

THE GLIDING FEDERATION OF AUSTRALIA INC

ABN 82 433 264 489

[www.glidingaustralia.org](http://www.glidingaustralia.org)



## **National Competition Guidelines**

DOCUMENT NUMBER SDP014

Version 1

Oct 2021

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**REVISION RECORD**

<b>Prepared</b>	<b>Approved</b>	<b>Version</b>	<b>Date</b>
D. Pietsch		2.1A	To Be Approved
J Thompson	J Thompson	1	Oct 2021
<b>Précis of changes</b> General update, change of revision number, insurance details updated, template forms added			

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National Championships are run on behalf of Gliding Australia for the purpose of finding National Champions in various categories. Competitions must be safe and fair, run according to the published Rules, and be both enjoyable and challenging to all who compete. Furthermore, competitions should attract as many pilots as possible who are at the appropriate standard to compete, and who wish to test their skills against their peers.

Australian National Gliding Championships have been conducted since the summer of 1951-2. Over the years, the number of people prepared to act as competition officials has steadily dwindled so that National Championships are being run by very small teams. Further, few competitors have support crew, meaning there are few 'bodies' able to assist with many of the daily tasks in running the competition and this can put considerable stress on the competition team.

These guidelines have been developed to assist competition officials in preparing for and conducting a gliding. Whilst these guidelines are aimed at National Championships, they are also relevant to State Championships. This document must be read as an accompaniment to the Australian National Championships Competition Rules ("the Rules") and assumes that the Organisers have fully acquainted themselves with the Rules which cover the competition prerequisite and the mandatory aspects.

Where there is an apparent discrepancy between these two documents the Rules will take precedence.

Finally, these guidelines are just that, they are guidelines, and every competition will have its own unique set of circumstances, so adapting these guidelines, as necessary, will be the order of the day. There will always be local factors or emerging circumstances or emerging technologies that will make it sensible to conduct the activity another, or a better, way.

**For this document to remain relevant and useful, Competition Organisers are asked to propose necessary changes to the National Competition Committee (NCC) for incorporation into the document. Send comments to [csdp@glidingaustralia.org](mailto:csdp@glidingaustralia.org)**

## 1. Scope

This document will primarily concern itself with the operational and organisational aspects of running a successful National Gliding Competition including:

- pre-competition activities
- the daily briefing
- the movements of gliders around the airfield
- the launch and start processes
- outlanding considerations
- finish and recovery processes

Whilst these guidelines are designed for the running of National Competitions, they should be used as guidelines for State competitions.

IT IS IMPORTANT TO HAVE GOOD KNOWLEDGE OF THE CURRENT RULES.

## 2. Competition Outcomes and Responsibilities

The competition can be considered as needing to achieve three outcomes: a sporting outcome, an operational outcome, and a reputation outcome.

### 2.1 Sporting Outcome

The sporting outcome determines the winner(s) in a fair competition. It is reasonable to expect that the sporting outcome is largely the responsibility of the Competition Director (CD) who must apply the Rules and oversight the competition to ensure a fair outcome.

## 2.2 Operational Outcome

The operational outcome is a safe competition without injury to people or damage to equipment.

The competition official with operational responsibility is the Competition Safety Officer who must be approved by the RM/O (refer MOSP 2 Section 9.3.4).

## 2.3 Reputation Outcome

The reputation outcome is a competition that creates a positive image for gliding across the gliding community, the wider aviation community, and the public.

# 3. Timeline Planning Guide

## 3.1 Six or more months prior

- Set up Website and Facebook page
- Dates to GFA Calendar and GFA Facebook page
- Advertise event Magazine and publicize through Social Media
- Appoint CD and apply to NCC for approval
- Appoint Major officials
- Publish entry form
- Draft Local rules
- Draft Budget

## 3.2 Three months prior

- Send Local rules to NCC for approval
- Send Budget to NCC for approval
- Appoint all officials
- Apply to RMO for approval of Safety Officer
- Locate trophies to be awarded
- Purchase day and final prizes
- Seek approval of, and publish Local rules
- Publish Turn points and Airspace files
- Order competition shirts and merchandise
- Decide on random weigh or daily weigh (preferred)
- Source personnel to run wings and launch gliders

## 3.3 One month prior

- Contact all pilots to confirm attendance
- Set up Soaring Spot Page
- Finalise Scrutineering and Registration information
- Organise NOTAM

# 4. Operational Matters

## 4.1 General

The competition must be run in accordance with the applicable sections of the Gliding Australia Manual of Standard Procedures (MOSP).

At this level, the Organisers should assume that pilots who have satisfied the entry conditions are competent and operate their aircraft within its certified limits, unless they demonstrate otherwise.

Pilots are required to obey all applicable laws and regulations and must accept full responsibility as pilots in command as specified in the MOSP. The competition must not diminish those responsibilities and where the pilot is faced with a choice between the MOSP and the Rules, the MOSP must have precedence and the Rules and procedures must allow for

that. The Organisation must carefully monitor the behaviour of pilots to ensure that the pilots also carry out their obligations in this regard.

The Organisers have a responsibility to ensure that the competition does not place competitors, helpers, other users of the airspace, or the public at unnecessary risk, and that safety risks are lowered as far as reasonably practical.

Finally, the Organisers are expected to set tasks that provide a sporting challenge but without putting pilots in danger to compete.

#### **4.2 Airfield Arrangements and Permissions (MOSP 2 Rev 3 Sect 18.6)**

The Organisers must make airfield arrangements with CASA and local authorities in accordance with MOSP 2 Sect 18.6

#### **4.3 Sporting events, operational factors (MOSP 2 Rev 3 Sect 8.1.17)**

Regardless of venue, all competitions, regattas, or sporting events held in a region are the operational responsibility of the Regional Manager Operations (RMO) and must comply with normal Gliding Australia requirements. This includes National and World Championship events.

The competition official with operational responsibility will be the Safety Officer, who must be approved by the RM/O. In the event of a dispute regarding an operational matter, the decision of the Safety Officer will prevail.

#### **4.4 Ratification of a Competition Safety Officer (MOSP 2 Rev 3 Sect 9.2.4)**

The competition official with operational responsibility will be the Competition Safety Officer who must be approved by the RM/O (refer Section 9.3.4).

#### **4.5 Budget and Competition Approval/Endorsement**

All National Championships, State Championships, and other events whose scope goes beyond normal club operations shall be “Endorsed” competitions. This endorsement provides a measure of insurance protection for Officials and has been negotiated in such a way as to require a certain minimum standard from the organisation.<sup>1</sup>

The requirements for endorsement are:

- Competition Director (Approved by Gliding Australia Soaring Development Committee (SDP) through the NCC)
- Safety Officer (Approved by RM/O of the local region)
- CD and Safety Officer shall be different people in National and State Competitions
- All competition pilots shall have an FAI Competitors Licence or a Gliding Australia Glider Pilot Certificate (GPC)

The Competition is endorsed by the Chair of the Soaring Development Committee or a deputy, normally the Chair of NCC.

Organisers must submit a budget to the SDP (via the NCC) for approval.

##### **4.5.1 Entry Fees**

Organisers should charge reasonable entry fees and tug charges. It is not Gliding Australia’s role to specify fees and profit levels, but it is incumbent on the organisers to be reasonable.

Entry fees are made up of establishment costs, tug ferries, Gliding Australia fees, prizes, infrastructure costs, etc. The major cost associated with running a competition is the tug ferry, tug pilots, fuel arrangements and cost of tugs. Organisers should specify what component of the entry fees or daily fees relate to tugs being provided.

For most clubs, there is a very small amount of upfront cost. Clubs that have no council

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<sup>1</sup> See Section 3.8 of this Document



infrastructure have more costs (rubbish removal, toilets, non-refundable deposits, etc)

To discourage late entries, which is not fair on organisers, other competitors, and tug owners, and impacts the chosen format of competition etc:

- Early Bird discounts apply up to 12 weeks prior to the competition practice day.
- Normal fees apply 6-12 weeks prior to the competition practice day.
- If Entries are accepted after 6 weeks prior to the competition practice day or later, Late fees must apply

#### **4.5.2 Underwriting of the Competition**

- Clubs who want Gliding Australia to underwrite the competition should include a competition guarantee fee in the entry fee (\$10 per entry) which is provided to Gliding Australia to go towards a sinking fund (Competition Guarantee Fund) for underwriting and they must notify the NCC of this choice. Gliding Australia will underwrite the losses of the National competition on the proviso that a budget for the competition is presented to the NCC and approved prior to the event. The budget is to cover tug, infrastructure, prizes, external catering, room hire, etc. Profit from bar and catering run by the club is excluded from the submitted budget.
- Clubs who do not want to participate in the Underwriting Arrangement can take their own risk and are not eligible for underwriting in the event of a loss being made.

### **4.6 Refunds**

#### **4.6.1 Refunds to Competitors**

If the competition is cancelled before it begins because of COVID or significant weather or other major events, Organisers will provide a full refund of fees paid to competitors if requested.

If the competition is stopped mid-way, the refunds are pro-rata days flown, against the total entry fee.

#### **4.6.2 Refunds to Organisers**

If the competition is cancelled before it begins because of COVID or significant weather or other major events, all costs encountered as noted as items in the budget, and including the refunds paid to competitors, and reasonable costs, will be reimbursed by SDP. Clubs should submit a claim to the NCC, which is approved by the SDP.

If the Organisers make a loss on a Competition that has started (due to COVID, weather, lack of participants, participants leaving half-way through, serious incidents, etc), the Organisers may submit a claim of reimbursement to Gliding Australia for reimbursement of the loss, as noted in the submitted budget and actual costs incurred.

### **4.7 Cancellation Notice and Changes to Site**

A final decision on the cancellation of a competition must be made 6 weeks prior to the first practice day and notified to all competitors. It is essential that the organizing club and the NCC hold discussions early and the decision is jointly made.

Similarly, consideration of a change of site to hold a competition must be made jointly with the clubs/organisers involved. If clubs cannot hold the competition for any reason and need to withdraw, this decision and discussions must be held as early as possible to allow another site to be established.

A change of site will impact many competitors' decisions on whether to fly in a particular competition.

### **4.8 Insurance**

The GFA's Broad Base liability policy provides Clubs and financial members with \$1,000,000

for anyone occurrence which is the minimum liability limit required to participate in GFA endorsements competitions.

The Gliding Australia insurer does ask for a list of the competitions held during the previous year which forms part of the underwriting information presented at renewal.

With regards to the competition endorsement clause for participating gliders insurance competition endorsement clauses are as follows:

*Agile / HDI: GFA Competitions*

*In respect of aircraft competing in competitions sanctioned by the Gliding Federation of Australia, the Policy is extended to include as jointly insured, the Gliding Federation of Australia, the Gliding Club hosting the event and any individual organiser or helper acting in connection with the sanctioned gliding competition.*

*QBE: Gliding Competition*

*In respect to the use of the Aircraft referred to in the Schedule competing in a gliding competition sanctioned by the Gliding Federation of Australia, Sections 2 and 3 of the Policy are extended to include as additional insureds, the Gliding Federation of Australia, any affiliated State Gliding Association, any affiliated Gliding Club and any individual organiser or helper acting in connection with such competition, but limited to the extent of coverage and Limit(s) of Liability as provided by this Policy.*

#### **4.9 Event Notification**

Once the competition has been endorsed, the Organisers must ensure that the event is placed on the Gliding Australia website calendar.

#### **4.10 Operational Structure**

Gliding Australia requires that all competition officials who carry operational responsibilities must be approved by the RM/O. As already stated, in the event of a dispute regarding an operational matter, the decision of the Safety Officer must prevail.

