Purpose of this Operating Procedure

1. The purpose of this Operating Procedure is to define the HPAC/ACVL pilot rating system and specify the requirements that pilots must meet in order to obtain specific ratings.

Description of the HPAC/ACVL Pilot Rating System

2. The HPAC/ACVL rating system consists of five levels each for hang gliding and paragliding. A pilot can hold one rating for hang gliding and one rating for paragliding.

3. The Student rating (H1/P1) is given at the introductory level of instruction and is aimed at introducing pilots early on to the HPAC/ACVL rating system and to make them aware of the Association.

4. The Master rating (H5/P5) is awarded to selected individuals who have contributed significantly to the sports of hang gliding and paragliding in Canada.

Minimum Requirements for Student through Advanced ratings

5. The tables below specify the minimum requirements that must be met by a pilot in order to obtain Student, Novice, Intermediate, Advanced ratings and specific endorsements for paragliders and for hang gliders.
   Note: The HAGAR examination is administered by Transport Canada.

P1 - Paragliding Student

General Description

A P1 Student pilot has the knowledge and basic skills necessary to fly and practice under direct instructor supervision and within significant operating limitations. The pilot understands the HPAC/ACVL paragliding rating systems and recommended operating limitations.

1. Practical Skills
    a. Ground Handling
    b. Training Flights
    c. Flying Skills - see “Demonstrated Skills & Logged Requirements”
2. Theoretical Knowledge
    a. Basic Aerodynamics
    b. Basic Meteorology
    c. Techniques of Flight
    d. Awareness of Air Regulations
3. Safety & Risk Management
    a. Human Factors
        i. concept of pilot-in-command / transfer of responsibility
    b. Environment
    c. Equipment
        i. radio use
        ii. pre-flight
    d. Emergency Procedures
    e. Accident Reports / Accident Reporting
        i. Definitions
        ii. Forms
        iii. Responsibilities
        iv. HPAC website reports info

P1 - Paragliding Student

Demonstrated Skills & Logged Requirements

1. Layout and preflight of paraglider and harness.
2. Demonstrates paraglider handling skills sufficient for controlled launch
3. Demonstrate method(s) of establishing that pilot is properly connected to the glider, with cleared lines and risers, just prior to inflation.
4. Launch unassisted showing:
    a. Proper inflation and run.
    b. Control during launch (pitch, roll, yaw, direction).
    c. Smooth transition from running to flying.
5. Airspeed Recognition and control,
    a. Six flights, predetermined to show airspeed recognition and control:
        i. Constant airspeed.
        ii. Smooth straight flight towards a pre-selected target.
        iii. Confident, slight variation in airspeed and direction showing awareness of control inputs and pendulum control.
        iv. Smoothly increasing airspeed, and smoothly slowing airspeed showing good control.
        v. Safe, smooth landing, on feet, into wind.
6. Shows the ability to recognize and understand how different wind conditions at a site will affect their flights.
    a. Wind direction.
    b. Wind velocity.
    c. Terrain shape.
    d. Obstructions.
7. On each flight, demonstrates proper post-landing procedure, to include, but not limited to:
    a. Paraglider deflation, immobilization & disconnection
    b. Landing Zone (LZ) protocol.
    c. Demonstrate proper packing, storage, and care of the paraglider.
8. Must pass the HPAC/ACVL P1 Student Paragliding written exam.
9. Must agree to all the provisions of the HPAC/ACVL standard waiver and assumption of risk agreement for the P1 Student rating and deliver an original signed copy to the HPAC/ACVL office.

Operating Limitations P1 Student Pilots:

Once the P1 Student rating is attained, all flights and ground handling sessions must be at sites and within conditions defined by the instructor using instructor-approved equipment.

P2 - Paragliding Novice

Novice rated pilots have the knowledge and basic skills necessary to fly and practice without direct instructor supervision. The pilot understands the HPAC/ACVL rating system and recommended operating limitations.
Pilots must demonstrate Student level skills and knowledge before obtaining the Novice rating. All witnessed flights must be pre-planned by the pilot and discussed with the Instructor/Apprentice Instructor

Prerequisites

- P1 Student Rating.

