

The South African Model Aircraft Association



Proficiency Tests for fixed-wing powered models

Issue 3 - June 2015 (Ludwig Steyn)

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SAMAA Proficiency tests for fixed-wing powered models

SECTION 1

GENERAL

This booklet deals with **fixed-wing powered aircraft**. Similar documents exist for proficiency tests for helicopters, gliders, control line, jets, multi-rotor, and other types of aircraft.

INTRODUCTION

In the interest of the hobby and sport of model aircraft, it is essential that first,

- an adequate standard be set before a **beginner** is allowed to fly on his own without a qualified instructor in attendance, and secondly,
- that further challenges are set to challenge the model aircraft pilot to improve his flying skills.

With these two main objectives in mind, the SAMAA has produced, over the years, a number of proficiency tests.

The first set of proficiency tests introduced in the 70s was the "Propeller" series, which was replaced in 1984 by the present proficiency system, which is represented by the four qualifications of Bronze, Silver, Gold, and Instructors, with a fifth, the Solo being added.

The Bronze was regarded by SAMAA as the minimum requisite for a radio control pilot to fly a model on his own. In 2001, it was decided that a more forgiving (in terms of flying requirements) and more comprehensive (in terms of general safety knowledge) test be introduced. This test is known as the "Solo".

The purpose of this "Solo" test is to ensure a model pilot's ability to fly and control a model aircraft safely when other members are present and flying. It also ensures that the model pilot had been instructed on his club's bye-laws, safety rules, the SAMAA Operating Manual, and has an understanding and working knowledge of the equipment and radio installation, and a basic understanding related to model safety, u, and aerodynamics.

Other changes to the present SAMAA proficiency regulations relate to:

- level of qualification needed to instruct or teach a beginner. (see club instructor)
- the level of competence required for a model pilot to be allowed to fly at an airshow held at his own club, with public present.

Also added to this Booklet is a “Teaching sequence” for pupil or beginner pilots. This is a milestone-recorded and progress log, which should make it easier for club instructors to monitor the progress of a beginner or pupil.

SECTION 2

DEFINITIONS

For clarity, let’s define some of the terms used in this booklet. These are:

- *Pupil pilot* - a pupil pilot is a paid up SAMAA member who is learning to fly an R/C model aeroplane, and has not yet obtained any proficiency level. When flying with others present, he shall be accompanied by a SAMAA-qualified club instructor.
- *Pilot* - a member who can fly a model aeroplane and has achieved a proficiency level of Solo or better.
- *SAMAA* - The South African Model Aircraft Association, which is the coordinating and controlling body for aeromodelling in South Africa. All SAMAA rules and regulations are to be incorporated into and complied with at all SAMAA-registered clubs.
- *Registered club* - field or flying site that has been set out for aircraft flying, registered by SAMAA. The club or site will have a responsible committee elected by the members to manage and run all model flying activities.
- *Member* - means a fully paid-up member of the SAMAA who is in good standing with the association.
- *Pilot box/Pilot area* - means designated area from which pilots fly their aeroplanes.
- *Frequency peg board* - the frequency control system used by the club to ensure control overall the frequencies which may be used at the field.
- *Pit area* - the area between the club house and the pilot boxes on the runway nearest to the club house.
- *Run-up area* - an area off to the side of the taxiways where engines may be checked without interfering

with aircraft in the pit area or the hearing of the pilots flying.

- *Transmitter control area* - the area at the back of the pit area where all transmitters are impounded in a switched-off state when not in use.
- *Transmitter* - a purpose-made, commercially available unit which shall operate on an ICASA-approved model aircraft frequency, and be “Type Approved” by ICASA, to operate within the specifications and power outputs defined by ICASA, for use in model aircraft control in South Africa.
- *Buddy box* - a system whereby the instructor has a “master” transmitter and the pupil pilot has the “slave” transmitter, and the instructor can assume control of the aircraft as required.
- *Simulator* - Presently one of the best and cheapest methods to learn to fly. In principle, it is an attachment to your computer which allows you to learn to fly a model aircraft on your computer screen (similar to a computer game).
- *Aircraft or aeroplane* - a conventional, powered, fixed-wing model aircraft. The final decision on the type of model aircraft that may be used for the actual test, remains with the judges (see clause 8.2)
- *Frequency peg/marker* - the marker used to identify the radio frequency being used by the pilot at the field.
- *Rules and regulations* - these shall mean the SAMAA rules and safety regulations, the club rules and regulations.
- *Club instructor* - A person, who in the view of the club committee, is qualified to assist a beginner to learn to fly. A member who in their views, is proficient, or has obtained a proficiency level which makes him competent to instruct beginners. This means that, if circumstances dictate, i.e the club does not have the qualified members, a member with a Solo or Bronze and with at least 12 months practical flying could be appointed a club instructor.

Unless there are special circumstances, a club instructor must hold a SAMAA silver proficiency.

Any two club instructors with SAMAA silver or higher, can test a pupil pilot and award a "Solo" status. The club instructor is critical to the future of model flying. Teaching of beginners and pupil pilots in the club, and achieving Solo status, is an essential service to the hobby.

- *SAMAA instructor* - A pilot who has satisfactorily obtained his SAMAA instructor proficiency and who has demonstrated to the SAMAA instructor judges that he has a good understanding of the safety rules, and comparative scoring system. He will be allowed to judge when accompanied by a second qualified SAMAA instructor, to award the SAMAA proficiencies for Solo, Bronze, Silver, or Gold.
- *SAMAA instructor judge* - After a pilot has obtained his SAMAA instructor proficiency, he could be appointed as a SAMAA instructor judge at SAMAA's discretion, provided he fulfills the following criteria:
 - (a) He shall be a fully paid-up member of SAMAA and be in good standing with regards to previous payments.
 - (b) He shall have a minimum of 7 (seven) years' involvement in model flying.
 - (d) He shall be mature, and shall be respected in the flying fraternity.
 - (f) He shall be entitled to judge, together with a SAMAA Gold proficiency pilot, any proficiency up to Gold.
 - (g) He shall be entitled to judge, together with another SAMAA instructor, a pilot for his Instructor rating.

It must be stated that it is SAMAA's decision as to how many judges they wish to appoint in an area region, and instructor judges will only be appointed as and when the need arises.

This instructor judge status may be revoked by SAMAA, if the appointee becomes inactive, irresponsible, or does not perform the duties.

SECTION 3

STEPS TO TEACHING A PUPIL PILOT TO FLY

This section has been introduced to set down some guidelines to club instructors who have undertaken the task of teaching a new member to fly.

It is intended to outline the matters that a pilot should know. Its objective is to assist and remind the instructor of matters that he takes for granted and assumes others know.

The duties of the club instructor are:

1. Check out the pupil pilots' aeroplane before the first flight, or after any repairs, by doing the pre-flight check set out in sections of this booklet.
2. Instruct the pupil pilot on SAMAA MOPs, the club's constitution, and flying procedures, and the club's safety rules and safety code.
3. Instruct briefly on a number of general subjects as outlined under "General Instruction".
4. Teach the pupil pilot to fly.

3.1 CHECKOUT THE PUPIL/BEGINNER'S AEROPLANE

Every aeroplane should be checked out structurally, and for the method and correctness of the radio, motor and equipment installation. For this purpose, it is suggested that the preflight checklist in Section 5 be used.

3.2 FIELD ETIQUETTE AND SAFETY RULES

This is the instructor's second duty. Some clubs have not yet prepared introductory courses to cover the safety rules etc. as set out in this section and section 3.3, but it is hoped that in due course clubs will introduce lectures to ensure that pupil pilots and new members understand the rules and the basics of how the hobby is structured. It is essential for the instructor to work through the following with the pupil pilot:

- (a) – Club rules and flying procedures
- (b) – Safety rules, safety code and procedures
- (c) – Bye-laws and special regulations.
- (d) – SAMAA rules.