The Organisers represent the Sports Committee and the Gliding Australia. The Organisers need to put in place an organisation that can run the competition in accordance with the Rules – they must obtain the people and equipment necessary to achieve this. Any compromises need to be agreed with the NCC ahead of the competition.

The Rules are set by Gliding Australia and must not be modified or ignored by the Organisers.

That said, there is a lot of scope for interpretation and judgement in the Rules. It is most important that pilots perceive that the competition provides the necessary challenge, is run fairly and safely and that they leave looking forward to returning for the next one.

The Local Rules, developed by the Organisers, must be approved by the NCC.

In addition to the Gliding Australia mandated positions of CD and Safety Officer, further, non-mandated, positions can include:

- Operations Officer
- Chief Marshall
- Launch Director
- Tug Master
- Weather Forecaster
- Chief Task Setter
- Verifier/Scorer
- Secretary
- Start and Finish radio
- Blogger

- Photographer
- Trackers
- Steward appointed by NCC
- Media

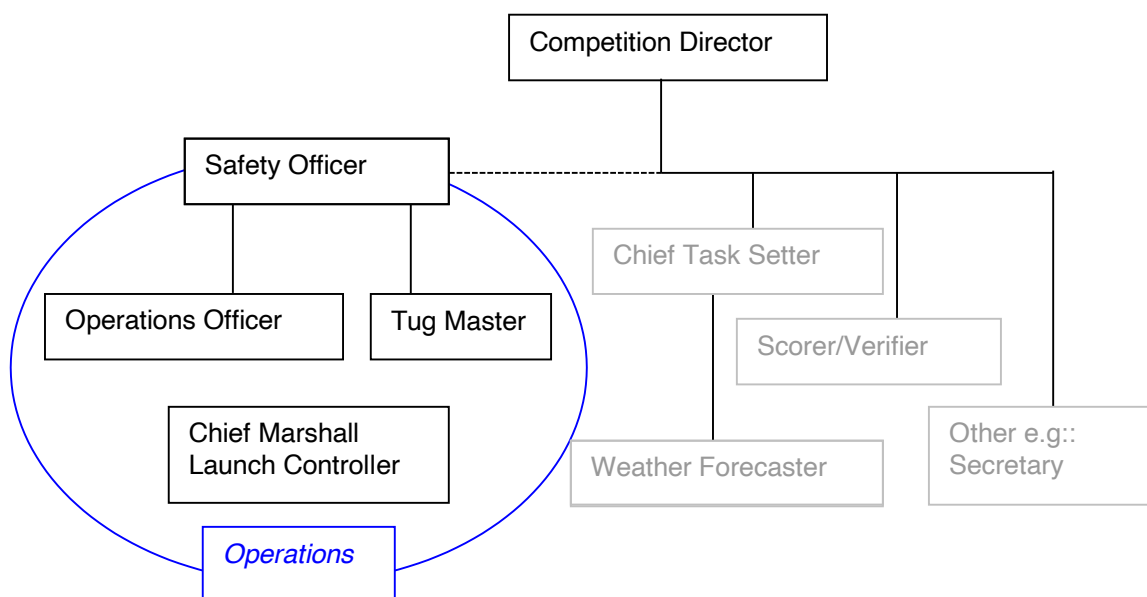
The NCC will appoint Steward(s) for National Competitions.

Whilst the overall conduct of the competition is the responsibility of the CD, the two supporting positions that make up operations group are the Safety Officer and the Tug Master.

Details of their individual responsibilities are suggested below. It is fair to say however, that whilst the Safety Officer has operational responsibility, they will be responsive to requests/guidance from the CD. No rigid lines of responsibility are dictated, and a collegiate approach from all officials is expected.

An example organisational structure is shown below (not all positions are depicted):

Figure 1 - Comp Organisational Structure



Each competition will have its own set of local conditions, such as one person taking on more than one role (noting that the CD cannot be the Safety Officer) but no matter what the structure, it is important that, prior to the competition, all the officials determine their respective lines of communication and reporting to ensure that all are working in a collegiate environment for a common outcome.

## 5. Officials

### 5.1 Competition Director (CD)

The CD is appointed in writing by the SDP through NCC. The CD must:

- be a current or former competition pilot or have extensive experience as an official, but not necessarily be an instructor or coach
- at Nationals level, have experience as a CD in other gliding competitions or in other sports at a similar level.
- is responsible to the Gliding Australia Sports Committee for the overall conduct and outcomes of the competition

- ensures that the competition is conducted fairly, that the pilots are challenged with low safety risk and that the event presents Gliding Australia and its members in a positive public image
- has a good understanding of the Rules and the experience and judgement to direct the Chief Task Setter where necessary to ensure appropriate and fair sporting outcomes.
- has the right attitude, approach, and skills to be the “face” of the event to the pilots, the Gliding Australia and the media
- manages disputes and responds appropriately to competitor pressure
- recognises poor judgements and can rectify them
- manages the workload and is cautious about taking on day-to-day operational tasks, especially at large competitions. This is the responsibility of the Safety Officer (see below). Recent history shows that overworked CDs may lead to the sporting outcome being compromised. If the competition goes “well” the CD may feel underutilised, but this allows the spare capacity to deal with unplanned or unexpected arisings, eg interaction with the public/media, resolving disputes etc.
- produces a written report to NCC and ensures the Scorer posts the completed results on the Gliding Australia web page on completion of the competition, and
- advises the Trophies Officer of all the trophy winners.

## 5.2 Safety Officer

The Safety Officer is appointed in writing by the RM/O of the local Region and must meet the requirements as listed in Section 9.3.4 of MOSP2.

The Safety Officer:

- is responsible to the RM/O for the operational conduct of the competition
- creates and manages the environment for safe, effective, and efficient flying operations and is responsible for the daily operation on the airfield – marshalling, launching, and finishing and for ensuring that any local flying is managed to fit in with the competition requirements.
- has the right attitude and needs to be confident, fearless and fair in dealing with whomever or whatever regarding any issues needing rectifying.
- directs the operations team during the conduct of the event.
- forms a safety committee
- ensures the reporting/investigation (as necessary) of accidents and incidents, including submission of Soar Reports
- deals with site specific safety problems daily
- reviews daily tasking to identify hazards that may arise during the competition task
- communicates with Airlines/RPT where necessary, advising competition tasking to all airspace users to enable safety planning and mitigation
- maintains a register of disputes and outcomes
- ensures compliance with a code of conduct
- produces a written report to the RM/O and NCC Chair on completion of the competition

## 5.3 Operations Officer

An Operations Officer may be appointed to assist the Safety Officer with conducting the operation. They would ideally, but not necessarily, be an active instructor, working under the authority of the Safety Officer.

The level of assistance provided by an Operations Officer to the Safety Officer can vary from minor to major to meet the local circumstances, noting that the Safety Officer always retains operational responsibility. For example, the Operations Officer might take over the roles of Chief Marshal and or Launch Controller.

## **5.4 Chief Marshall and Launch Controller**

### **5.4.1 Chief Marshall**

The Chief Marshall's task is to ensure that start grid is arranged to meet the launch order requirements and that the movement of gliders from the tie down area(s) to the launch grid is conducted in an orderly and efficient manner.

### **5.4.2 Launch Controller**

The Launch Controller's task is to manage the launch sequence safely and efficiently. This is a critical role as the environment is noisy, often dusty, there will be a lot of movement of aircraft and personnel, plus there will be the ever-present danger of spinning propellers and moving aircraft. The launch controller must have a cool head, a clear understanding of his environment, and a very keen eye for potential dangers. The launch controller must be able to manage a safe launch sequence and never, ever, allow the pressure of completing the launch to compromise safety. The difference between a slow launch sequence and an accident is immeasurable.

It can be convenient for the Chief Marshall and the Launch Controller to be the same person.

## **5.5 Tug Master**

The Tug Master's task is to manage the towing operation, including monitoring serviceability, fuel, ropes and rings, and maintenance in addition to controlling the towing operation on each day. They establish towing patterns to minimise congestion and airprox risks.

It is a major role which has a considerable bearing on the safety and often on the fairness of the competition.

The Tug Master may be a local club Tug Master or experienced tow pilot – experience in competition towing is important especially in the Multi-class Nationals where most gliders will be launched at their MTOW.

All tug pilots must have a competition towing endorsement.

## **5.6 Weather Forecaster**

The Weather Forecaster's task is to provide vital input to the task setter and conduct the daily weather briefing. This is one of the most sporting critical roles in the competition

The provision of detailed and accurate weather information will provide the task setter the essential information to set a challenging yet achievable task. Outlanding most of the field or setting a 200k task on a 500k day is highly undesirable. The weather forecast has a direct bearing on operational aspects of the day, dictating launch time, and pilot's ideal start time, finishing time, and planned route. It needs to provide pilots with the essential tactical information to plan their flights effectively.

## **5.7 Chief Task Setter**

The Chief Task Setter's role is to chair the Task Setting Committee and has primary responsibility for setting tasks with input from the class representatives. The committee must respond to any direction from the CD who may wish, or even need, to set the overall sporting intent of the competition day.

The Chief Task Setter should ideally be a knowledgeable local pilot, experienced in competition at a National or State level. They must understand both the safety implications and the sporting consequences of various tasking options and have a good instinct for the associated nuances.

Each day, prior to briefing, the task setting committee will set an appropriate task based on any CD direction, the information provided by the Weather Forecaster and their knowledge of the task area.

If the Chief Task Setter is in contention for Competition winner, then they should be excused

from task setting on at least the last day.

### **5.8 Scorer/Verifier**

The Scorer/verifier's main task is to monitor the operation of the scoring system (currently See You) and be able to intervene or communicate with the host (currently Naviter) to resolve issues that might arise. They also need knowledge of gliding competitions and the Rules, where verification or interpretation of flight logs is necessary in the event of logger failures, use of back-up loggers and interpretation of potential infringements. The Scorer/verifier's job is to give a pilot the maximum score possible within the Rules. Often, the scorer can do this work offsite, with assistance from the onsite organisers.

## **6. Pre-Competition Preparation**

The Organisers need to consider the following operational matters prior to pilots arriving at the competition.

### **6.1 Competition Prizes**

The Organisers must ensure the return of all trophies and arrange for their cleaning etc prior to final presentation.

It is recommended to provide small take-away trophies/medals for final place getters to retain. Daily prizes are traditionally small gifts such as bottles of wine provided by sponsors.

### **6.2 Competition Website**

A competition website is essential. Establishment of the website as soon as the competition is scheduled is a good idea. Importantly, a website manager should maintain the website with regular updates. An obviously out of date website does not engender confidence in the Organisers. It would be useful to consider any proposed wireless logger trace download protocol at this stage.

### **6.3 Entries**

A limit of 60 competition aircraft in total is seen to be the maximum manageable size when taking into consideration weighing, briefing, gridding, launching, competition finish and logistics. Larger competition sizes can be achieved where the logistics, personnel, number of tugs, tie down and gridding areas are able to facilitate a safe and efficient operation, but should not exceed 40 competitors in any one class.

Clubs who organise competitions normally accept all entries (up to the maximum) submitted provided that:

- The pilot (and crew) can comply with the club's rules and procedures
- The pilot has the necessary experience and qualifications

Clubs may refuse the entry of a pilot to a national competition based on evidence and objective measures.

### **6.4 Other Airfield Users**

Where the site is a joint user, other airfield users must be accommodated. Face to face discussions with other users should be held, ideally by local gliding representatives, to ensure that both sides understand each other's needs and expectations.

