

The Gliding Federation of Australia Inc

Occurrence Summaries

01/01/2011 to 31/12/2011

Region(s): All

Club:



Christopher Thorpe
Executive Manager, Operations
The Gliding Federation of Australia Inc.

31-Dec-2011



The Gliding Federation of Australia Inc
SOAR Accident and Incident Occurrences

General Statistics

Date From: 01/01/2011

Date to: 31/12/2011

Damage	VSA	WAGA	GQ	SAGA	NSWGA	Total
Nil	4	2	4	1	6	17
Write-off		1				1
Substantial	7	1	1	2	4	15
Minor	2	4	2	7	7	22
Total	13	8	7	10	17	55
Injury	VSA	WAGA	GQ	SAGA	NSWGA	Total
Nil	13	7	7	7	16	50
Fatal		1				1
Minor				2	1	3
Serious				1		1
Total	13	8	7	10	17	55
Phases	VSA	WAGA	GQ	SAGA	NSWGA	Total
In-Flight	1	1		2	5	9
Landing	9	5	5	6	9	34
Outlanding				1	2	3
Launch	2	2	1	1	1	7
Ground Ops			1			1
Thermalling	1					1
Type of Flight	VSA	WAGA	GQ	SAGA	NSWGA	Total
Local	6	5	4	5	6	26
Competition	2			1	3	6
Training/Coaching	2	1		2		5
Cross-Country	2	2	2	1	7	14
AEF	1			1	1	3
Ground Ops			1			1
Total	13	8	7	10	17	55

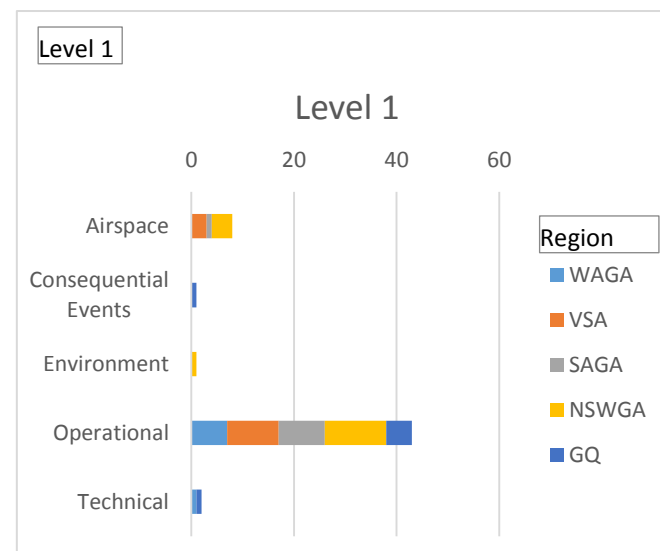


The Gliding Federation of Australia Inc
SOAR Accident and Incident Occurrences
Classification Level 1

Date From: 01/01/2011

Date to: 31/12/2011

Level 1						
	VAGI	VSA	SAGA	ISWG	GQ	Total
Airspace			3	1	4	8
Consequential Events					1	1
Environment				1		1
Operational	7	10	9	12	5	43
Technical	1				1	2
Total	8	13	10	17	7	55





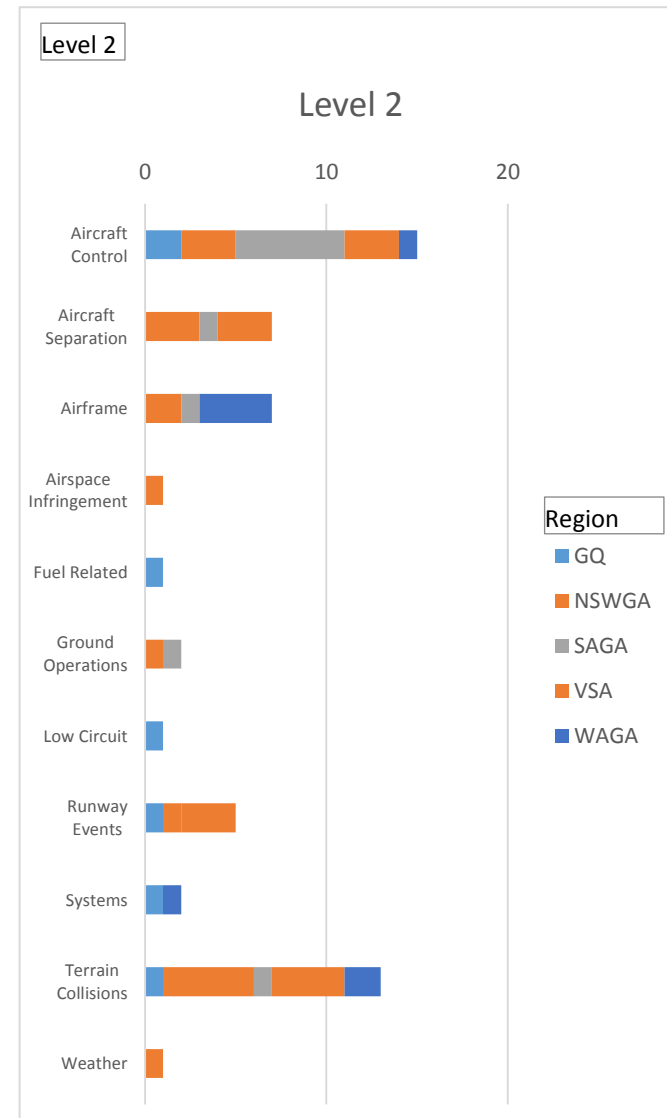
**The Gliding Federation of Australia Inc
SOAR Accident and Incident Occurrences**

Classification Level 2

Date From: 01/01/2011

Date to: 31/12/2011

Level 2	GQ	NSWGA	SAGA	VSA	WAGA	Total
Aircraft Control	2	3	6	3	1	15
Aircraft Separation		3	1	3		7
Airframe		2	1		4	7
Airspace Infringement		1				1
Fuel Related	1					1
Ground Operations		1	1			2
Low Circuit	1					1
Runway Events	1	1		3		5
Systems	1				1	2
Terrain Collisions	1	5	1	4	2	13
Weather		1				1
Total	7	17	10	13	8	55



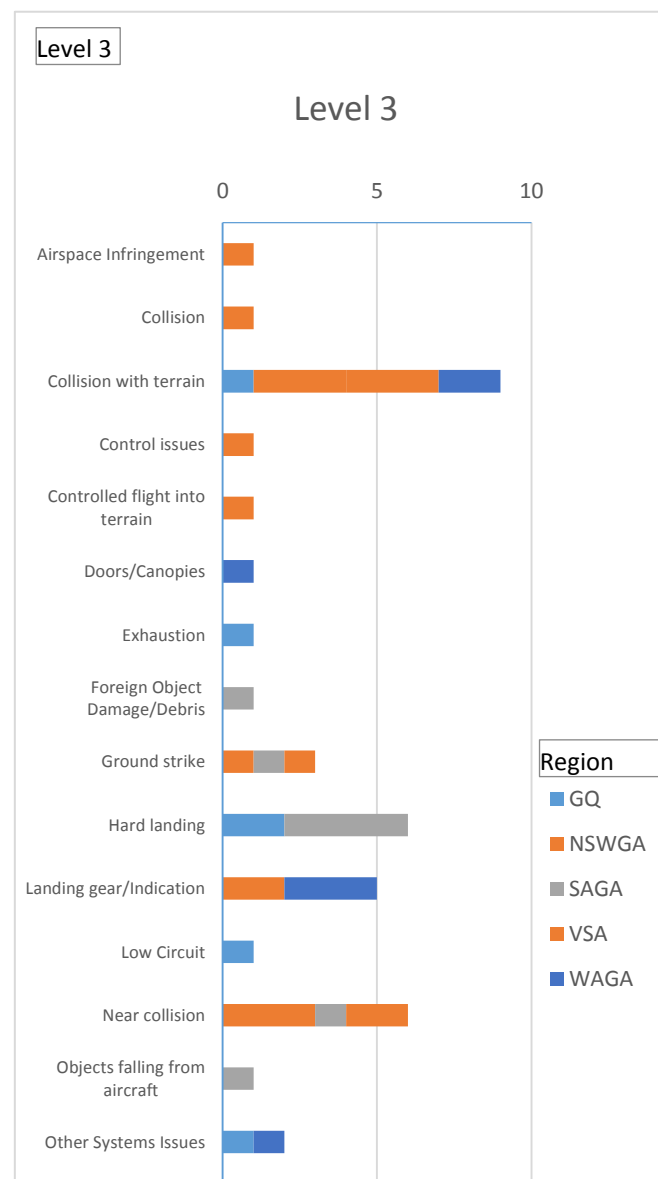


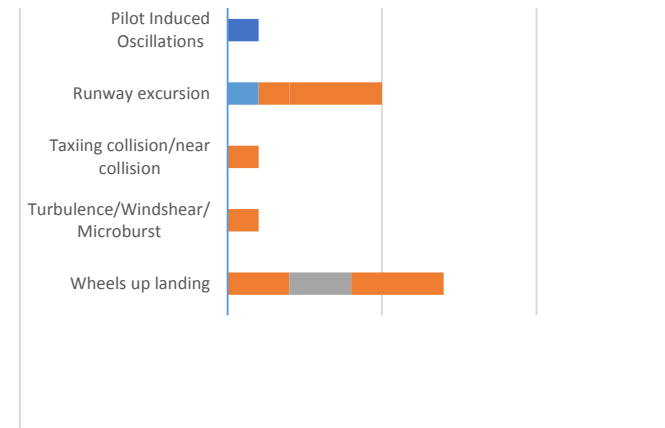
The Gliding Federation of Australia Inc
SOAR Accident and Incident Occurrences
Classification Level 3