3.3. GENERAL INSTRUCTION

The instructor's third duty covers a fairly large scope. It is up to the instructor to do his best to give the pupil grounding in the following:

3.3.1 **Theory of flight**

- (i) basics (lift, weight, thrust, drag).
- (ii) speed/lift. (Bernoulli principles).
- (iii) stalling.
- (iv) centre of gravity (forward-safe, rearward-disastrous).
- (v) the three axes (yaw, pitch, roll).
- (vi) control surface function.
- (vii) adverse yaw.
- (viii) air density and temperature.
- (ix) mass and wing loading.

3.3.2 **Radio functions**

- (i) very basic theory.
- (ii) actions and functions of Tx.
- (iii) actions and functions of Rx.
- (iv) checks, range, switch, antennae, batteries, etc.
- (v) maintenance and charging.
- (vi) Receiver "failsafe" settings.
- (vii) Buddy box use
- (viii) Home simulator.

3.3.3 **Frequency Control**

- (i) Describe the system still used in South Africa, i.e. "PEG ON" in detail, emphasising discipline and consequences of failure to observe these frequency control rules.
- (ii) The system of "peg on" board before switching on transmitter.
- (iii) Transmitter impound system.

3.3.4 **Pre-flight checks**

- (i) radio/start-up/mixture at high – low rpm/mixture when aircraft is nose up, reliable idle, etc.
- (ii) engine power limits, propeller size.
- (iii) control checks.
- (iv) taxi and runway discipline.
- (v) runway entrance, hold for landing aeroplanes, permission from other pilots flying.
- (vi) line up and delays.
- (vii) club local flying and safety rules.

3.3.5 **Flying**

- (i) power for height, elevator for speed.
- (ii) acquisition of stick "feel" – practice.
- (iii) simple turns and correction during manoeuvres.
- (iv) normal turns and manoeuvres.

- (v) disorientation - stick time.
- (vi) dangers of flying through the sun.
- (vii) basic aerobatics and correction.
- (viii) changing altitude.
- (ix) accurate positioning of aeroplane in the sky.
- (x) approach and landing pattern.
- (xi) landing.
- (xii) take-off procedures (use of rudder at lower speeds).
- (xiii) touch-and-go's.
- (xiv) identification of pupil's weakness, revision and practice to improve.
- (xv) first solo flight.
- (xvi) Solo proficiency test.
- (xvii) one month check-up and correction of any problem.

3.3.6 **Proficiency testing**

Reasons and purpose of proficiency tests. (Refer to Section 1 and Section 8)

3.4. **TAKE-OFF AND FLYING**

Now comes the hard work for the instructor, his fourth duty – teaching the beginner or pupil to fly.

NO PUPIL PILOT MAY FLY HIS AIRCRAFT WITHOUT AN INSTRUCTOR OR QUALIFIED FLIER IN ATTENDANCE.

Once the pupil has listened to all the above theory, he is now ready to fly, but again, only after having the instructor explain the following to him:

3.4.1 **Pre-flight check procedure**

1. Re-check control movements before taxiing.
2. Taxi
 - (i) explain up elevator for a tail dragger
 - (ii) straight taxiing
 - (iii) torque effect.
3. Nose wheel effective.
4. Speed (i.e. enough power for take-off).
5. Refuel if necessary.
6. Explain "aerial theory" of orientation (don't point aerial at aeroplane).
7. Explain "stick towards the wing that is down"-theory of orientation when aeroplane is coming towards the pilot.
8. Explain stick movements, and use of trims and rates if necessary.
9. Explain position of hands and fingers on the transmitter.

10. Give commands to pupil and check his response to positioning aeroplane.

3.4.2 **Flight checks**

1. Take-off.
 - (i) more speed than usual.
 - (ii) keep climb-out flattish until safe height attained.
2. Check and adjust trims on transmitter.
3. Land immediately if trims are way-out or aeroplane behaves abnormally.
4. After test flight, land and adjust trim on aeroplane to re-centre trims on transmitter.
5. Re-check trims in flight, re-adjust if necessary.

3.4.3 **TEACH THE PUPIL PILOT TO FLY**

Flying – Sequence of teaching

Here each instructor has his own individual idea as how best to teach a pupil, but the basics throughout the world show that the norm is:

- Take-off by the instructor, either using pupil's Tx or Buddy Box, climb to a reasonable height, throttle back and trim out for straight and level flight.
- Hand over transmitter to pupil (if applicable) who will do hours and hours of left turns and right turns, squares, figure eight's, etc.
- Landing by instructor.
- The pupil learning to taxi, as this teaches him to use rudder and throttle.
- The pupil flying further hours of circuits, at gradually decreasing height above ground.
- The pupil's first landing.
- Further flying circuits, practising approaches and flight over runways.
- First take-offs.
- Practising take-offs, landings, flying the solo test pattern, approaches, and landings.
- Performing and passing the "Solo" test.
- Periodic check-ups.

The instructor's job is well done and he is a mental wreck, but guess what...there will still be dozens of new members over the years who will still want to learn to fly!

We believe that some of the points which must become part of the instructor's vocabulary *ad nauseum* are:

- Is your peg on the board?
- When last did you check the batteries?
- Have you checked out your aeroplane?
- Have you fuelled up?
- Have you switched on, and selected the correct model?
- Mind/be careful of the spinning propeller.
- Have you extended the Tx aerial. (if applicable)
- Do not fly over the pits.
- Get more height.
- Announce your intentions to the other pilots.
- Have you switched off?
- Have you taken your peg off the board?
- Is your transmitter back in the Tx impound?

SECTION4

BEGINNERS/PUPIL PILOT MILESTONE LOG

4.1 **PUPILS/BEGINNERS MILESTONES**

This section now sets out the proposed learning – "achievement milestones" for teaching pupils. To help achieve uniformity, we have produced a Progress Log, and we suggest that these milestones become a club standard in that any instructor can see at a glance the status and progress of the pupil, and carry on instruction from that point.

A suggestion to clubs is that a cardboard print of the Progress Log be issued to the pupil, and this card is then presented to the instructor before the pupil flies. This is then finally signed off by the instructor and a judge after the "Solo" test is done.

PROGRESS LOG

Pupils status – Milestones

Member's name: Type of aeroplane:

Club name: SAMAA number:

Milestones achieved

<i>Item</i>	<i>Flying</i>	<i>Ground</i>	<i>Signature and Date</i>
1	Explain frequency control system, control functions, movement of sticks, flying criteria to pupil	Demonstrate frequency peg system. Explain basic safety rules, and flying rules	
2	Aeroplane checked out, trims okay, flies okay	Airworthiness checklist ok	
3	Pupil can ground taxi, do left and right hand circles and figure eight's at altitude	Club safety, field and flying rules known by pupil	
4	Pupil can do left and right hand circles and figure eight's at low altitude, as well as trim out aircraft and do landing approaches	Safety Procedures know and practiced by pupil	
5	Pupil can do landings, including dead-stick landings	Safety and flying rules and procedures known	
6	Pupil can do take-offs	Basic aerodynamics known	
7	Pupil passes solo test and is qualified to fly solo at club	Has satisfied instructor on knowledge of safety, club rules and basic aerodynamics	

Instructor's signature: _____ Date: _____

Judge 1 signature: _____ Date: _____

SECTION 5

PRE-FLIGHT CHECKLIST

5.1 (a) The checks as set out in (Points 5.2 to 5.8), are general checklist items and should be used in part or in whole by all pilots, no matter how experienced they are, to check out their aeroplanes before the first flight of the day. It is to be used in whole by pupil pilots who are doing their Solo proficiency tests. The intention is that the pupil pilot will demonstrate to the judges that he has a thorough knowledge of his aircraft and the details which make for safe flying.