Seek formal approval from the local airport management authority to make all runways and gridding points available for the duration of the competition.

### **6.5 Competition Area and Waypoints**

The competition area and waypoints should be published on the Worldwide Soaring Turnpoint Exchange website as early as possible before the event and preferably no later than 2 weeks before the registration dates. Annex A suggests a waypoint data protocol.

Should tasks be envisaged that would take pilots over reduced or sparse outlanding

opportunities the Organisers should, prior to the event, advise pilots and consider providing outlanding guidance to allow pilots to conduct appropriate pre-competition planning, such as ground inspection or Google Earth study.

### **6.6 Competition NOTAM**

It has been a longstanding practice for competition organisers to promulgate a NOTAM to advise other airspace users of the intensive gliding activity. This is in line with the requirements in AIP GEN 2.2, which requires a NOTAM to be originated and issued when concerning the presence of hazards which affect air navigation – such as gliding competitions, regattas or other intensive gliding activities.

NOTAM requests are to be submitted via the CASA Sports Office at least 14 days ahead of the commencement date of the event using the specially designed form available from the GFA Documents and Forms Library at [THIS LINK](#). Relevant guidance is contained within the form.

In addition, where a gliding event is being conducted from a certified aerodrome, the aerodrome reporting officer will usually arrange for a separate NOTAM to be issued where the event has a direct effect on aerodrome operations, both on the ground or within the airspace associated with that aerodrome. The Competition organisers should liaise with the aerodrome operator well in advance to determine their requirements

### **6.7 Airspace**

To reduce the likelihood of airspace infringements, the concept of a competition area has been introduced. Usually, a lateral boundary of 1 km and a vertical boundary of 500 ft clear of the controlled airspace is established, outside of which scoring penalties will be applied.

The above criteria can be varied and allow the Organisers to totally exclude areas which are impractical for use or where the terrain is unsuitable to fly over.

When selecting the competition area, consideration must be given to airspace constraints. Generally, there will be no flexibility with respect to accessing Class A or C airspace.

However, Restricted Areas and Danger Areas that are activated by NOTAM need to be considered for possible use during the competition. Most of these areas are normally activated by the ADF and it is often possible to obtain an undertaking from the ADF that the relevant areas will not be activated during the competition period, particularly during the December/January period when military activity is usually reduced. To facilitate negotiations with the relevant airspace users, being able to deal through a glider pilot who is appropriately positioned within the organisation normally activating the airspace is generally an advantage. Gliding competitions do not rate particularly highly for airspace users when competing for airspace unless we have a competent “insider”.

Many glider pilots fly only in class G, sometimes E, airspace and have no familiarity with many airspace issues. Pre-competition documentation should contain all necessary airspace information for pilots to avoid infringements.

### **6.8 Radio Frequencies**

The allocated safety frequency for National and lesser gliding competitions is 122.025 (see MOSP 2 Rev 3 Sect 19.2 and 19.3). The airfield frequency will normally be different, as will the Area frequency.

Develop and publish frequency procedures that optimise the use of radio to provide maximum situational awareness for all airspace users.

### **6.9 Water Ballast Facilities**

For multi-class events, confirm that water will be available! Water restrictions might preclude water ballast, and this of course will have a bearing on the site selected. Assuming water available, water ballast facilities need to be considered when establishing tie down locations. Convenient watering points should be provided throughout the tie down area. Ideally water will

be reticulated across the tie down area such that each tie down point has easy and individual access to water, ideally without having to move the glider from the tie-down point (reduces ground handling risks). Water pressure should be sufficient to allow the simultaneous filling of ballast from all outlets.

### 6.10 Tugs

The standard sought is to launch the entire fleet in one hour or less. One tug can launch about 6-8 aircraft per hour. This mandates sufficient tugs of sufficient power to be provided, relative to the size of the competition fleet. Low powered or slow tugs are to be avoided from a safety viewpoint. If the number of tugs becomes problematic, avoid the temptation to use unsuitable tugs. Simply accept the additional launch time with a reduced number of tugs. If necessary, limit entries accordingly. Consider the following with respect to towing:

- Take-off distance and rate of climb of the tug glider combination is a function of combined weight of tug and glider and the available power of tug. Heavy gliders need higher powered tugs. Whilst some airfields and their environs will allow lower powered tugs, the benchmark for tugs could be the Pawnee 235.
- Open class gliders at 850 kg take-off weight require a minimum of a Pawnee 235 but preferably a higher-powered tug (e.g. Pawnee 260)
- 18-metre gliders at 600 kg take-off weight and 15-meter gliders at 525 kg require a minimum of 180 hp but preferably a Pawnee 235.
- Club and Sports class gliders at lower max take-off weights around 400 kg can usually be served adequately by tugs of 180 hp.

Whilst this discussion re power of tugs is referenced to horsepower, this assumes an aircraft intended for glider towing, with suitable propeller and being devoid of ancillary equipment such as agricultural spreading/spraying gear. Further it is assumed that the lower powered tugs are in lighter aircraft so that a commensurate power margin remains for acceleration and climb. IE a where a 180 hp Pawnee might be unsuitable, a 180 hp Super Cub might be perfectly adequate.

Gliders flying at ballasted competitions require as a benchmark 70 kts on tow. This particularly applies to longer wing aircraft, some of which are sluggish to manoeuvre on tow. Tugs that are not capable of towing effectively at up to 75 kts are generally unsuitable to tow larger gliders at ballasted competitions. (See further discussion [7.22 Launching Procedure](#))

### 6.11 Weather Forecasting

Local knowledge is always an advantage for forecasting. If the Weather Forecaster is not a local, then endeavours should be made to obtain some local assistance. The Weather Forecaster will likely use online weather forecasting tools as well as BOM.

### 6.12 Trackers

Many competitions use Trackers. These need to be obtained and distributed.

*[more detail on this to be included in future versions of this document]*

### 6.13 Practice Days

The Rules require at least one official practice day be scheduled at the start of each competition. This is not only for the pilots to become familiar with the competition environment but importantly, to give the Organisers an opportunity to have a “practice run” to address any bugs in the operational procedures. Should the scheduled practice day not be flyable the rules allow for the next day to be the first contest day, but organisers should still avail themselves of the opportunity to rehearse relevant procedures anyway.

### 6.14 Pilot Information and Competition Documentation

#### 6.14.1 Car Glider Stickers

It is usual to provide glider Rego car stickers for entrants.





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- Appendix E - Takeoff Log Form\_
- [Appendix F - Change of Task Sheet Example](#)

### 6.14.3 Local Rules

Organisers shall document Local Rules. See Appendix B - Minimum Content for Local Rules and Information for suggested minimum contents list. It is highly recommended that operational documentation is disseminated prior to the competition via the competition website or by email.

### 6.15 Risk Management

Prior to the competition a risk management plan should be developed. These risks should include:

- Organisational risks that might jeopardise the overall conduct of the competition
- Operational risks that might affect the running of the operation
- Competition risks that might jeopardise a fair outcome of the competition
- Safety risks that impinge on the safety of people or equipment
- Public image risks that affect the standing of the gliding fraternity within the aviation and general community
- Accident response, first aid people, Doctors, Ambulance
- Others

To develop the plan, use of the Gliding Australia ***SDP016 Gliding Australia Generic Risk Assessment.xlsx***, and adapt as appropriate for the competition.

One effective method of dealing with the wide range of risks is to have a brainstorming session with a group of people to develop a risk register and then in measured time determine how each of the risks are treated to reduce them to a level that is as low as reasonably practical.

### 6.16 Disaster Planning – Incidents and Accidents

Prior to the competition, an accident plan needs to be developed which accounts for the local environment. Roles and responsibilities of key players will need to be clearly articulated and relevant personnel nominated and educated. In the event of an accident, it will normally be the Safety Officer who conducts the initial rescue actions, whilst the CD undertakes all the notification and media issues.

In the event of an incident, normal Gliding Australia reporting is to be applied.

It is strongly recommended to conduct at least a couple of desk top accident exercises prior to the competition to ensure that should an accident occur, all the important initial steps are taken and the transfer to the relevant authorities (police, emergency services, etc.) is smooth and effective. A written accident / incident guide or aide memoir is essential to get this right.

## 7. THE COMPETITION PERIOD

### 7.1 Registration

The local rules will nominate the registration period. Having the registration office open for two days before the first official practice day may prove useful for avoiding congestion. It is preferred that the registration processes are completed on-line prior to the event to simplify and speed up the process.

Information that is needed by the Organisers includes:

- The Pilot IGC Identification. The Organisers must put this ID into the scoring program against the pilot's name to ensure that the pilot's IGC ranking is automatically updated after the competition. Failure to do so creates a significant workload after the event.

- The Class that the pilot intends to fly in. For pilots with aircraft capable of being flown in more than one class, the Organisers should not accept changes of class after pilot registration.
- Pilot/Crew mobile phone number to be used for SMS broadcast of operational matters such as changed briefing times etc.
- Details of any tracking device that the pilot might be carrying to enable the Organisers to access tracking data, particularly in the event of failure to complete the task (e.g. URL for accessing SPOT tracking data)

## 7.2 Scrutineering

All gliders must be weighed to ensure reference weight. Refer to the Rules for information, and the current Gliding Australia Handicap Lists.

At Scrutineering, the Scrutineers may also check winglets, parachutes, Oxygen, Flarm functionality, carriage of emergency beacons, etc (but some Competition Organisers will be happy to accept pilot declarations).

- When weighing the entire fleet the option exists to allow pilots to present their aircraft overweight and reduce weight at the weighing station in order to leave the station at maximum competition weight.
- When weighing only selected aircraft, all aircraft must leave the tie down area in their intended weight configuration. No voluntary reduction of weight at the weighing station is permitted.

### 7.2.1 Weighing Method

Aircraft are weighed prior to the first Competition Day in their:

- maximum weight configuration for multi-class competition and
- intended flying weight for club and sports class competitions.

Then by immediately configuring the glider in the tow out configuration (no pilot, all flight equipment loaded, wing tip wheel affixed, attached to car, etc.) and recording just the main wheel weight this figure can be used in the spot weight checking process to give a reasonably adequate weight check.

For spot weight checking, place the weighing station near the tow-out path so that pilots can easily pull out of the tow-out line, be weighed quickly, compared with their recorded weight, and easily return to the tow-out line. If wind is significant, weighing the glider crosswind is likely to give the most accurate weight. In the event of a disputed overweight reading, pilots need the option of a full weighing and these facilities need to be instantly on hand. This weighing team requires one or two knowledgeable people who, perhaps, can later assist with the launch process.

Where random weighing is used, Ballast Infringement penalties apply.

## 7.3 Competition Communications

It is useful to establish a text messaging system for communicating to pilots and crew during the competition. E.g. WhatsApp or SMS.

## 7.4 Tie-downs

Where necessary, gliders should be grouped on the tie-down area according to the groups that are going to be started together. Whilst this generally means by class, if two classes say 15-metre and Standard are going to be tasked and started together then they can be tied down together. The purpose is to permit selective marshalling to allow groups to marshal and grid in desired sequence.

Glider tie down points should be clearly marked out on the ground in the tie down area, (fluoro marking spray paint helps), allowing arriving competitors and crews to quickly identify where

they should position their glider after rigging.

Adequate space should be available to allow gliders to be moved to and from their tie down point without the need for other gliders to be moved and with sufficient clearance not to risk towing accidents.

All tie-down pegs must be flush with the ground.

### **7.5 Trailers**

Trailers should be designated an easily accessible and secure area for parking. All trailers are to be tied down securely.

