E6GLIDE RULES

FAI e-Concept Rules modified and adapted for the E6GLIDE 2025

29th June – 5th July 2025

Calcinate del Pesce - Varese, Italy

Main points and principles of these rules:

- The rules are based on the FAI Sailplane Grand Prix rules
- These rules apply to all classes of e-Concept competitions. A distance handicap method is used to compare different types of aircraft.
- Scoring is based on a total elapsed time system, similar to the Tour de France.
- It is possible to use the engine during the competition flight within a contingent. Energy consumption outside of the daily assigned quota is subject to a time penalty.

The difference in elapsed time between each competitor and the first place finisher will be limited.

- All outlanding pilots will receive the same elapsed time as the slowest finisher.
- Requirements for energy measurement will be published in the event Local procedures.

Changes from e5glide rules are highlighted in green. ()

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1. GENERAL

1.1 DEFINITIONS

1.1.1 FAI E-concept gliding competition (ELGC) is for the participation of gliders equipped with electric means of propulsion.

1.1.2 In this document, wherever the words he, his or him is used, it should be taken as he/she, his/hers or him/her.

1.2 OBJECTIVES OF THE E-CONCEPT GLIDING CONTESTS (ELGC)

1.2.1 To encourage the development of electric MOP in gliders and the techniques of using them;

1.2.2 To promote worldwide expansion of the public image of soaring;

1.2.3 To foster friendship, cooperation, and exchange of information among soaring pilots of all nations;

1.2.4 To encourage the development of safe operational procedures, good sportsmanship, and fairness in the sport of soaring.

1.3 GENERAL REQUIREMENTS

1.3.1 The ELGC shall be controlled in accordance with the FAI Sporting Code General Section, Section 3 (Gliders & Motorgliders) and with this document.

1.3.2 The Winner shall be the pilot having the best Total time according to the rules and procedures contained in this document.

1.3.3 The official language of the ELGC shall be the English language; this shall include all regulations and information circulated to the competitors, any public announcements during the event, and briefings.

1.4 RESPONSIBILITIES OF THE ORGANISERS

1.4.1 The organisers shall pay due regard to safety and fairness in all aspects of the ELGC.

1.4.2 The organisers shall provide:

a. All facilities necessary for the satisfactory operation of the competition
b. Each competitor with Local Procedures no later than one month before the event
c. Each competitor with all complementary information upon arrival at the contest site, turn and control points, and an electronic version of the start, turnpoint and control point database in the most usual file formats for turn point data files
d. Full meteorological information during the ELGC, access to which shall be available to competitors and assistants in addition to briefing material supplied to the competitors

1.4.3 The organisers shall enable doping controls by the competent authority in accordance with FAI Rules and National Requirements.

1.4.4 The organisers of an ELGC must pay sanction fees to FAI as decided by IGC.

1.4.5 The living and travel expenses for the FAI Official are the responsibility of the Organisers.

2. E-CONCEPT GLIDING CONTEST OFFICIALS

2.1 THE ELGC DIRECTOR

The ELGC Director will be in overall operational charge of the event. In case of a World ELGC championship, the ELGC Director shall be approved by the IGC. The ELGC Director is responsible for good management and the smooth and safe running of the ELGC. The Director or his nominated Deputy shall be available at the contest site at all times while ELGC flying is in progress.

a. He shall make operational decisions in accordance with rules of the ELGC and in conformity with the FAI Sporting Code, General Section. Decisions shall be published without delay in writing.
b. He shall penalise or disqualify a competitor for misconduct or infringement of the rules in accordance with the requirements of 8.4 and the penalty list at 8.5.
c. He shall give evidence to the FAI official if requested.
d. He shall publish the officially accepted entry list and issue daily results with the minimum of delay.

2.2 FAI OFFICIAL

The FAI official shall be responsible for the ELGC being run according to the rules, for checking all scores and for adjudication of any protests during the ELGC. The FAI official for a World ELGC shall be nominated and approved by the IGC.

a. He shall be present at the event site for the ELGC.
b. He shall check the scoring of every race.
c. He shall deal with protests filed by a competitor by hearing the protest in presence of the ELGC Director and give his decision as soon as possible.
d. He has the right to terminate the ELGC if the Organisers fail to abide by these Rules and the general sporting requirements of the FAI Sporting Code.
e. He shall approve the final results of the ELGC and send them to the FAI.
f. He shall send a technical report to the IGC no later than one month after the event.

2.2 PILOTS

2.3 COMPLIANCE

Competitors and crew members, by virtue of entering, agree to be bound by these Rules and the Local Procedures issued for the event, by any rulings and requirements stated by the Organisers at any briefings, and the airspace regulations in force during the Championships. They are also deemed to accept without reservation any consequences resulting from the event (for instance see 3.5 on insurance).