Requirements

- HPAC/ACVL Instructor Recommendation.
- Pass HPAC P2 Written Exam
- Meet Practical Skill Requirements (listed below)
- 25 flights
- Must have at least one Endorsement/Sign-off(s).
    - thermal
    - coastal soaring
    - towing
    - SIV

1. Practical Skills
    a. Ground Handling
    b. Training Flights
    c. Flying Skills - refer to Demonstrated Skills & Logged Requirements listed below
2. Theoretical Knowledge
    a. Aerodynamics
        i. air flow
        ii. profile design / glider construction
        iii. lift and drag
        iv. stall
        v. performance
        vi. glider stability
        vii. wing loading
    b. Techniques of Flight
        i. axis of movement (pitch, roll, yaw)
        ii. launch techniques
        iii. speeds (ground, air, wind)
        iv. turns
        v. speed control
        vi. landing approaches
    c. Meteorology
        i. wind
        ii. temperature
        iii. clouds
        iv. weather forecasting
        v. air mass & systems
        vi. humidity / density / pressure
        vii. venturi
        viii. turbulence
            1. mechanical
            2. thermic
            3. wake

P2 - Paragliding Novice

d. Air Regulations
   i. Transport Canada / HPAC
   ii. cloud flying
   iii. VFR
   iv. airspace classifications (TP6010)
   v. rules of the ridge
   vi. right of way
   vii. radios

3. Safety & Risk Management
   a. Human Factors
      i. Physical
         1. hypoxia
         2. hypothermia
         3. vertigo
      ii. Psychological factors
         1. alcohol
         2. medication
         3. drugs
         4. peer pressure
         5. stress
         6. ego
   b. Environment
      i. turbulence
      ii. weather forecasting
      iii. site analysis
   c. Equipment
      i. pre-flight
      ii. maintenance
      iii. gear selection
   d. Emergency Procedures
      i. rapid descent techniques
      ii. water landing
      iii. tree landing
      iv. powerline
      v. reserve deployment
      vi. stall/spin/incident avoidance and recovery
   e. Accident reports / Accident reporting
      i. Definitions
      ii. Forms
      iii. Responsibilities
      iv. HPAC website reports info

P2 - Paragliding Novice

Demonstrated Skills & Logged Requirements

1. Demonstrates consistent ability to achieve
   a. Aircraft landing approaches.
   b. S-turn
   c. figure eight landing approaches
   d. accurate, planned & controlled landings
2. Demonstrates layout and pre-flight of the canopy, harness, and backup reserve parachute.
3. Gives a reliable analysis of general conditions of the site and self, and a flight plan including flight path, areas to avoid in relation to the wind flow, and obstacles to stay clear of.
4. Demonstrates consistent ability to achieve consecutive forward and reverse inflations with a visual check and surge dampening of the canopy each time.
5. Demonstrates controlled kiting
6. Demonstrates consistent and reliable pre-flight checks
7. Demonstrates consistent and reliable launching in various wind conditions
8. Demonstrates how to brief and instruct a ground crew in assisted launch techniques and explain when an assisted launch is necessary.
9. Demonstrates flight with smooth variation in airspeed, from minimum sink to fast flight, while maintaining a heading.
10. Demonstrates controlled turns in both directions, and at various speeds and bank angles.
11. Demonstrates one handed flying skills, weight-shift turns, and rear-riser turns.
12. Demonstrates big-ear technique for increased descent rate.
13. Demonstrates the ability to judge and allow for proper clearance from a ridge and other aircrafts
14. Demonstrates or explains proper strong wind landing procedures and how to keep from being dragged back.
15. Demonstrates or explains how to lengthen and shorten the flight path.
16. Demonstrates right-of-way traffic rules.
17. Demonstrates the proper use of a speedbar/accelerating system.
18. Demonstrates reserve deployment while hanging in a harness in a simulated environment