### **7.6 Non-Competition Flying by Local Glider Pilots**

Pilots who are not entered in the competition may fly but must agree to remain clear of all set tasks and follow any instructions issued to them by the Competition Director. The Safety Officer is responsible for the daily operation on the airfield – marshalling, launching, and finishing – and for ensuring that any local flying is managed to fit in with the competition requirements. (see Section 5.2 above)

### **7.7 Task Setting**

Safety. Tasks should be set to avoid the opportunity for pilots to take safety risks that will confer competitive advantage. Tasks must not be set over terrain that would force pilots to operate out of range of landable areas and Assigned Area Tasks (AATs) should not be chosen to allow pilots, such that by flying out of range of landable terrain, they would achieve a competitive advantage. This is particularly pertinent if convection is low and/or unreliable.

Cats' cradles and AAT tasks are an important consideration as they provide good opportunity for safe task setting.

Challenge. Tasks should challenge all pilots, but not (where possible) demoralise the lower performers. The aim of the National Championships is to find the best pilot so the tasking should reflect that intention. The length of tasks should use as much as is sensible of the soarable day, not just the period of strongest lift, whilst still allowing pilots to complete the task.

Variety. Ideally a mix of longer and shorter tasks provides for a range of tactics and skills to be exercised by the competitors. It is preferable to set approximately equal numbers of each available task type (Fixed/AAT) except in situations where a new task type is being trialled. In this case, it is better to set only one or two of the new type, to avoid distortion of scores if the task is not working well.

Alternate Tasks. It is normal practice to set a task (Task A) which seems best fit for the predicted weather, with a second task (Task B) as back-up should the weather not develop as planned. Normally the B task is a smaller task but they can be larger, should the circumstances warrant. In times of high uncertainty even a C task might prove useful. Importantly, careful consideration should be given to alternate tasks. These tasks must be sufficiently different to cater for the changed circumstances including the allowance for delayed launch time. Task setting time available is usually short so ensure efficient task selection to allow equal attention to be paid to primary and alternate tasks.

### **7.8 Day Cancellation**

Weather related cancellation should be a last resort. The availability of 2 hours of soarable weather after the start should be sufficient for a task. If there is any possibility of a task, then one should be set even if there is a later change or a cancellation.

Where there is any, even slender, likelihood of the weather being suitable for a task, the CD should delay cancellation until at least at briefing or preferably re-schedule the briefing to a later time to allow reassessment of conditions.

Only if there is absolutely no possibility of a task, the CD may cancel the day prior to briefing.

At any stage during the day once a day is cancelled it must not be restarted.

### **7.9 Task Setting Procedure**

For task setting, the normal procedure is to select a different pilot from each class, each day, to form a task setting committee with the Chief Task Setter as chair. Selecting the rotation of pilots for the entire competition in advance and then providing the list at the first competition briefing works well.

Ultimate responsibility for the task will always be with the CD. Tasking should be run by the Chief Task Setter. Any sporting guidance provided by the CD should be incorporated into the task(s). The CD should be present but should normally refrain from involvement unless his sporting direction is not being met.

The Safety Officer should attend as an observer, whose only active role should be to review and if necessary, veto proposals which involve unacceptable/unnecessary safety risks.

Launch sequence between classes will be decided as part of the task setting process, usually in response to direction from the CD.

It is very beneficial to have a tasking assistant who can quickly plot potential tasks within a planning program to provide critical data to the committee when “what-iffing” tasks. This person is not part of the task setting committee and should refrain from offering opinion in developing the task unless a clear undetected error or safety issue develops. An important role is to confirm the max/min distances for AATs are neither under nor over set.

Time for task setting normally is not plentiful. It is useful to remind committee pilots on the previous day’s briefing of the need to attend, have the met ready to go, and the tasking assistant prepared, so that the process can start on time.

The Chief Task Setter may find it useful to have a range of pre-selected tasks, which can be quickly adapted to the conditions of the day. Pre-selection of tasks can consider in slow time the suitability of terrain weather effects etc.

Following the setting of the tasks a final check of the validity of the task(s) is necessary. AAT max and minimum task distances should be confirmed to be in accordance with guidelines (below) with, particularly, no probability of pilots flying the maximum task distance and arriving at the finish line under the allocated time.

Chief Task Setter and CD might find a brief checklist very useful for the final validity check. Final concurrence for the task(s) must be given by the CD.

### **7.10 Racing Task (RT) Guidelines**

The benchmark for task distance is that a glider doing 85% of the expected winner’s speed on the day should be able to complete the task. The delay for launching and gate opening must be considered to allow the last launchers to get to starting altitude, together with a minimum 15 minute allowance after predicted gate opening time.

Lower performing pilots or gliders should not be overly considered in setting the tasks unless these pilots are in a considerable majority.

Where different tasks are set for the classes, the final legs should be from the same direction, with a 15 – 20° variation being considered acceptable.

Tasks should not be set which result in conflicting traffic, for example out and return tasks, or tasks which include successive legs on approximately reciprocal headings, especially when there is a cloudbase which may result in many gliders being at the same altitude. Tasks may cross, but where possible should do so at a wide angle (30° or more) and where possible at times which will not see classes converging.

**7.10.1 Task lengths (km)**

Task lengths should be guided by the following table unless an exceptional day is expected.

*Table 1- Min and Max Task Lengths*

Class	Minimum distance [km]	Maximum distance [km]
Club	170	600
Un-ballasted Sports	200	700
Ballasted Sports	200	750
Standard	200	750
15 Metre	200	850
18 Metre	200	950
Open	250	1000

**7.10.2 Speeds (kph)**

For Club and Sports classes, the guidance speeds in the following table are the raw speeds expected from the faster pilots flying the aircraft at the lower end of the handicap range.

For multi-class, where the handicap range is generally less, the guidance speed is the raw speed expected from the faster pilots.

*Table 2 - Fastest Expected Task Speeds*

Class	Fastest Expected Speeds						
	Mean Lift [kts]						
	2	4	5	6	7	8	>8
Club	75	95	105	115	120	125	130
Un-ballasted Sports	80	100	115	120	130	140	150
Ballasted Sports	80	105	120	130	140	150	160
Standard	80	110	120	130	140	145	160
15 Metre	85	110	125	135	145	150	170
18 Metre	85	110	125	135	145	155	175
Open	90	115	130	140	150	160	180

**7.10.3 Guidance speeds for task setting**

Add 10 kph if the day is predicted to be very high. Reduce the expected speed if the wind is strong.

If the weather looks like providing the chance for an exceptionally long task, with an early start, it is recommended that pilots be alerted to this on the previous evening to allow them to prepare, and to schedule an earlier briefing for those pilots.

As per the Rules, When RTs are set, the Task Setting Committee must set an A and B task for each class. The A and B task distances must differ by at least 20%.

### 7.11 Assigned Area Task Guidelines

AATs have several uses including:

- Reducing gaggles and potential collision risk on gaggle prone days (blue days with lower convection depths)
- Flexibility for unpredictable weather conditions where large areas might become unsoarable due to thunderstorms, maritime air incursion, trough or frontal activity
- Fostering individual pilot effort
- “Levelling the playing field” for aircraft in a class with a wide range of handicap. If the day has the potential for considerable gagging the AAT should be considered.

AATs allow pilots a great deal of flexibility and should be used to provide that flexibility.

Areas should be set such that the range of handicaps in the class is catered for. It is necessary to set the task maximum and minimum lengths to ensure that:

- the fastest finisher does not run out of space and
- the lower performing aircraft can complete the task in the assigned time.

A method of ensuring a fast finisher does not run out of space is to set one wedge of very large (effectively infinite) radius. This can be one of the turnpoints where a relatively narrow wedge of very large radius keeps pilots in the same general area or as a “time soak” as the final turn where the wedge angle and orientation can be set to meet the task.

Areas should be selected to minimise the opportunity for pilots to choose courses that take them over dangerous or unlandable terrain, particularly if in so doing they would gain a competitive advantage. Pilots must be notified at briefing if sections of an area are off-limits due to airspace or outside of the declared competition area.

Successive areas must not overlap, as this could lead to a situation where a pilot flies only in the overlapping area and as a result it may be difficult or impossible to calculate the best flight.

It is desirable that the last area visited can be used as a “time soak”, so that pilots can use the final area to extend or cut short the task with a reasonable degree of certainty as to finish time.

Avoid setting the final area a long distance from the finish because in the event of weather uncertainties the correct decision when to commit to heading for home can be more a matter of chance than of good judgement. On the other hand, the final area should not be so close to the finish that pilots may be arriving back at the airfield from significantly different angles.

The use of wedges can be useful in managing flight tracks such that the final area being a wedge pointing at the finish, thus controlling track convergence angles on the final leg, whilst still providing the “soak” capability. This can be preferable to control points which tend to congregate aircraft at potentially high crossing angles.

There is usually no point in setting an area that is only a little off track from two others, as it adds navigation effort without giving the pilot any greater options. An exception to this might be when it is desirable to ensure that pilots track around unlandable country or restricted airspace.

Do not set a task that has many small areas, because the AAT effectively becomes a fixed task, and if that is the intention then it might be better to set a fixed task. In medium to good conditions, a 3-4 area AAT is often the most practical. Notwithstanding there may be occasions where multiple smaller areas are desirable due to prevailing weather conditions and terrain, so each task needs to be set on its merits.

### 7.12 Start Options

The Organisers may elect to use start points or start lines or may wish to impose starting parameters. Preference currently is for start lines, but there remains ongoing discussion regarding the advantages/disadvantages of either start geometry. Both are discussed below.

### **7.12.1 Start Points**

The Rules require that 9 start points be provided at each competition, whether start points or start lines are to be used. Intent is that pilots are given evenly spaced random groups of three each day from which to select their preferred start point. Start points should be widely spread within 20 km of the airfield. They do not need to coincide with any geographical feature, although where possible this is preferable.

### **7.12.2 Start Lines**

The Rules require that each start line be a minimum of 10 km in width and oriented at right angles to the first leg. With appropriately positioned start points these points can also be used as the start line centre.

Selection of the line should consider wind effects, congestion, and proximity to launch release point. When wind is a factor, setting the task so that the first leg is along the wind line reduces congestion at one end of the line. Arranging for the launch release point to be in the vicinity of the start line reduces the necessary delay between last launch and gate opening. Late launchers should not be disadvantaged by having to transit a significant distance to the start line and not be able to start when the gate opens. If for reason of tug turnaround times early launchers are more efficiently released some distance from the start, then the last couple of launch waves should be released closer to the start line.

### **7.12.3 Starting Parameters**

Whilst the Rules do not mandate Start Ground Speed limits and Start Height limits, there are sporting, operational and safety requirements that need to be considered. Pre-Start Ground Speed limits (usually 80 kts) may optionally be employed to discourage gliders from making fast runs through gaggles before the start. Start heights controls may be imposed for reasons of sporting fairness or other operational issues (e.g. pre-start wave)

## **7.13 Finish Options and Considerations**

### **7.13.1 Finish Circle**

The finish is to be a circle of appropriate diameter so that pilots can finish the task and then concentrate on making an orderly arrival. The benchmark is a 3km finish circle based on the centre of the airfield. Pilots may need reminding that some navigation computers give final glide information to the finish circle and not to the centre of the circle. All landable areas on the airfield must be within the finish circle.

### **7.13.2 Finish Height**

Where a minimum finish height is to be used, these must be described in the local rules, noting that the local rules must be approved by the NCC which may provide direction on the matter. Current practice is to use a height which would be below normal approach path for a straight in finish, but high enough to allow the pilot to still reach the airfield safely. The actual height might vary between classes and be dependent on the prevailing wind or weather conditions.