Date From: 01/01/2011

Date to: 31/12/2011

Level 3	GQ	NSWGA	SAGA	VSA	WAGA	Total
Airspace Infringement		1				1
Collision				1		1
Collision with terrain	1	3		3	2	9
Control issues		1				1
Controlled flight into terrain		1				1
Doors/Canopies					1	1
Exhaustion	1					1
Foreign Object Damage/Debris			1			1
Ground strike		1	1	1		3
Hard landing	2		4			6
Landing gear/Indication		2			3	5
Low Circuit	1					1
Near collision		3	1	2		6
Objects falling from aircraft			1			1
Other Systems Issues	1				1	2
Pilot Induced Oscillations					1	1
Runway excursion	1	1		3		5
Taxiing collision/near collision		1				1
Turbulence/Windshear/Microburst		1				1
Wheels up landing		2	2	3		7
Total	7	17	10	13	8	55







The Gliding Federation of Australia Inc

Accident and Incident Summaries

Date	14-Jul-2011	Region	WAGA	SOAR Report Nbr	S-0099
Level 1	Operational	Level 2	Terrain Collisions	Level 3	Collision with terrain
A/C Model 1	Glasflugal Hornet			A/C Model 2	
Injury	Fatal	Damage	Write-off	Phase	In-Flight
				PIC Age	46

A Hornet sailplane that was conducting ridge soaring for a photo opportunity rolled inverted due to turbulence at lip of the mountain and crashed into the knoll. The pilot suffered fatal injuries and the glider was destroyed. Witness reports indicate that the aircraft was flying 20-30 feet above & 50-100 feet upwind from the almost vertical ridge face in close proximity to significant localised turbulent airflow. The glider was observed to roll rapidly towards the ridge to an inverted position in which it impacted the ground. It is believed that the port wing was lifted by an updraft strong enough to exceed the ability of the pilot to correct with opposite aileron deflection.



Date	23-Jul-2011	Region	GQ	SOAR Report Nbr	S-0091
Level 1	Operational	Level 2	Aircraft Control	Level 3	Hard landing
A/C Model 1	Std Cirrus			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	Landing
				PIC Age	51

The pilot accidentally released the winch cable just as the glider became airborne and prior to entering the initial climb. The pilot then pushed the stick forward and aircraft pitched sharply down resulting in the glider contacting the ground hard but not enough to cause damage. The pilot advised he commenced the ground run with his left hand on the release and resting on his leg. The release activated when his hand and leg moved while using rudder inputs. The incident was consequent of an incorrect recovery technique following a failed launch.

Date	17-Aug-2011	Region	SAGA	SOAR Report Nbr	S-0104
Level 1	Operational	Level 2	Terrain Collisions	Level 3	Ground strike
A/C Model 1	LS1f			A/C Model 2	



The Gliding Federation of Australia Inc

Accident and Incident Summaries

Injury	Minor	Damage	Substantial	Phase	Outlanding	PIC Age	23
The pilot got low over difficult territory and, while conducting an outlanding into a paddock over tall trees on approach, misjudged slope and descent rate. The glider landed heavily and rolled into an overgrown sewerage trench. Potential casual factors include late paddock selection, high workload during landing, and hidden obstacle.							

Date	25-Aug-2011	Region	SAGA		SOAR Report Nbr		S-0092	
Level 1	Airspace		Level 2	Aircraft Separation		Level 3	Near collision	
A/C Model 1		DG-400			A/C Model 2		DG1000S	
Injury	Nil	Damage	Nil	Phase	In-Flight		PIC Age	67
Airprox on the ridge. The gliders were approaching head on. While the DG 1000 pilot had the DG 400 in sight, the pilot of the DG 400 did not see the DG 1000. Both aircraft were Flarm equipped but the Flarm in the DG 1000 was not working. The DG 400 unexpectedly commenced a turn onto a reciprocal heading towards the Dg 1000, forcing him to steepen the turn to avoid collision. The DG 400 pilot did not sight the DG 1000 until it was heading towards it and had little time to identify the danger and react. This incident highlights the importance of good Lookout and working Flarm to facilitate alerted see-and-avoid.								

Date	10-Sep-2011	Region	WAGA		SOAR Report Nbr		S-0078	
Level 1	Technical		Level 2	Systems		Level 3	Other Systems Issues	
A/C Model 1		IS28			A/C Model 2		PA25 Pawnee	
Injury	Nil	Damage	Nil	Phase	Launch		PIC Age	60
During aerotow and at a height of 400ft the towline released from the glider. The pilot completed a landing without further incident. Subsequent inspection revealed a broken spring in the glider's release.								

Date	11-Sep-2011	Region	VSA	SOAR Report Nbr	S-0095		
Level 1	Airspace	Level 2	Aircraft Separation	Level 3	Near collision		
A/C Model 1	Janus C			A/C Model 2	Cessna 172		
Injury	Nil	Damage	Nil	Phase	Landing	PIC Age	59
A visiting Cessna 172 aircraft conducted a 'touch and go' manoeuvre head-on to a landing Janus. A collision was avoided by 100 ft. Despite radio calls from the Janus announcing its intentions, the Cessna pilot continued to land on the reciprocal runway. The Cessna pilot was on a solo training flight and was counselled by his CFI.							

Date	15-Sep-2011	Region	NSWGA	SOAR Report Nbr		S-0077	
Level 1	Operational		Level 2	Aircraft Control		Level 3	Wheels up landing
A/C Model 1		LS7			A/C Model 2		
Injury	Nil	Damage	Nil	Phase	Landing		PIC Age 64
Pilot did not retract the undercarriage after take-off and flew around with the wheel down. On downwind leg the pilot retracted the undercarriage during pre-landing check. While the undercarriage warning was triggered when airbrake was deployed during final approach, the pilot ignored it in the belief that the wheel was down and locked. The aircraft was incorrectly configured post-release, and was not configured for landing when circuit was joined. The pre-landing check was used as an 'action list' rather than a check list.							

Date	24-Sep-2011	Region	NSWGA	SOAR Report Nbr	S-0093
Level 1	Operational	Level 2	Runway Events	Level 3	Runway excursion



The Gliding Federation of Australia Inc

Accident and Incident Summaries

A/C Model 1		ASW 28			A/C Model 2			
Injury	Nil	Damage	Minor	Phase	Launch	PIC Age	61	
The pilot was aerotow launching using the belly hook due noise from nose hook. The aircraft carried 120 litres of water on board (about 2/3 full). On the first launch attempt the glider overran the rope and back released. The right wing went down and water flowed to the right. The pilot asked a young boy running the wing to put the left wing down to allow the water to flow back to the left but the message appeared not to have been understood. The pilot elected to accept another launch knowing that the water levels in the wings were probably uneven. The pilot started the ground run with half airbrake to assist aileron control but the right wing went down immediately. The pilot delayed releasing and tried to raise the wing with control inputs but the aircraft ran off the runway and collided with a fence post and narrowly missed parked vehicles. Contributing factors were aerotowing off the belly-release, uneven water ballast following earlier failed launch attempt, untrained wing runner, and pilot's slow reaction to releasing from tow.								

Date	24-Sep-2011	Region	SAGA		SOAR Report Nbr		S-0079	
Level 1	Operational		Level 2	Airframe		Level 3	Objects falling from aircraft	
A/C Model 1		Grob 109			A/C Model 2			
Injury	Nil	Damage	Minor	Phase	In-Flight		PIC Age	71
While flying at approximately 90kts under power, the canopy detached at the emergency detachment hinge point and blew up and back over the rear of the aircraft. Neither of the crew activated the emergency release mechanism nor saw any warning of the impending occurrence.								