2.4 ENTRIES

2.4.1 Application for Entry

Application for entry shall be accepted only if sent before the deadline, on the official entry form, and accompanied by the entry fee in full. Incomplete entry forms or those containing inaccurate information shall not be accepted.

2.4.2 Entry Fee

The entry fee shall cover all operational costs during the ELGC, except that aero tows may be paid as used, at the discretion of the organisers. A competitor who withdraws shall have no right to the return of any fees.

Entry fees shall be returned:

a. In full, if the ELGC does not take place,
b. Unused fees shall be paid back if the ELGC are stopped or cancelled for reason of force majeure,

2.5 PILOT CRITERIA

To be allowed to participate in an ELGC World event a pilot must:

a. Have flown at least 250 hours as a pilot in command, of which at least 100 hours must be in sailplanes;
b. Hold a Pilot License or equivalent document issued or recognized by the authorities of the host nation;
c. Hold a current FAI sporting licence;
d. Fulfil any additional criteria for participation that may be set by the Organizers or the IGC Bureau.

2.5 REGISTRATION

2.5.1 On arrival at the contest site, all pilots shall report to the Organisers' Registration Office to have their documents checked and to receive any supplementary information.

2.5.2 After the closing of registration, no change of sailplane or pilots shall be permitted. Pilots whose documents have not been checked and found to meet all requirements shall not be permitted to fly until the requirements are met.

2.5.3 The Organisers, if appropriate, shall require the following documents and translations:

a. Documentary proof of personal medical insurance.
b. For the pilot:
   - Proof of nationality or certificate of residence (FAI General Section 3.7)
   - Valid Pilot Licence or equivalent document and proof of qualification regarding hours
   - FAI Sporting Licence valid for the year of the event.
c. For the sailplane:
   - Valid Certificate of Airworthiness or Permit to Fly, and
   - Third party insurance certificate for the sailplane.

2.6 INSURANCE

2.6.1 The sailplane must be covered for 3rd party liability to an amount set by the Organisers.

2.6.2 It is the responsibility of all pilots and crew members to obtain personal medical insurance covering accidents and sickness during the ELGC, including any local hospital costs and the costs of transport back to the team member's home country. Neither the organisers nor the FAI/IGC shall be responsible for any costs resulting from accidents or illness to ELGC participants.

3. TECHNICAL REQUIREMENTS

3.1 SAILPLANES AND EQUIPMENT

3.1.1 Equipment:

The competitors shall provide a sailplane equipped with an electric means of propulsion, and other equipment, including GNSS Flight Recorders, radios, oxygen systems, parachutes, and survival equipment of a performance and standard suitable for the event.

a. The airworthiness, safety and safe operation of competing sailplanes and any associated equipment and vehicles, as appropriate, shall be the responsibility of the competitors at all times.
b. Each occupant of a competing sailplane shall use seat belt and shoulder harness and wear a serviceable parachute on each ELGC flight unless the glider is equipped with a recovery system.

3.1.2 Each competing sailplane must have a valid Certificate of Airworthiness or Permit to Fly not excluding competition flying and shall be flown within the limitations of this Certificate of Airworthiness or Permit to Fly.

3.1.3 Damage to a sailplane must be reported to the Organisers without delay. A damaged sailplane may be repaired. The following items may be replaced instead of being repaired: control surfaces; the complete horizontal stabiliser; airbrakes or flap surfaces; canopy; undercarriage gear and doors; propellers; non-structural fairings; and, wing tips and winglets but not the entire outer wing panels. Electric MOP and associated parts may be replaced with the consent of the FAI official.

3.1.4 If the damage was no fault of the pilot, the whole sailplane or any part of it may be replaced with the consent of the ELGC Director. Landing damage is normally assumed to be the fault of the pilot.

3.1.5 A competitor involved in a collision in the air shall not continue the flight but land as soon as practicable. Both pilots shall be scored as having virtual outlandings at the position at which the collision occurred.

3.2 AIRCRAFT WEIGHT AND WEIGHING PROCEDURE

3.2.1 A maximum wing loading and/or a maximum take of weight will be defined in Local procedures for each ELGC event, this must be approved by the ELGC management team.

3.2.2 Initial Weighing

This procedure is intended to verify that the take-off mass will not exceed the maximum mass allowed for this class (or the maximum certified mass of the sailplane if less than this) or that the maximum wing loading is not exceeded if any has been set (or the maximum certified wing loading of the sailplane is not exceeded if less than the maximum wing loading).

During scrutineering, the organizer shall measure the weight of the glider ballasted with all removable equipment (thermos, drinks, tie-down equipment, additional clothing, water-ballast) and the weight of the pilot with parachute. The total mass shall not exceed the maximum take off mass (or the mass corresponding to the maximum wing loading if such a maximum has been set). Water may be dropped if necessary. The organizer shall then measure the weight in tow out configuration (town by a car with a tow bar and with a wing wheel). This will be the reference weight for the daily weighing. The results of this operation shall be recorded and made available to the pilot concerned.