### **7.13.3 Finish direction and approach**

To promote safety and assist in the finish process, tasking should be set such that all classes will arrive from a common direction.

Where possible, the preferred competition finish and airfield arrival is via a straight-in approach.

### **7.13.4 Control Points**

Should the final turn point or turn area not adequately align pilots with the straight in approach the option exists to include a mandatory final turn point, "Control Point", of 2km radius at approximately 10-15 km from the finish which aligns the traffic flow with a suitable straight-in



approach and landing direction. If used, the strong preference is to have the Control Point over an easily identifiable ground reference to keep pilots' eyes outside the cockpit in this high traffic density area (note: this is NOT the "time soak" turnpoint). If traffic density is likely to be an issue, radio calls approaching the control point should be made to alert other pilots, like those procedures approaching the airfield.

Control points are not appropriate where the last leg is downwind and aircraft would need to track near to, or overfly, the airfield in order to reach the control point prior to turning back into wind to achieve an into-wind landing. In this case the aircraft should finish upwind of the airfield and join the downwind leg for the circuit.

### **7.13.5 Circuits**

It will not always be possible to arrange final legs to support a straight-in approach or wind conditions might change from those anticipated. Further, the option must always be available for a pilot to conduct a circuit. Circuit patterns must cater for simultaneous straight-in and circuit patterns and if possible, the two should be segregated to reduce potential for conflict. What must be avoided is a situation where pilots must fly their circuit overhead of the finishers.

These patterns should ensure avoidance of head-on landing conflicts, and cross-runway conflicts. Without getting too deep into the specifics, one well established rule is that no aircraft is to cross any active runway intersection during the landing approach or ground roll. Normally all runways are considered active unless a particular runway is declared out of bounds.

Accordingly, the daily briefing should be very specific about preferred runway directions, and the pattern described every day. The preferred patterns for that runway direction should be flown by all pilots on that day, unless advised by the incoming radio call that the preferred pattern has been changed to an alternate direction. The alternate landing pattern must also be the subject of daily briefings. Here, having provided the landing patterns in the pre-competition documentation will ensure well-considered patterns and save much briefing time.

What we are aiming for is an orderly finish, predictable flight paths with no flight path crossings, pilots knowing where to concentrate their lookout and an adequate area in which to land. Guidance to pilots on the finish procedure is usually necessary to achieve an orderly "flow".

## **7.14 COMPETITION COMMITTEES**

The Rules require three pilot elected committees, the Pilot Safety Committee, the Penalties Committee, and the Protest Committee and nominate their composition.

Prior to election of each committee, the CD should clearly articulate the purpose and responsibilities of each of the committees so that all competitors are familiar with its role.

### **7.14.1 The Pilot Safety Committee (PSC)**

The role of the PSC is to provide a peer-group forum to promote safety and airmanship standards, as well as deal with complaints arising from those standards without necessarily involving the competition organisation. The PSC should be made up of highly respected and experienced pilots capable of effectively dealing with sometimes-awkward issues in a fair and sensitive way.

As soon as practical after being elected, the Safety Officer should meet with the PSC to establish a line of communication and explain the PSC's role and responsibilities.

The intent is that the PSC can receive complaints and reports of breaches of safety and airmanship and deal with the issue at a peer level. Should this be unsuccessful or inappropriate then involvement of either the complainant or the organisation may be needed. Remember, the idea is to resolve the issue at the lowest level of escalation.

If the PSC is unable to resolve an issue it would be elevated to the Safety Officer.

### **7.14.2 The Penalties Committee**

The role of the Penalties Committee is described in the Rules.

### **7.14.3 The Protest Committee**

The role of the Protest Committee is described in the Rules.

In all cases, should there be a conflict of interest on the part of any of the committee members these members should be excused from the proceedings.

## **7.15 Briefings**

Primary communication with pilots is through the briefings. However, coordination of certain activities can be better achieved using SMS, website or social media. Accordingly, as a minimum, arranging for SMS communication to all pilots for such things as revised briefing times, day cancellations, confirmation of gridding before brief etc., in addition to notice boards, is recommended.

### **7.15.1 Initial Briefing**

The Rules require an initial competition and safety briefing. This briefing is normally conducted on the first Official Practice Day and is then followed by the daily briefing for the practice task. The initial operational brief will of course be necessarily more comprehensive, taking more time, to cover in detail a range of issues that will become commonplace over time.

At the initial briefing the tenor of the competition is set, and a range of non-recurring topics and activities are covered. Whilst not exclusive, the following is offered:

- Welcome
- Introduction of Officials
- Airfield Briefing
- Airspace Briefing
- Start Procedure
- Finish Procedure
- Flight submission procedure
- Safety Briefing
- Outlandings
- Local area considerations
- Election of Pilot Safety Committee (Should be seen as the premier pilot group)
- Election of Protest Committee
- Election of Penalties Committee

### **7.15.2 Daily Briefing**

The daily briefing will normally be chaired by the CD. The quality of the briefing (content and procedures) will determine the tone of the competition. Pilots need to leave the briefing with no misunderstandings or confusion. Briefing in the following format is offered as a guide:

- Optional light-hearted segment to keep the atmosphere fun and happy.
- CD- Issues relating to the competitive aspects of the competition, particularly previous day
- Previous days results and Daily Prize Giving
- Operations Brief, given by Safety officer or CD
  - Lessons learned from previous day's activities with any changes to established procedures.
  - Safety Issues
  - Airfield Issues
  - Marshall and gridding issues
  - Relights

- Airspace
- Launching plan (tug towpath, launch failure options as necessary; can be given by Tug Master if necessary)
- Any glider manoeuvring and non-manoevring areas
- Finish and landing flow
- Other flying issues
- Other operational issues
- Weather Brief
- Task brief and distribution of Task Sheets (leave this to last or issue beforehand – do not do this mid-briefing as the pilots become focused on the task only).

Placing available daily briefing material on the website or sending via SMS prior to the brief is also strongly encouraged.

Briefing times must be published / advised adequately to allow all pilots to attend. Perhaps 0900 on the first day or so, then relaxing to 0930 or 1000 as briefings tighten up.

Keep briefings efficient and short, but ensure all aspects are addressed. A good task sheet will save a lot of time.

PowerPoint slides can be a great way of getting visual information across in very quick time. After the first couple of days just putting up an overhead as a reminder should be enough. Only changes need be briefed.

Minimum number of people should speak, and the competitors should be restrained from too much interaction. Take care here – sometimes some very valid points come from the floor, so keep finely tuned to what is being said.

Notwithstanding, avoid making changes on the “fly” – quite often the changes end up with unintended and unhappy consequences. Unless it is an obvious safety concern which the Safety Officer can effectively resolve at briefing or prior to take-off, undertake to address the issue by the next day’s brief.

### **7.16 Airspace**

At the initial briefing, the declared “competition area” and relevant airspace issues need to be addressed for the entire task area. Where airspace might be a factor on a particular day, the relevant airspace considerations should be revisited at the daily briefing. The person giving the airspace brief should be knowledgeable to avoid missing issues or having to defer to someone in the crowd. Good pre-competition documentation can address all issues.

To avoid airspace height penalties, pilots should enter the airfield elevation in their instruments prior to launch. If there is any potential risk of FL airspace being breached, then the task setter should declare the day QNH pressure to be used in determining FL airspace penalties for entry into the SeeYou scoring program and provide this information to pilots so that those with suitable instrumentation can make use of this value. This QNH should be the QNH expected at take-off time.

### **7.17 Marshalling/Gridding**

At the daily briefing, marshalling start and finish times should be nominated by class group to manage ground traffic flow. Allowing about 1 minute per aircraft marshalling time as a starting point, plus a 15-minute allowance between end of marshal and first take-off should work. Fine tuning can be accomplished over the course of the first few days of the competition. If well planned and briefed, marshalling can be self-managed by the pilots based upon timing and marshalling path.

The option always exists to marshal before briefing. For example, in Queensland marshalling before briefing considers the earlier starts than say in South Australia, where starts are usually later.

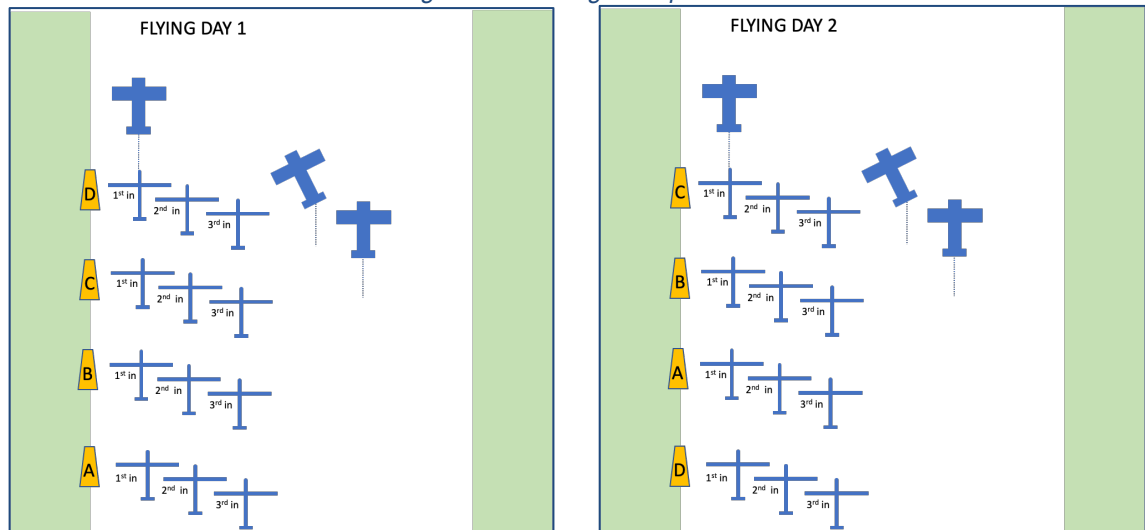
The launch grid will depend on the airfield setup. The grid can range from two or three wide up to seven or so, depending upon runway width. Normally the wider the grid – the better, since more runway length will be available.

The actual marshalling methodology will depend on the airfield geometry. Here are two examples:

### Example 1

- Aircraft are allocated a row identification that they keep for the competition.
- Witches' hats designate the grid rows.
- Feeding the row in from one side with each arriving aircraft parking in behind its predecessor using maximum safe overlap.
- Placing the witches hats far enough apart to allow pilots to arrive at any time during the allocated period makes for trouble free gridding. This does however spread the grid out fore and aft and eats into runway length. Prior to launch, pushing the grid to the back will restore the runway length.
- Where possible, stack the gliders with the first in the row at the front of the row to allow tugs to roll up to the glider and other tugs can be ready behind for the next glider.

Figure 2 - Gridding Example A



### Example 2

- Alternatively, marshalling can work well without allocated positions if the grid is filled from the back to the front. i.e. the group to launch last grids first, with the first glider of that group to arrive being positioned at the back of their launch group and launching last. This allows cars to tow the glider just short of its final position, be quickly removed from the glider, and parked to the side with the glider being pushed back into position.
- If the airfield has sufficient space, simultaneous marshalling of separate groups can work with gliders entering the grid from the side but requires markers to indicate back of the grid positions by group and usually needs a couple of competent marshals to manage the ensuing mêlée.
- Every day the first six gliders (maybe less) in each class are nominated to launch first (therefore tow out last in their class). The first launch glider list is rotated daily on flying days.