Date	25-Sep-2011	Region	NSWGA		SOAR Report Nbr		S-0112	
Level 1	Airspace		Level 2	Aircraft Separation		Level 3	Near collision	
A/C Model 1		Ventus 2Cx			A/C Model 2		C182	
Injury	Nil	Damage	Nil	Phase	In-Flight		PIC Age	41
ATSB INVESTIGATION - FACTUAL INFORMATION								
On 25 September 2011, a Cessna Aircraft Company 182P, registered VH-MST (MST), departed Roma airport, Queensland (Qld), on a private flight. On board the aircraft were the pilot and three passengers. The pilot planned a direct track from Roma to Toowoomba at 9,500 ft above mean sea level (AMSL). On the same day, a Schempp-Hirth Ventus 2c glider, registered VH-ULZ (ULZ), departed Warwick aerodrome, competing in the Queensland State Soaring Championships. The course for that day’s race took in the turning points of Warwick, Maryvale, Jimbour and Cecil Planes before returning to Warwick. At the time of the incident, the pilot of ULZ was on the Maryvale to Jimbour leg of the course. The pilot stated that tracking via thermals on the day took ULZ “very close to Toowoomba.” At approximately 1400 Eastern Standard Time (EST), at a position 5NM west of Toowoomba and a height of 4,000 ft above mean sea level (AMSL), the pilot of MST noticed glider ULZ, between 300 m and 500 m directly in front of MST at the same level and heading towards MST. The pilot of MST commenced an evasive descending turn to the left to avoid ULZ. It was estimated the distance between the two aircraft came close to 100 m horizontally at the same level.								
Cessna Pilot’s recollection of events								
The pilot stated that he obtained the NOTAMs for the area earlier that day and noted that: - the Oakey airspace was deactivated, - a NOTAM was current for the area for a gliding event involving up to 40 gliders between Warwick/Kingaroy/Roma and Goondiwindi from surface to 10,000 ft.								
The pilot of MST stated that, due to the gliding event, he made an additional 30 mile call inbound to Toowoomba on descent through 8,500 ft on the Oakey/Toowoomba CTAF frequency. The pilot of MST recalled receiving a reply from: The pilot of a glider, registered VH-GAW (GAW), overhead Oakey tracking north-west for Jimbour								



The Gliding Federation of Australia Inc

Accident and Incident Summaries

and,

- The pilot of a Robinson R22 helicopter, registered VH-YZO (YZO), conducting circuits at Oakey. The pilot of MST did not recall hearing a call from ULZ and was unaware of ULZ's position until the incident. The pilot of MST stated that, following the incident, he attempted to make radio contact with the pilot of ULZ on the CTAF frequency and had no response.

Glider Pilot's recollection of events

At about 5 NM west of Toowoomba, ULZ was thermalling around 3,000 ft above ground level (AGL). The pilot noticed an aircraft about 2 NM above and ahead of ULZ on track for Toowoomba. The pilot stated that the two aircraft were approaching head on. However he did not think that there was any potential for a conflict. The pilot of ULZ stated that he did not broadcast on the CTAF and did not recall hearing MST make an inbound call to Toowoomba. However, the pilot did recall hearing GAW broadcasting on the CTAF at the time. The pilot stated that it was common practice to switch between monitoring the CTAF frequency and the gliders 'gaggle' frequency. The pilot stated it was possible that he was on the 'gaggle' frequency when MST broadcast his inbound call.

Pilot radio communications

The Australian Transport Safety Bureau (ATSB) examined recordings of the transmissions broadcast on the joint Oakey / Toowoomba CTAF at the time. That examination revealed that the pilot of MST broadcast an inbound call on the Toowoomba CTAF, 20 NM to the south-west of Oakey on descent through 8,700 ft. The pilot of MST made a further broadcast 10 NM south-west of Oakey passing through 6,600 ft inbound for Toowoomba, where glider GAW, replied that he was overhead Oakey at 3,600 ft. MST made a broadcast directed to YZO, 3 NM south of Oakey stating they were tracking direct to Toowoomba passing through 5,700 ft. The pilot of MST made a further broadcast directed to 'Toowoomba traffic' 8 NM west of Toowoomba on descent through 4,100 ft. The next broadcast from MST was to 'the glider to the south west of Toowoomba' (ULZ). There was no response.

CTAF PROCEDURES

CAR 166C requires pilots to make a broadcast whenever it is necessary to do so to avoid a collision, or the risk of a collision with another aircraft. The Aeronautical Information Publication (AIP) Enroute (ENR) section details various recommendations relating to operations outside controlled airspace (G airspace), including CTAF procedures and communication for both powered and unpowered aircraft.

With reference to communication for gliders, ENR 5.5-1 includes:

- Except for operations in controlled airspace gliding operations may be conducted no- radio, or may be on a discrete frequency allocated for use by gliders.
- Radio equipped gliders at non-towered aerodromes will use the CTAF.
- Except when operationally required to maintain communications on a discrete frequency, glider pilots are expected to listen out on the area VHF and announce if in potential conflict.
- AIP ENR 1.1 details various recommendations for operations in the vicinity of a non-towered aerodrome where the carriage of radio is mandatory, including:
- In the vicinity of a non-towered aerodrome where the carriage of a radio is mandatory pilots should always monitor the CTAF and broadcast their intentions at least in accordance with the minimum calls outlined in table, Summary of Broadcasts – All aircraft at Non-Towered aerodromes.
- If a pilot intends to fly through the vicinity of, but not land at, a non-towered aerodrome – broadcast when the aircraft enters the vicinity of the aerodrome.

Gliding Competition Rules

The Queensland State Gliding Championships Local Rules required all aircraft competing in the competition to be equipped with a serviceable VHF radio. Specifically the local rules stated;

- En route all pilots should monitor 122.9 (glider gaggle frequency). "Use of this frequency is mandatory when entering or near gaggles or flying with or near other gliders."
- Competitors must take particular note of the airspace requirements applicable to the task area. Penalties applied for flights infringing controlled airspace and were prescribed in the National Rules.
- The Gliding Championship Local Rules must be read in conjunction with The Gliding Federation of



The Gliding Federation of Australia Inc

Accident and Incident Summaries

Australia Airways and Radio Procedures for Glider Pilots, which stated;

- All pilots must monitor and communicate on the CTAF frequency whenever they are operating at or in the vicinity of a non-towered aerodrome.
- The height may vary considerably in consideration of local traffic however all aircraft are expected to operate on the CTAF frequency whenever at or below 3000 ft AGL and higher where appropriate.

Further the Gliding Federation of Australia Manual of Standard procedures provides at 25.1.3;

- Radio equipped gliders are not permitted to use one of the gliding frequencies in a CTAF area (unless the designated CTAF frequency is a gliding frequency.)

ATSB COMMENT

It is likely that had the pilot of ULZ been constantly monitoring the CTAF, he would not have missed the position reports made by MST. Conversely, had the pilot of ULZ transmitted his position and intentions on the CTAF, MST would have been alerted to the presence of ULZ as he was alerted to the presence of GAW. While the inclusion of the glider 'gaggle' frequency, in future NOTAMs regarding intensive glider activity, would provide other airspace users with access to those broadcasts. It was considered that such action may result in greater confusion over which frequency to monitor and lead to more opportunities for calls to be missed. Further the Gliding Federation of Australia standard procedures unequivocally require glider pilots to use the designated CTAF frequency in the vicinity of a CTAF and not a discrete gliding frequency.

SAFETY MESSAGE

By itself, the concept of 'see-and-avoid' is far from reliable. It is important that pilots apply the principles of 'see-and-avoid' in conjunction with an active listening watch. Research has shown the effectiveness of a search for other traffic is eight times greater under alerted circumstances than when un-alerted. Pilots should be mindful that transmission of information by radio does not guarantee receipt and complete understanding of the information. Without understanding and confirmation of the transmitted information, the potential for alerted see-and-avoid is reduced to the less safe situation of un-alerted see-and-avoid. A 2004 ATSB review of all 37 mid-air collisions in Australia between 1961 and 2003 (ATSB, 2004) identified that radio problems, use of the wrong frequency, or failure to make the standard positional broadcasts led to many of these collisions.

- In at least six of the aeroplane/aeroplane collisions, one or both pilots did not hear a required radio broadcast made by the other pilot.
- In three of the aeroplane/glider collisions, neither pilot was using the radio.
- In two of the aeroplane/glider collisions, one of the pilots did not make the standard positional broadcasts.
- In one of the aeroplane/glider collisions, one of the pilots used the wrong frequency to make the standard broadcasts.
- In one of the aeroplane/aeroplane collisions at a non-towered aerodrome, the pilot did not make a required broadcast due to radio frequency congestion.

