Pilot In Command Requirements

4.33.1 Before 8th Apr 2020: Any person who is not a holder of a Silver "C" or an Instructor's Rating may not fly as pilot-in-command of a glider unless authorised to do so and under the supervision of an Instructor.

4.33.2 From 8th Apr 2020: Pilots who hold a LAPS(S) or SPL may act as PIC. Otherwise pilots may only act as PIC while authorised to do so an while under the supervision of an FI(S).

4.34 Pilot In Command Medical Requirements

4.34.1 No person may act as pilot-in-command of a glider unless he/she fulfils the medical requirements as set out under Section 1.6 of these regulations.

4.35 Flying Out of Range of the Airfield

4.35.1 Before 8th Apr 2020: A person who is not a holder of a Bronze Certificate with Cross-Country Endorsement or higher qualification may not intentionally fly out of gliding range of the intended landing point.

4.35.2 From 8th Apr 2020: A student pilot may not intentionally fly beyond gliding range of the intended landing point unless such a flight is conducted under the supervision of an unrestricted FI.

4.36 Aeronautical Charts

4.36.1 No pilot may intentionally fly out of gliding range from the intended landing point unless he/she carries a current aeronautical chart.

4.37 Aerotowing

4.37.1 For an aeroplane to be used for towing a glider, the C. of A. issued or rendered valid in respect of that aircraft under the law of the state in which it is registered must authorise use for that purpose. The aircraft must comply with any limitations or restrictions imposed therein.

Rule 6 (1) SI 72/04

4.37.2 Tow-Rope Length

The total length of the combination from nose of towing aeroplane to tail of glider shall not exceed 150 metres.

4.37.3 Pre Take-Off Tug-Pilot Checks

Before take-off the tug pilot is responsible for ensuring that :-

a) The tow rope is suitable and serviceable

b) The proposed flight can safely be made by the combination.

c) Adequate signals have been agreed and can be made between the pilots, and between pilots and ground crews, including emergency signals ordering the glider pilot to release or informing the towing pilot that the glider cannot be released.

4.37.4 Snatch Pick-Ups

"Snatch Pick-Ups" of gliders are not permitted.

4.37.5 Collision Avoidance on Tow

For the purpose of avoiding collision the tug and glider-shall be regarded as a single aircraft under the command of the tug pilot.

4.37.6 Tow Stability

The glider being towed shall not attempt to steer the tug by pulling its tail around.

4.37.7 Dropping of Tow-Ropes

Tow ropes shall only be dropped in the designated area and in the direction of landing unless otherwise agreed by Flying Control.

4.37.8 Minimum Aerotow Limitations

The sum of the aero-tows made by the tug pilot and the glider pilot, in their respective capacities, shall not be less than six.

4.37.9 Emergency Signals while on Tow

The signal that a glider's airbrakes have become extended or that the tail parachute has been deployed shall be made by waggling the rudder of the tug. The glider pilot should check and immediately rectify any apparent problem.

4.37.10 Glider Release Signal

The signal for the glider to release shall be made by rocking the tug laterally. This order must be obeyed instantly.

4.37.11 Glider Unable to Release Signal

The signal that the glider cannot release shall be to position the glider out to the left side of the tug as far as possible and rock the glider wings laterally. Under such circumstances the tug pilot will tow the glider to within gliding range of the airfield or a suitable landing area before releasing the rope.

4.37.12 Glider Release

Once released the glider shall climb to the left and the tug descend to the right. Where the glider is being towed along a ridge, care must be taken where it is not possible for the tug to descend and turn right; under these circumstances the glider should turn away from the ridge until the tug is clear.

4.37.13 Tug-Pilot Responsibility

It is the responsibility of the tug pilot to check visually that the glider has in fact released.

4.37.14 Towing into Cloud

A glider shall not be towed into cloud.

4.37.15 Night Flying

Flights by night are not permitted.

4.38Flight of Gliders after Repair

4.38.1 Any glider which has been subject to adjustment or repair since its last flight must have a fresh CRS issued by an IGSA Certifying Staff member with duplicate inspections where appropriate.

4.39 Requirements before Flight

4.39.1 A glider shall not commence a flight unless

- The Certificate of Release to Service and Airworthiness Review Certificate or Permit to Fly are valid.
- The daily inspection has been completed.
- The pilot has satisfied himself that the glider is airworthy.
- Any ballast fitted is secured in such a way as not to be a hazard.
- The pilot has satisfied himself/herself that any deposit of ice, frost, rain or snow on the glider will not adversely affect the performance.

4.39.2 The following pre-flight cockpit check must have been completed satisfactorily:

CB SIFT CBE

Controls	full and free movement and in the correct sense
Ballast	Securely fastened; correct cockpit load
Straps	harness for occupant(s) done up correctly and tightly fastened
Instruments	working and set as required.
Flaps	full and free movement and set for take-off
Trim	Check operation and set for take-off

Canopy	Closed and properly locked
Brakes	check operation, closed and properly locked
Eventualities	Review launch failure and other considerations

4.39.3 This cockpit check must be used as a minimum. Any additional items specified in the aircraft manual must be checked for serviceability.