5.1 (b) This same checklist should be used by the instructor to check out a beginner or pupil's aeroplane before its first flight. To assist the pilot, this section has been set out in a logical sequence so that each check, or set of checks, follows the previous one. The pupil must be present during the check as he will be required, at a later date, to perform this check for the instructor before obtaining "Solo" status, and he has much to learn.

5.2 Airworthiness

Here is the first of the instructor's duties.

It is a prerequisite that any new, **untried**, or **repaired** aeroplane be properly checked before its first flight. The check-lists which follow are brief but reasonably comprehensive and, if in the views of the instructor, the aeroplane is not airworthy or is unsuitable for a pupil, now is the time to say so. It is pointless for a pupil to try to fly an unsuitable aeroplane which he will crash and which will convince him that this hobby is not for him.

If the aircraft fits the above category, it should be grounded until such time as the alteration, modification, or replacement is done to the satisfaction of the instructor. A list of the defects, if not fixable at the field, should be given to the pupil by the instructor. A copy of this same list must be given to the safety officer, with the pupil's name, the type of aeroplane, and his reasons for not allowing the aeroplane to be flown, clearly documented thereon.

Checks to be done by the instructor, must include the following:

- Explain to the pupil, during the check out of the aeroplane, the observations and reasons for any adjustments that are made.
- If this check is being done at the field – RESERVE THE TRANSMITTER FREQUENCY BEFORE STARTING THE CHECK (if applicable). Confirm that the frequency is an approved-SAMAA frequency.

5.3 CHECK LIST:

Structure

1. Check wing for warps.
2. Check ailerons.
 - (i) method of attachment (hinges pinned, etc.)
 - (ii) check aileron/wing gap and temporarily seal with tape if excessive.
 - (iii) movement (correct direction and adequate movement, especially if two servo's fitted in wing.
3. Check centre section of wing for strength, and wing overall for stiffness.
4. Check that tailplane is on straight and square.
5. Check that fin is on straight and square.
6. Check the method of attaching tail surfaces to fuselage.
7. Check rudder and elevator hinges (pinned), and control surface gaps.
8. Check rudder and elevator movements.
 - (i) correct direction and amount of movement, (adequate or excessive).
 - (ii) kwiklinks (control rod locks) correctly fitted to both ends of push rods.

9. Check method of mounting engine.
 - (i) type of mount.
 - (ii) correct type and number of screws.
 - (iii) servo linkage, movement correct.
 - (iv) no metal-to-metal linkages to cause noise.
10. Check fuel tank.
 - (i) is it at the correct level?
 - (ii) position: can it move or rotate?
 - (iii) correct plumbing to tank, are the pressure and clunk systems okay?
 - (iv) filter(s) fitted.
11. Check nose wheel or tailwheel (whichever fitted).
 - (i) drag.
 - (ii) correct direction of movement.
 - (iii) amount of movement.
 - (iv) linkages okay, no metal-to-metal links.
 - (v) tracks straight when servo is at centre.
 - (vi) properly mounted with bracket
 - (vii) shaft nearly vertical or slight aft rake
12. Check main wheels.
 - (i) drag.
 - (ii) method of attachment to fuselage, and wheels to axles.
 - (iii) tracking straight.
 - (iv) position of wheels relative to CG.

5.4 **Radio installation**

1. Check servo tray and/or aileron servo attachment.
 - (i) trays screwed down correctly.
 - (ii) servos mounted correctly on grommets.
 - (iii) screws in servo output arms.
 - (iv) kwiklinks on push rods fitted and adjusted correctly.
 - (v) no binding of output arms or push rods over full servo throw, including trims.
2. Check battery
 - (i) position, method of fixing. Can it move and alter C of G, etc.?
 - (ii) check battery voltage under load.
 - (iii) set up "fail safe" settings if applicable.
 - (iv) check switch position and movement of switch
3. Check receiver position and protection.
4. Check position of aerial. (Old and new requirements)
 - (i) restraint inside fuselage, not under tension.

- (ii) away from servos and output arms.
- (iii) method of attachment to fin and/or tail plane.
- (iv) not doubled back on itself.
- (v) not inside fuselage alongside metal control rods?
- (vi) protected at exit point of fuselage.
- (vii) not inside carbon fibre fuselage
- (viii) Is aerial correctly orientated ? (2.4GHz)

5. Linkage on servos.
 - (i) no metal-to-metal contact.
 - (ii) nyrod outers glued both ends, supported in middle of a long run.
 - (iii) end of control rods properly restrained.
6. Foam rubber packing (not plastic foam) where necessary.
7.
 - (i) Servo leads okay and plugged into receiver properly.
 - (ii) Servo lead plugs anchored into receiver.
8. Check linkage to elevator, rudder, ailerons, throttle and nose wheel.
 - (i) method of attachment.
 - (ii) throttle travel correct or override provided.
 - (iii) nose wheel shock absorber (on leg and linkage).
 - (iv) clearance of aileron linkages when wing attached to fuselage.
 - (v) kwiklinks or clevis locks in place.
9. Check movement of servos.
 - (i) servos move smoothly, no grinding noises, jerkiness, or buzzing.
 - (ii) no binding during full throws and trims.
 - (iii) all moving in the correct directions relative to stick movements on ailerons, elevator, rudder, throttle and nose wheel.
 - (iv) set up rates if thought necessary.
 - (v) check failsafe settings on servos if PCM receiver used. (Motor to stop – balance of servos to hold.)
 - (vi) set all trims to zero, if required, adjust mechanical settings.
 - (vii) programme in exponential if thought to be beneficial.
 - (viii) special check on direction if two aileron servo's fitted.

5.5 **Assembly**

1. Check if covering of total aeroplane okay.
2. Check wing incidence.
3. Check tailplane incidence.

4. Check thrust line of motor.
 - (i) viewed from side for down thrust.
 - (ii) check to top of fin for right thrust.
5. Check all control surfaces are aligned with flying surfaces, i.e. elevator, rudder, and aileron.
6. Check position of Centre of Gravity.
7. Method of attaching wing to fuselage.
8. Wing square on fuselage.
 - (i) viewed from front.
 - (ii) viewed from back.
 - (iii) viewed from top.
 - (iv) check aerial, servo leads, or battery wire not trapped.

5.6 Engine checks

1. Propeller.
 - (i) correct size for engine.
 - (ii) correct type for engine (not pure nylon).
 - (iii) prop nut tight (no pliers please).
 - (iv) propeller balanced
 - (v) spinner if used, tight
2. Glow plug.
 - (i) correct type.
 - (ii) firmly tightened, but not over tight.
3. Carburettor.
 - (i) mounted firmly.
 - (ii) idle adjusted correctly.
4. Fuel.
 - (i) tank full with correct type fuel.
 - (ii) filter recommended in fuel line.
5. Silencer.
 - (i) check that the silencer is an approved, unmodified unit.
 - (ii) check that the silencer is properly attached to the motor.
 - (iii) if deemed excessively noisy, add baffles or modify.

[WARN ABOUT THE DANGERS OF A SPINNING PROPELLER]

6. Start engine.
 - (i) check high-speed setting, set intermediate setting.

- (ii) check for fuel foaming.
- (iii) check idle, adjust so that motor stops on pulling throttle trim back.
- (iv) re-check over full rev range and sort out problems.
- (v) motor maintains revs with aeroplane nose held vertically up.
- (vi) check that the noise level is within SAMAA and club limits when engine is at full revs.

5.7 Range checks

1. Identifying frequency of transmitter
2. Peg on frequency before operating transmitter
3. Output meter on the transmitter reading correctly and in the "green" at plus 9.6V.
4. Check receiver battery voltage under load.
5. Check operating range with transmitter aerial collapsed.
(Should be at least 30 metres, see manufacturer's specification)

5.8 Buddy box

1. Correctly connected, and control surface movements correct.

NOTE Explain adjustments to the pupil and let him observe, learn, and participate with the necessary checks and adjustments and range check, and buddy box settings.