It is imperative that pilots make a broadcast with position and intentions in the vicinity of a CTAF particularly when changing frequencies or if there is any doubt as to the position of other aircraft. These occurrences show clearly that simply having a radio is no guarantee of safety. The following publications provide some useful information on the see-and-avoid principles:

- Limitations of the see-and-avoid principle (1991), available from the ATSB's website at www.atsb.gov.au
- Safety in the vicinity of non-towered aerodromes (2010) AR-2008-044(2), available from the ATSB website at www.atsb.gov.au
- Pilots responsibility for collision avoidance in the vicinity of non-towered (non-controlled) aerodromes using the 'see-and-avoid' (Civil Aviation Advisory Publication CAAP 166-2(0), available from the Civil Aviation website at www.casa.gov.au

SAFETY ACTION

Whether or not the ATSB identifies safety issues in the course of an investigation, relevant organisations may proactively initiate safety action in order to reduce their safety risk. The ATSB has been advised of the



The Gliding Federation of Australia Inc

Accident and Incident Summaries

following proactive safety action in response to this occurrence.

The Gliding Federation of Australia

The Gliding Federation of Australia (GFA) recognised that the Competition Local Rule that required all pilots to use the gliding frequency 122.9MHz "when entering or near gaggles or flying with or near other gliders" may have inadvertently led to confusion. While it was not the intention of the competition organisers to override the Civil Aviation Regulations, it is likely that some competing pilots may have interpreted this requirement literally. As a result of this occurrence, the Gliding Federation of Australia has advised the ATSB that they will ensure that competition local rules reinforce the radio requirements for operating at, or in the vicinity of non-towered aerodromes and clarify when the 'gaggle' frequency is to be used.

Date	25-Sep-2011	Region	VSA	SOAR Report Nbr	S-0148
Level 1	Operational	Level 2	Terrain Collisions	Level 3	Ground strike
A/C Model 1	Janus			A/C Model 2	
Injury	Nil	Damage	Minor	Phase	Landing
				PIC Age	72
During an outlanding in a ploughed paddock the glider's left wingtip struck a rock at the end of roll causing minor damage. There were numerous rocks in the paddock that were not visible until late on final approach.					

Date	30-Sep-2011	Region	NSWGA	SOAR Report Nbr	S-0094
Level 1	Operational	Level 2	Aircraft Control	Level 3	Wheels up landing
A/C Model 1	LS 7-WL			A/C Model 2	
Injury	Nil	Damage	Minor	Phase	Landing
				PIC Age	60
Gear up landing after practice low level finish. Potential causal factor was pilot fatigue due to: slashing grass during the morning, a long flight and little sleep the night before.					

Date	2-Oct-2011	Region	GQ	SOAR Report Nbr	S-0102
Level 1	Operational	Level 2	Terrain Collisions	Level 3	Collision with terrain
A/C Model 1	LS8-18			A/C Model 2	
Injury	Nil	Damage	Substantial	Phase	Landing
				PIC Age	65
Wingtip of glider struck tyres at the runway threshold causing the glider to ground loop. Glider's tail boom and fin were damaged.					

Date	3-Oct-2011	Region	NSWGA	SOAR Report Nbr	S-0080
Level 1	Operational	Level 2	Aircraft Control	Level 3	Control issues
A/C Model 1	PILATUS B4 PC11AF			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	In-Flight
				PIC Age	62
During the test flight following completion of the annual inspection, the pilot conducted a high speed run up to Vne (100 knots). At approx 95k knots a severe vibration developed that shook the entire airframe. Reducing speed stopped the vibration. The pilot initially thought the air brake may have been sucking out, so he held onto the airbrake lever and commenced a second run. At about the same speed the vibration returned. The pilot noted that he felt nothing through the controls but the rear of the glider felt like it was shaking quite violently, with a significant 'oil canning' noise typical of metal gliders. The aircraft landed without incident. No cause of flutter was identified subsequently and the aircraft suffered no damage.					

Date	3-Oct-2011	Region	SAGA	SOAR Report Nbr	S-0081
Level 1	Operational	Level 2	Aircraft Control	Level 3	Hard landing



The Gliding Federation of Australia Inc

Accident and Incident Summaries

A/C Model 1	ASK-21				A/C Model 2		
Injury	Nil	Damage	Minor	Phase	Landing	PIC Age	73
Circuit joined at a good height but the PIC flew too far downwind and turned base at low height. The glider experienced turbulence on final approach and subsequently landed heavily, causing damage to the main wheel fairing.							

Date	4-Oct-2011	Region	SAGA		SOAR Report Nbr		S-0103	
Level 1	Operational		Level 2	Aircraft Control		Level 3	Hard landing	
A/C Model 1		Grob G 103 Twin II			A/C Model 2			
Injury	Nil	Damage	Minor	Phase	Landing		PIC Age	65
Glider experienced a high rate of decent during the approach, resulting in a heavy landing and ground loop. Student pilot flew the approach while the aircraft was stalled. While the Instructor closed airbrakes and assumed control, he did not appreciate the aircraft was stalled as he still had full aileron control. The instructor attributed the high rate of descent to possible wind shear and turbulence on approach.								

Date	8-Oct-2011	Region	SAGA		SOAR Report Nbr		S-0100	
Level 1	Operational		Level 2	Aircraft Control		Level 3	Hard landing	
A/C Model 1		Club Libelle 205			A/C Model 2			
Injury	Serious	Damage	Substantial	Phase	Launch		PIC Age	24
Cable break occurred following transition into full climb at about 100ft AGL. The aircraft pitched nose down, descended steeply and collided with the ground. The pilot was experienced in both power and glider flight and had recently conducted an acceptable winch launch failure check with an instructor. A potential causal factor was that the cable break was 'soft' and the pilot allowed the speed to get too low before lowering the nose.								

Date	13-Oct-2011	Region	WAGA		SOAR Report Nbr		S-0098	
Level 1	Operational		Level 2	Aircraft Control		Level 3	Pilot Induced Oscillations	
A/C Model 1		PW-6U			A/C Model 2			
Injury	Nil	Damage	Substantial	Phase	Landing		PIC Age	68
During final approach the pilot allowed the speed to deteriorate resulting in a heavy landing. The pilot mishandled the controls following a bounce leading to Pilot Induced Oscillations. Pilots need to maintain a safe speed and stable approach towards the aiming point.								

Date	15-Oct-2011	Region	SAGA		SOAR Report Nbr		S-0105	
Level 1	Operational		Level 2	Aircraft Control		Level 3	Wheels up landing	
A/C Model 1		Twin Astir			A/C Model 2			
Injury	Nil	Damage	Minor	Phase	Landing		PIC Age	53
Aircraft landed with the wheel retracted. The pilot did not configure the aircraft for landing and omitted to complete a pre-landing check. Contributory factors include complacency.								

Date	15-Oct-2011	Region	VSA		SOAR Report Nbr		S-0082	
Level 1	Operational		Level 2	Runway Events		Level 3	Runway excursion	
A/C Model 1		Ventus			A/C Model 2			
Injury	Nil	Damage	Nil	Phase	Landing		PIC Age	52



The Gliding Federation of Australia Inc

Accident and Incident Summaries

During landing the glider's wing caught in long grass resulting in the glider ground-looping.

Date	16-Oct-2011	Region	NSWGA	SOAR Report Nbr	S-0135
Level 1	Operational	Level 2	Airframe	Level 3	Landing gear/Indication
A/C Model 1	ASH 25 M			A/C Model 2	
Injury	Nil	Damage	Minor	Phase	Outlanding
				PIC Age	60
The pilot experienced deteriorating weather conditions while on a cross-country flight. The pilot made the decision to start the engine of the self-launching sailplane and divert to an alternative landing area. Unfortunately, the aircraft had insufficient fuel to reach the alternate landing area and a paddock outlanding was undertaken. During the landing roll the glider's undercarriage collapsed while traversing undulations in the surface of the paddock. Potential casual factors include deteriorating weather and strong headwinds, insufficient fuel for diversion to intended outlanding airport, and landing in a rough paddock.					