As far as possible the weighing should be performed in a wind free location and on a hard and horizontal ground. A tolerance of 2 kg is acceptable for the initial weighing

3.2.3 Daily Weighing

On all competition days all gliders shall be weighed in their “towing out” configuration with all removable equipment on board at the weighing point on their way to the grid. If a glider is heavier than its reference weight its water ballast must be discharged to achieve their reference weight at the weighing point without incurring penalties. A tolerance of 5 kg may be applied if the weighing is performed outside.

3.3 CONTEST NUMBERS

3.3.1 The contest numbers, as validated by the Organisers, shall be displayed:

a. On both sides of the tail fin and/or rudder. These should be at least 30 cm high.
b. On the glider trailer and crew car.

3.3.2 Contest numbers shall consist of not more than three letters or numerals or a combination of letters and numerals in a plain block style with a single colour that contrasts strongly with the sailplane's background colour.

3.3.3 The Organisers may require competitors to modify contest numbers that they deem to be similar, confusing, of low contrast or otherwise illegible. Competitors not complying with the Organiser's requirements shall be denied competition launches.

3.3.4 The Organisers may require competitors to display transfer logos and advertising banners on their sailplanes.

3.4 TRACKING SYSTEMS

The Organisers may require competitors to carry data recorders, cameras and data transmitters to provide position information and video pictures to be broadcast via the Internet and television mediums. The pilots have to agree to carry this equipment on board. Any interference with these units in order to prevent them from working properly is prohibited and will be penalised.

3.5 GENERAL FLYING PROCEDURES

3.6 GENERAL

Cloud flying and unauthorised aerobatics are prohibited. Any manoeuvre hazardous to others shall be avoided and may be penalized and competitors shall avoid dropping water ballast in any manner likely to affect other competing sailplanes.

3.7 BRIEFING

A briefing will be held each morning, during the training and ELGC flying periods, at which full meteorological and operational information appropriate to the task of the day and the airfield shall be given. This will include units of measurement and times as appropriate.

3.8 EXTERNAL AID TO COMPETITORS

The following limitations are imposed so that the ELGC shall, as far as possible, be directly between the individual competitors, neither controlled nor helped by external aid.

3.8.1 Radio Transmitters and Transceivers

Radios are for voice transmissions between the pilots (regarding safety), and between them and the Organisers (regarding safety and operational information) only. Any other data transmission between competitors, or between them and the ground, is prohibited except as required:

- by the organisers
- for safety purposes
- for anticollision warning

The Organisers shall designate a common radio frequency on which all transmissions will be made during the contest. All pilots shall remain on this frequency. Non-compliance may be penalized.

3.8.2 Other Types of Aid

Leading, guiding, or help in finding lift by any non-competing aircraft is prohibited. Competing sailplanes abandoning their task must land or return to the ELGC site without delay and may not lead, guide or help other competitors in any way.

3.9 CONTROL PROCEDURES

3.9.1 Flight verification will be made using GNSS flight recorders (FR).

a. All GNSS FRs approved by the IGC up to two months prior to the Opening Day shall be accepted. FRs must record the instantaneous power delivered to the eMoP with each fix. A separate flight log produced by the motor controller may also be accepted.

b. At least one GNSS FRs must be used. If two recorders are used, one shall be designated to the Organisers as the primary recorder and the other one as a back-up. The Organisers shall be informed of any change of equipment including the designation of the primary FR. Non-compliance shall be penalised.
c. GNSS FRs recording intervals shall be set to 1 sec or less. Non-compliance shall be penalised.
d. FRs shall be switched on for at least two minutes before take-off to establish an altitude baseline. For motor gliders having a MoP capable of being started in flight (including sustainer MoP) a test run during flight on the first competition day or the last practice day shall be required to prove the ENL of the flight recorder works. The FR must remain switched on following an engine run on the ground.
e. If the recorder fails which is connected to the eMoP, it is possible to count the energy by using the ENL. The use of the engine at maximum power is assumed for the time of the marked ENL.
f. If both recorders fail and the flight record is interrupted for a period longer than one minute the sailplane shall be considered as having a virtual outlanding at the point of interruption unless satisfactory evidence can be provided that the sailplane did not, during the interruption of the FR record, violate airspace or use the MoP. IGC Files delivered by tracking units may be used to provide this evidence.
g. The altitude taken into account for analysing the flight will be the pressure altitude measured by the flight recorder corrected by an offset value such that the altitude on ground before take-off is equal to the elevation of the airfield as published in the local procedures. No correction of the measured altitude with the calibration chart of the Flight recorder shall be performed.
h. In an ELGC where the local procedures specify feet as the official unit of altitude, altitudes published in feet will be rounded to the closest meter for all sporting-related calculations

3.9.2 Penalties shall be imposed by the Organisers for unauthorised interference with the GNSS equipment, data or internal program.