5. SIGNALS

5.1 Signals - Launching

5.1.1 One of the following procedures must be used for all launches unless a serviceable telephone or radio-system is installed between the person in charge of the launch at the glider end of the cable and the winch or tow car driver or tug pilot.

5.2 Emergency Stop Signals

5.2.1 Where telephonic or radio signalling is used, means must exist for an emergency stop signal which can be received notwithstanding the noise of the engine.

5.3 Hand or Bat Method

5.3.1 **Take Up Slack**. Hand or bat moved to and fro in front of body

5.3.2 **All Out** Hand or bat moved to and fro above the head.

5.3.3 **Stop**. Hand or bat held stationary vertically over the head. (Bat to be coloured Red or Orange - preferably "DayGlo",)

5.4 Light Method

5.4.1 **Take Up Slack** Dashes of one second duration and three-seconds interval,

5.4.2 **All Out** One-second dots at one-second interval.

5.4.3 **Stop** Steady Light.

(Note: Lights must not be coloured Red or Green.)

6. PILOT Requirements

6.1 Requirements to fly as PIC

6.1.1 Pre Solo pilots may not fly as PIC

6.1.2 Solo pilots must have an acceptable medical Section 1.6

6.1.3 A pilot may not carry passengers as PIC unless he/she has carried out, in the preceding 90 days, at least 3 take-offs, approaches and landings in an aircraft of the same type or class. (EASA FCL 060)

6.1.4 Passenger carrying

- Not allowed unless by a holder of an IGSA Instructor rating or;
- holder of an SPL/LAPL(S) with 10hours or 30 launches (FCL 105.S(b)) or
- holder of an SPL with 75 hours or 200 launces as PIC and pass a profiiciency check with an examiner to act with remuneration. (FCL 205.S(b)(2), FCL(205.S(c))

6.1.5 Mutual Flying

Two pilots may fly in a two-seater glider provided:

- Both hold at least Bronze cert or LAPL(S)/SPL.

- One pilot is clearly designated as PIC.
- Any other limitations that the owners of the glider may require.

6.2 Requirement for Bronze Cert or FCL

6.2.1 Privileges of Bronze Cert or SPL/LAPL(S)

- General. The privileges of the holder of an Bronze/LAPL(S)/SPL are to act without remuneration as PIC in non-commercial operations on the appropriate aircraft category.
- Conditions. Applicants for the Bronze/LAPL(S)/SPL shall have fulfilled the requirements for the relevant aircraft category and, when applicable, for the class or type of aircraft used in the skills test.
- SPL holders may receive remunerations subject to 6.1.4

6.2.2 To qualify for Bronze Cert a pilot must have a minimum:-

15 Hours flight instruction including:-

- 10 Hours dual
- 2 hours supervised solo flying
- 45 launches and landings
- Pass IGSA (before 8/4/2020) or EASA ground exams
- Pass IGSA GFT (before 8/4/202) or EASA Skill test

- 7 of the 15 hours may be in TMGs

6.2.3 In addition to qualify for LAPL(S) or SPL

- Cross country endosement
- 1 cross country flight of 50km solo or 100km dual; or
- FAI Silver 50km

6.2.4 Credit of prior PIC hours (FCL 110.S, FCL210.S)

The amount of credit shall be decided by the IGSA where the pilot undergoes the training course, on the basis of a pre-entry flight test, but shall in any case:

(1) not exceed the total flight time as PIC;

(2) not exceed 7.5 hours of the 15 hours required;

(3) not include the requirements supervised solo or cross country flight

6.2.5 Launch methods (FCL 130.S (c,d), FCL 220.S)

A pilot is limited to the launch method included in the skills test (GFT). This limititation may be removed after the pilot has completed:

1) Winch and car launch – 10 dual and 5 supervised solo launches
2) Aerotow/self launch -5 dual and 5 supervised solo; in the case of self-launched, dual flights many be performed in a TMG.

   Completion of the additional training launches shall be entered in the logbook and signed by the instructor

   Currency – pilots must perform a minumum of 5 launches in the pervious 24 months. In case of non-compliance, the pilot will complete the additional launches either dual or solo under supervision to renew the privilege.

6.3 Recency requirements

6.3.1 FCL LAPL(S) and SPL are each valid for 24 months.

6.3.2 Sailplanes and powered sailplanes excl TMG

In the past 24 months, (FCL 140.S(a), FCL 230.S)

- 5 hours as PIC
- 15 launches

- 2 training flights with an instructor

6.3.3 TMG in the previous 24 months (SPL/LAPL only) (FCL 140.S(a), FCL240(a)):
IGSA have no function with TMG under Irish Law.

- 12 hours flight time as PIC incl 12 take-offs and landings

- 1 hour refresher training.

6.3.4 Non compliance with recency (FCL 140.S(c),FCL240.S(c))

- Bronze C/LAPL/SPL holders who do not meet recency requirements shall:
- Pass a proficency check (check flight for Bronze with an instructor, proficiency check with an FE for LAPL/SPL) or
- Perform the additional flights/take-off and landings flying dual or solo under supervision.