Date	16-Oct-2011	Region	GQ	SOAR Report Nbr	S-0090
Level 1	Consequential Events	Level 2	Low Circuit	Level 3	Low Circuit
A/C Model 1	IS28B4			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	Landing
				PIC Age	50
The pilot was flying the club's two-seater solo. Following a normal take off the aircraft was later observed joining circuit for the duty runway at a very low altitude - estimated at between 400 and 500 ft AGL. The pilot continued to fly the circuit oblivious to deteriorating angles to his aiming point and he did not respond to radio calls advising him to commence an early base turn. A very low turn was conducted to align the aircraft with the runway and the wingtip was reported to be only metres above trees on the airfield boundary. The pilot did not recognise the danger and his flying privileges have been removed pending remedial training.					

Date	18-Oct-2011	Region	NSWGA	SOAR Report Nbr	S-0096
Level 1	Operational	Level 2	Ground Operations	Level 3	Taxiing collision/near collision
A/C Model 1	PA25 Pawnee			A/C Model 2	
Injury	Nil	Damage	Substantial	Phase	Landing
				PIC Age	26
Heavy application of brake after landing, resulting in nose over and prop strike. Incorrect landing and braking technique. Pilot motivation to achieve quick turnaround may have contributed.					

Date	20-Oct-2011	Region	NSWGA	SOAR Report Nbr	S-0097
Level 1	Operational	Level 2	Terrain Collisions	Level 3	Ground strike
A/C Model 1	DG-400			A/C Model 2	
Injury	Nil	Damage	Substantial	Phase	Landing
				PIC Age	47
Pilot tried to start the engine on downwind when carrying out an outlanding. The engine did not start, and the pilot lost control and ground looped after hitting contour bank. Pilots must make an early decision to extend motor while in reach of safe landing field. With powered sailplanes there is a significant probability of engine start failure, which usually results in high workload and is often accompanied by decreased glide performance and a higher rate of descent.					

Date	29-Oct-2011	Region	VSA	SOAR Report Nbr	S-0085
------	-------------	--------	-----	-----------------	--------



The Gliding Federation of Australia Inc

Accident and Incident Summaries

Level 1	Operational	Level 2	Terrain Collisions	Level 3	Collision with terrain
A/C Model 1	DG 400			A/C Model 2	
Injury	Nil	Damage	Substantial	Phase	Launch
				PIC Age	75
Pilot of self-launching glider lost control on take-off in a cross wind and hit fence causing substantial damage to the glider.					

Date	30-Oct-2011	Region	WAGA	SOAR Report Nbr	S-0136
Level 1	Operational	Level 2	Airframe	Level 3	Doors/Canopies
A/C Model 1	Astir CS			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	Launch
				PIC Age	95
The pilot had completed his pre take-off checks and hooked on. Delays organising the autotow launching details led the pilot leaving the canopy open while the cable remained connected. When the launch was ready to commence, the pilot attempted to lock the canopy as the wing runner started signalling the launch. The pilot could not lock the canopy as the retaining cord became jammed between the canopy frame and the fuselage. While attempting to lock the canopy the aircraft was launched. The pilot could not release the cable without letting go of the canopy. A cable break occurred at a low height necessitating a modified circuit, all flown while the pilot held the canopy closed. Potential casual factors include rushed procedures, poor launch point discipline, and high pilot workload. This incident highlights the importance of not hooking on until the canopy is closed, and that the cable should be released and checks recommenced if the launch is significantly delayed. Launch crews should ensure the pilot is ready before giving launch commands.					

Date	5-Nov-2011	Region	SAGA	SOAR Report Nbr	S-0101
Level 1	Operational	Level 2	Aircraft Control	Level 3	Hard landing
A/C Model 1	SF 25C Falke			A/C Model 2	
Injury	Minor	Damage	Minor	Phase	Landing
				PIC Age	61
Heavy landing and ground loop. Potential casual factor was pilot distraction during late final and not properly monitoring airspeed on approach.					

Date	6-Nov-2011	Region	GQ	SOAR Report Nbr	S-0089
Level 1	Technical	Level 2	Systems	Level 3	Other Systems Issues
A/C Model 1	Cessna 150			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	Ground Ops
				PIC Age	65
Tug aircraft operated beyond 100 hourly maintenance. Pilot misread maintenance release.					

Date	12-Nov-2011	Region	VSA	SOAR Report Nbr	S-0132
Level 1	Operational	Level 2	Aircraft Control	Level 3	Wheels up landing
A/C Model 1	ASW 20B			A/C Model 2	
Injury	Nil	Damage	Substantial	Phase	Landing
				PIC Age	49
At the end of a 'conversion' flight to this new type and during the base leg, the pilot went to open the airbrakes to counter the effect of lift and inadvertently retracted the undercarriage. Realising his error but now under increased pressure at this critical stage of the flight, the pilot lowered the undercarriage but failed to lock it. The aircraft landed heavily and the undercarriage collapsed. Potential causal factors include unfamiliarity with aircraft type, undercarriage lever is on the same side and close to the airbrake lever, and high workload.					



The Gliding Federation of Australia Inc

Accident and Incident Summaries

Date	12-Nov-2011	Region	NSWGA	SOAR Report Nbr	S-0088
Level 1	Operational	Level 2	Terrain Collisions	Level 3	Collision with terrain
A/C Model 1	Standard Libelle			A/C Model 2	
Injury	Nil	Damage	Minor	Phase	Outlanding
				PIC Age	59
While chasing thermals, the pilot got low over terrain with limited landing options. An outlanding was then conducted on a mining road when the glider's wing hit a PVC post. Pilot was focussed on chasing lift under clouds and lost situational awareness. An over-reliance on GPS and not map reading may have led to disorientation. This occurrence highlights the importance of maintaining situational awareness by constantly monitoring potential landing areas during all phases of the flight. It also highlights the importance of using basic map reading skills in conjunction with GPS.					

Date	12-Nov-2011	Region	NSWGA	SOAR Report Nbr	S-0106
Level 1	Operational	Level 2	Terrain Collisions	Level 3	Collision with terrain
A/C Model 1	ES 52B MK II Kookaburra			A/C Model 2	
Injury	Nil	Damage	Minor	Phase	Landing
				PIC Age	60
During ground roll after landing the glider came to rest in a depression in the runway, possibly caused by wildlife. Minor damage was caused to the lower fuselage. Pilot elected to land in area with known depressions despite safe alternative landing options being available.					

Date	12-Nov-2011	Region	NSWGA	SOAR Report Nbr	S-0107
Level 1	Operational	Level 2	Airframe	Level 3	Landing gear/Indication
A/C Model 1	LS 1-f			A/C Model 2	
Injury	Nil	Damage	Minor	Phase	Landing
				PIC Age	52
Landing gear retracted after touchdown due to mechanical fault.					

Date	12-Nov-2011	Region	VSA	SOAR Report Nbr	S-0118
Level 1	Operational	Level 2	Aircraft Control	Level 3	Wheels up landing
A/C Model 1	Standard Libelle 201 B			A/C Model 2	
Injury	Nil	Damage	Minor	Phase	Landing
				PIC Age	23
Pilot on third flight in single-seat glider forgot to put the undercarriage down during his pre-landing check. Potential causal factors include low experience, no prior exposure to a retractable undercarriage, and unfamiliarity with the aircraft being flown.					

Date	13-Nov-2011	Region	WAGA	SOAR Report Nbr	S-0109
Level 1	Operational	Level 2	Airframe	Level 3	Landing gear/Indication
A/C Model 1	SZD-41A Jantar Standard			A/C Model 2	
Injury	Nil	Damage	Minor	Phase	Landing
				PIC Age	71
During flight the pilot retracted the undercarriage normally however when attempting to lower the undercarriage the pilot was unable to engage the unlock mechanism. The pilot exerted increasing force until the lever moved and the undercarriage appeared to lower to the normal position. However there was no positive lock, which resulted in the undercarriage collapsing during the landing roll. Potential causal factors include: Undercarriage handle plastic grip was found to be obstructing the unlock mechanism; the pilot was unfamiliar with the aircraft; and the use of abnormal force to lower the undercarriage.					



The Gliding Federation of Australia Inc

Accident and Incident Summaries

Date	14-Nov-2011	Region	NSWGA	SOAR Report Nbr	S-0114
Level 1	Airspace	Level 2	Aircraft Separation	Level 3	Near collision
A/C Model 1	Piper PA-25-235			A/C Model 2	Cessna 182T
Injury	Nil	Damage	Nil	Phase	In-Flight
				PIC Age	71
During an aerotow retrieve from Dubbo Airport to Narromine aerodrome NSW, the glider combination was passed by a Cessna 182 heading in the opposite direction. The tug pilot turned on his landing lights to increase visibility and the glider pilot waggled his wings. Neither the tug pilot nor the glider pilot heard any radio calls from the other aircraft.					