Recommended Operating Limitations for P2 Novice Pilots

- Should not fly in thermal lift exceeding your ability to maintain control
- Keep landing zone within a safe glide
- Avoid advanced maneuvers such as spirals, wing-overs, stalls without guidance of a certified instructor
- Fly a glider recommended by the manufacturer as suitable for beginner or Intermediate pilots.
- Avoid flying in wind speed that exceeds ⅔ of your glider's trim speed

P3 - Paragliding Intermediate

General Description

Intermediate pilots have the knowledge and skills to fly most sites in mild to moderate soaring conditions, and to judge when the site and conditions are within the pilot's skill, knowledge, and experience level. The Intermediate pilot understands the HPAC/ACVL paragliding rating system and recommended operating limitations, and the CARs (Canadian Aviation Regulations) and other flying rules applicable to his/her flying (ridge rules, thermal right of way, CAR 602.29, airspace regulations, etc.). The pilot shall use good judgment and have a level of maturity commensurate with the rating.

Prerequisites

- HPAC/ACVL Novice rating (P2).
- Must have attained both the Coastal/Ridge Endorsement and the Thermal Soaring Endorsement.
- Pass the Transport Canada HAGAR exam.

Logged Requirements

- Pass the HPAC P3 Written Exam
- Must have logged a minimum of 30 flying days.
- Must have logged a total of at least 90 flights.
- Must have logged a minimum of 60 hours of logged airtime.

Demonstrated Skills and Knowledge

1. Has received training in and/or understands the importance and significance of:
   a. Right of way rules.
   b. Transport Canada Regulations and aircraft sectional charts
   c. Airspeed control, stalls, spins, and turbulence-induced collapses and recoveries.
   d. Canopy owner's manual.
   e. HPAC/ACVL Accident Report current results.
   f. First aid (highly recommended).
2. Can give verbal analysis of conditions on the hill, demonstrating knowledge of wind shadows, gradients, lift, sink, laminar air, turbulence and rotors, and the effect these items have on an intended flight path and turns.
3. Must give a verbal flight plan for each observed flight.
4. Must show thorough preflight of the harness, canopy, and backup reserve parachute.
5. With each flight, demonstrates a method of establishing that the pilot is properly connected to the glider, with cleared lines and risers just prior to launch.
6. All inflations/launches should be aggressive, confident, and with a smooth transition from running to flying. Flights with slow, unstable inflations/launches will not be considered adequate for witnessed tasks.
7. For witnessed tasks, all landings must be safe, smooth, on the feet, and in control.
8. Demonstrates the ability to differentiate airspeed from ground speed from wind speed.
9. Demonstrates linked 180° turns along a predetermined ground track showing smooth controlled reversals and proper coordination at various speeds and bank angles.
10. Demonstrates 360° turns in both directions, and at various speeds and bank angles.
11. Demonstrates symmetric and asymmetric tip folds (25% per side, 50% total) or some other method of canopy reduction for increased descent rate.
12. Demonstrates one method to increase forward speed.
13. Demonstrates proper surge control of canopy using properly timed brake application.
14. Gives a thorough verbal description how to maintain directional control during and correct a 50% asymmetric wing collapse.
15. Gives a thorough explanation of:
    a. why flying a paraglider with one or both control toggles significantly extended should be avoided unless flaring for a landing.
    b. the signs that the paraglider has entered a stalled configuration (one or both sides).
16. In 5-15 mph (8-24 km/h) winds, demonstrates the ability to maintain airspeed at or near minimum sink during crosswind and upwind legs, without any evidence of stalls.
17. Demonstrates 5 landings within 10 feet (3 m) of a target after flights requiring turns on approach.
18. Demonstrates proper airspeed control on landing approach when descending through a gradient.
19. Demonstrates proper airspeed for maximum distance flown into a significant headwind.
20. Acknowledges and understands the need to become familiar with site-specific restrictions and launch or landing access limits, consistent with preservation of flying privileges at a site.