7. INSTRUCTORS' RATINGS

7.1 Instruction

7.1.1 No member of the IGSA may give flying instruction in a glider unless he/she is the holder of one of the Instructors' Ratings set out below, their rating and medical certificates are current and such instruction is given in accordance with their limitations. (Before 8/4/2020)

7.1.2 An Instructor must hold a LAPL(S) or SPL as a prerequisite for an FCL FI(S) qualification. (FCL 900(a))(After 8/4/2020)

7.2 Ratings

7.2.1 Class 1 Rating (FCL FE(S)) (FCL 905(i)(2), FCL 1000, FCL 1030)
Full Instructor, authorised to send pilots on first solo and first cross-country in addition to normal flying instruction. May also perform Skills tests for the Bronze Certificate/SPL/LAPL(S) and provide Instruction for Instructors.

7.2.2 Class 2 Rating (FCL FI(S))
Authorised to give flying instruction but not to authorise first solo or first cross-country. FCL FI can authorise 1st solo and cross-country on reaching 15hrs or 50 take offs of flight instruction.

7.2.3 Instructor Under Training (U/T) (FCL FI(S) below 15 hours/75 flights) (FCL 910)
An instructor under training may only give instruction to students as specified by a Class 1 Instructor (FI), and can only give such instruction whilst a Class 1 Instructor (FI) is present on the site.

7.2.4 Air Experience Instructor Rating (AEI) (no equivalent FCL equivalent)
An AE instructor may exercise the privileges of the rating only whilst under the supervision of a higher rated instructor. The AEI is allowed to

teach pre-flight checks, effective lookout, use of elevator and ailerons above 800 ft AGL. From 8/4/2020 this rating will cease to exist.

7.3 Requirements to obtain Ratings

7.3.1 Class 1 (FCL FE(S), FCL 1010, FCL 1015, FCL 1020)

a) Minimum P1 hours 120 hrs.
b) Minimum hours as Class 2 Instructor 40 hrs. and 150 Launches or hold an FI(S) unrestricted certificate
c) Experience on not less than 6 glider types.
d) Holder of Silver "C" or SPL/LAPL(S)
e) Examination by an IGSA Flight Instructor Examiner on IGSA Flying Syllabus.
f) Minimum of one year as Class 2 Instructor.
g) Minimum age 18
h) For FCL FE(S) and from 8/4/2020, conditions a,c,d and e are replaced by Examiner standardisation seminar.

7.3.2 Class 2 (FI(S)) (FCL 915, FCL 920,FCL 930, FCL 935)

- Minimum P1 hours 75 hrs in gliders
- Minimum 15 hours or 50 launches as U/T Instructor (FI(S) restricted).
- Holder of Bronze certificate and cross country rating or FAI Silver C or SPL/LAPS(S)
- Certificate of medical fitness (cf. 7.6).
- Completion of IGSA approved instructor's course. (APPENDIX E)
- Examination by CFI and recommendation.
- OR
- Examination by an IGSA Flight Instructor Examiner (mandatory for FI(S)).
- Minimum Age 18

7.3.3 U/T Instructor (FI(S) – restricted privileges)

- Minimum hours 75 hrs as PIC in sailplanes/power sailplanes.
- Minimum of 200 launches as PIC.
- Holder of Bronze Certificate and cross country rating or FAI Silver C or SPL/LAPS(S)
- Certificate of medical fitness (cf. 7.6).
- CFI clearance in the aircraft to be used for instruction
- Completion of U/T or FCL Instructor's Course (APPENDIX F)
- Minimum age 18

7.3.4 Air Experience Instructor

- Minimum P1 hours 50 hrs.
- Holder of Bronze Certificate.
- Certificate of medical fitness (cf. 7.6).
- Completion of IGSA approved AEI course.(APPENDIX G)
- Acceptance by CFI
- Minimum age 18

7.3.5 The holder of a current BGA Full Category Instructor Rating may be granted an IGSA Class 1 Rating on the recommendation of a CFI or IGSA Flight Instructor Examiner. (before 8/4/2020)

7.3.6 The holder of a current BGA Assistant Instructor Rating may be granted an IGSA Class 2 Rating on the recommendation of a CFI or IGSA Flight Instructor Examiner. (before 8/4/2020)

7.3.7 The holder of a valid Instructor Rating from a foreign authority may act as a Class 2 Instructor for a stated period not exceeding three months, on acceptance by a CFI. (before 8/4/2020)

7.3.8 Crediting (FCL 915 (c))

- Hours flown as an examiner during during skills or proficieny checks may be credited for re-validation
- Teaching and learning skills demonstartated may be used for further ratings.

7.4 Chief Flying Instructor

7.4.1 CFI Endorsement to Class 1 Rating

- Minimum hours P1 200 hrs.
- Minimum of 1 year as Class 1 Instructor.
- Not less than 2 years Instructing Experience.
- Note: CFI must be the holder of a current Class 1 rating (Rule 4.25)

7.4.2 Deputy CFI

- No special endorsement.
- Minimum requirement is Class 1 instructor rating.

7.4.3 Temporary CFI Endorsement.

A Class 1 instructor without a "CFI Endorsement" may be allowed to function as CFI of a club in exceptional circumstances with the written endorsement of the IGSA Instructors' Committee.