4. THE E-CONCEPT GLIDING CONTEST TASK

4.1 TASK PARAMETERS

The e-concept gliding contest is designed as a multi-class competition. The compensation of different glider-types is based on Distance Handicapping.

4.1.1 Distance Setting

a. Distance Handicap: the aerodynamic difference between the gliders is compensated by different task lengths for each glider type. The basis for an index evaluation is an index list defined in the local procedures. The calculation of the task length s_g for each glider type takes place using the following formula:

$$s_g = \frac{s_{max} * l_g}{l_{max}}$$

where:

s_g … task length for glider with Index I_g

s_{max} … maximum task length for the glider with the highest Index I_{max} in the competition

b. Minimum Task Length: the minimum length of an ELGC Task for the glider with the lowest Index shall be 100 km

4.1.2 Energy Setting

A value of base Maximum Energy Allowed (MEA) must be defined for each day. This base MEA is allocated to the lighter glider of the contest at the maximum contest wing loading (This define the reference glider mass). Each glider's own MEA is then calculated proportionally to the mass of the given glider at maximum contest wing loading compared to the reference glider mass. The energy consumption for determining the MEA is only counted for the competition flight between the start and the finish line. The competitor may use stored energy for propulsion during the scored portion of the flight. The energy must be stored in one or more batteries. There is no limit to the amount of stored energy carried, and acquisition as well as storage of energy during the flight is allowed.

4.2 TASK

The Organisers shall set a Task, which will consist of:

a. A number of TurnPoints in a sequence. All participants receive the same turnpoints. The different task lengths for compensation are realized by different turnpoint radii. A radius is assigned to each turn point for each glider type.
b. A value of base Maximum Energy Allowed (MEA) for the day.
c. An initial Start Line opening time and Start Height/Speed limits, if any.

After the opening of the Start Line, the competitor shall cross the Start Line and complete the race by passing through these turnpoints, in the sequence designated by the Organisers, and the finish line.

5. E-CONCEPT GLIDING CONTEST PROCEDURES

5.1 THE LAUNCH GRID

a. The grid order shall be set by the ranking on the last official practice day or drawn by lot before the first flying day.
b. The grid will be defined in the local procedures.
c. The grid order shall advance after every valid competition day according to local procedures.
d. Sailplanes must be on the grid at the time specified by the Organisers.
e. Only sailplanes on the grid at the time of the start of the launch shall affect the timing of the Start.

5.2 LAUNCHING PROCEDURES

a. The beginning of the launching period will be announced at briefing. The release height and position shall be announced prior to the first take off. The release altitude should be as close as possible to the start altitude, especially in weak conditions.
b. If a sailplane or pilot is not ready to be launched due to a fault by the Organisers, the launch shall not be commenced.

c. Except in emergencies, pilots shall not release until after the tow pilot has rocked the wings of the tow plane. Pull-ups before releasing are prohibited.
d. If a competitor postpones his first launch on his own initiative, or he is not ready when his turn comes up, he shall be launched after the main launch is complete.
e. If a competitor has to be relaunched because of a failed take-off or a failure of the tow plane resulting in jettisoning or premature release of a sailplane he shall be relaunched immediately provided he reports to the launch point without delay.
f. If a competitor requires an additional launch for any other reason, he shall be re-launched immediately after the main launch is complete and shall be released in the nominated release area at the nominated release altitude.
g. Once launching has started, the Organisers may suspend towing if it is dangerous to continue.

5.3 STARTING

5.3.1 Definitions

a. **Start Line**: a straight line, of 8km length, perpendicular to the track to the first Turn Point.
b. **Extended Start Line**: the start line extended on both sides to the infinite.
c. **Start Area**: the half circular area with of 2.5km radius located "behind" the Start Line opposite to the first Turnpoint.
d. **Extended Start Area**: the area located behind the Extended Start Line.
e. **Start Altitude**: the maximum altitude at which the start line may be crossed once the start line is open. This altitude shall be set daily by the organiser as a function of the meteorological conditions. On the flight record the altitude of the start shall be measured by interpolating between the altitude at the last fix before the line and the altitude at the first fix after the line.
f. **Start Point:** the center of the Start Line. The Start Point should normally coincide with the Goal defined in 7.6.1.b.
g. **Start Speed:** the maximum groundspeed at which the start line may be crossed. This maximum start speed is announced at briefing and shown on the race sheet. On the flight record, the ground speed shall be measured by dividing the distance between the last fix before the line crossing and the first fix after the line crossing by the time interval between the two fixes. (In most scoring software this is the speed given for the first fix after the line, so there is no interpolation required by the scorer)