SECTION 6

6.1 REQUIREMENTS FOR SOLO TEST

From the attached "Solo proficiency test score sheet" it can be seen that the flying manoeuvres required are basic. This is intentional. The reason for this test is to **demonstrate to the two SAMAA silver rated pilots that the beginner or pupil, has enough knowledge of the club procedures and the experience and ability to fly, without an instructor present. When he is on the flightline with other pilots flying, he will not be a liability or danger to those present, including spectators and their property at the flying field.**

The solo test will be judged by two SAMAA silver-rated pilots or better, neither of whom taught the pupil. The oral and model check tests should be carried out, and should be followed by one flight as detailed on the Solo proficiency test sheet. If, in the views of the judges the pilot is competent then he passes. If the judges are uncertain of the pilots ability they;

- (i) May have him re-do the maneuvers they were unhappy with, or
- (ii) Make him re-do the preflight or the whole test flight

Please note that if:

- (i) **The pilot does not have his SAMAA card with him, or**

- (ii) **If the model used, is in the views of the judges not airworthy, or representative of models generally flown at the club (see 8.2), NO TEST will be done.**

This qualification fulfills the requirement of the SAMAA insurance for flying unaccompanied on the flight line with other pilots present.

The first two items, oral (general and safety) and pre-flight, will require some homework from the pupil.

These solo tests will be conducted in a formal manner, with the correctly qualified persons present at the tests. After the test, the duly signed test papers will be approved by the club safety committee or chairman, placed on file, and a copy forwarded to the SAMAA general manager by fax, post, or e-mail. The solo certificate will be posted to the pilot.

Here follows a description of the requirements for the manoeuvres.

Take-off into the wind

The runway used will be the one nearest into the wind, and the pupil will be required to do a take-off which consists of the following:

- Apply power smoothly
- Keep reasonably straight down the runway on take-off
- Keep straight, climbing slowly, (not hanging on propeller) for at least 5 seconds
- Do a gentle turn away from the pits

Left and right hand circuits

Here the pupil must demonstrate his ability to do circuits while maintaining a reasonable level.

- After take-off, climb to a reasonable height
- Pupil to announce intention, i.e. left or right circuit, when the aeroplane is in front of him
- Proceed to do the turn
- When the turn is complete, repeat the manoeuvre in the opposite direction

Lack of control, uncertainty in flying, will result in re-test of this manoeuvre.

Horizontal eight

This is a manoeuvre with a smooth transit in between the two turns.

The model approaches in straight and level flight, performs a quarter circle turn away from the pilot, followed by a 360° turn in the opposite direction. This is then followed by a 270° turn in the original direction. The manoeuvre is complete after the model has passed the pilot in straight and level flight in the direction of the original entry into the maneuver.

Dead-stick landing

At some point in the test, the judges will tell the pupil to cut the plane's motor. This command will always be in such a position that he will be able to land on the runway.

- On receiving the command to cut, throttle the motor back to idle/stop.
- The pupil must judge the circuit and approach so as to be able to land into the wind on or near the runway in use.

Landing

See 7.2.15, except that landing on or near the runway is acceptable. Landing on the pit side of the runway or in an uncontrolled manner means a test failure.

6.2. SOLO PROFICIENCY TEST SHEET

Attached is a "Solo" test sheet divided into:

(a) Flying

The pupil will be required to fly one flight in accordance with the Solo test sheet, in a conventional and acceptable manner, using approved radio equipment, and a suitable model aircraft. The judges have the right, if doubt exists, to have him repeat any of the maneuvers listed. This test is scored on pass or fail. The Judges will inform the pupil whether he has passed or failed, and at their discretion, advise of him of flying shortcomings. Their decision is final. A test may be redone a second time on the same day provided that there is time and the judges believe he is capable of passing the test.

(b) Oral and Pre-flight check

This part of the Solo test is the more difficult part, as it requires that the pupil knows and understands, the club and the SAMAA and CAA rules, and can safely operate his model aircraft, when others are flying.

This above test is in two parts:

(1) The Oral test

This is in the form of random questions which will be asked, and answered to the satisfaction of the judges. A list of the types of questions is set out on pages 29 and 30.

(2) The pre-flight check

This will be based on the SAMAA instructors check list (per section 5 of this booklet).

This is a hands-on test where the pupil checks out the model in front of the judges, and shows that he understands the problem areas of a model which could cause an accident and need regular checking.

As stated elsewhere, a lack of knowledge on the frequency control system, the basic club, safety, and field rules will ensure a failed test.



Proficiency test score sheet

SOLO

NB. Please check SAMAA membership card, to validate membership

No.	Description/name of manoeuvre	Only one flight	
		Judge 1	Judge 2
Oral test - eight questions regarding flying, safety, club rules, SAMAA rules (tick only ✓)			
Pre-flight check of aircraft and radio done to satisfaction of judges (tick only ✓)			
1	Controlled take-off into wind		
2	Left-hand circuit - end of circuit parallel to runway		
3	Right-hand circuit - end of circuit parallel to runway		
4	Two horizontal figure eights (<i>one upwind, and one downwind</i>)		
5	Simulated dead-stick landing - engine at low speed		
6	Landing approach from left		
7	Landing approach from right		
8	Landing into wind		
No numerical scores assigned to manoeuvres. Tick only ✓ if completed to satisfaction.			

Please complete the following information, to be captured/verified on the SAMAA database.

Date of test Test location

Pilot's name Pilot's home club

Pilot's SAMAA no. Expiry date of membership

Pilot's address

Pilot's home tel. no. Business telephone

Pilot's cellphone no. e-mail address

Pilot's signature

Judge 1 name Signature Rating

Judge 2 name Signature Rating

Club chairman/proficiency officer recommendation

Comments

TYPICAL QUESTIONS TO BE ASKED FOR ALL BADGES

Answers to all these questions should have been covered by your instructor during your learning to fly period and if not, are addressed in the SAMAA Manual of Operations which can be found on the SAMAA web www.samaa.co.za

- Where do you find the rules or operational procedures applicable to model aircraft flying, and have you read them?
- Who controls the use of airspace and are model fliers answerable to this body?
- To which group is SAMAA and its members affiliated?
- Do you need to be a member of any organisation or club to fly?
- Where can you legally fly?
- Do you need a permit to fly?
- What is your standard procedure when you arrive at the club?
- What do you do if you are a visitor at a club and wish to fly?
- What checks have you done before you go out to fly?
- Why must you secure the frequency spot and place your peg on it before switching on your transmitter? What do you do if there is a peg on your frequency spot?
- What do you do if you want to fly and your frequency spot is not on the board?
- What would you do if you want to fly but left your frequency peg at home?
- What would you do if you are about to fly, and when you switch on your transmitter the meter shows red or under 9 volts?
- How do you know that your receiver battery okay to fly, for the first flight, and then for subsequent flights?
- How often do you do a radio range check?
- Which areas of your club field are you not allowed to overfly(no-fly zone) and why?
- When you fly, should you have a person/spotter with you on the flightline?
- What is the legal height at which you may fly your model aircraft?
- What would you do if you see a full-size aircraft or helicopter flying near or over your flying field?
- Why is it dangerous to lean over the motor to adjust the needle valve when the engine is running or at full throttle?
- Why do club safety rules state that you should not taxi your aeroplane in the pit area?
- What would you do if your motor stalls on the threshold/runway prior to take-off and other pilots are waiting to take-off?
- What would you do if on take-off, just after becoming airborne, your aeroplane turns towards the pit/spectator area?
- How do you know what direction the circuit is to be flown?
- Which runway do you use for take-off and landing?
- If there are pilots standing, say three (3) metres from and halfway down the runway and you needed the full runway for take-off, what would you do?
- Where do you stand when flying?
- If you are going to land and see someone on the runway trying to retrieve an aeroplane, what would you do?
- If you were lined up ready for take-off and during your final check you notice:
 - A servo glitching
 - That the tailplane is loose
 - That the aeroplane is vibrating badly
 - That the wing is skew
 - That the undercarriage is skew or loose