7.5 Minimum requirements for Instructor Rating Revalidation

7.5.1 IGSA Instructor ratings are valid for 12 months.

7.5.2 Recommendation for revalidation from the CFI based on any two of:

a) At least 15 hours P1 sailplane and/or SLMG in the 12 months previous to the date of revalidation of which at least 10 hours or 20 launches in a sailplane and/or SLMG are instructing, and 2 hours or 4 launches are solo flying;

b) A 5 year refresher seminar within the 5 years previous to the date of revalidation and 3 year standardisation check within the 3 years previous to the date of revalidation;

c) Test by an IGSA Flight Instructor Examiner (signed entry in the instructor's logbook).

If b) and c) are the chosen requirements, the instructor must also have completed a minimum of 10 hours instructional flying in the past three years..

7.5.3 EASA FCL revalidation requirements (FCL 940, FCL 1025)

a) EASA FCL FI(S), FE(S) and FIE(S) are valid for 3 years and fulfil 2 of the following three conditions:

b) 30 hours or 60 take-offs of flight instruction in sailplanes, power sailplanes to TMG over the period of validity

c) Attend refresher seminar within the validity

d) Pass an assessment of competence within 12 months of expiry date of FI certificate. This condition is mandatory every 3rd revalidation

7.6 Valid certificate of medical fitness.

7.6.1 Instructors and potential instructors (including AEI's) are required to furnish their CFI with a certificate of medical fitness before commencing to train, on reaching the age of 45 and at 5 yearly intervals, measured from the date of the medical.These certificates should be endorsed by a GP or aeromedical examiner (AME). The standard of fitness required is that required under the Roads Traffic Act for the issue of a licence to drive a Heavy Goods Vehicle. Evidence of meeting the medical requirements of a current PPL or higher rated licence, valid on the date of declaration, will be accepted as a declaration of medical fitness.

7.6.2 If in the course of the period of validity following medical certification the instructor or potential instructor can no longer meet the requirements for the renewal of such certification he or she shall inform the CFI before their next flight. A medical re-certification may be required.

7.6.3 Instructor renewals are to be notified in writing to the IGSA. The certificate supplied by the CFI must include date of last medical certificate and its validity, solo and Instructional flights and hours flown. Where hours do not meet the minimum requirements, additional certification by the CFI is required.

7.6.4 At annual renewal, a CFI shall furnish evidence of currency and medical fitness to the IGSA as part of the annual review. (7.5.1)

7.6.5 The CFI may apply additional requirements for a rated Instructor to instruct in a Club. Such requirements have no bearing on IGSA ratings.

7.6.6 Instructors holding EASA FI(S)/FE(S)/FIE(S) certificates are required to have an EASA Class 2 or LAPL medical certificate.

7.7 Rating Renewal after lapsing

7.7.1 Where an Instructor's Rating lapses for any reason, he/she will be required to complete the following;

7.7.2 Class 2 instructors will be required to repeat their rating test with their CFI.

7.7.3 Class 1 instructors will be required to apply to an IGSA examiner who may require a further test or an interview or other evidence that the instructor is still up to the required standard. Alternatively, they may apply to their CFI for a Class II rating test.

7.7.4 U/T instructors will be required to repeat their rating test.

7.7.5 A/E instructors will be required to repeat their rating test.

7.7.6 The Chairman of the I.G.S.A Instructors' Committee is to be notified when an Instructor's rating lapses and again when renewed.

7.7.7 In the case of FCL FI(S) attend a refresher seminar and pass an assessment of competence.

7.8 Powered Flying Experience (allowance of flying time)

Powered flying experience may be counted towards the requirements for an Instructor's Rating, as follows :-

7.8.1 Where a pilot has less than 100 hours gliding (total) he may count powered flying experience as 1 hour for every 6 hours power up to a limit of 50% of the required total.

7.8.2 Where his gliding experience exceeds 100 hours (total) he may count power flying in the ratio of 1 to 4.

7.8.3 As an alternative, candidates are at liberty to attend an approved instructor course run by the British Gliding Association.

7.9 IGSA Instructors' Committee

7.9.1 The IGSA Instructors' Committee is composed of all IGSA Class 1 Instructors.

7.9.2 The Role of the Instructors' Committee is to make recommendations to the Council on

a) Syllabus for Bronze certificate

b) Syllabus for IGSA Instructor Ratings

c) Matters relating to Safety including review of all incident and accident reports

d) Instructional and operational matters

e) Make recommendations for Flight Instructor Examiners to the IGSA Council

7.9.3 The Chairman of the Instructors' Committee shall be ex-officio a member of the IGSA Council

7.10 Gliding Instructor Examiners

Before 8th April 2020

7.10.1 The IGSA Council may appoint Gliding Instructor Examiners (GIE). Candidates may be recommended by the IGSA Instructors' Committee.

7.10.2 Minimum requirements for GIE

a) Hold Class 1 Instructor Rating

b) Be approved by the IGSA Instructors' Committee

7.10.3 The role of an GIE is to:

a) Grant IGSA Class 1 Instructor Ratings or renew Lapsed Ratings

b) Approve Issue of initial CFI Endorsement

After 8th April 2020

No equivalent for IGSA GIE is provided for in FCL.