P3 - Paragliding Intermediate
Recommended Operating Limitations for P3 Intermediate Pilots • Maximum base wind of 16 mph (25 km/h). • Maximum peak gusts to 19 mph (30 km/h). • Maximum gust rate of 5 mph (8 km/h) in 5 seconds. • Avoid steep turns close to the ground. • Avoid application of either brake beyond 3/4 of the way from full off to stall position. • Limit turns to bank angles recommended by the manufacturer, limit speed in turns to 2 times the straight line, brakes off, cruise speed, and smoothly exit any spiral turn that shows a tendency to steepen or accelerate. • Should initiate downwind turns only with 300 feet (100 m) of clearance outward from the hill or ridge in winds above 15 mph (24 km/h), and 250 feet (75 m) of clearance in winds above 9 mph (15 km/h). • Should not fly in thermals where peak climb rates exceed 800 fpm (4 m/s) or where significant vertical cloud development exists. • Upon mastering the above skills, an Intermediate Paragliding Pilot should pursue new maneuvers, sites, and conditions with the guidance of a HPAC/ACVL Certified Advanced Paragliding Instructor or Observer

P4 - Paragliding Advanced

Advanced pilots have the knowledge and skills to fly technically demanding sites in strong soaring conditions, and to judge when the site and conditions are within the pilot's skill, knowledge, and experience level. The advanced pilot understands the HPAC/ACVL paragliding rating system and recommended operating limitations, and the CARs (Canadian Aviation Regulations) and other flying rules applicable to his/her flying. Knowledge of First Aid is highly recommended. The pilot will fly using good judgment and have a level of maturity commensurate with the rating.

Prerequisites

- HPAC/ACVL Intermediate rating (P3).
- All three of the following endorsements:
  - Coastal/Ridge
  - Thermal Soaring
  - SIV ("Simulation d'Incident en Vol", Simulation of Incidents in Flight).
- Pass the Transport Canada HAGAR exam.

Logged Requirements

- Pass the HPAC P4 Written Exam
- 250 flights.
- Must have made 5 flights at each of 5 different sites in Intermediate level conditions, of which 3 were inland.
- Must have logged a minimum of 80 flying days.
- Must have logged at least 3, 1-hour flights in thermal lift without sustaining ridge lift. Flights must originate from at least 2 different sites in Intermediate level conditions.
- Must have logged at least 1, 1-hour flight in ridge lift without sustaining thermal lift.
- Must have logged a minimum of 120 hours total solo airtime. Of these 120 hours, 60 must be in thermal lift.
- Must have flown a minimum of 5 different models of paragliders
- Must have achieved the Coastal/Ridge Endorsement and the Thermal Endorsement.

Demonstrated Skills and Knowledge

1. Demonstrates preflight of the harness, canopy, and reserve parachute.
2. Can give a verbal analysis of conditions.
3. Can develop then follow a flight plan.
4. With each flight, demonstrates a method of establishing that the pilot is properly connected to the glider, with cleared lines and risers just prior to launch.
5. All inflations/launches should be aggressive, confident, and with a smooth transition from running to flying. Flights with slow, unstable inflations/launches will not be considered adequate as witnessed tasks.
6. All landings must be safe, smooth, on the feet and in control.
7. Demonstrate ability to allow clearance when doing 360° turns by demonstrating figure eights:
   a. In a wind sufficient to cause drift, two points will be selected on a line perpendicular to the wind.
   b. The pilot will fly along a line parallel to that joining the pylons, slightly downwind of the pylons, toward a point midway between them. During the crosswind leg, the pilot will establish the degree of wind drift. At the midpoint between the pylons, the pilot will make a smooth, deliberate upwind turn and enter a figure eight course consisting of smooth turns of constant ground track radius around the pylons (centered on the pylons) with straight segments at the midpoint between the pylons.
   c. The pilot must complete two consecutive figure eights in which the airspeed, bank angle, and turn rate are altered smoothly around the course such that the proper ground track is held and the drift is compensated for, without overcompensation or hesitation.
8. Demonstrate three consecutive landings within 10 feet (3 m) of a target after a flight which requires turns on approach. In smooth conditions, the spot location should be changed by the Observer, for each of the three flights. Flights should be a minimum of one minute and 200 feet (60 m) AGL.
9. Demonstrate smooth coordinated 360° turns in both directions, with reversal at various speeds and bank angles appropriate to the rating level.
10. Pass the HPAC/ACVL Advanced Paragliding (P4) written exam.
11. The Instructor or Observer must be confident that the pilot can check in and fly Advanced rated sites without endangering spectators, other pilots, or jeopardizing the site.