Date	14-Nov-2011	Region	NSWGA	SOAR Report Nbr	S-0120
Level 1	Airspace	Level 2	Airspace Infringement	Level 3	Airspace Infringement
A/C Model 1	G 102 Club Astir IIIb			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	In-Flight
				PIC Age	50
An experienced commercial pilot with limited gliding experience gained overseas had embarked on a local flight, which was his first solo flight in five years. During the flight the pilot drifted out of reach of his departure airfield. With light fading and unsure of reaching his intended destination, the pilot elected to land at a Class D airport that was in reach. The glider was not equipped with the CTAF frequency to enable the pilot to radio his intentions to ATC. The pilot stayed clear of the aerodrome to allow a Qantas link Dash-8 to depart and then landed. Potential causal factors include limited gliding experience, lack of currency, unfamiliarity with the site, and complacency.					

Date	16-Nov-2011	Region	VSA	SOAR Report Nbr	S-0087
Level 1	Operational	Level 2	Runway Events	Level 3	Runway excursion
A/C Model 1	ASK21			A/C Model 2	
Injury	Nil	Damage	Substantial	Phase	Landing
				PIC Age	78
Elderly instructor landed in an unmaintained area adjacent to the operational runway. The glider's wing caught in long grass, resulting in a ground loop. The aircraft suffered substantial damage, including the fuselage being broken just aft of the wing trailing edge. Pilot had no explanation for landing off runway.					

Date	19-Nov-2011	Region	GQ	SOAR Report Nbr	S-0110
Level 1	Operational	Level 2	Fuel Related	Level 3	Exhaustion
A/C Model 1	Pa 25 235 Pawnee			A/C Model 2	SZD-50-3 Puchacz
Injury	Nil	Damage	Nil	Phase	Launch
				PIC Age	64
During an aerotow launch the glider tug ran out of fuel and safely executed an off-field landing. The glider completed a 180 degree turn and landed back at the airfield. The tug pilot reported that he visually examined the fuel tanks in the morning but misread the fuel level, resulting in miscalculating the flight duration. This incident highlights the importance of physically dipping the tanks to check fuel levels rather than estimating contents from a cursory visual check.					

Date	20-Nov-2011	Region	NSWGA	SOAR Report Nbr	S-0108
Level 1	Operational	Level 2	Terrain Collisions	Level 3	Collision with terrain
A/C Model 1	H-36 Dimona			A/C Model 2	
Injury	Nil	Damage	Substantial	Phase	Landing
				PIC Age	54
Low level wind shear caused loss of airspeed and diminished control authority on approach while close to the ground. A subsequent wind gust could not be sufficiently countered and the left wing impacted terrain, resulting in a ground loop and the aircraft sliding backwards in the direction of landing. The tail wheel was					



The Gliding Federation of Australia Inc

Accident and Incident Summaries

sheared off, the tail boom broken and the wheel spats and vertical fin were damaged.



Date	20-Nov-2011	Region	WAGA	SOAR Report Nbr	S-0115
Level 1	Operational	Level 2	Airframe	Level 3	Landing gear/Indication
A/C Model 1	SZD-48 Jantar Standard 2			A/C Model 2	
Injury	Nil	Damage	Minor	Phase	Landing
				PIC Age	35
Undercarriage collapsed on landing. Not locked down. Note: On a Jantar the arrow on the lock button should be clearly visible and it should be impossible to pull back the lever.					

Date	27-Nov-2011	Region	WAGA	SOAR Report Nbr	S-0116
Level 1	Operational	Level 2	Airframe	Level 3	Landing gear/Indication
A/C Model 1	SZD-48 Jantar Standard 2			A/C Model 2	
Injury	Nil	Damage	Minor	Phase	Landing
				PIC Age	55
Undercarriage collapsed on landing. Not locked down. Note: On a Jantar the arrow on the lock button should be clearly visible and it should be impossible to pull back the lever.					

Date	29-Nov-2011	Region	NSWGA	SOAR Report Nbr	S-0111
Level 1	Airspace	Level 2	Aircraft Separation	Level 3	Near collision
A/C Model 1	Grob G 103c Twin III SL			A/C Model 2	SAAB 340



The Gliding Federation of Australia Inc

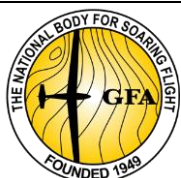
Accident and Incident Summaries

Injury	Nil	Damage	Nil	Phase	In-Flight	PIC Age	72
20 miles West Narrandera, outside CTAF, a SAAB 340 passed close to the sailplane while on decent to Narrandera aerodrome.							

Date	2-Dec-2011	Region	VSA		SOAR Report Nbr		S-0125	
Level 1	Operational		Level 2	Aircraft Control		Level 3	Wheels up landing	
A/C Model 1		Discus 2B			A/C Model 2			
Injury	Nil	Damage	Substantial	Phase	Landing		PIC Age	71
Pilot lowered undercarriage but the lever did not lock into position. The pre-landing checklist was completed late (while on base leg), at which time the pilot noticed the undercarriage lever was not in the locked position. With other traffic on final the pilot's workload was high and he mistakenly retracted the undercarriage and then landed. Potential causal factors include high workload, late completion of pre-landing checks, and not checking undercarriage lever to placards.								

Date	3-Dec-2011	Region		NSWGA	SOAR Report Nbr		S-0113	
Level 1	Operational		Level 2	Terrain Collisions		Level 3	Controlled flight into terrain	
A/C Model 1		SZD-48-3 Jantar Standard 3			A/C Model 2			
Injury	Minor	Damage	Substantial	Phase	Landing		PIC Age	68
The pilot was observed to enter the circuit at low height and at a flat angle to the runway. The pilot persisted with a low and flat downwind, following which a very low turn onto base leg was flown just short of the runway threshold. During the subsequent turn onto final the glider's wingtip struck the ground resulting in the glider cartwheeling and touching down heavily while travelling sideways. The pilot suffered minor injuries and the glider was substantially damaged. Contributing factors were low currency and complacency.								

Date	5-Dec-2011	Region	VSA	SOAR Report Nbr		S-0124	
Level 1	Airspace		Level 2	Aircraft Separation		Level 3	Collision
A/C Model 1		Ventus-2cM			A/C Model 2		Duo Discus
Injury	Nil	Damage	Nil	Phase	Thermalling	PIC Age	78
At 1525 EST on 5 December 2011, while thermalling near Jung, Vic and a height of 4,300 ft AMSL, the second pilot (Coach) of a Duo Discus saw the Ventus enter their thermal slightly lower. After a short interval the Ventus pulled up in front of the Duo Discus, whose crew reported a slight impact between the nose of the Duo Discus and the elevator of the Ventus. The Ventus pilot did not feel an impact and neither aircraft suffered any damage. The Duo Discus was thermalling quite tightly at an airspeed of about 60 knots. The thermal was strong averaging about 6 to 7 knots. The Ventus pilot had the Duo Discus in sight during the thermal entry. The Ventus was travelling at about 65 knots on entry. The Duo Discus pilots saw the Ventus enter the thermal. During thermal entry both gliders passed out of view of the pilots. As the thermal strength was strong, the Ventus would have been subject to a higher climb rate than the Duo Discus as it pulled up into the thermal. The Duo Discus was circling more tightly in comparison to the Ventus, which may have contributed to the Ventus pilot being unaware of his close proximity to the Duo Discus. The situation with gliders thermalling together is quite dynamic and pilots cannot always anticipate the relative movements of the other gliders involved. When joining another glider or number of gliders already in a thermal, ensure that you join in such a way that they can see you. Establish yourself on the opposite side of the circle to the nearest glider and keep adjusting your position to ensure that you do not get into the blind spot of a glider at the same level.							



The Gliding Federation of Australia Inc

Accident and Incident Summaries

Date	8-Dec-2011	Region	VSA		SOAR Report Nbr		S-0121	
Level 1	Airspace		Level 2	Aircraft Separation		Level 3	Near collision	
A/C Model 1		Ventus b			A/C Model 2		Piper PA-31-350 Chieftain	
Injury	Nil	Damage	Nil	Phase	In-Flight		PIC Age	66
While inbound to Essendon Airport Vic a Piper Chieftain, flying in controlled airspace, reported taking avoiding action near the 30NM Melbourne DME radial close to Staughton Vale in order to avoid a glider heading in the opposite direction approx 100 foot below. Investigation revealed the glider pilot had inadvertently penetrated controlled airspace while flying in close proximity to the boundary. The glider pilot, who had been flying for four hours in difficult conditions, did not see the powered aircraft. Potential causal factors include a loss of concentration and situational awareness due to dehydration.								