7.11 Flight Instructor Examiner (FCL 1005.FIE, FCL 1010.FIE)

7.11.1 Privileges (FCL 1005.FIE)

(i) for applicants wishing to conduct assessments of competence on TMGs, 10 hours or 30 take-offs instructing applicants for an instructor certificate in TMGs;

(ii) in all other cases, 10 hours or 30 launches instructing applicants for an instructor certificate.

7.11.2 To qualify for FCL FIE the applicant must (FCL 1010.FIE)

(1) hold the relevant instructor certificate;

(2) have completed 500 hours of flight time as a pilot on sailplanes or powered sailplanes;

(3) have completed:

(i) for applicants wishing to conduct assessments of competence on TMGs, 10 hours or 30 take-offs instructing applicants for an instructor certificate in TMGs;

(ii) in all other cases, 10 hours or 30 launches instructing applicants for an instructor certificate.

8. ACCIDENTS

8.1 Accident Reporting

8.1.1 Where a glider, of any nationality, suffers substantial damage, or where death or serious injury occurs to the pilot, passenger or to any person whether carried in the glider or not, the pilot, or if the pilot is incapacitated, in the Republic of Ireland, the owner or operator shall send notice to the Secretary of the Irish Gliding & Soaring Association by the quickest means of communication and at the same time notify the **Air Accident Investigation Unit**, Department of Transport (AAIU)Telephone Number 01.6041293/01 / 01.2411777).

8.1.2 Accident Reports

The information required shall include -

- Type, nationality and registration marks.
- Name of owner or operator of the glider
- Name of pilot-in-command.
- Date and time of accident.
- Position of the accident with reference to some easily defined geographical point.
- Nature of the accident and the extent of the damage.
- Number of persons, if any, killed and number of persons, if any, seriously injured.
- Last point of departure and next point of intended landing.

8.1.3 Further Details

If the particulars specified in para.8.1.2 are not readily available at the time of the accident, such of the particulars as are available should be notified immediately and remaining particulars furnished as soon as possible afterwards.

8.1.4 Fatal Accidents

Where death or serious injury results from an accident involving a glider, no person other than a member of the Garda Siochana or an officer of Customs & Excise or a person authorized by the Minister, shall have access to the glider, nor may any parts or articles be removed or interfered with, save for the purpose of extricating persons or animals, or preventing any danger to the public.

8.1.5 Serious Accidents

In the case of all serious accidents Air Navigation (Investigation of Accidents) Regulations shall apply.

8.1.6 Minor Accidents

In the case of all minor accidents or incident, occurring during gliding operations and resulting in either medical attention being required or an aircraft being temporarily withdrawn from service, notice shall be given by either the Pilot-in-command or by the Chief Flying Instructor to the Secretary, Irish Gliding & Soaring Association, as soon as possible, giving full details of the accident/incident.

8.1.7 Accidents Abroad

Accidents or incidents occurring to Irish Registered Gliders while abroad are primarily the responsibility of the Authorities in that country. The I.G.S.A and the AIIU should, nevertheless, be notified of all such accidents or incidents.

9. IGSA MEDICAL STANDARDS

Copies of the following form are obtainable from IGSA

1. To be signed before starting to fly as a solo pilot.

I hereby declare that I have never suffered from any of the following, which I understand may create or lead to, a dangerous situation in flight.

Epilepsy, Fits, Severe Head Injury.

Recurrent Fainting, Giddiness or Blackouts.

Unusually High Blood Pressure.

A previous Coronary.

I am not regularly taking insulin for the control of Diabetes.

I further declare that, in the event of my contracting, or suspecting, any of the above conditions in the future, I will cease to fly until I have obtained medical opinion.

Pilot signature and date

_____

If you cannot sign the above declaration, you must, before flying, obtain the signature of your regular G.P. or that of an approved Irish Aviation Authority Medical Examiner, below:

I am the regular G.P. of the applicant

I am an Irish Aviation Authority Medical Examiner

Delete as appropriate

I understand that the applicant wishes to fly in sporting gliders, but has been unable to sign the above declaration. In my opinion, it is safe for him/her so to fly.

Doctor's signature and date _____

The following conditions may cause difficulty while flying. If you suffer, or have suffered, from any of these, you are advised to take medical opinion.

Chronic Bronchitis

Severe Asthma,

Chronic Sinus Disease

Chronic Ear Disease

Eye Trouble (e.g. Inability to read a car number plate at 25 yards; corrective glasses may be used).

Regular severe migraine

If you normally wear spectacles, you should always carry a readily accessible spare pair.