5.3.2 Starting Procedures

a. The Organisers shall announce by radio the opening time of the Start Line which shall be not less than 20 minutes after the main launch procedure has been completed.
b. Once the Start line opening time has been announced, the Organisers shall no longer delay the opening of the Start Line even if pilots fail to stay airborne or to reach the start altitude. They may however cancel the opening of the Start Line if it is dangerous to continue launching or the weather deteriorates so that the task may not reasonably be attempted or if more than half of the pilots fail to stay airborne before opening of the start line.
c. During the last 5 minutes before the opening of the Start Line, circling or turning (by more than 90°) to the right is prohibited in the Start Area. Non-compliance shall be penalised.
d. The pilots must be behind the Extended Start Line no later than one minute before the Start Line is opened. Non-compliance shall be penalised.
e. Once the Start Line is open the pilots must start by crossing the line below the Start Altitude and within the Start Speed limit. Non-compliance shall be penalised.

f. A pilot starting before the opening of the Start Line shall be penalised.
g. A pilot manoeuvring in such a way as to fly in the opposite direction or perpendicular to the track of the other pilots, while the field is attempting to cross the start line, shall be disqualified for the day (dangerous manoeuvre creating risk of head on conflict with the other gliders).
h. A competitor landing back to the airfield after having started may be relaunched. He shall be released directly in the Start Area at the nominated Start Altitude. He does not need to stay behind start line for one minute and may start immediately but must cross the start line below the start altitude and within the speed limit. In this case no time penalty shall apply for not being behind the start line for one minute before the opening of the Start Line.

5.3.3 Radio Procedures

The following radio messages will be made by the Organisers:

a. At least 20 minutes before the opening of the start line: "The Start Line will be opened at y Hour and the maximum start altitude is z m or zz ft " (altitude expressed in QNH).
b. At 10 minutes before the start: "The Start Line will be opened in ten minutes. The maximum start altitude is z m or zz ft. Pilots must be behind the Extended Start line in 9 minutes".
c. At 5 minutes before the start: "The Start Line will be opened in five minutes; the maximum start altitude is z m or zz ft. From now, turns to the right are prohibited in the start Area. Pilots must be behind the Extended Start line in 4 minutes.
d. At 2 minutes before the start: "The Start Line will be opened in two minutes. Pilots must be behind the Extended Start line in one minute".
e. One minute before the start: "The Start Line will be opened in one minute"
f. 30 seconds before the start: "The Start Line will be opened in 30 seconds "
g. 10 seconds before the start: "Start in 10, 9, 8, 7, 6, 5, 4, 3, 2, 1, Go!"

5.3.4 Validity of Starts

A Start is valid if the GNSS FR shows a valid fix or a straight line between two subsequent FR fixes crossing the Start Line in the direction of the first turn point after the Start Line has been opened. Nevertheless, a pilot missing the start line by less than 500 meters (i.e. crossing the Extended Start Line at a distance from the edge of the Start Line of less than 500m) shall be considered as having made a valid start, but shall be given a penalty.

5.3.5 Circling Direction after the start

For safety reasons, the organisers may impose in the Local Procedures a common turn direction up to a given distance from the start. The appropriate penalty will also be defined in the local procedures.

5.4 TURN POINTS

5.4.1 Definitions

a. **Observation Zone**: for an ELGC GNSS Turn Point the observation zone shall be a circle of radius which is defined by the task sheet, centred on the turn point. The minimum radius of the observation zone should be 500 meters.
b. **Maximum Altitude:** a maximum limit AMSL may be set for rounding a turn point

5.4.2 Turnpoint Procedure

The pilot has to fly through the Observation Zone of the Turnpoint below the maximum altitude limit if any has been set.

5.4.3 Validity of Turnpoints

a. A Turnpoint is positively rounded (i.e. valid) if the GNSS FR shows a valid fix or part of a straight line between two consecutive valid fixes within the Observation Zone.
b. If there is no proof that the competitor passed through the Observation Zone the rounding of the Turn Point shall be validated if the competitor was within 500 m of the boundary of the Observation Zone, but a penalty shall be applied.
c. If a maximum altitude has been set for the Turn Point and if a pilot rounds the Turn Point above this altitude the rounding shall be validated but a penalty shall be applied.

5.5 OUTLANDING

a. A complete failure of both GNSS FRs is regarded as an outlanding.
b. The position and time of the outlanding shall be determined from the last valid fix on the GNSS flight record when the aircraft came to rest, before the starting of the MoP, or before the FR failure, whichever occurs first.
c. After landing out, the competitors shall inform the Organisers without delay by giving their position (co-ordinates). Non-compliance shall be penalised.
d. The Organisers shall assist competitors and crews in every possible way to locate outlanded sailplanes.

