

WBRF's - Guide to Model Aircraft Safety Practices

Most model aircraft fliers (including drones) tend to fly from specific, designated sites and as part of a club environment as we do at WBRF's, which is clearly the best way to learn and get most out of the sport. However, 'solo' flight from other locations may also be possible provided that the models are operated in accordance with the requirements of the law and SACAA rules in South Africa and your Clubs chosen ARO guidelines and not forgetting to, - fly with respect to the safety of other people, buildings, infrastructure and full size aircraft.

1 The Basics or "Common Sense" list 'is the light on up there?'

1. You and only you! Are responsible for flying your model aircraft in a safe manner.
2. You are responsible for making sure your aircraft is in fact; air worthy!
3. You must keep the model aircraft in your direct sight at all times while it is flying, so that you can ensure that it does not collide with anything, especially other aircraft.
4. Do not fly into the sun as eye disturbance from direct sunlight can cause losing sight of your model.
5. You must not endanger anyone, or anything with your model aircraft, including any articles that you drop from it.
6. You must not fly at a height greater than 400ft (120mtrs) above the surface unless permitted to by the SACAA via our ARO (RCASA) for special events.
7. You must not fly within any Flight Restriction Zone of either a protected aerodrome or as directed by a NOTAM, (Notice to Airmen) stipulating a restricted; "No Fly area."
8. Before starting an engine ensure your model is in the starting block area or away from the pits and being held by a helper if starting blocks not available.
9. Check with other pilots before your model enters the runway, if someone shouts landing do not enter runway and attempt to take off until the landing model is on the ground and the pilot and model are clear of the runway.

2 General Safety Guidelines – For operating a RC plane of any type

1. Models should be built to a standard such that they will not fail under normal circumstances, giving particular attention to control surfaces associated connections, wing fixations and secure covering on flying surfaces. This should be thoroughly checked prior to each flying session and after any hard landing.
2. It is recommended that rounded spinners or safety propeller nuts of the domed type are fitted to internal combustion and electric powered models and that gliders and pusher powered aircraft's noses should also be rounded (no needle noses).
3. Care should be taken by the operator that propellers are of suitable size and construction for their engine or motor's operating speed. All propellers should be carefully balanced. Economic and efficient propeller balancers are available from your local model shop.

4. Do not use propellers on internal combustion engines that are designed for use on electric motors.
5. On internal combustion engines and electric motors, damaged propellers must not be used. Inspect your propellers regularly and replace any that are not in good condition
6. Metal propellers must not be used.
7. The use of locking prop nuts is recommended, especially for 4-stroke engines. A backfire or 'kick' can loosen a prop nut and locking nuts will prevent the propeller flying off. The safety factor of locking prop nuts on four-stroke engines is more important than the recommendation to use 'domed' safety nuts so, if you have to choose, go for the locking nuts.
8. Heavy ballast, or any other heavy part, subject to jettisoning in flight is prohibited.
9. All R/C models are subject to in-flight vibration, landing knocks, transport damage etc. Be sure that receivers and batteries are well protected, servos are fixed securely, control linkages (pushrods, snakes, closed loop etc.) are robust enough for their purpose, are properly supported where necessary and are as "slop free" as possible and that all control surface hinges and horns are fitted correctly. Pushrod clevises should fit control horns cleanly with no sideways strain and they should be fitted with a plastic or silicone tube 'keeper' as a secondary closure.
10. When starting an engine make sure that the model is restrained and cannot move forward. Restraint is best done by either a helper or by some mechanical means such as starting poles that restrain wings or tethered rope over tail section (in this later case DO NOT run engine at full revs).
11. Never put yourself in a position where your face is in line with a turning propeller. A broken propeller will fly out and forward so make all engine adjustments from the rear if possible. A broken propeller will also be a danger to anyone standing nearby so take care that no-one is in line with it when starting your engine.
12. Never allow children unsupervised running free at any model flying facility.
13. Do not bring your pet dogs to the field! If you do they must not roam freely and be tethered on a leash behind the pits area.
14. All visitors who are spectators must stay behind the pits areas and not be allowed to wander through the pits and onto the flight side of pits.

3 Use of Glow Fuel and Gasoline

- 1 All fuelling of your plane and emptying after use must only be done outside the pits area on the grass or at the starting posts. UNDER NO CIRCUMSTANCES CAN PIT TABLES BE USED for these operations.
- 2 Ensure fuel containers are closed after each use to prevent spillage.
- 3 Do not leave batteries connected to fuel pumps when not in use

4 General Pre-Flight Checks

1. Check control surfaces for correct movement once plane is setup at field (wings fitted) both before starting and before take-off.
2. Remember! Aileron stick on transmitter moved to right, then right aileron goes up when viewed from back looking toward front. Likewise aileron stick to left and left aileron goes up. Rudder stick to right rudder moves right and to left and rudder moves left. Pull back elevator stick, elevator goes up, push forward elevator goes down. It is surprising how many people do not do this simple check before take-off. They assume because the control surfaces move, they do so in the right direction?
3. Never fly at any of WBRF's flying facilities ALONE! Remember safety in numbers?
4. Have a clear plan of what happens in event of an accident, this being dependant on proximity of model club flying site in relation to local medical facilities.

5 Flight Box Etiquette

- 1 It is recommended that only 3 pilots fly at the same time (WBRF Rule)
- 2 No pilot joins the flight line for take-off before checking with flying pilots they may join, a simple but clear shout! *"May I join and take off please"*. Is sufficient to get clearance
- 3 If reply is *"hold on I'm just landing,"* wait until plane has landed and it's all clear.
- 4 Do not take off while standing on runway. Once you have clearance check circuit direction, place plane on runway into wind and go to flight box and then shout *"Taking Off"*
- 5 If a flying pilot shouts, *"Dead Stick"* Other pilots in box should immediately fly clear, but within range of runway, to allow the dead stick pilot to move to front of flight box & land.
- 6 When a pilot wants to land he must give ample warning by shouting *"Landing"* so other flying pilots may give him priority, by responding, *"OK clear"*.

6 Essential Equipment

- 1 Have clean cloth or paper towels to keep hands clean from oil dust etc.
- 2 It is recommended that in dry summer conditions pilots have a Co2 fire extinguisher at hand should a plane crash fire occur.
- 3 Each member must carry some form of first aid kit in vehicle just in case of accident.
- 4 Remember! A trousers belt can be used as a tourniquet to stop/reduce profuse bleeding. So can a roll of electricians PVC tape with a pressure pad made from a piece of old cloth.

7 Emergency Numbers (Hermanus Area)

Hermanus Private Ambulance Services:

- EMS (Provincial) Ambulance Service – Hermanus Tel: 028 312 3219
- EMR Emergency Medical Rescue – Hermanus Tel: 076 585 0899
- CMC Critical Emergency Care – Hermanus Tel: 066 222 7219

Hermanus Fire Brigade Tel: 028 313 8980

SAPS Hermanus Police Station Tel: 028 313 5300

“REMEMBER SAFE AND SENSIBLE FLYING AT ALL TIMES”