APPENDICES

9.1 Appendix A IGSA Bronze Certificate Training

IGSA Bronze Certificate Flight Training Syllabus

Document Reference: IGSA/PSFTS/1.1

Version: 1.1

Exercise No.	Exercise Title	Exercise Description
1	Effects of Controls	Effects of Elevator, rudder, aileron, flaps (if required) Adverse yaw Control co-ordination Secondary effects of rudder and aileron
2	Turns and S-Turns	Lookout, scan cycle and collision avoidance, Entry into turns Exit and maintenance, Slip and skid, Regaining a heading
3	Diving & Climbing	High speed flight & recovery
4	Use of trimmer	Use of trimmer in various flight regimes
5	Speed Control	Speed monitoring & control Scan cycle, Drift, track and heading
6	Launch (1) - Ground Run	Pre-flight checks Equipment Launch speeds Launch techniques Signalling Maintaining control on the ground Lift-off

7	Airbrakes on Approach	Full airbrakes No Airbrakes Normal airbrakes
8	Negative G demo	To assess negative G sensitivity
9	Straight Stall & Recovery	HASAL Check 1G stalling Symptoms of the approaching stall Recovery
10	Stall with wing drop & recovery	Simulated stall in a gust Recovery
11	Spins & Spiral Dives	Spin initiation, recognition & recovery Spiral dive initiation, recognition & recovery
12	Steep turns	Entry, Exit and maintenance, Slip and skid, Regaining a heading
13	Launch (2) - Aerotow	Launch failure considerations Launch abandonment Eventualities Flying the aerotow Out of position recovery
14	Landing	Final approach Round out Hold Off Landing Use of wheel brake
15	Circuit Planning	Reference point Normal circuit Modified circuit Effect of wind Height judgement Pre-landing checks Eventualities
16	Cross-wind landings	Cross-wind landing techniques
17	Undershoots	Recovery procedure in the event of an undershoot on final approach developing
18	Overshoots	Recovery procedure in the event of an overshoot on final approach developing
19	Downwind landings	Downwind landing technique
20	Cable breaks & power failures	Launch failures Launch abandonment
21	Advanced circuits – too high	Decision making

		Sideslipping at height Use of airbrakes in the circuit Extending the circuit Reverse base leg
22	Advanced circuits – too low	Decision making Amending the circuit appropriately Downwind landing option
23	Circuits without instruments	Circuit with ASI disabled Circuit with Altimeter disabled
24	Turns onto headings	Accurate turns onto specified headings
25	Sideslips & slipping turns	Sideslips at height Sideslips on approach Slipping turns
26	Lack of elevator at the stall	Demonstration of lack of effective elevator in a stall
27	Stall in a turn	Increased stall speed in a turn
28	Stall vs. negative G	Reduced G not reliable symptom of stalling
29	High Speed stall	Accelerated stall
30	Spin off a turn	Accelerated spin
31	Opposite spin off a turn	Spin from an incorrect spin recovery
32	Effect of rudder at the stall	Increased effect of rudder at the stall
33	Spin from a failed winch launch	Spin from an incorrectly recovered wire launch failure
34	Ridge Soaring & Rules	Ridge soaring techniques & rules
35	Thermal Soaring & rules	Thermal soaring techniques & rules
36	Wave soaring and rules	Wave soaring techniques & rules
37	Use of radio	Phonetic Alphabet Knowledge appropriate to radio communication in a glider
	Ground Syllabus	Ground Handling & Parking Retrieve vehicle operation Ground Signals & Launch Further effects of controls Rules of the air Outlanding VMC Emergency procedures Local ATC rules

		Rescue equipment operation Operational handbook read & accepted

9.2 Appendix B IGSA Bronze C Badge

The IGSA Bronze Badge

Document Reference: IGSA/BB/1.1

Version: 1.1

Minimum Solo Experience.

A minimum of 50 solo flights, or 20 flights and 15 hours, in a glider.

Soaring Flights

Two soaring flights, each of 30 minutes duration, if launched by winch, car or bungee, or each of 60 minutes after release from aerotow at a height not exceeding 2,000 ft.

General Flying Skills Test.

A minimum of three flights in a dual controlled glider with a Class 1 Instructor or FE who will be satisfied during the IGSA Bronze Badge General Flying Skills Test that the candidate has the ability to operate the glider within its limitations, complete all manoeuvres with smoothness and accuracy, exercise good judgement and airmanship, maintain effective lookout, and maintain control of the glider at all times in a manner such that the successful outcome of a procedure or a manoeuvre is never in doubt.

During the test, the candidate must demonstrate an appropriate level of practical skill

and knowledge associated with the following:

a) Pre-flight operations including glider assembly and inspection

b) Techniques and procedures for the launching method(s) used, including appropriate airspeed limitations, emergency procedures and signals used

c) Circuit flying, collision avoidance precautions and procedures

d) Normal and crosswind approach and landing

e) Control of the glider by external visual reference

f) Understanding and recognition of the symptoms of the stall, stall with wing drop and full spin, followed by the correct recovery

g) Satisfactory recovery from at least two launch failures or simulated launch failures.

h) Demonstrate that they can obtain and interpret airspace, NOTAM and weather information appropriate for soaring flight.

Field Landing Requirement.

Two field landings into a field or, if a suitable field is not adjacent to the club site, into a marked area of the airfield. The altimeter should be covered or the millibar scale offset for this practice. If a marked area of the airfield is used, it must be so chosen that there is little or no undershoot and that the circuit and approach do not coincide with the normal circuit and approach to the airfield.