Date	11-Dec-2011	Region	VSA	SOAR Report Nbr	S-0117			
Level 1	Operational		Level 2	Terrain Collisions		Level 3	Collision with terrain	
A/C Model 1		Astir CS 77			A/C Model 2			
Injury	Nil	Damage	Substantial	Phase	Landing		PIC Age	60
Glider hit sign-post in peripheral vision (warning motorists 'beware of low flying aircraft') with the wing whilst on late finals. Potential causal factor was cognitive tunnelling due to high workload phase of flight.								

Date	11-Dec-2011	Region	WAGA	SOAR Report Nbr		S-0122		
Level 1	Operational		Level 2	Terrain Collisions		Level 3	Collision with terrain	
A/C Model 1		SZD-48 Jantar Standard 2			A/C Model 2			
Injury	Nil	Damage	Minor	Phase	Landing		PIC Age	67
The pilot landed long. In an attempt to bring the glider to a halt before the end of the runway, he applied the wheelbrake with such force that the wheel locked. This resulted in the aircraft pitching forward, tail high, and coming to rest on its nose. Potential causal factors include high workload during circuit and new wheel brake.								

Date	17-Dec-2011	Region	NSWGA	SOAR Report Nbr		S-0133	
Level 1	Environment		Level 2	Weather		Level 3	Turbulence/Windshear /Microburst
A/C Model 1		Pilatus B4-PC11AF			A/C Model 2		
Injury	Nil	Damage	Minor	Phase	Landing		PIC Age 66
As the pilot began to flare for landing, a gust struck the glider causing the aircraft to yaw left and drop to the ground heavily. Aircraft suffered minor skin buckling near the tailwheel.							

Date	24-Dec-2011	Region		SAGA	SOAR Report Nbr	S-0123	
Level 1	Operational		Level 2	Ground Operations		Level 3	Foreign Object Damage/Debris
A/C Model 1		HK-36TTC Super Dimona			A/C Model 2		
Injury	Nil	Damage	Minor	Phase	Landing		PIC Age 47
While conducting a 'power on' landing, and just before touching down, the motor glider pilot noticed something unusual with the nosewheel and aborted the landing. The pilot of another glider advised that there was wire hanging off nosewheel. The motor glider pilot subsequently landed safely. Investigation indicated the glider picked-up a wire that may have been laying in grass following recent work to widen the runways.							



The Gliding Federation of Australia Inc

Accident and Incident Summaries

Date	28-Dec-2011	Region	GQ	SOAR Report Nbr	S-0145
Level 1	Operational	Level 2	Aircraft Control	Level 3	Hard landing
A/C Model 1	Pik 20B			A/C Model 2	
Injury	Nil	Damage	Minor	Phase	Landing
				PIC Age	47
Incorrect landing technique led to glider landing heavily and removing undercarriage door. Causal factors include low hours pilot inexperienced on type.					

Date	29-Dec-2011	Region	VSA	SOAR Report Nbr	S-0126
Level 1	Operational	Level 2	Runway Events	Level 3	Runway excursion
A/C Model 1	ASW 19B			A/C Model 2	
Injury	Nil	Damage	Substantial	Phase	Launch
				PIC Age	66
Following the winch 'all out' signal the glider accelerated briskly and very quickly started to turn right. The pilot pulled the release as the glider reached 90 degrees to the launch direction while airborne. The glider impacted the ground nose down and facing back towards the launch point some 60 metres from where it started. The glider suffered substantial damage but the pilot was uninjured. Potential causal factors include the pilot not recognising the wing had dropped, a late decision to release (even though the pilot has his hand on the release), and possible crosswind component at the moment of launch.					

Date	30-Dec-2011	Region	SAGA	SOAR Report Nbr	S-0128
Level 1	Operational	Level 2	Aircraft Control	Level 3	Wheels up landing
A/C Model 1	ASH 25 M (Rotax 505A)			A/C Model 2	
Injury	Nil	Damage	Minor	Phase	Landing
				PIC Age	63
An attempt to start the engine after an early release from aerotow was unsuccessful. The glider was then outlanded with engine extended and the undercarriage retracted. Potential causal factors include stress from a high workload resulting in a pre-landing check not being completed.					

Date	30-Dec-2011	Region	VSA	SOAR Report Nbr	S-0142
Level 1	Operational	Level 2	Terrain Collisions	Level 3	Collision with terrain
A/C Model 1	Hornet			A/C Model 2	
Injury	Nil	Damage	Substantial	Phase	Landing
				PIC Age	52
While returning from a cross-country flight the glider encountered severe sink. The pilot chose to outland but was too low to overfly the paddock for check for obstacles. During the ground roll the glider collided with a fence hidden in long grass. This accident highlights the importance of breaking off the flight with sufficient height to assess outlanding options.					

Date	31-Dec-2011	Region	GQ	SOAR Report Nbr	S-0146
Level 1	Operational	Level 2	Runway Events	Level 3	Runway excursion
A/C Model 1	Pik 20E II			A/C Model 2	
Injury	Nil	Damage	Minor	Phase	Landing
				PIC Age	48
During landing in turbulent conditions, the glider's wingtip caught in long grass. The pilot was unable to maintain directional control and the glider ground-looped causing minor damage to the tail-wheel attachment..					



The Gliding Federation of Australia Inc

Accident and Incident Summaries

Level 1	Level 2	Level 3	Definition
Airspace	Aircraft Separation	Collision	An aircraft collides with another aircraft either airborne or on the runway strip, or a vehicle or person on the runway strip.
Airspace	Aircraft Separation	Issues	Airspace - Aircraft separation occurrences not specifically covered elsewhere.
Airspace	Aircraft Separation	Near collision	An aircraft comes into such close proximity with another aircraft either airborne or on the runway strip, or a vehicle or person on the runway strip, where immediate evasive action was required or should have been taken. (a) En-route (b) Thermalling (c) Circuit
Airspace	Airspace Infringement	Airspace Infringement	Where there is an unauthorised entry of an aircraft into airspace for which a clearance is required.
Airspace	Other	Other Airspace Events	Airspace occurrences not specifically covered elsewhere.
Consequential Events	Ditching	Ditching	When an aircraft is forced to land on water.
Consequential Events	Diversion / Return	Diversion / Return	When an aircraft does not continue to its intended destination, but either returns to the departure aerodrome or lands at an alternative aerodrome.
Consequential Events	Emergency / Precautionary descent	Emergency / Precautionary descent	Emergency descent - Circumstances that require the flight crew to initiate an immediate high rate descent to ensure the continued safety of the aircraft and its occupants.
Consequential Events	Emergency evacuation	Emergency evacuation	When crew and/or passengers vacate an aircraft in situations other than normal and usually under the direction of the operational crew.
Consequential Events	Forced / Precautionary landing	Forced / Precautionary landing	Forced landing – Circumstances under which an aircraft can no longer sustain normal flight and must land regardless of the terrain. Precautionary landing - A landing made as a precaution when, in the judgement of flight crew, a hazard exists with continued flight.
Consequential Events	Low Circuit	Low Circuit	Any occasion where a pilot flies a Low Circuit that was potentially hazardous.
Consequential Events	Other	Other Consequential Events	Consequential events not specifically covered elsewhere.
Environment	Weather	Icing	Any icing issue that affects the performance of an aircraft.
Environment	Weather	Lightning strike	The aircraft is struck by lightning.
Environment	Weather	Other Weather Events	Weather occurrences not specifically covered elsewhere.
Environment	Weather	Turbulence/Windshear/Microburst	Aircraft performance and/or characteristics are affected by turbulence, windshear or a microburst.
Environment	Weather	Unforecast weather	Operations affected by weather conditions that were not forecast or not considered by the flight crew.
Environment	Wildlife	Animal strike	A collision between an aircraft and an animal.
Environment	Wildlife	Birdstrike	A collision between an aircraft and a bird.
Environment	Wildlife	Other Wildlife Events	Wildlife related occurrences not specifically covered elsewhere.
Operational	Aircraft Control	Airframe overspeed	The airspeed limit has been exceeded for the current aircraft configuration as published in the aircraft manual.
Operational	Aircraft Control	Control issues	The flight crew encounter minor aircraft control difficulties while airborne or on the ground.
Operational	Aircraft Control	Hard landing	Damage occurs during the landing.
Operational	Aircraft Control	Incorrect configuration	An aircraft system is incorrectly set for the current and/or intended phase of flight.
Operational	Aircraft Control	In-flight break-up	The aircraft sustained an airborne structural failure or damage to the airframe, to the extent that continued flight is no longer possible.
Operational	Aircraft Control	Loss of control	When control of the aircraft is lost or there are significant difficulties controlling the aircraft either airborne or on the ground.
Operational	Aircraft Control	Other Control Issues	Aircraft control occurrences not specifically covered elsewhere.
Operational	Aircraft Control	Pilot Induced Oscillations	Any PIO occurrence occasioning damage.
Operational	Aircraft Control	Stall warnings	Any cockpit warning or alert that indicates the aircraft is approaching an aerodynamic stall.
Operational	Aircraft Control	Wheels up landing	An aircraft contacts the intended landing area with the landing gear retracted.