- That some covering is loose – what would you do?
30. What would you do if you were a pilot on the flightline and heard:
 - Someone shouting "DEADSTICK" – when you were about to take-off?
 - Someone shouting "LANDING" – when you were about to take-off?
 - Someone shouting "crossing runway"?
31. If you are the most senior person at the field and the duty officer is not present, what would your duty be?
32. If you see a child running in the pit area, what would you do?
33. If you are the duty officer for the day, what would you do:
 -- If someone is flying recklessly and ignoring the safety rules?
 -- If after a verbal warning they still persist in ignoring the rules?
34. What are your duties if you are the safety officer of the day?
35. What is a "fail safe" receiver setting and how do you set it up ?
36. Why are lithium polymer batteries more dangerous than ordinary batteries?
37. Why are electric motor-driven models dangerous?
38. When and where may you safely power up an electrically-driven model aircraft?
39. What could happen if you turn off your transmitter without first disconnecting the power to the electric motor of your model?
40. How do you know the state/condition of your flight and transmitter battery packs?
41. What would you do if you notice that you forgot to switch off your transmitter an hour or so ago, and want to fly again?
42. What would you do if it starts to rain while you are flying?
43. What would you do if there is lightning while you are flying?
44. Where do you fly, launch, or land a glider, either electric or bungee/winch launched?
45. Where do you fly a helicopter at your field, and if on the main field how may you fly?
46. What would you do if you are flying and a cell phone on you rings?
47. What would you do if you feel ill or faint while you are flying?
48. What would you do if you lose sight of your aeroplane while flying?
49. What would you do if you are in a thermal going up and want to get down?
50. What would you do if the throttle on your aeroplane sticks at full throttle whilst flying?
51. Why does an aeroplane pull to the left on take-off?
52. What precautions should be taken when circumstances require landing downwind?

SECTION 7

7.1 **BRONZE, SILVER, GOLD, AND INSTRUCTOR PROFICIENCY TESTS**

7.1.1 **Requirement for SAMAA Bronze, Silver, Gold, and Instructor tests are as follows:**

No proficiency test may be judged or signed off by an instructor, who was not present at the test, or who taught the pilot undergoing test.

Tests for Solo and Bronze

These tests may be judged by any **two members with at least SAMAA Silver** status. One flight only required, preflight check and questions must be answered satisfactorily.

Tests for Silver

This test may be judged by any **two members with at least SAMAA Gold** status. Questions mandatory, note one test required for Silver.

Tests for Gold

This test may be judged by any **two members. One Gold and one at least Instructor.** Questions mandatory.

Tests for Instructor

This test will be judged by two judges, one of whom shall be a **SAMAA Instructor and the other a SAMAA Instructor Judge.** Questions are mandatory

NB! No pilot will be allowed to do an instructors proficiency test without having first passed the Gold proficiency test.

SAMAA has provided for the following proficiency tests:

The Solo Level	The Bronze Level
The Silver Level	The Gold Level
The Instructors Level	Display Pilot

Sample score sheets are attached. The score sheets are designed to be used for two rounds of whichever test the pilot has chosen, (Solo, Bronze and Silver only one flight required), and are to be scored by both judges. These tests will be arranged and conducted in a formal manner, with the appropriately-approved persons present at the tests. The original test papers will be submitted to the club committee for approval and will require ratification by the main club committee before being sent to SAMAA, to be entered into the central proficiency register. Clubs are requested to keep a copy of each test sheet sent to the SAMAA office.

7.1.2 **Scoring**

The scoring system for the proficiency tests (except Solo) will be on the same basis as for aerobatic flying, i.e. out of a total 10, per manoeuvre. It must be pointed out that the purpose of these tests is to determine the proficiency of the pilot rather than the accuracy of flying the manoeuvres. It must also be emphasised that the landing approach pattern is probably the most important aspect of the proficiency tests and therefore competent approaches from both base legs are essential for the attainment of proficiency merit.

The scoring standard used has been set by the SAMAA instructor judges, and although more relaxed than that used for FAI competitions, is still stringent especially for instructors proficiency. On each scoresheet is a preflight check, and questions on safety and flight line procedure. Please note that both the preflight

check and questions are a pass or fail, and the final score is unaffected by this item **but obviously a fail in the preflight check, or the questions, is a test fail.** The divisor used is the number of manoeuvres undertaken and scored. The final score is the average of the sub-totals. The average score must equal or exceed the passing percentage required and **no manoeuvre** may score less than the minimum score of 3, 4, or 5 as specified for that proficiency test.

A minimum score for a manoeuvre for say a Silver requires one eight, or two sevens to offset a minimum score of four, to achieve the ultimate percentage!

7.1.3 Test failure

In any of the proficiency tests, a score less than the minimum specified for any in one manoeuvre means that the test is failed.

7.1.4 Repeat test

Two attempts at the same proficiency badge will be allowed on the same day, provided time permits.

7.1.5 Time before a re-test

If a pilot has failed both attempts at a proficiency level, he will have to wait and practice for one month before a retest will be allowed. The complete test will be redone, and no cognizance will be taken of previous attempts.

7.1.6 Level of entry

A pilot may do his first test at any level up to Gold. A pass at any level of proficiency automatically qualifies the pilot for the levels below.

7.1.7 Proficiency badges

The initial badge awarded for any proficiency level is presently for free. If the qualifying pilot wishes to purchase the badges of the levels below that which he has qualified for, he may do so at a cost of R30-00. R30-00 is the current price and is subject to increase by the suppliers.

7.1.8 Time-out

Should a pilot, for some valid reason, such as to refuel or as a result of a dead-stick, require to land, he shall be entitled to, and shall in no way be penalised, provided he requests time-out and then proceeds to land in a controlled manner on the runway in use. After the problem has been rectified, he will resume his test at the point it was interrupted.

7.1.9 Time between flights

A pilot will be given, if he so requests, or if circumstances rule, a break between flights. The length of this break will be at the discretion of the judges.

7.1.10 Pilot's briefing

A pilot's briefing will be held at the beginning of the test session. The judges will host this session. All pilots doing tests will be properly briefed as to what is required of them. At this time the candidates must clear any queries they have on the tests to be performed or the manoeuvres required.

7.1.11 Debriefing

If time permits, a debriefing will be held by the judges and the results of the proficiency tests will be made available.

7.2 Proficiency test manoeuvres

7.2.1 Preflight check and questions

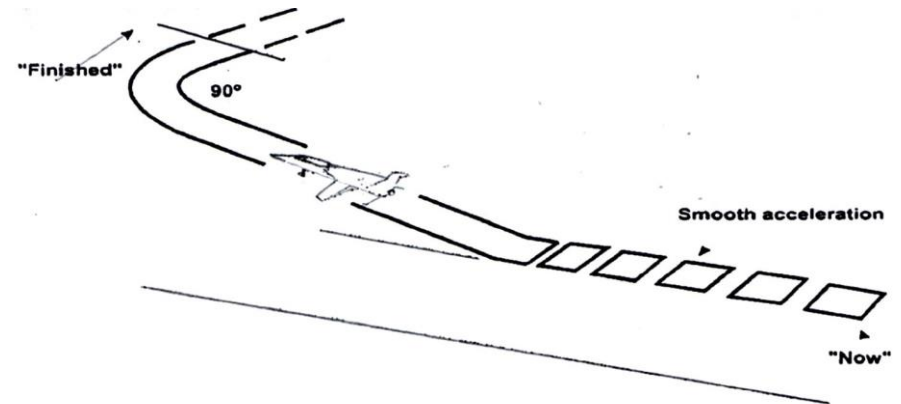
The preflight check **will be done** by the pilot prior to the flight testing portion of any test being done. It must be done on the model aeroplane and is to be a complete safety and airworthiness check, to clearly demonstrate to the judges that the pilot understands the workings of the model. The attached listing in Sections 3.3 and 3.4 of this document give the requirements for a preflight check.