Theoretical Knowledge Test

The candidate must pass the IGSA Bronze Badge Theoretical Knowledge Test.

Timing.

The flying and ground tests must all be completed within the 24 months prior to the application.

Medical Requirements

The applicant shall comply with the medical standards prescribed in the current edition of the IGSA Operational Regulations Section 1.6.

9.3 Appendix C IGSA Bronze Badge Theoretical Knowledge Syllabus

IGSA Bronze Badge Theoretical Knowledge Syllabus

Document Reference: IGSA/BBTKS/1,1

Version: 1.1

An appropriate level of theoretical knowledge must be demonstrated following a IGSA approved multiple choice written test to include the following subjects:

- Air Law
- Air Navigation Order
- AIC
- AIP
- NOTAMS
- Rules & Regulations relevant to Glider pilots
- IGSA Operational Regulations

Instruments

ASI	How it works Limitations Errors Failure
Altimeter	How it works Limitations Errors Failure
Variometer	Different types How they work

	Errors
	Failure
Compass	How it works
	Limitations
	Errors
	Failure

Human Performance and Limitations

Human performance and limitations relevant to the glider pilot

Meteorology

Atmosphere	Formation of lows and highs
	Cols
	Troughs
Pressure	Isobars
	Pressure gradient
	Geostrophic force
	Wind speed & direction changes with height
	Backing & veering
Temperature	Relative humidity
	Dew point
	Latent heat
	Pressure variation with height
	Lapse rates
	Inversions
	Fohn effect
Clouds	Types
	Causes
	Fog
	Effect of increasing pressure on cloud
	Effect of decreasing pressure on cloud
Fronts	Recognition of approach
	Associated pressure changes
	Weather at passage
	Chart signs
	Occlusions
	Warm sectors

Convection	Causes
	Trigger areas
	Cloud types
	Sea breeze fronts
Ridge soaring	Weather specific to ridge soaring
	Orographic cloud
Wave soaring	Lenticular clouds
	Areas of maximum lift and sink.

Navigation

Map-reading	Aeronautical Charts
	Conventional signs
	True North
	Magnetic North
	Isogonals
	Scales
	Airspace
	Altimetry
Compass	Points of the compass
	Deviation
	Variation
	Turning errors
	Acceleration errors
Courses	Plotting a course
	Drawing a course line
	Measuring distance
	Compass heading
	Variation
	Effect of wind on track & ground speed
	Using land marks
	Silver C 1% rule
Vectors	Vector Triangles
Cross-Country	Pre-flight planning
	Preparation for cross-country flights
	Charts
	Fluids,
	Food, water
	Hat

	Etc.
Flying X/C	Thermal sources, staying high, etc.
Field landings	Field selection Size Animals Wires Surface Height Obstacles Wind Slope

Principles of flight

Aerofoils:	Reason for shape, venturi effect, lift
Lift:	Factors influencing lit (speed, angle of attack etc.)
Drag:	Factors influencing drag, types of drag (profile, induced, total), aspect ratio, ways of reducing drag
Forces:	Forces acting during the flight. Effect of increasing or decreasing any of these forces. Performance data Glide angle. Polar curves. Forces acting in the launch Mass & balance Centre of Gravity
Turning:	Forces acting during a turn. Steep turns. Optimum angle of bank in a turn.
Stalling:	How it happens. Reasons for the pre-stall symptoms. Recovery. Effect of flaps on stalling speed Effect of airbrakes on stalling speed

Effect of rain on stalling speed
Effect of steep turns on stalling speed

Spinning: How it happens
Forces in a spin
Recovery procedure

Limitations: Glider operating limitations
Placard speeds
Flight envelope

Stability: Lateral stability
Longitudinal stability
Yaw stability
Dihedral
Sweep-back & sweep-forward

Radiotelephony
Knowledge appropriate to radio communication in a glider

Flight Training Experience

The applicant shall have successfully attained the following experience in gliders:

a. The minimum solo soaring experience as described in IGSA Laws and Rules; and

b. Completion of the flight training syllabus exercises required to successfully complete the general and navigation skills tests which must include the following practical subjects:

Lookout
Scan cycle and collision avoidance
Effects of Controls
Effects of Elevator, rudder, aileron, flaps (if required)
Adverse Yaw
Speed monitoring and control
Co-ordination
Use of trim
Appropriate use of the trimmer at all times
The straight glide
Scan cycle
Drift, track and heading
Turning
Entry, exit and maintenance

Slip and skid
Regaining a heading
Steep turns
Airbrakes (and/or Spoilers)
Effects
Approach control
Normal
Undershoot
Overshoot
Landing
Final approach
Round out
Hold Off
Landing
Use of wheel brake
Cross wind landing
Circuit Planning
Reference point
Normal circuit
Modified circuit
Effect of wind
Height judgement
Wire launching (as appropriate)
Relevant speeds
Launch techniques
Launch failures
Launch abandonment
Aerotow launching (as appropriate)
Equipment
Launch speeds
Launch techniques
Launch failures
Launch abandonment
Stalling
Symptoms
IG stalling
Accelerated stalling
Lack of effect of elevator at stall
Reduced G not reliable symptom of stalling
Spinning and Spiral Dives
Spinning – recognition and recovery
Spiral Dive – recognition and recovery
Further spinning
Navigation
Planning

