

Take-off Sequence

The take-off is possibly the most important manoeuvre of all, as it is the first manoeuvre you fly in front of the judges, so it is up to you to show us how good you are. The take-off should be flown with the same precision and grace as all the other manoeuvres in the schedule. All turns should be as flat as possible to give a good impression in the judges' eye of smoothness and gracefulness.

The procedure for take-off is as follows:

1. The model should be placed on the runway by your helper facing into wind with a very slow idle and released. When released the helper should not touch the model again as this could be classed as an assisted take-off. However a point of safety should be considered in a crosswind or on rough ground where the model may 'weathercock' towards the pilot, judges, pits or spectator line. It may be necessary to hold the tail of the model while the engine revs are increased and the model moves forward to overcome any resistance of the undercarriage wheels and the rudder has some authority
2. The pilot slowly applies the power and the model moves off in a straight line. When flying speed is reached the model lifts off with wings level and a gentle rate of climb which should not exceed an angle of 30 degrees. Power can now be reduced to allow the model to fly at the speed which you like to fly through the schedule.
- 3a. **Clubman Schedule:** The model continues until the model is upwind and completes two 90° turns onto the downwind leg. The downwind leg should be straight and level at the preferred baseline height of the schedule to be flown. Two further 90° turns are made to bring the model back onto the preferred flight line and baseline height for the second manoeuvre of the schedule to be flown on the box centre line. (The first manoeuvre is considered to be the Take-Off sequence). There is an option at the downwind turn. If preferred a Half Reverse Cuban Eight can be flown to bring the model back onto the schedule base line.
- 3b **Intermediate Schedule:** The pilot now proceeds to turn the model 90 degrees into a crosswind leg with the model still climbing towards the preferred baseline height. At the appropriate distance out the model should turn upwind to start its 270 degree turn into the downwind trimming pass, which should be positioned over the 150 metres markers. When approximately level with the downwind marker the pilot initiates a turn-around manoeuvre of his choice. Do not rush the take-off a rushed take-off normally leads to a rushed flight and points lost.

Note: When the model passes over the centre line on the downwind leg, the take-off manoeuvre is complete and will not be judged beyond that point.

Possible downgrades

1. Assisted take-off: zero points. (see notes above)
2. Model does not track straight on take-off: 1-2 points. Beware of the flying surface i.e. ruts and pot holes on grass sites.
3. Wings not level after take-off: 1 point per 15 degrees.
4. Rate of climb too steep: 1-2 points above 30 degrees.
5. Model goes behind judge's line after take-off: zero points.
6. Model retouches runway after lift-off: 1 point.
7. Bits come off model on take-off: zero points for the whole flight.

8. The 90 degree turn is not 90 degrees: 1 point per 15 degrees.
9. The 270 degree turn is not 270 degrees: 1 point per 15 degrees.
10. The model is flown in too close or too far out on completion of turn-around manoeuvre: 1-3 points depending on its severity. Judges you need to be careful about what is considered to be too close or too far out. The criterion set out in the judges' guide suggests 100-175 metres.

Landing

The landing sequence should be flown with the same precision as all other manoeuvres in the schedule.

- a. **Clubman Schedule:** On completion of the last manoeuvre a short straight and level flight should be flown. At reduced power the model completes two 90 degree turns into a level or descending downwind leg and then executes a two more 90 degree turns onto the final descending approach to the runway, touching down inside the landing zone
- b. **Intermediate Schedule:** On completion of the last manoeuvre a short straight and level flight should be flown. At reduced power the model turns 180 degrees into a level or descending downwind leg and then executes a second 180 degree turn upwind for the final descending approach to the runway, touching down inside the landing zone.

Landing is complete after the model has rolled 10 metres or has come to rest inside the landing zone. The landing zone is an area described by a circle of 50 metres radius or lines across a standard runway spaced 100 metres apart where the runway is 10 metres wide.

Possible downgrades

1. Model does not follow landing sequence: zero points.
2. Landing gear retracts or wheels come off on landing, zero points.
3. Model lands outside the zone: zero points.
4. 90 or 180 degree turns not 90 or 180 degrees 1-2 points.
5. Wings not level in downwind and upwind legs 1 point per 15 degrees.
6. Model does not track on runway after touchdown 1-2 points.
7. Model bounces on touchdown 1-2 points.
8. Model climbs and dives on downwind leg or final approach to runway 1-2 points.
9. Model changes heading left or right on approach to runway 1-2 points.

The landing will not be downgraded if:

1. If the pilot elects side-slip to land due to crosswind conditions, in which case the upwind wing will be low.
2. Wing dips due to cross wind turbulence and is corrected IMMEDIATELY.

Take-offs & Landings are scored 0-10 with a K factor of 2 for Clubman and 1 for Intermediate, using the downgrades stated above,