Operational	Aircraft Loading	Loading related	The incorrect loading of an aircraft that has the potential to adversely affect any of the following: a) the aircraft's weight; b) the aircraft's balance; c) the aircraft's structural integrity; d) the aircraft's performance; e) the aircraft's flight characteristics.
Operational	Aircraft Loading	Other Loading Issues	Aircraft loading occurrences not specifically covered elsewhere.
Operational	Airframe	Doors/Canopies	When a door or canopy, or its component parts, has failed or exhibited damage.
Operational	Airframe	Furnishings & fittings	An internal aircraft furnishing or fitting, including its component parts, has failed or exhibited damage.
Operational	Airframe	Fuselage/Wings/Empennage	Damage to the fuselage, wings, or empennage not caused through collision or ground contact.
Operational	Airframe	Landing gear/Indication	When the landing gear or its component parts (including indications), has failed or exhibited damage.
Operational	Airframe	Objects falling from aircraft	Objects inadvertently falling from or detaching from an aircraft.
Operational	Airframe	Other Airframe Issues	Technical - Airframe occurrences not specifically covered elsewhere.
Operational	Airframe	Windows	A window or a component part has failed or exhibited damage.
Operational	Communications	Other Communications Issues	Communications occurrences not specifically covered elsewhere.
Operational	Communications	Transponder related	The incorrect setting of a code and/or usage of transponder equipment.
Operational	Crew and Cabin Safety	Cabin injuries	A cabin crew member or passenger has suffered an illness or injury.
Operational	Crew and Cabin Safety	Flight crew incapacitation	A Flight Crew member is restricted to nil or limited duties as a result of illness or injury.
Operational	Crew and Cabin Safety	Inter-crew communications	Relates specifically to a loss, or breakdown, of communication between flight crew or associated ground staff.
Operational	Crew and Cabin Safety	Other Crew and Cabin Safety Issues	Cabin safety occurrences not specifically covered elsewhere.
Operational	Crew and Cabin Safety	Passenger related	Where the actions of a passenger adversely or potentially affects the safety of the aircraft.
Operational	Crew and Cabin Safety	Unrestrained objects	When objects are not appropriately restrained for the aircraft operation or phase of flight.
Operational	Fire Fumes and Smoke	Fire	Any fire that has been detected and confirmed in relation to an aircraft operation.
Operational	Fire Fumes and Smoke	Fumes	When abnormal fumes or smells are reported on board the aircraft.
Operational	Fire Fumes and Smoke	Smoke	When smoke is reported to be emanating from: a) inside the aircraft; or b) an external component of the aircraft.
Operational	Flight Preparation/Navigation	Aircraft preparation	Errors or omissions during the planning and/or pre-flight phase that affect or may affect aircraft safety in relation to: a) the aircraft's weight; b) the aircraft's balance; c) the aircraft's structural integrity; d) the aircraft's performance; e) the aircraft's flight characteristics.
Operational	Flight Preparation/Navigation	Lost / Unsure of position	When flight crew are uncertain of the aircraft's position and/or request assistance from an external source.
Operational	Flight Preparation/Navigation	Other Flight Preparation/Navigation Issues	Navigation - Flight planning occurrences not specifically covered elsewhere.
Operational	Flight Preparation/Navigation	VFR into IMC	An aircraft operating under the Visual Flight Rules enters Instrument Meteorological Conditions.
Operational	Fuel Related	Contamination	When the presence of a foreign substance is found in fuel.
Operational	Fuel Related	Exhaustion	When the aircraft has become completely devoid of useable fuel.
Operational	Fuel Related	Leaking or Venting	Relates specifically to the unplanned loss of fuel from a fuel tank or fuel system.
Operational	Fuel Related	Low fuel	The aircraft's supply of fuel becoming so low (whether or not the result of a technical issue) that the safety of the aircraft is compromised.
Operational	Fuel Related	Other Fuel Related Issues	Fuel related occurrences not specifically covered elsewhere.

Operational	Fuel Related	Starvation	When the fuel supply to the engine(s) is interrupted, but there is still usable fuel on board the aircraft.
Operational	Ground Operations	Foreign Object Damage/Debris	Any loose objects on an aerodrome have caused, or have the potential to cause, damage to an aircraft.
Operational	Ground Operations	Ground handling	Any ground handling and aircraft servicing that caused, or has the potential to cause injury or damage to a stationary aircraft.
Operational	Ground Operations	Jet blast/Prop/Rotor wash	Any air disturbance from a ground-running aircraft propeller, rotor or jet engine that has caused, or has the potential to cause, injury or damage to property.
Operational	Ground Operations	Other Ground Ops Issues	Ground operation occurrences not specifically covered elsewhere.
Operational	Ground Operations	Taxiing collision/near collision	An aircraft collides, or has a near collision, with another aircraft, terrain, person or object on the ground or on water during taxi.
Operational	Miscellaneous	Missing aircraft	The aircraft is reported as missing.
Operational	Miscellaneous	Other Miscellaneous	Miscellaneous occurrences not specifically covered elsewhere in this manual.
Operational	Miscellaneous	Rope break/Weak link failure	Towplane separation incident necessitating a modified circuit.
Operational	Miscellaneous	Rope/Rings airframe strike	Airframe struck by launch cable or rings. Includes entanglement with rope.
Operational	Miscellaneous	Warning devices	Situations in which an aural or visual aircraft warning device activates to alert the flight crew to a situation requiring immediate or prompt corrective action.
Operational	Miscellaneous	Winch Performance Issue	Any incident caused by poor winch performance, such as power failure, or mechanical reasons.
Operational	Runway Events	Depart/App/Land wrong runway	An aircraft that: a) takes off b) lands, c) attempts to land from final approach d) operates in the circuit at, to or from an area other than that authorised or intended for landing or departure
Operational	Runway Events	Other Runway Events	Runway event occurrences not specifically covered elsewhere.
Operational	Runway Events	Runway excursion	An aircraft that veers off the side of the runway or overruns the runway threshold.
Operational	Runway Events	Runway incursion	The incorrect presence of an aircraft, vehicle or person on the protected area of a surface designated for the landing and take-off of aircraft.
Operational	Runway Events	Runway undershoot	Any aircraft attempting a landing and touches down prior to the threshold.
Operational	Terrain Collisions	Collision with terrain	Any collision between an airborne aircraft and the ground, water or an object, where the flight crew were aware of the terrain prior to the collision.
Operational	Terrain Collisions	Controlled flight into terrain (CFIT)	When a serviceable aircraft, under flight crew control, is inadvertently flown into terrain, obstacles or water without either sufficient or timely awareness by the flight crew to prevent the collision.
Operational	Terrain Collisions	Ground strike	When part of the aircraft drags on, or strikes, the ground or water.
Operational	Terrain Collisions	Wirestrike	When an aircraft strikes a wire, such as a powerline, telephone wire, or guy wire, during normal operations.
Technical	Powerplant/Propulsion	Abnormal Engine Indications	A visual or cockpit warning that indicates an engine is malfunctioning or operating outside normal parameters.
Technical	Powerplant/Propulsion	Engine failure or malfunction	An engine malfunction that results in a total engine failure, a loss of engine power or is rough running.
Technical	Powerplant/Propulsion	Other Powerplant/Propulsion Issues	Powerplant / Propulsion occurrences not specifically covered elsewhere.
Technical	Powerplant/Propulsion	Propeller malfunction	The failure or malfunction of an aircraft propeller or its associated components.
Technical	Powerplant/Propulsion	Transmission & Gearboxes	The failure or malfunction of an aircraft transmission/gearbox and/or its associated components.

Technical	Systems	Avionics/Flight instruments	The partial or complete loss of normal functioning of the avionics system or its components.
Technical	Systems	Electrical	The partial or complete loss of normal functioning of the aircraft electrical system.
Technical	Systems	Flight controls	The partial or complete loss of normal functioning of a primary or secondary flight control system.
Technical	Systems	Fuel	The partial or complete loss of normal functioning of the fuel system.
Technical	Systems	Hydraulic	The partial or complete loss of the hydraulic system.
Technical	Systems	Other Systems Issues	Technical - Systems occurrences not specifically covered elsewhere.