5.6 FINISHING

5.6.1 Definitions

a. **Finish: a straight line**, of 2 km length, at the elevation of the airfield and clearly identified on the ground. A minimum altitude shall be imposed for crossing the line (see paragraph c). It is recommended to place the finish line at the beginning of the runway in order to make sure that the gliders can land safely on the airfield even if they do not have enough energy to make a speed finish. Alternatively, **a Finish Circle** of 3 km radius, at a minimum altitude of at least 300m above the elevation of the airfield, expressed in meters AMSL.
b. **Goal:** the center of the Finish Line.
c. **Mandatory Reporting Point**: The organisers shall set a final turn point to align the gliders before the finish. A minimum altitude shall be set to a minimum of 30 meters above the airfield elevation in the local procedures and shall apply from the mandatory point to and including the finish line. For a better concentration of the pilots during the finish and landing phases of the flight, the use of the engine between the Reporting point and the finish line is punished with a penalty. The mandatory reporting point should not be located more than 15 km from the finish line. Sharp turns at this reporting point should be avoided.

5.6.2 Finish Procedures

a. Competitors shall announce their arrival on the Finish Line frequency according to the local procedures.

b. The organisers shall repeatedly announce strength and direction of the wind, together with other significant meteorological data at the contest site.
c. The Finish Line shall be closed at sunset, or when all competitors are accounted for. Competitors still on task after closure of the Finish Line shall be considered as outlanded.

5.6.3 Validity of the Finish

a. A finish is valid if the sailplane crosses the Finish Line, unassisted, in the direction specified at briefing.
b. Competitors crossing the Finish Line below the minimum altitude shall be penalised.
c. Notwithstanding 7.6.3 a, a competitor landing back at the airfield without crossing the Finish Line shall be deemed to have finished and shall be given as finish time the time at which his sailplane stopped moving, plus a penalty equal to 5 minutes.

5.7 LANDING

a. The landing procedures shall be detailed at the briefing.
b. Hazardous manoeuvres when approaching and after crossing of the Finish Line shall be penalised. Having crossed the Finish Line the competitors shall land without delay.
c. Landing later than the end of legal daylight is not permitted. Non-compliance shall be penalised.

7.8 FLIGHT DOCUMENTATION

All flight documentation, including GNSS records shall be handed in immediately after landing on flash cards or memory sticks. The Organisers may also require back- up documentation within 30 minutes of making the request.

6. SCORING AND PENALTIES

6.1 OVERVIEW OF SCORING

On days on which there are one or more finishers, all competitors will receive a Daily Elapsed Time (DET). In order to keep the overall race interesting, the difference between each competitor's elapsed time and that of the first place finisher will be limited. There are 5 steps to scoring each day:

a. If real used energy (UE) is more than MEA + 10% the pilot is considered as virtually outlanded at the position at which this value was reached
b. Convert exceeded MEA to penalty time (1 Wh is equal to 1s) and add the penalty time to elapsed time (ET). The new time is named corrected elapsed time (CET)
c. Apply any penalties except "Dangerous or Hazardous Flying" penalties to the CET
d. Record the actual CET of each finisher and sort them from lowest to highest.
e. For the first place finisher, the Daily Elapsed Time (DET) is equal to CET. Limit the DET of each finisher to the first place finisher's DET plus dT (defined below). All "slow finishers" receive the same DET.
f. Give all non-finishers a DET of the first place finisher's DET plus dT. All non-finishers receive the same DET.
g. Apply any "Dangerous or Hazardous Flying" penalties to the DET. The application of "Dangerous or Hazardous Flying" penalties may causes the difference in elapsed times between pairs of competitors to exceed the "limit."

The finisher with the lowest DET after adding the penalties is the day winner.

6.2 DEFINITIONS AND PARAMETERS

- **Finisher**: A finisher is a competitor who crosses the start line (with or without penalty), achieves all the assigned Turn Points in the correct order (with or without penalty) and crosses the Finish Line (with or without penalty)
- **Valid Day:** a day shall be counted as an ELGC race day if a launch opportunity has been given to each competitor, and at least one competitor is a finisher.

- **MEA** = maximum energy allowance for the task between start and finish line in [Wh]
- **UE** = real used energy between start and finish line [Wh]
- **PTE** = time penalty for exceeding MEA between start and finish line
- **PT** = normal penalty time
- **T_S** = start time - the time of day at which the start line was opened
- **T_F** = competitors finish time
- **ET** = time elapsed between the start and the finish time for an individual competitor
- **CET** = corrected elapsed time: ET plus the penalty time PTE due to exceeded MEA
- **CET0** = minimum CET (i.e. CET of the first place finisher)
- **N** = number of pilots having had a competition launch
- **n3** = number of real finishers who are faster than **CET0 x 1.2**
- **dT** = maximum time difference to the first place finisher = 0.2 x **n3/N** x **CET0**
- **DET** = daily elapsed time: time with adjustments and penalties for the final scoring

- **TET** = total elapsed time: the sum of each competitor's DET over all competition days

6.3 TOTAL ELAPSED TIME SCORING PROCEDURE

6.2.1 Calculation of the Corrected Elapsed Time (CET)

$$ET = T_f - T_s$$

ET = time elapsed between the start and the finish time
T_S = time of day at which the start line was opened
T_F = competitors finish time
UE = real used energy between start and finish line [Wh]
MEA = maximum energy allowance for the task in [Wh]
PTE = time penalty for exceeding MEA
CET = corrected elapsed time

If UE ≤ MEA

$$CET = ET$$

If UE ≤ 2 × MEA

$$PTE = (UE - MEA) * 1[s]$$
$$CET = ET + PTE$$

Otherwise UE > 2 × MEA
Pilot is scored as a non-finisher. The procedure for non-finisher is described under 8.3.3.

