**APPENDIX R62.07**
**RECREATIONAL PILOT LICENCE**
**GYROPLANES**
**PRACTICAL TRAINING**

## 1. Aim of training course

The aim of the course is to train a candidate to the level of proficiency required for the issue of a category, class or type rating for gyroplanes, and to provide the training necessary to act as pilot-in-command of any gyroplane for which he or she holds a valid type rating, engaged in non-revenue flights under visual flight rules.

### 2. Practical training course

Practical flying training must cover the following aspects of flight-

(a) *Familiarisation with the microlight gyroplane*

Aim: To allow the learner to become familiar with the components, parts, controls and systems of the gyroplane.

*(b) Preparation for- and action after flight*

Aim: To demonstrate and teach to the learner pilot all pre-flight requirements including personal preparation like clothing and choice of footwear, documentation, aircraft preparation and pre-flight inspection and how to leave the aircraft after flight, including the post flight inspection.

(c) *Air Experience*

Aim:

For the learner pilot to experience the first sensation of flight;

to instil confidence for the aircraft and for flying, in a learner pilot;

to convey some basic knowledge;

to familiarise the learner with the topography surrounding the airfield.

(d) *Effects of controls*

Aim: To teach he learner pilot to understand the primary and secondary effects of the flight controls and how to maintain or change a given attitude and / or condition of the aircraft in flight by manipulating the controls in the proper manner.

(e) *Taxiing*

Aim: To teach the learner to safely control the aircraft on different surfaces while manoeuvring on the ground and in varying wind conditions.

(f) *Straight and level flight*

Aim: To teach the learner-

to recognise the different aircraft attitudes when maintaining flight in a straight line and at a constant altitude, at different air speeds.

how to control the aircraft in order to maintain a straight and level condition at changing air speeds.

(g) *Climbing*

Aim: To teach the learner-

to recognise the different aircraft attitudes for standard full power climbs angles used in practice.

how to enter and maintain a steady full-power climb at different climb angles used in practice and to return to level flight at a predetermined altitude.

(h) *Descending*

Aim: To teach the learner-

to recognise the different aircraft attitudes for standard cruise as well as power-off descents.

how to enter and maintain a cruise descent at constant speed, and level off into straight and level flight at a predetermined altitude, and how to establish a steady climb from the descent.

how to enter and maintain a power-off descent at constant speed and level off into straight and level flight at a predetermined altitude or establish a steady climb.

(i) *Rotor blade stalling*

Aim: To teach the learner-

to recognise the symptoms and indications of an impeding blade stall, both in straight and level flight as well as during level, descending and climbing turns;

how to recover to a normal rotor blade angle and rpm with minimum loss of height;

how to recognize and control typical gyroplane behaviour just prior to blade stall.

(j) *Flight at low airspeed*

Aim: To teach the learner to recognise flight at critically low speeds and to learn to safely and consistently control the aircraft at these speeds and how to recover to normal flight conditions.

(k) *Medium Turns*

Aim: To teach the learner how to-

enter and maintain a medium (up to approximately 30o bank angle) turn whilst maintaining level flight

return to straight and level flight on a new predetermined ground referenced course as well as compass heading;

enter and maintain a climb or descent while turning,

enter a turn from a straight climb or descent onto a predetermined heading.

(l) *Steep Turns*

Aim: To teach the learner-

how to carry out level turns at angles of bank not exceeding $45^0$.

not to allow a loss of height of more than 100 feet to occur, and should it happen to immediately recover to a wings level attitude and to regain the height.

to recognise a developing spiral dive, increasing rotor rpm and how to immediately recover from it;

how to avoid flying through the aircaft's own wake turbulence.

how to carry out not more than twospiral descending turns at angles of bank not exceeding between $60^0$ at constant speed.

(m) *Practice forced landing*

Aim: To familiarise the learner with, and/or teach him/her-

the heights and positions around his airfield from where a power-off landing can be made on the airfield;

the heights and positions during the take-off phase of flight from where it is not possible to execute a turn and a glide to land on the airfield;

the possible landing areas during the take-off phase of flight where a safe landing can be executed;

the safest option to execute a controlled impact with the ground should there be no adequate space available for a forced landing.

While flying away from his airfield to be continually aware of landing areas within gliding distance;

to recognize a fatal engine failure and to immediately select and turn towards the landing area

to carry out a safe landing from a power-off glide.

(n) *Take Off and Climb to Downwind Position*

Aim: To teach the learner to safely take-off and climb the aircraft to a position on the downwind leg at circuit height.

(o) *Circuit, Approach and Landing*

Aim: To teach the learner how to fly an accurate circuit and carry out a safe approach and landing in order for him to be able to do it safely on his own.

(p) *Precautionary landings*

Aim: To teach the learner-

to identify and understand the conditions that require a decision to execute an unplanned precautionary landing at short notice;

to assess the risk level associated with the emergency situation;

how to select a suitable landing area relative to the risk level and time available;

to take all the required precautionary steps in order to minimise the present risk level and not to increase it.

(q) *Specific pre-solo requirements*

Aim: The learner must-

be the holder of a valid recreational learner pilot's certificate;

be able to safely execute a simulated emergency landing from any position in the circuit;

have completed at least six hours of dual flight instruction

have attended all the theoretical knowledge classes and understand the principles of flight significant to the air exercises up to this stage.

(r) Situational awareness and m*onitoring of aircraft instruments*

Aim: To instil the principles of continuous situational awareness, the learner pilot must be taught that-

visual flying is conducted by constant observation of and modification of the aircraft attitude is done with reference to the horizon;

navigation over the ground is constantly monitored by observation of and reference to ground features;

regular checks of the flight, navigation, and engine instruments must be made to confirm the serviceability of the engine, as well as the instrument systems, by confirming that these in fact reflect the actual situation as being experienced at the time, and as was planned.

(s) *Low flying*

Aim: To teach the learner the additional principles and procedures required to safely operate the aeroplane at heights not lower 100 ft above ground level.

(t) *Cross-wind take-off and Landing*

Aim: To teach the learner all the principles of cross wind take-off's and landings as related to articulating wing aircraft, in order for him / her to:

know and experience the aircraft maximum cross-wind component for safe take-off and landing;

know and experience his own maximum cross-wind component for safe take-off and landing with which he is comfortable;

safely execute a down-wind landing and stop within the required distance.

(u) *Action in event of fire*

Aim: To teach he learner to:

Identify an in-flight fire;

Immediately start an emergency landing;

Isolate or extinguish the fire if possible;

To maintain control of the aircraft.

(v) *Restarting the engine in flight*

Aim: To prepare the learner for engine failure in flight and how to cope with the situation. This exercise must not be practised by the learner during solo flights. It must be practised within safe gliding distance from a known learning strip, and in each instance must be treated as an actual emergency until the engine has been restarted and runs smoothly. Even then the approach must be completed to short finals, or a landing.

(w) *Unusual and dangerous attitudes / conditions of flight*

Aim**:** To teach the learner to recognise potentially dangerous conditions of flight and to avoid, and recover safely from these. These must include, but not be limited to-

Low-speed turns with high power and large rotor blade angles;

Steep dives with speed increasing and increasing rotor rpm;

Low speed turns into same direction as rotor direction of rotation.

(x) *Navigation*

Aim: To train the learner pilot to plan and fly an accurate route in visual meteorological conditions on a visual flight rules flight plan.

(y) *Flying in loose formation*

Aim: To train the learner pilot to plan and safely fly in loose formation with other aircraft, inclusive of all planning processes and procedures for pre-flight briefing, taking off, joining up, maintaining station, and joining and landing procedures at the destination.