The pilot **is required** to answer a number of questions related to model and club safety, and regulations, as asked by the judges. Examples of these are generally as shown in section 6.2 of this book.

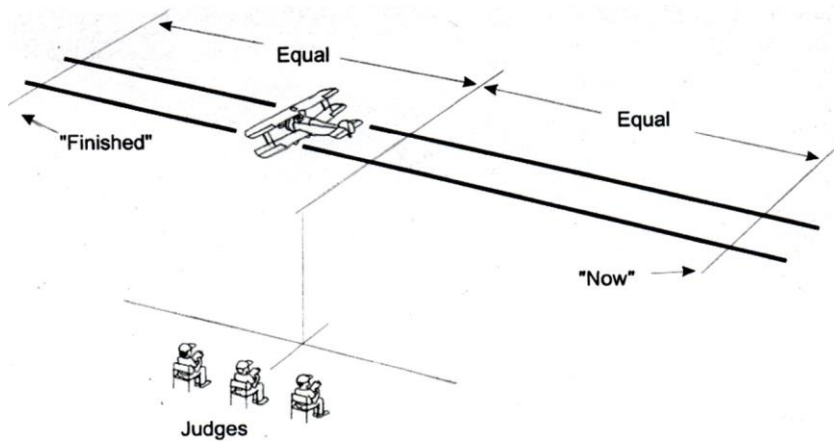
Note: a failure in either of the above sections **is a test failure**.

7.2.2 Take-off into the wind

The take-off will be judged on model control, particularly use of rudder, use of throttle, length of run, and angle of ascent. Where a tail dragger is used for the test, a reasonable amount of swing on initial acceleration should be tolerated. The take-off should start from a standstill, and is complete when the model has performed a 90° turn away from the pilot.

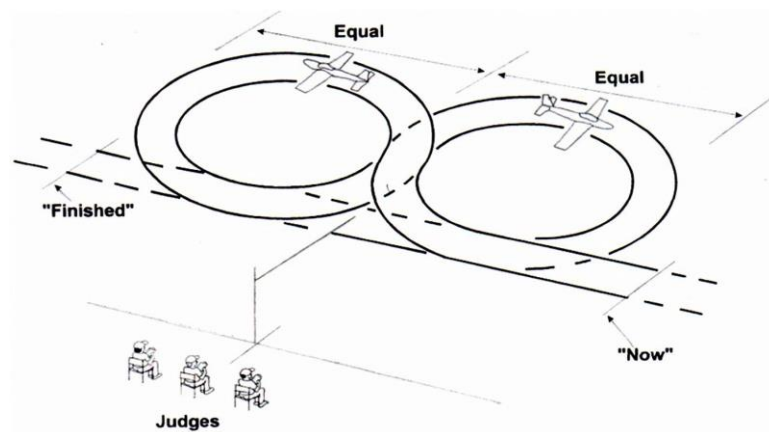


7.2.3 Straight and level flight into wind for five seconds at an altitude of between 17 and 34 metres.



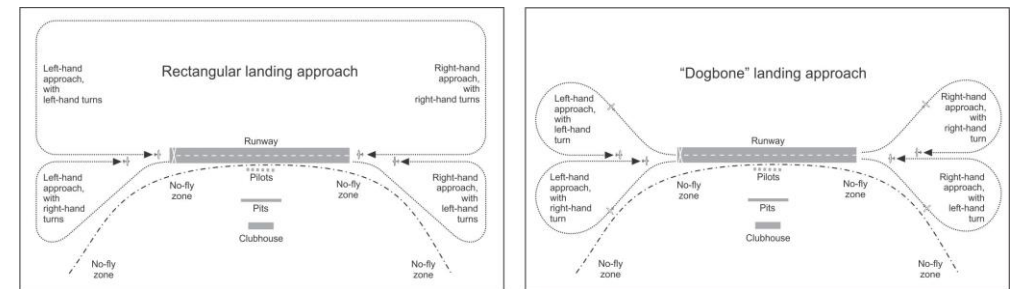
7.2.4 Two figures of eight

One into wind, the other downwind, whose longitudinal axis shall be parallel to the runway of take-off. Altitude will be maintained within reasonable limits and consistency of the figure of eight will be judged, taking into account any wind strength. Altitude should be between 17 and 34 metres. The model approaches in straight and level flight, performs a quarter circle turn away from the pilot, followed by a 360° turn in the opposite direction. This is then followed by a 270° turn in the original direction. The manoeuvre is complete after the model has passed the pilot in straight and level flight in the direction of the original entry into the manoeuvre.



7.2.5 Approaches from both sides and both bases

The pilot will demonstrate to the satisfaction of the judges that he can make a satisfactory **approach** to within 3 metres of the runway centre from either direction and from both left and right base legs, on **both** attempts of the test. The sketches below will clarify how the approaches should be made to prevent the pilot flying **in the no-fly area**, above or behind the club house. The criteria for a pass in this test is whether the pilot can land the aeroplane safely from any direction of approach, with any combination of turns.



7.2.6 The landing

The landing would be straight into wind on the active runway, and touchdowns should be within the first one third of the runway length. A small bounce, particularly with a tail dragger will be tolerated.

7.2.7 One inside loop

From straight flight, parallel to the runway of take-off, the model pulls up and completes a circular loop, and resumes straight and level flight on the same heading as the entry. The throttle may be reduced at the top of the loop as appropriate to the type of aeroplane and the loop completed after which the throttle is opened and normal flight resumed.

7.2.8 Slow pass into wind

Straight and level at about 5 metres above ground, throttle back to a safe low speed and do a low pass into wind, parallel to runway in use.

7.2.9 One roll

Starts from straight and level, flown into wind parallel to runway of take-off, aeroplane to roll axially (unless otherwise stated) to left or right until a full roll is completed with the wings level and aeroplane is at the same heading and at the same altitude as at the entry.

7.2.10 Spiral descent

This is not a flat spin; the motor must always be below the tail. Suggested method for performing a spiral descent is: obtain sufficient height, from level flight, throttle back motor, some up elevator, apply rudder and if required, some aileron, allow 2 – 3 turns in a 10-15 degree nose-down attitude corkscrew-type descent. Recover to level flight.

7.2.11 Consecutive rolls

Starts from straight and level, flown into wind, parallel to runway of take-off, plane to roll axially (unless otherwise stated) to left or right until two rolls are finished. The recovery should be at the same heading and altitude as entry. Slight changes in altitude, depending on aircraft type will be acceptable.

7.2.12 Emergency landing

For this manoeuvre, the pilot will be informed to cut throttle and land. An idling motor will be acceptable, and the pilot will land into the wind on the runway of take-off. The use of the throttle, or landing off the runway scores zero.

7.2.13 Outside loop

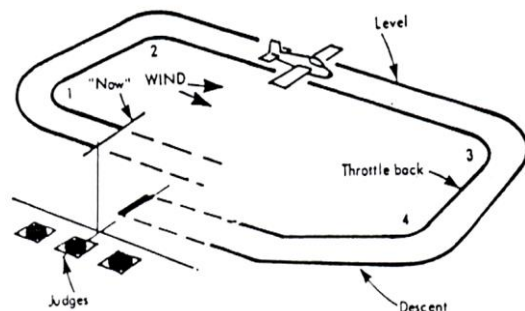
Obtain sufficient height flying downwind, parallel to runway of take-off. From straight and level, shut throttle, give down elevator to dive down and complete a circular loop. Open throttle at about 4 o'clock position pushing back up to entry altitude to complete the loop.

7.2.14 Crosswind landing

As per normal landing, but rudder or aileron should be applied to keep the aeroplane flying down the runway before landing.