6.2.2 Upper Limit of the elapsed time and calculation of the Daily Elapsed Time (DET)

If CET ≤ CET0 + dT then DET = CET

Otherwise DET = CET0 + dT

6.2.3 Scoring Non-Finishers

All non-finishers are credited with the same elapsed time:

DET = CET0 + dT + 0.2 x 1/N x CET0

6.2.3 Application of Penalties

After all elapsed times have been determined, including adjustments, any normal penalties PT are applied:

$\mathrm{DET} = \mathrm{DET} + \mathrm{PT}$ PT = normal penalty time (please refer chapter 8.5)

6.2.4 Overall Results / Total Elapsed Time (TET)

$\mathrm{TET} = \mathrm{DET}\ [\text{First valid day}] + \mathrm{DET}\ [\text{second valid day}] + \ldots.$

The pilot with the lowest TET win`s the competition.

6.3 PENALTIES AND DISQUALIFICATION

6.3.1 The ELGC Director shall impose penalties for infringement of, or non-compliance with, any Rule or Local Procedure. The severity of the penalty's ranges from a minimum of a warning to disqualification as appropriate for the offence. The penalties imposed shall be in accordance with the appropriate list of penalties stated in Section 8.5 below.

6.3.2 All penalties shall be expressed in times and added to the scores after they have been calculated according to section 8.5.

6.3.3 Offences not covered by this list may be penalised at the ELGC Director's discretion in accordance with the provisions of the Sporting Code, General Section 5.2.

6.3.4 Penalties shall be listed on the score sheet of the Day on which the penalty was given.

6.3.5 In case of dangerous flying or cheating or unsportsmanlike behaviour the ELGC Director may give a yellow card (warning) or a red card (disqualification) in addition to any standard penalty.

6.3.6 For a normal scoring after a daily disqualification, the disqualified competitor receives the following daily elapsed time: $\mathrm{DET} = (\mathrm{CET0} + \mathrm{dT})\ \mathrm{x}\ 2$

6.3.7 If a pilot had not started, he receives the following daily elapsed time: $\mathrm{DET} = (\mathrm{CET0} + \mathrm{dT})\ \mathrm{x}\ 2$

6.4 LIST OF APPROVED NORMAL PENALTIES

Type of Offence	Penalty
Overweight of W kilograms in case of a random check	W x 10 sec
Wrong or Missing Information	
Documentation not complete	No launch
Scrutinizing not complete	No launch
Late submission of FR	30 sec
Time intervall between fixes > 3s	3 sec
Changing FR without advising the Organisers	1 minute
Incorrect Start	
Time spent outside the Extended Start Area during the final 1 minute before the Start Line is open	Time x 2
Start before the Start Line is open	Time difference x 10
Start above maximum start altitude	0 sec/meter for the first 5 meter, 2 sec/meter thereafter
Start speed above 170 kpH	5sec / km/h in excess of 170 km/h
Missing the start line by less than 500m	5 minutes
Manoeuvring in opposite direction or perpendicular to track of pilots attempting to cross the start line, thereby creating a risk of head-on or perpendicular conflict	Day disqualification
Incorrect Rounding of Turn Points	
Within 0.50 km from the boundary of the Observation Zone	5 minutes
More than 0.50 km from the boundary of the Observation Zone	No control
Flying above max altitude in the observation zone of a Turn Point (if a maximum altitude has been set)	0 sec/meter for the first 5 meters, 2 sec/meter thereafter
Incorrect Finish	
Flying below the minimum altitude between the reporting point and the finish line.	0 sec/meter for the first 5 meters, 2 sec/meter thereafter (measured at the lowest point between the reporting point and the finish line)
Engine usage between reporting point and the finish line	30 sec
Landing on the airfield but not crossing the finish line	5 minutes
Dangerous or Hazardous Flying	
Cloud flying	30 minutes
Circling in wrong direction in the start area before opening of the start	30sec / right turn or right circle
Towing: early or late release/ pull-up before release	1 minute
Finish Line: hazardous manoeuvre	1 minute
Landing: incorrect landing lane	1 minute
Flying above the absolute altitude limit (defined at briefing) if excess altitude < 100m	0 sec/meter for the first 5 meters, 2 sec/meter thereafter
Flying above the absolute altitude limit (defined at briefing) if excess altitude > 100m	outlanded at the entrance in the airspace
Entering restricted or closed airspace	outlanded at the entrance in the airspace
Landing after legal daylight	outlanded at the position of the sailplane at the expiry of the legal daylight
Cheating or Falsifying Documents	
Falsifying documents	Disqualifying
Attempt to obtain external help for finding lift from non-competing sailplane or airplane	Day disqualification
Use of frequency other than the common frequency	5 minutes
Attempt to interfere with the tracking units	5 minutes
Other Violations	
Flying under influence of alcohol	Day Disqualification
Positive doping control	See FAI policy
Daily Disqualification	
in case of daily disqualification, the pilot receives following DET	DET = (CET0 + dT) x 2