### 7.18 Daily Weighing

The purpose of weighing is to ensure a fair sporting field. It is not an aircraft loading check. Two options exist for weighing – weighing the entire fleet or weighing selected aircraft.

When weighing the entire fleet, the option exists to allow pilots to present their aircraft overweight and reduce weight at the weighing station to leave the station at maximum competition weight.

When weighing only selected aircraft, all aircraft must leave the tie down area in their intended weight configuration. No voluntary reduction of weight at the weighing station is permitted.

The most efficient weighing process will vary from site to site. One method that works but requires necessary activity during the lead up day(s) to the competition is to weigh the aircraft prior to the competition in its maximum weight configuration for multi-class competition and intended flying weight for club and sports class competitions. Then by immediately configuring the glider in the tow out configuration (no pilot, all flight equipment loaded, wing tip wheel affixed, attached to car, etc.) and recording just the main wheel weight this figure can be used in the spot weight checking process to give a reasonably adequate weight check.

For spot weight checking, place the weighing station near the tow out path so that pilots can easily pull out of the tow out line, be weighed quickly, compared with their recorded weight, and easily return. If wind is significant, weighing the glider crosswind is likely to give the most accurate weight. In the event of a disputed overweight reading, pilots need the option of a full weighing, and these facilities need to be instantly on hand. This weighing team requires one or two knowledgeable people who, perhaps, can later assist with the launch process.

See Weighing Form in *9.4 Appendix D – Weighing Form*

### 7.19 Takeoff Location

Of all the decisions that the Safety Officer must make, selection of the take-off location ranks with the most important.

There will be an ongoing conundrum between safety risk, practicality, competition considerations and convenience, all compounded by the imperative of time.

The risk issue will always be the safety margins on take-off and options in the event of a launch failure for both the tow pilot and the glider pilot.

Carefully consider any convenience of the tug operation at the expense of runway available for the launch. It can be prudent to accept increased launch times to increase safety margins in the event of a launch failure during take-off and early climb.

The basic rule is that the more runway / landable areas in front at the beginning of the take-off roll, the lower the risk to personnel and equipment in the event of a take-off failure. In some locations this is quite easy since plenty of runway is available and off-field landing options immediately upwind of the airfield are plentiful. More often however, launch failure options are limited. There can be “dead zones” where a controlled crash is the likely outcome. These “dead zones” must be identified and their size minimised by selection of take-off location.

Further, tug and glider pilots need maximum guidance where margins are small or dead zones might exist. Good pre-flight briefing is very important in these circumstances, including aerial photographs and suggested options. At some sites Google Maps is an exceptional resource to provide these images.

Importantly, pilots must be reminded that they are responsible for their decisions in the event of a launch malfunction, that they might “walk” the launch failure options, and that they should raise their objections if they believe that safety risks are unnecessarily high.

Another factor is crosswind. Some of the competing sailplanes will have limited ability to cope with strong crosswinds. There will be timing pressures not to change runways if the wind

changes before or during the launch. Do not accept risks that jeopardise a safe take-off. Accept the time delay and change the runway.

### **7.20 Task Changing**

Where for operational or weather reasons a task is changed after the conclusion of briefing, all affected pilots must be provided with the revised task information. Pilots or their representative must acknowledge the new task via signature on a “changed task” sheet. Use of SMS can facilitate this activity but does not replace the signature sheet.

Sufficient time must be allowed for pilots at the front of the grid to make the necessary changes to their flight plan before launching. Where the task is a new task (rather than the already briefed alternate task) additional time will be needed. As a guide, a pilot should have 10 minutes between completing his/her task changing activities and commencing launch. A total time allowance of 15 to 20 minutes should normally suffice.

Once the fleet has commenced launching, it is highly inadvisable to change the task. Crowded skies, stress, and pilots with their heads down in the cockpit re-setting navigation systems, are a very dangerous mixture. If this course of action is taken, then only a pre-briefed alternate task (ie ‘B/C’) is to be declared.

### **7.21 Task Cancellation**

The CD can cancel a day at any time, even after the start gate is open, and even if some or all gliders have started. The reasons for day cancellation are of three types:

- Flying is unsafe due to weather, visibility, concentration of gliders, conflicting non-competing traffic, in the task area or for any other safety related reason.
- The competition cannot give a reasonably fair chance to all. This is often caused by a change in weather during the launch or immediately after the start, which means that the chances for some pilots are very different from others, and through no fault of their own.
- An accident or incident, which affects some or all competitors which prevents a fair go for all.

## **7.22 Launching Procedure**

### **7.22.1 Launching**

There needs to be sufficient ground crew, rope handlers, wing runners, signallers, to safely launch the fleet in the shortest possible time. These willing volunteers can usually be sourced from the host gliding club members and family as well as from the local community.

The volunteer ground crew need to be comprehensively briefed and trained in the safe and efficient execution of their roles. Ground crew are to be managed by the Launch Controller and monitored by the Safety Officer. Care and discipline need to be exercised and maintained throughout the competition.

Having a launch controller managing the tug line-up and take-off process via radio significantly speeds up the process. Ideally a glider pilot experienced in towing would fill this role.

A log needs to be taken of all sailplane launches.

Launching should start at the time stated at briefing provided that reliable convection to at least 2,500 ft AGL is available, with the expectation that it will increase to 3,000 ft by start gate opening. Launching should be stopped if the gliders cannot continue to achieve 2,500 ft or more, or if congestion poses a safety risk.

### **7.22.2 Tow pilots**

It is essential the tow pilots are thoroughly briefed and firmly managed by the Tug Master. If they are inexperienced at competition launch techniques it is the responsibility of the Tug

Master to ensure they receive training on the required process and are carefully monitored throughout the competition. Tow pilots should be briefed daily as a group, on the ground, well before any launching commences. Tug aircraft pre-launch warm up and pre-flight checks are to be conducted prior to taxiing to the launch point. They must have a Competition Endorsement.

### **7.22.3 Tow patterns**

Towing patterns and drop zones need to be agreed between the Tug Master and the Organisers and controlled by the Tug Master.

Tugs should launch in the same direction and follow a standard pattern each launch. This pattern will have been briefed to the tow pilots, by the Tug Master, prior to each day's launch. In unusual weather conditions, and particularly when weather is poor, the pattern may be varied during the launch to keep the launch fair for all and reduce the possibility of relights.

During the Ops Brief competitors will be advised of the launch pattern at each day's competition briefing, which may simply be in accordance with pre-briefed patterns for a particular runway.

Where considerations for launch failure options permit, initial climb out should be straight ahead for the first 1000ft AGL. Angles of bank should be kept low, particularly when towing open class gliders. Tugs are NOT to thermal the combination at any time during the competition and the launch pattern is to be constructed such that there is no possibility of traffic conflict with gliders or other tugs.

Indicated Air Speed (IAS) of the tug should not be less than 70kts for the duration of the launch. With some glider wingloadings now approaching 60kg/sqm, these aircraft on tow require consistently high airspeeds and towing technique is critical. Tow pilots should ensure that climb speed is reached near the ground before climb is initiated, that 70kts is the MINIMUM prior to commencing, and throughout, the climb. This technique is particularly critical for the heavier aircraft, particularly open class, Glider pilots should direct the tug speed by use of simple phrases such as "Yellow Pawnee plus 5 knots please", or "Yellow Pawnee minus 5 knots please".

Tugs may fly in proximity to gaggles but are to always stay clear of the gaggle. Tugs should manoeuvre to the left of any gaggle, allowing the glider on tow to release to the right and join the gaggle if desired.

Post-release, tugs must follow a standard pattern for descent and approach which ensures no traffic conflict. Tow pilots should use a communication protocol for self-separation during the launch procedure which allows for communication with quick unambiguous descriptors. Whilst not in accordance with standard R/T procedures, locally developed terminology specifically for the towing process has proven very effective and considerably enhanced safety. EG "Red One-eighty is on base with Blue Pawnee on short finals in sight" works very well where there is a single Cessna 180 and a single blue Piper Pawnee in the towing fleet. Descriptors selected, whether they be to identify aircraft or positions, should be unambiguous and consistently applied.

### **7.22.4 Self-Launching Gliders**

Motor Gliders must launch by agreement with the CD, which will be in accordance with the take-off sequence.

Many Self Launching gliders have poor climb out gradient capability and their pilots will want to use maximum runway take-off length. This means that they will want to take off from the back of the grid - often impractical - or use another runway. If using another runway, a motor glider launch marshal needs to be with the motor gliders and in direct contact with the aero-tow launch grid to coordinate motor glider take-offs. Also, due to the starting reliability of some of the self launchers' motors, be prepared to despatch a tug to launch a recalcitrant beast.

Motor Gliders, particularly those with turbo or sustainer motors, may be required by their flight manual, or by common sense, to test their motor after launching. This is acceptable but not to gain advantage.

### **7.23 Radio Procedures**

In practice, there are usually two prime frequencies that competition pilots will need to use – the airfield CTAF frequency for launching and finishing and a “safety” frequency when operating near other competitors.

Both frequencies are to be always monitored by the Organisers once the launch process has started, until the last aircraft has landed. Pilots with dual monitoring radios should monitor both frequencies when in the vicinity of the airfield.

There should be a person designated by the Safety Officer to always monitor the CTAF radio frequency during both the launch process and also during the task finish. This person should be responsible for communicating with inbound, transit, and departing, powered traffic and should be experienced/familiar in standard aviation radio procedures and phraseology.

During launching, all aircraft will be on the airfield CTAF frequency. Once clear of the airfield environs and prior to start, competition pilots will normally want to change frequencies to the safety frequency. If circumstances allow, this will normally be at 3,000ft AGL, however the Safety Officer, based on locality specific issues and guided by Gliding Australia Airways and Radio Procedures manual will need to determine where (what altitude) that changeover occurs and brief pilots accordingly. Aim is to have all competition pilots on gaggle frequency as soon as local conditions allow.

The CTAF, gaggle and other frequencies to be used are to be included each day as part of the daily briefing. The height AMSL at which pilots must switch from CTAF to gaggle frequency is to be included as part of this briefing.

All radio calls from the Organisers related to glider start and glider safety should be made on both CTAF and safety frequencies.

### **7.24 Launch Delays**

In the event of complications, such as changed surface conditions, potentially requiring a take-off location change, the Safety Officer should just concentrate on ensuring a safe operational outcome. The Safety Officer’s advice to the CD should be just what he/she is doing in order to maintain a safe operation and what the timing implications are as a result.

The Safety Officer must not be enticed into high risk operations to meet sporting desires. One broken glider will spoil the day for everyone since the launch will need to be stopped anyway! What the CD needs to know is how long before it will be possible to open the start gate. The CD, with the Chief Task Setter will determine the sporting consequences and what action needs to be taken in competition terms and potential task changes.

### **7.25 Starting**

The Rules allow pilots to start as many times as they wish. There is currently no rule that requires that the start time and point be called, but if desired this can be set in local rules. From a competitive perspective there is no value in the start call, since the scoring will be done on the best flight regardless of the call.

Operationally, the launch of the glider commences tracking for SAR purposes, so there is no reason to require the pilot to make a call on starting.

### **7.26 Gate Opening**

The CD is responsible for determining the time of opening of the start gate and guidelines have been developed to assist in making that decision – there is flexibility under the Rules to allow from 15 to 40 minutes, depending upon convection depth, after the launch of the last aircraft in the class, excluding relights or pilots who have refused a launch. Generally, the earlier the start



gate can be opened the better, as it reduces the amount of time that the fleet has to be bunched together in the start area.