7.2.15 Landing sequence

The landing sequence should be of the rectangular approach type and should demonstrate the ability to control rate of descent and throttle setting. The final approach and touchdown must be smooth and demonstrate a consistent rate of descent and speed. All landings shall be on the runways. Where no runway exists, landings will be within 3 metres of the assumed centre line of the runway. Acceptance will be at the discretion of the judges and their decision shall be final.



7.2.16 Recovery from unusual attitudes.

The judge(s) will, while the pilot is under test, with his hands off the Tx, place the aircraft in an unusual flight altitude on two separate occasions during the flight, and the pilot will demonstrate his ability to recover from the unusual attitude, the first reaction being to close the throttle. (This may be dependant on the circumstances at the time).

7.2.17 Fast low pass downwind

Straight and level at about 4 metres above the ground and parallel to the runway in use.

7.2.18 Inverted figures of eight

Two inverted figures of eight, one into the wind the other downwind, whose longitudinal axis shall be parallel to the runway of take-off. Altitude will be maintained within reasonable limits and consistency of the figure eight will be judged, taking into account any wind strength. The model approaches in straight and level flight, rolls inverted, performs a quarter circle turn away from the pilot, followed by a 360° turn in the opposite direction. This is then followed by a 270° turn in the first direction. The manoeuvre finishes with a roll to upright, back into straight and level flight, on its original heading.

7.2.19 Other manoeuvres

If there are any other manoeuvres which you do not understand, ask the instructor who is testing you to explain what he requires.

SECTION 8

8. MISCELLANEOUS INFORMATION ON PROFICIENCY

8.1 Proficiency status

Obtaining a proficiency rating has a number of advantages:

- (i) It improves flying skills
- (ii) It defines where and when pilots may fly certain models within the SAMAA system with specific proficiencies. These are detailed below:

For fixed wing proficiency levels:

Solo: Allows you to fly at your club without a competent person in attendance when others are flying.

SAMAA Bronze: Same rights as a solo qualification. Some clubs use the Bronze level as their lowest level of qualification.

SAMAA Silver: This is the minimum level that pilots should try to achieve as it gives them a number of advantages:

- (a) Most clubs will allow a pilot with a silver proficiency, to teach a pupil pilot to fly, although there is usually a 6-month probationary period between the pilot achieving his silver merit, and the time he is allowed to teach others to fly.
- (b) With a silver proficiency, a pilot will be allowed to participate in and fly a model at an airshow at his own club.
- (c) A silver proficiency will qualify a pilot to test a pupil pilot for a solo or bronze rating, with the proviso that he may not test the pupil if he taught him to fly.
- (d) The silver qualification is generally accepted as the entry qualification to fly in competitions. It qualifies you to fly large models over 12kg but less than 25kg, twin-engined models, and pylon racing aircraft if you have done the additional tests and obtained the required SAMAA or SIG "Permit to Fly" certification.
- (e) A silver will allow you to participate in many special events like float flying, cross country etc. where although the event is at a non-registered site, the public are not present and the risks are low.

SAMAA Gold: A Gold proficiency will:

- (a) Allow you to fly at any airshow, display, or event at a non-registered (but temporary-approved) field in the presence of spectators.
It qualifies you to fly large models of over 12kgs but less than 50kgs.
- (b) You are allowed to judge for Solo, Bronze, and Silver proficiency.

SAMAA Instructors:

Allows:

- (a) You may pilot a fixed-wing aeroplane in any event, airshow etc.
- (b) As a SAMAA instructor, you are qualified to judge proficiency tests for SAMAA Solo, Bronze, Silver, Gold and Instructor proficiency (subject to having an instructor judge present at an instructor test).
- (c) You are qualified to fly at a full-size airshow if invited.

SAMAA Instructor Judge:

Allows you to test pilots (with another SAMAA gold judge present) for any SAMAA proficiency status, up to gold and with another SAMAA Instructor, up to SAMAA Instructor

8.2 Type of aircraft

What type of aircraft may be used for a proficiency test? Any model aircraft that can do the maneuvers listed, to satisfaction of the judges. The model aircraft used must be able to fly the maneuvers correctly, i.e. a loop for instance must be minimum of 35 metres diameter and the aircraft must fly around this loop, not flop over at the top.

So, choosing an electric flat wing foamie will actually penalise your scores, especially in windy weather unless you are a good flier. But, the final proof of the suitability of the model, will be the two judges scoring the tests, and their scoring will decide if the candidate passes. Whether the model is electric, glow, or otherwise is not important, the thing that matters is: Can it fly the sequence to the satisfaction of the judges and clearly demonstrate that the pilot is proficient?

8.4 Validity of proficiency status

Pilots with SAMAA proficiency qualifications should be aware that a lapse of three years in SAMAA membership will automatically cancel any proficiency rating above Solo. A request from your club chairman and one other club committee member is required to reinstate your Solo level proficiency status with SAMAA.

8.5 Instructor judge

It should be noted that the appointed position of instructor judge is subject to review by the SAMAA proficiency sub-committee. If it is found that an instructor judge is not committed to performing the duties expected from him then he will be informed by SAMAA that his appointment is revoked.

8.6 Central register for proficiency and badges

- 8.6.1 The SAMAA general manager will keep a database of all proficiency tests passed. It is expected that clubs will organise the proficiency tests and the judges will sign off the proficiency tests and send a copy to the SAMAA general manager to be recorded.
The club should, for safety sake, keep a copy in their records.
The SAMAA will in due course issue the relevant certificates and badge and print the latest and highest qualification or qualifications obtained on the SAMAA pilot's membership card.
- 8.6.2 Should a proficiency test/s not be accepted by the general manager for whatever reason, a copy will be returned to the club for follow-up/clarification.
- 8.6.3 The present price of a badge is R30,00 (subject to manufacturing price), and this price will be charged, for each badge required.

8.7 Proficiency qualification through a SIG

It has been agreed that pilots who have, and are competing in competitions and who regularly obtain high scores in these competitions, could earn or qualify for a proficiency level. The SIGS have discussed and agreed the scores required to qualify for a proficiency level, and these have been accepted by the SAMAA.

An example of this is the recently ratified RC Aerobatics criteria as follows:

- Award a SAMAA Bronze proficiency to any aerobatic pilot who achieves or has achieved a minimum average score of 50% in a recognized MAASA National competition.
- Award a SAMAA Silver proficiency to any aerobatic pilot who achieves or has achieved a minimum average score of 55% in a recognised National MAASA competition.
- Award a SAMAA Gold proficiency to any aerobatic pilot who achieves or has achieved a minimum score of 60% in a recognized MAASA National competition.
- Similar criteria are presently being agreed to with the other SIGs and these will be found on the SAMAA website under the respective SIG.

8.8 Reinstating previous proficiency

Since the introduction of the new proficiency tests there have been numerous requests from holders of the old SAMAA qualification to have these converted to the new system.

After considerable discussion it has been agreed by the management committee, that provided adequate and satisfactory evidence can be provided, the SAMAA proficiency sub-committee will investigate, and after consideration, will advise the member of the outcome. (It is likely that the highest proficiency awarded will be one lower than the original.)

The information required is as follows:

- A copy of the original certificate or a photograph of the proficiency badge obtained.
- A written motivation, with as many details possible of where, when and by whom the tests were done.
- A confirmation from the member's club chairman and a committee member that the member is still a competent and active flier.

Please remember clause 8.4 Validity applies.

8.9 Club instructors and judges

To assist SAMAA and the regions in approving proficiency tests, it is requested that **all clubs** doing their own proficiency tests should submit to the general manager at SAMAA, lists of their appointed instructors, together with their SAMAA numbers and present proficiency status, as well as the names of the proficiency authorising committee members of the club.