7. COMPLAINTS AND PROTESTS

7.1 COMPLAINTS

7.1.1 The purpose of a complaint is to obtain a correction without the need to make a formal protest.

7.1.2 At any time during the ELGC a complaint may be made by a competitor to the ELGC Director or his nominated Deputy. Such complaint shall be dealt with expeditiously.

7.2 PROTESTS

7.2.1 Protests may not be filed against the ELGC's Rules.

7.2.2 When dissatisfied with a penalty or the decision on a complaint made during the ELGC a competitor has the right of protest to the FAI official.

a. Such a protest shall be made in writing, in English, and shall contain the following elements:
   - It shall refer to the decision, against which the protest is lodged,
   - It shall include reasons for the protest, and
   - It shall state the remedy sought by the protest.

b. A Protest, together with the Protest Fee of 150 Euros, shall be handed to the ELGC Director or his nominated Deputy, by the competitor before the briefing of the day after the publication of the decision against which the protest is made (or within 1 hour after this publication on the last day)

7.3 TREATMENT OF PROTESTS

The ELGC Director shall deliver a protest to the FAI official without delay.

a. The FAI official shall give his decision within 24 hours (as soon as possible on the last day) of receiving the protest from the ELGC Director.
b. The FAI official shall hear both sides on the matter of any protest, applying correctly the Rules for the ELGC and appropriate FAI Regulations. In considering the protest the FAI official shall be provided with access to all persons and information to assist in their considerations.
c. The ELGC Director is bound by the decision of the FAI official.
d. The protest fee shall be returned only if the protest is upheld, or is withdrawn prior to the hearing by the FAI official.

8. RESULTS

8.1 DEFINITION OF STATUS OF RESULTS

a. **Preliminary Results:** Performances before any verification;
b. **Unofficial Results:** Preliminary results corrected following verification of flight records from all pilots receiving points and including penalties;
c. **Final Results:** Unofficial results corrected after expiry of the protest time and after all protests have been dealt with to include the consequences all decisions on these protests made by the FAI official.

8.2 PUBLISHING

All Unofficial and Final Results shall be published with minimum delay clearly indicating the status of the result and the time of publication and with the pilots ranked by their performance for the day. Unofficial Results shall include the expiry time for protests and Unofficial Results and Final Results shall be signed by the ELGC Director or his nominated Deputy. A short prizegiving ceremony, based on unofficial results, should be organised daily, no later than one hour after the arrival of the three first pilots.

8.3 VALIDITY OF THE RESULTS

8.3.1 The cumulative scores of the e-Concept gliding contest shall be final only after the FAI official has confirmed their validity. They will be published before the Prizegiving is held.

8.3.2 The Results of an ELGC contest are valid if there were at least 2 valid races.

9. LOCAL PROCEDURES

Local Procedures must be provided to the competitors by the organisers no later than one month before the event.

The Local Procedures shall be submitted to the ELGC management team for approval no later than two months before the Opening Ceremony.

They are always subordinate to the ELGC rule and shall not duplicate rules already contained in this document.

They shall contain the following information:

A. **Documents to be presented by the pilot at registration**
   - Pilot
   - Crew
   - Sailplane

B. **Technical requirements**
   - Method of determining energy used and calibration of energy logger
   - Scrutineering: location and schedule
   - List of instruments that must be removed
   - Requirement for High visibility markings
   - Procedure for checking aircraft mass

C. **Scoring**
   - used Indexlist for Distance Handicap and maximum wingload
   - Handling of IGC files in electronic form
   - Delay for handling of flight documents

D. **General Flying Procedure**
   - Map of the airfield
   - Units of measurement
   - Single Frequency to be used
   - Carriage of tracking units

E. **Gridding**
   - Organisation of the grid
   - Requirements for discharging of water ballasts on the grid

F. **Launch procedure**
   - Procedure for motor gliders if they are accepted
   - Release areas
   - Release
   - Re-lights (re-launch)
   - Turn direction for the first Kilometers

G. **Finish Procedure**
   - Arrival announcement
   - Mandatory Reporting points (if any)
   - Procedure for direct landings
   - Procedure for speed finishes
   - Minimum altitude/height restrictions.

H. **Outlanding**
   - Telephone number of the outlanding office
   - Outlanding form (information to be provided)