Notwithstanding, sufficient time must be allowed for the last pilot launched in each class under the prevailing weather conditions to climb to a start position and not be disadvantaged relative to the other pilots in their class. Allowing 4 minutes per 1000 ft AGL up to convection / start height is a reasonable minimum. This allows for an average rate of climb from take-off of about 3-4 kts with a small allowance for start positioning. As a guide the following is provided.

If multiple aircraft return for relight the CD will need to determine the fairness of opening the gate based upon the last person in the class launched from the (original) grid.

*Table 3 - Convection or Start Height limit and time for gate opening*

Convection Height or Start Height Limit [feet AGL]	Time between last launch in class and gate opening [min]
4000	15
6000	25
8000	35
Above 8000	40

Note that the higher the convection at start, likely the stronger the convection.

Once the CD has determined the start time, broadcasts need to be made on both the CTAF and safety frequencies.

These broadcasts should provide warning of start gate opening time at regular intervals (20, 10, 5 minutes) advising the class, warning time and opening time. Example: "Start Gate for Standard Class Task B opens in 5 minutes at time 04".

At start gate opening time, the call should be: "The Start Gate for Standard Class Task B is now open".

To assist the CD, the Safety Officer needs to arrange for a pilot in each class to acknowledge the start calls on the relevant frequency(s).

The start gate can be closed, but this should only be done when there is a compelling reason such as an approaching change of weather. At least 30 minutes warning is required by the Rules.

## **7.27 En-Route**

Whilst the competitors are en-route, the Safety Officer can take a little rest, but not for long! There will not be a lot of time, maybe a couple of hours, after the last glider has started and the first finisher appears over the horizon.

### **7.27.1 Outlandings**

The Organisers need an effective outlanding centre. Many pilots have minimal crew or no crew, sharing outlanding responsibilities with other pilots. The outlanding centre need be nothing grand, and can be as simple as one point of contact known by and easily contactable by pilots and crews alike.

An effective recording and display method of outlanded pilots is essential to maintain track of all competitors, as well as initiating retrieval action.

Four electronic means of communicating an outlanding are available to the pilot – radio relay, telephone, SMS texting (from a mobile phone or via Spot Messenger Service) or email (from a

smart phone or equivalent). The centre therefore needs radio, landline, and mobile phone (voice & SMS) access. Whilst email is possible, it should be discouraged in favour of SMS since it may be impractical to have anyone near a computer looking for incoming emails.

Put simply, pilots must be able to communicate their outlanding via radio (relay) telephone or SMS, with a high expectation of response. A text response gives the pilot peace of mind to know that their text has been received.

Priority is via phone, since it provides reliable two way communication with minimum opportunity for mix-ups.

All outlanding information must come to the outlanding centre to be collated and the retrieve action monitored. With mobile phones and, to a lesser extent radio relay, it is entirely possible that the pilot will communicate directly with their crew and not through the outlanding centre. This is good, but the crew must then report to the centre on the outlanding and what action they are taking.

Before proceeding on retrieve, road retrieve drivers must advise the outlanding centre of their intent to depart and tow pilots must either report in person or by radio on their intention to depart. It is strongly advised that both aircraft registration and pilot's name is used in all communication about a particular outlanding to reduce possibility of confusion. The outlanding centre needs to correlate these two pieces of data each time to ensure no confusion. Careful discipline is required in the event of a mass land out.

It may fall to the outlanding centre to organise a few of the retrieves for pilots with no crew, or their mutual crew has also landed out – be prepared for that, but many people will be generous if the distance isn't too great. This will be made much easier for those pilots who provide an information pack to the outlanding centre at the beginning of the competition with their car and trailer information and have everything prepared except for the car being attached to the trailer.

The outlanding centre must be able to interpret the outlanding information to provide the, sometimes inexperienced, crew clear guidance as to landing position and instructions. There are some crew who can't convert coordinates to a geographical position. Be prepared to help.

Pilots using radio relay should be encouraged to advise callsign, pilot's name, approximate geographical position, lat / long and distance/bearing to home as a gross error check. In the event of some mix up, airborne pilots are likely to remember the pilot's name and approximate geographical position should some sort of follow up activity be required. Also, pilots should give position only in degrees and whole minutes. Easier for fellow competitors to remember the smaller string of numbers when writing them down airborne and trying to compete as well as passing on the info.

Prior to the competition, and in addition to the information on the daily briefing sheet, supplying all competitors and their crews with a standard outlanding report form containing areas for the required information and with pre-printed telephone numbers for the club house, outlanding centre mobile, and Tug Master mobile, will head off many of the possible problems.

### ***7.27.2 Aero Tow Retrieves***

Aero tow retrieves need to be coordinated by the outlanding centre, ideally with the assistance of the Tug Master, or their delegated representative, who can provide the necessary operation input to the process. Further, crews need to be made aware that the pilot is being retrieved by air to avoid unnecessary concern. Since radio requested retrieves can result in ad-hoc retrieves, where possible, tow pilots must advise the outlanding centre who they are picking up.

## **7.28 Finishing**

It is a requirement that that the at least one, preferably two competition officials observe finishing aircraft (Safety Officer and one other). Arrivals should be monitored for orderliness and safety. Regular weather advisories should be provided on the finish frequency to assist

pilots in planning their arrival.

The Safety Officer must be prepared to intervene if necessary. Take care here – ‘less is often more’ - but if life is at risk, correct, immediate, action might be required. Treat every finish sequence as an opportunity to learn and take steps to improve the process as necessary for subsequent days’ operations.

### **7.28.1 Airfield layout considerations**

Airfield layout and runway size plays a significant role in how finishing should be addressed. Basically, the wider the landing area, the greater the arrival flexibility. Here bitumen runways, particularly with raised lighting, are quite narrow in effect and can pose quite a challenge to multiple landings. A wide grassed area is much better, since multiple landings can be accomplished abeam.

If an airfield has multiple landing strips and pilots are allowed to land in any direction, the resultant crossing paths create a hazard. A very near midair between two gliders on short finals to two different landing directions at Temora in January 2008 is testament to this. Accordingly, crossing paths in the air and on the ground must be avoided. In the case of multiple landing strips which cross or intersect, strict approach and landing procedures must be established to avoid potential conflicts.

### **7.28.2 Landing Areas**

During periods of multiple landings, landing areas can fill up rapidly. Accordingly, pilots should land long utilising the far end of the landing area allowing pilots to land behind. Where possible gliders should land at the side of the landing area so that they can taxi safely off the flight strip allowing following gliders to land. If the airfield warrants, a team should be available at the far end of the landing area to rapidly clear gliders to the side so that as much as possible of the available landing area remains clear.

Short final and landing flare should never be conducted over the top of another glider on the field.

To reiterate, what we are trying to achieve is a traffic pattern that allows for both circuit and straight-in finishers, that circuit traffic will not conflict with finishers, that the landing paths do not cross and that there is sufficient space to land during high traffic density landing periods.

### **7.28.3 Finish Radio Procedures**

To assist competition pilots to manage self-separation, inbound calls are made on the CTAF\* frequency and at predetermined ranges. (\*Currently, all expected National Championships sites are within CTAFs)

Ranges should be called to the centre of the finish circle. Pilots must be briefed on this so that they can set their navigation system(s) accordingly or remember to add the circle radius to the distance to finish.

The first call should normally be a CTAF arrival call at 10 NM (18.5 km) from the airfield point (not the 3km circle edge). Some pragmatism on the part of the pilot is necessary with regard to the 10NM call. Where a pilot is the first or a lone arrival, then a full CTAF call is required, EG “Temora Traffic, Glider ABC, 10 Nautical Miles South West, descending through 3100 ft, Inbound” (For easy conversion to NM from Kms, if pilots precisely halve their kilometres to run, then relative accuracy between finishing gliders is maintained and the slight absolute error is of little consequence to other traffic). If part of a “gaggle” arrival and a full CTAF call has already been given, then an abbreviated call is appropriate to eliminate radio congestion, e.g. “ABC 10 NM” until the call intensity dies down.

An alternative to competition pilots making the expanded CTAF inbound calls at 10 NM is for the ground based CTAF radio monitor to advise local powered aircraft traffic of the inbound

traffic, direction, distance, and approximate numbers.

Once inside the CTAF it is custom for finishes is to revert to km when calling ranges but be aware that if non-gliding traffic is also using the airfield their pilots will be expecting ranges to be called in NM.

A mandatory call at 10km is recommended. If unable to call at the pre-determined range because of other transmissions, the pilot should state the actual range.

At the 10 km call, plus where judged necessary, pilots should provide their range to 0.1 of a kilometre so that fellow pilots can judge their relative position where they don't have visual contact.

E.g. "ABC 9.4 kilometres".

At the 10 km calls, the competition finish radio should respond with latest wind conditions and preferred traffic and landing flow. During periods of multiple finishes, these advisories should be given at appropriate intervals rather than responding to every 10 km call.

Whatever procedures are developed for a particular competition then they must be mindful of the Gliding Australia Airways and Procedures manual, briefed by the organisation and applied consistently by all competitors. This makes for easier understanding by all, as well as creating a favourable impression to other airspace users.

Regular weather advisories should be provided on the finish frequency to assist pilots in planning their arrival.

### **7.29 Unsafe Flying**

The Rules provide for a penalty for dangerous or hazardous flying. The Rules further state that damage to a glider during outlanding will normally be considered the fault of the pilot.

Whilst the Rules state that the Penalties Committee will determine the penalty, the Rules do not prescribe who, or which committee, determines whether a hazardous or dangerous flying infringement has occurred. It is the CD's responsibility to ensure that the Rules are applied, and for the overall outcome of the competition. Since determining dangerous or hazardous flying will be an issue of judgement, and not the application of an easily measured technical issue, it would be appropriate for the CD make the call.

Here the CD will need to deal with each issue on its merits, taking advice from the Pilot Safety Committee and the Safety Officer. Once a decision is made that a particular act was dangerous or hazardous, and a penalty should apply, the matter is referred to the Penalties Committee.

The judgement whether a pilot has, or has not, committed an unsafe or hazardous flying act will often be a very challenging one for the CD. In the case where a clear and wilful breach of the safety rules has resulted in a safety incident, the judgement is simple. Where a highly respected pilot perpetrates an incident where there was a threat to safety, but no actual damage or injury occurred and particularly if this pilot is in the running for a podium/representational position, then it becomes very difficult.

The judgements should consider whether the pilot's actions were:

- a risk to just themselves,
- a risk to others, and/or
- a risk to the reputation of the sport. (All accidents have a detrimental effect on our sport's reputation)

We attempt to conduct Australian Gliding Championships in a collegiate and harmonious environment. We try to minimise conflict to have a friendly competition. However, when it comes to safety the CD needs to be resolute, firm and fair.

Whilst not all hazardous or unsafe flying will be observed, those events that are observed need

to be dealt with. Allowing known events to be ignored undermines the safety culture that we are trying to maintain, and where needed, improve. CDs need to put aside sporting consequences when dealing with safety occurrences. This will not always be easy, and an element of common sense and compromise might be necessary when the penalty or the consequence of the penalty outweighs the severity of the incident. But be very careful here – if it is a serious breach and safety has been clearly compromised – eg there has been a crash as a consequence - then it will be inappropriate to rationalise that a breach does not warrant a penalty.

Questions that the CD must ask themselves, and act upon, regardless of the outcome – did the pilot take safety risks to gain competitive advantage, was the pilot's action foolhardy, had the pilot squeezed himself into a corner by taking safety risks that were now being realised, had the pilot disregarded the safety of others.