9. SAMAA TEST SHEETS

Included in this booklet are test sheets for:

- (a) SAMAA Solo

- (b) SAMAA Bronze
- (c) SAMAA Silver
- (d) SAMAA Gold
- (e) SAMAA Instructors

The above sheets are to be completed with all relevant information, signatures must be legible, and if information is missing, the sheets will be returned to the club for completion.

10 GENERAL

10.1 Airshows, events, displays

- Pilots who fly at airshows or displays at their own SAMAA-registered club fields shall hold a minimum of a current **SILVER** rating. Pilots participating at full-size airshows will hold a **GOLD** rating (or better) It is the club or airshow organiser's responsibility to apply to the SAMAA office in writing, requesting permission for any display or flying event to be held at either a SAMAA-registered or at a non-SAMAA registered site. Unless permission is obtained for the display/event, the event will be deemed to be unapproved, and insurance cover will not be provided.

10.2 Queries

All queries on proficiency should be addressed to the general manager of SAMAA. Should he be unable to answer your query directly he will refer the query to the SAMAA Development sub-committee.



Proficiency test score sheet BRONZE

NB. Please check SAMAA membership card, to validate membership

No.	Description/name of manoeuvre	Only one flight	
		Judge 1	Judge 2
Pre-flight check of aircraft/radio done and six questions answered to satisfaction of judges (tick only ✓)			
1	Take-off into wind		
2	Slow low pass into wind		
3	Two horizontal figure eights (<i>one upwind and one downwind</i>)		
4	One inside loop		
5	Straight and level flight for 5 seconds		
6	Landing approach - right hand turns, from left-hand side of field		
7	Landing approach - left-hand turns, from right-hand side of field		
8	Landing approach - left-hand turns, from left-hand side of field		
9	Landing approach - right-hand turns, from right-hand side of field		
10	Landing into wind		
Minimum score per manoeuvre		3	3
Score sub-total for Judge 1		<i>a</i>	
Score sub-total for judge 2			<i>b</i>
FINAL PERCENTAGE SCORE (a + b/2.0)			
Passing percentage is... 50%		50%	
<i>If less than minimum score of 3 is achieved for any manoeuvre, the attempt is deemed a failure.</i>			

Please complete the following information, to be captured/verified on the SAMAA database.

Date of test Test location

Pilot's name Pilot's home club

Pilot's SAMAA no. Expiry date of membership

Pilot's address

Pilot's home tel. no. Business telephone

Pilot's cellphone no. e-mail address

Pilot's signature

Judge 1 name Signature Rating

Judge 2 name Signature Rating

Comments

Comments



Proficiency test score sheet SILVER

NB. Please check SAMAA membership card, to validate membership

No.	Description/name of manoeuvre	Only one flight	
		Judge 1	Judge 2
Pre-flight check of aircraft and radio, and six questions answered to satisfaction of judges (tick only ✓)			
1	Take-off into wind		
2	Straight and level flight for 5 seconds		
3	Two horizontal figure eights (<i>one upwind and one downwind</i>)		
4	One roll		
5	Two consecutive inside loops		
6	Landing approach - right hand turns, from left-hand side of field		
7	Landing approach - left-hand turns, from right-hand side of field		
8	Landing approach - left-hand turns, from left-hand side of field		
9	Landing approach - right-hand turns, from right-hand side of field		
10	Landing into wind		
Minimum score per manoeuvre		3	3
Score sub-total for Judge 1		<i>a</i>	
Score sub-total for judge 2			<i>b</i>
FINAL PERCENTAGE SCORE (a + b/2.0)			
Passing percentage is... 50%		50%	
<i>If less than minimum score of 3 is achieved for any manoeuvre, the attempt is deemed a failure.</i>			

Please complete the following information, to be captured/verified on the SAMAA database.

Date of test Test location

Pilot's name Pilot's home club

Pilot's SAMAA no. Expiry date of membership

Pilot's address

Pilot's home tel. no. Business telephone

Pilot's cellphone no. e-mail address

Pilot's signature

Judge 1 name Signature Rating

Judge 2 name Signature Rating

Comments

Comments



Proficiency test score sheet GOLD

NB. Please check SAMAA membership card, to validate membership

No.	Description/name of manoeuvre	Judge 1		Judge 2	
		Flight 1	Flight 2	Flight 1	Flight 2
Pre-flight check of aircraft and radio, and five questions answered. (tick only ✓)					
1	Take-off into wind				
2	Straight and level flight - 5 seconds				
3	Two horizontal figure eights (<i>one upwind, and one downwind</i>)				
4	Two consecutive rolls				
5	Two inside loops				
6	One inverted horizontal figure eight				
7	Slow low pass into wind				
8	Spiral descent (<i>minimum two turns, objective to lose height</i>)				
9	Emergency landing (<i>called anytime during flight</i>)				
10	Landing approach - right hand turns, from left-hand side of field				
11	Landing approach - left-hand turns, from right-hand side of field				
12	Landing approach - left-hand turns, from left-hand side of field				
13	Landing approach - right-hand turns, from right-hand side of field				
14	Landing into wind				
Minimum score per manoeuvre		4	4	4	4
Score sub-totals for Judge 1		<i>a</i>	<i>b</i>		
Score sub-totals for judge 2				<i>c</i>	<i>d</i>
FINAL PERCENTAGE SCORE (a + b + c + d/5.6)					
Passing percentage is... 60%		60%			
<i>If less than minimum score of 4 is achieved for any manoeuvre, the attempt is deemed a failure.</i>					

Please complete the following information, to be captured/verified on the SAMAA database.

Date of test Test location

Pilot's name Pilot's home club

Pilot's SAMAA no. Expiry date of membership

Pilot's address

Pilot's home tel. no. Business telephone

Pilot's cellphone no. e-mail address

Pilot's signature

Judge 1 name Signature Rating

Judge 2 name Signature Rating

Comments



Proficiency test score sheet INSTRUCTOR

NB. Please check SAMAA membership card, to validate membership

No.	Description/name of manoeuvre	Judge 1		Judge 2	
		Flight 1	Flight 2	Flight 1	Flight 2
Pre-flight check done to satisfaction of judges (tick only ✓)					
1	Take-off into wind				
2	Take-off crosswind				
3	Straight and level flight - 5 seconds				
4	Two horizontal figure eights (<i>one upwind, and one downwind</i>)				
5	Two outside loops from top (<i>or with half rolls from bottom</i>)				
6	Spiral descent (<i>minimum two turns, objective to lose height</i>)				
7	Two consecutive rolls				
8	Two inverted horizontal figure eights (<i>one upwind, and one downwind</i>)				
9	Unusual attitude recovery 1				
10	Unusual attitude recovery 2				
11	Emergency landing (<i>called anytime during flight</i>)				
12	Fast low pass, downwind				
13	Slow low pass, into wind				
14	Landing approach - right hand turns, from left-hand side of field				
15	Landing approach - left-hand turns, from right-hand side of field				
16	Landing approach - left-hand turns, from left-hand side of field				
17	Landing approach - right-hand turns, from right-hand side of field				
18	Landing into wind				
19	Landing crosswind				
Instructor's training procedures in place					
Minimum score per manoeuvre		5	5	5	5
Score sub-totals for Judge 1		<i>a</i>	<i>b</i>		
Score sub-totals for judge 2				<i>c</i>	<i>d</i>
FINAL PERCENTAGE SCORE (a + b + c + d/6.8)					
Passing percentage is... 60%		60%			
<i>If less than minimum score of 5 is achieved for any manoeuvre, the attempt is deemed a failure.</i>					

Please complete the following information, to be captured/verified on the SAMAA database.

Date of test Test location

Pilot's name Pilot's home club

Pilot's SAMAA no. Expiry date of membership

Pilot's address

Pilot's home tel. no. Business telephone

Pilot's cellphone no. e-mail address

Pilot's signature

Judge 1 name Signature Rating

Judge 2 name Signature Rating

Comments

11. NOTES