In flight map reading navigation techniques
In flight GPS navigation techniques (optional)
In flight airspace awareness
Lost procedure
Field Landing
Field suitability and hazards
Circuit judgement
Pre and Post Flight Operations
Glider post assembly/rigging checks
Pre flight inspection
Obtaining NOTAM's
Recording of flight time
Glider parking/storage

General and Navigation Skills Tests

a. The applicant shall successfully complete a IGSA Bronze Badge General Skills Test during a series of flights in a glider.

b. The applicant shall successfully complete a IGSA Cross Country Endorsement Navigation Skills Test.

c. The applicant shall successfully meet the field landing test requirement during a. and b. above.

9.4 Appendix D The IGSA Cross-Country Endorsement

The IGSA Cross-Country Endorsement

Document Reference: IGSA/CCE/1.1

Version: 1.1

Bronze Badge

The Cross-Country Endorsement to the Bronze Badge can only be issued if the applicant has already been granted a Bronze Badge and has the approval of his/her CFI.

Soaring Flights.

Two soaring flights in thermal conditions of at least one hour duration after release. Each soaring flight must be under the supervision of a IGSA instructor or Official Observer, who must complete and certify the report. Appropriate Bronze Certificate qualifying flights may be used to satisfy this requirement

Field Selection.

The candidate must demonstrate satisfactorily his or her ability to select or reject fields as to their suitability for landing. This exercise must be undertaken from the air but can be flown in a glider, motor glider or light aircraft.

Field Landings.

The candidate must make a minimum of two successful approaches into a field landing area selected by the candidate. The altimeter should be covered or the millibar scale offset for this exercise. To qualify for the Endorsement, the approaches must be flown without any assistance or prompting from the instructor who must be satisfied that the candidate has demonstrated an adequate level of judgement and skill.

Navigation.

The candidate must demonstrate his ability to navigate to the satisfaction of the full rated instructor. The candidate must plan a nominated triangular task of at least 100 km, giving due consideration for any airspace requirements and to appropriate aspects of airmanship. The candidate must demonstrate to the full rated instructor during a IGSA Bronze Cross Country Endorsement Navigation Skills Test the ability to read an aeronautical chart, to relate features shown on it with those features as they appear from the air and to orientate the map with respect to ground features.

Timing

The requirements must be completed within 12 months of the second soaring flight.

9.5 APPENDIX E Class 2 Instructor Syllabus

EXAMINATION ON THE FOLLOWING SYLLABUS

The test shall be carried out by the C.F.I. of the Club in which the candidate is to instruct or by any I.G.S.A examiner.

DEMONSTRATION OF TEACHING WHILE FLYING

- Effects of controls; turns
- Stalling and Spinning; recovery
- Take off and climb (state type of launch
- Approach and landing; use of air brakes
- Approach planning

COMPETENCE IN THE FOLLOWING

- Pre flight briefings and basic exercises
- Briefing and supervision of solo pilots
- Organising and running the launch point
- Rigging; de-rigging; carrying out the daily inspection

KNOWLEDGE OF THE FOLLOWING

- Air Law
- Principles of flight

9.6 APPENDIX F – Under Training Instructor Syllabus

UNDER TRAINING (U/T) INSTRUCTOR SYLLABUS

Part 1 Air Exercises

Preparation for flight. Cockpit checks. Attaching cable. Signals

Effects of controls; Flying at correct speed

Co-ordination of controls; Use of trimmer

Medium and steep turns; Continuous circling

Launch procedure, (winch, aerotow or both)

Approach and landing. Airbrakes. Under and Over shoot procedures

Circuit planning. Development of judgement

Symptoms of approaching stall. Stall recovery. Stall reinforcement exercises

Incipient and full spin entry and recovery. Considerations.
Further stalling and spinning exercises.

Airmanship. Lookout. Assessment of weather and flying conditions

Emergencies. Failed launch procedure. Airbrakes coming open. A.S.I failure

Taking over control, considerations

Soaring techniques, weather permitting

Fault finding

Normal category aerobatics

Part 2 Ground Exercises

Instructing Technique & Briefing, relating to air excercises

Safety in operations on the airfield

Airmanship; laws & rules; flying discipline; accident prevention

Glider construction; daily inspection, maintenance, defect reporting

Principles of flight; typical glider performance, aircraft limitations

Field landings. Basic techniques of cross-country soaring

Soaring meteorology; synoptic chart interpretation, principles of convections

Navigation: maps and map reading

Time should be allowed for the U/T Instructor candidate to give short practice briefing talks and lectures

9.7 APPENDIX G – Air Experience Syllabus

Air Experience Instructor Training Syllabus

Part 1 Air Exercises

Preparation for flight. Cockpit checks. Attaching cable. Signals

Lookout

Effect of elevator

Effect of aileron

Part 2 Ground Exercises

Instructing Technique & Briefing

Safety in operations on the airfield

Airmanship; laws & rules; flying discipline; accident prevention