As guidance, CD might wish to consider the following examples:

- Any single aircraft accident where another aircraft is not involved, such as an outlanding accident, is in most circumstances the fault of the pilot: eg pressing on too long and accepting unnecessary risk without a safety plan, not making enough allowance for wind or 'unexpected' sink, flying over unlandable or marginal outlanding areas. In these cases, it can normally be construed as hazardous flying. The pilot took a safety risk – the risk was realised, and the pilot should suffer the penalty.
- If during the landing roll in a paddock, the aircraft hits a rock or rabbit hole in an otherwise suitable paddock, then it would normally be inappropriate to apply a dangerous or hazardous flying penalty.
- Low energy manoeuvring during the latter part of the final glide and the landing sequence is another area where pilots can be tempted to conduct hazardous manoeuvres. Again, CDs need to be resolute in dealing with hazardous piloting activity for both the good of the individual and the good of the sport.
- Where a pilot has endangered others, then CDs have an obligation to all participants to act which may need to be more than simply applying the penalty.

In the end, any judgement must be seen to be firm but fair to all competitors and that safety of the competitor(s) and any third parties was appropriately considered, as well as addressing actions of pilots who take unnecessary safety risks for competitive advantage.

**In addition to all the above advice, SOAR reports must be completed for all incidents (see also section 8.2 Safety Officer.**

### **7.30 After Landing**

After landing, pilots must clear the flight strip environs promptly but with reduced crewing this might mean leaving gliders parked adjacent to the flight strip until pilots get their retrieve vehicle.

#### **7.30.1 Logger Trace Submission**

As advised in the pre-competition documentation pilots should arrive at the competition able to transfer their flight data quickly from their media or via the competition website. Pilots should be able to have their flight logs submitted within 1 hour of landing at the airfield and should be encouraged to do so. The Rules will normally state the maximum time between landing and flight log transmission.

#### **7.30.2 Verifying and Scoring**

Although in theory any program may be used for scoring, *SeeYou* is the recommended program – accurate scoring scripts for Australian Nationals are available on the *SeeYou* website or from experienced scorers and use of this method will greatly reduce the potential difficulties in this area.

It is important that loggers be downloaded as quickly as possible to provide quick time scoring for the benefit of spectators and other competitors. Pilots need to download their own loggers and then provide the IGC data file to the Scorer in a timely manner. The preferred method is to upload the file wirelessly onto the pre-established website. Pilots can download their file at the cockpit and then using a laptop with wireless connection to transmit their file to the website. If the site has WiFi then pilots can use the WiFi connection. To cater for pilots who are unable to transmit their data file wirelessly, the Organisers need to provide a computer where the pilot can bring their data file on memory stick or some other agreed media to the computer and upload their file directly from their media. It is now generally accepted that the Organisers need not provide the ability for the pilot to directly download from their logger, rather they bring the downloaded IGC file on the agreed media eg. USB memory stick or SD card.

The local rules should clearly specify:

- the acceptable loggers for the competition,
- the URL for wireless transmission of the flight IGC file and
- the media that can be used on the available competition computer.

Commonly used loggers are LX Nav, LX Navigation, Flarm, Cambridge, Colibri, Nano and Volkslogger. Note also that some loggers still use old style serial ports, so modern laptop computers (which lack these) may not be suitable unless USB adapters and suitable download software is available.

The Rules require the use of an IGC approved logger as a primary device, with other units including non-IGC Flarm to be used only as a backup.

Scorers may be asked by the safety officer, the safety committee, or the CD, to examine flight traces for issues of safety, or flights which descend below the Competition Floor.

Motor gliders must use loggers capable of recording engine runs so that any deployment of the motor can be recognised.

**Note:** few loggers advertised with engine detection can detect jet engines. If no engine detection is carried, pilots must either disable the engine or make some other agreement with the Organisers to seal the engine compartment (paper tape or similar) to detect engine deployment.

### **7.30.3 End of Day Muster**

At the end of the day, it is essential that a muster be carried out to ensure all the competitors have been accounted for. Use the Take-off Log to form the basis of the muster.

Many pilots carry SPOT or similar tracking devices. Pilots should make available to the Organisers the URL of their SPOT or whatever tracking information is available. Where Live Tracking is used, this can also be used as a primary source of information.

For those competitors not accounted for by 1 hour after sunset, Search and Rescue action, if not already underway, needs to be initiated. Do not hesitate for those extra few minutes, "Just-in-case". Initiate the action - it can always be called off.

### **7.31 Pilot Behaviour**

Competitors are obligated to comply with the Member Protection Policy and associated codes of conduct. Breaches of the code of conduct should be documented in the form of either a formal or informal complaint (See Complaints and Resolutions Procedure).

## **8. After the Competition**

### **8.1 CD**

The CD:

- produces a written report to NCC

- ensures the Scorer posts the completed results on the Gliding Australia web page on completion of the competition
- advises the Trophies Officer of all the trophy winners.
- Arranges to send Gliding Australia competition levies to the Office and notify the NCC that this is completed.
- arranges for scores to be sent to the IGC for ranking.

Breaches of the Code of Conduct should be documented in the CD's report. This is important so that if future competition directors have similar behaviour evidenced by a pilot, further action can be taken. Continuous breaches of the code of conduct should be brought to the attention of the NCC and documented.

## **8.2 Safety Officer**

The SO produces a written safety report to the RM/O and NCC Chair on completion of the competition.

Safety Breaches must be documented in a Soar Report. Pilots who continue to fly unsafely at multiple competitions will be brought to the attention of the NCC and the RM/O.

## 9. Appendices



## 9.1 Appendix A - Recommended Turnpoint Convention

The following suggested turnpoint convention is recommended.

- Alpha numeric for all turnpoints
- Max number of characters for each point to be 6 (whilst many navigation programs use 8 characters, some use just 6): i.e. two numeric followed by 4 alphas e.g. Sydney might be 23SYDN. The idea is to be able to select turnpoints via their number, but have an alpha designator to reduce opportunity for data entry error.
- Generally use only the first letter followed by the first or best next 3 consonants, but this will be somewhat dependent upon the name, and the odd use of vowel will be appropriate to get the sense of the name (see examples below)
- The turn points would be listed in alphabetical order – this is not critical
- Maximum of 75 turnpoints has been recommended when old loggers are in use. This requirement is becoming less important with new generation loggers.
- Start and Finish points at the beginning of the file
- Start points to indicate sector (i.e. W1 for West One)
- With the above in mind the first 9 points would be the start points and the 10th point would be the finish point:

Example:

01N1, 02N2, 03N3, 04S1, 05S2, 06S3, 07W1, 08W2, 09W3, 10FINI

Turn points would then start at number 11- 11ADMN (Adaminiby), 12BNYN (Bunyan), 13COMA (Cooma), 14DLGT (Dalgety) ..., 75YNKN (Yankaninnie)

When selecting turnpoints consider likely tasking areas and spread turnpoints around to give best tasking flexibility. Avoid clustering turnpoints together and consider using airfields as turnpoints, but of course be sensible and avoid high use GA airfields and any with RPT.

**9.2 Appendix B - Minimum Content for Local Rules and Information**

Rules	
Registration Period	
Competition Dates	
Acceptable loggers for the competition	
Briefings	Location, times.
Maximum time between landing and flight log transmission (usually 1 hour)	
Mandatory hand-held radio in vehicles	
Gridding System	Grid before or after briefing, cone IDs, orders
Airspace (local and enroute)	
Outlanding Contacts and process	
Local and Competition Radio procedures	Procedures, frequencies
Trackers	Procedures, rental/ownership etc,
Handicaps and Weighing Procedures	
Min Finish Height and finish procedures for all runways	
Launch procedures	
Starting Procedures	Grand Prix, PEV, Multiple starts, Start Radius
Information	
Airfield Information and maps	Layout, tiedown area, water points, vehicle restrictions, council rules, weighing location and times
Outlanding options and local region information	Aerotow retrieve criteria, suitable landing options
Waypoint files	URL link
WiFi	WiFi information and download URL
Logger download procedures	
Gliding Australia Safety Pack	URL
Oxygen	Availability, cost, process
Facilities	Electricity, water, maintenance, repairs

### 9.3 Appendix C - Sample Registration Form/Information Required<sup>2</sup>

**Details:**

- First Name
- Surname
- GFA Number
- Pilot IGC Identification\*
- Glider Registration
- Competition Class\*
- Maintenance Release Expiry
- Pilot Phone Number
- Crew Name and number
- Car type, colour and registration, and State of registration
- Emergency Contact Name and phone number
- Logger #1 Type and serial number
- Logger #2 Type and serial number
- PLB – yes or no
- SPOT – yes or no

**Declarations:**

- Compliance with Code of Conduct\*
- Read and understood Safety Material
- Flarm working
- Anti-Doping compliance
- Parachute current packing

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<sup>2</sup> Items shown with asterisk are not required for regattas etc

**9.4 Appendix D – Weighing Form**

Comp ID	A/C Reg	Handicap	Pilot	Ref Wt	Tow-out Weight

**9.5 Appendix E - Takeoff Log Form**

Glider Registration	Tug	Takeoff Time

**9.6 Appendix F - Change of Task Sheet Example**

<b>Date</b>		<b>Class</b>	
Task is changed from Task _____ to Task _____			
<b>Glider Registration</b>	<b>Initials of Competitor</b>	<b>Glider Registration</b>	<b>Initials of Competitor</b>

**9.7 Appendix G - Forecaster Checklist for Task Setting**

- QNH for the day and task area
- Surface Wind at launch time
- Surface Wind at finish time
- Boundary Layer wind over task area
- Chance of wave at start
- Earliest time Convection Height to 3300 ft (1000m) AGL
- Trigger temperature
- Average climbs
- Best Climbs
- Best Heights
- Best areas
- Length of Day, end of day
- Sea breeze potential
- Rainfall areas previous days (reduced actual climbs and heights vs forecast)
- High cloud (amount, speed)
- Smoke (reduced actual climbs and heights vs forecast)
- Satellite image
- Upper troughs
- Significant weather e.g. storms

**9.8 Appendix H – Task Planning Sheet**

<b>Task Planning Sheet</b>		
<i>Weather Report</i>		
Time of Start of Lift to 1000 m AGL		
Time End of Lift 2-3 kts		
Cloud - Cloud Base - Area		
Working Height band		
Check for:	Airspace restriction	
	Where rain fell	
	Wind at launch and finish time	
	Possible weather hazards on task	
	Height limit prior to start	
	Potential for wave	
	Potential for storms	
<i>Operations</i>		
Active airspace		
Time for Marshall		
Time for first Launch		
Expected gate open		
Relight strip		
For Finish	Which strip into wind	
	Control point	
	Obstacles on the last leg	
	Circuit direction	
	Rolling finish	
<i>Task Setting</i>		
Type of task	AAT or RT	
Task time Window	Speed of slowest aircraft	
	Speed of fastest aircraft	
Check for	all angles and conflict	
	danger areas and airspace	
	Overlapping AAT circles	
<b>Set Task B (and C?)</b>	At least 20% difference for RT	
	Decisions to change, last time to change vs task windows	
	Conflicts with other tasks	
Other Considerations	Pilot Fatigue	
	Previous outlandings	



**9.9 Appendix I – Task Sheet Preparation Checklist**

- Colour of Paper
- Name of event
- Date
- Day number
- Glider Class
- Task A
- Task B
- Task Time if AAT
- Correct Start dimension
- Correct Start point
- Correct Turnpoint dimension
- Correct Finish dimension
- List of Airspace areas marked active or inactive
- Gridding time
- Gridding order by class
- Gridding order by row
- Time of expected First Launch
- Pre Start height
- Pre Start speed
- Min Finish height
- Outlanding contact info