Paragliding Endorsements	
TS **(Thermal Soaring)**	The Thermal Soaring Endorsement signifies that the pilot understands the special conditions and has demonstrated the flying skills required to fly safely in moderate to strong thermal conditions (400-1200 fpm, 2-6 m/s) 1. Demonstrates controlled, calm and confident flight in conditions requiring quick, deliberate, substantial, and correct control application to reduce pendulum motion. 2. Demonstrates the ability to launch unassisted with strong, running forward-inflation launches in winds less than 3 mph (5 km/h). 3. Demonstrates proper directional control and correction of full (i.e., 50% of the wing span) asymmetric collapses. 4. Demonstrates sustained flight in moderate thermal conditions without the aid of ridge lift. 5. Demonstrates smooth and correctly timed surge control.Must have logged five 30-minute thermal flights without sustaining ridge lift. 6. Demonstrates understanding of high altitude conditions (e.g., air density, cloud suck, anabatic and catabatic conditions, hypoxia, hypothermia). **Recommended Operating Limitations for Thermal Soaring Conditions** • Maximum base wind of 9 mph (15 km/h). • Wind velocity gust variation of ±4 mph (±6 km/h) (up or down). • Maximum crosswind in launch window of 15 degrees.
CR **(Coastal / Ridge Flying)**	The Coastal or Ridge Soaring Endorsement signifies that the pilot understands the special conditions and has demonstrated the flying skills required to fly safely in the strong laminar wind flow found on ridge and coastal sites which in turn makes soaring possible. 1. Demonstrates 2 high-wind (12-16 mph, 20-25 km/h) inflations/launches. 2. Demonstrates symmetric and asymmetric tip folds for increased descent rate. 3. Demonstrates the ability to judge and allow for proper clearance from a ridge obstacles and aircraft. 4. Demonstrates a consistent ability to top land in 12-16 mph (20-25 km/h) laminar flow wind and be able to identify the different approaches needed for landing in those wind speeds. 5. Understand and explains the causes, variations and problems associated with Venturi. 6. Understand and explains the causes, variations and problems associated with Wind gradient. 7. Understands and explains the signs indicating change in wind speed and direction that may be observed during flight. 8. Demonstrates how to brief and instruct a ground crew in assisted launch techniques and explain when an assisted launch is necessary. 9. Explains proper strong wind landing procedures and how to keep from being dragged back, as well as various strong wind glider disabling techniques. 10. Demonstrates the effective use of the acceleration/speed system. **Recommended Operating Limitations for Ridge and Coastal Soaring Paragliding Pilots** • Maximum base wind of 19 mph (30 km/h) • Maximum peak gusts to 22 mph (35 km/h)

Paragliding Endorsements	
T **(Towing)**	1. Must participate in a structured ground school and instructional course whose focus is the theory and practical demonstration of the skills, techniques, methods and communication skills needed in towing 2. Understand and discuss towing pressure. 3. Demonstrate consistent ability to inflate and launch in no wind from the forward inflation position 4. Demonstrate consistent ability to inflate and launch in winds up to 12 mph (20 km/h) from the reverse inflation position. 5. Demonstrate an ability to communicate both with hand or leg signals and by radio. 6. Understand the term "lock out" and describe how to avoid it. 7. Demonstrate consistent skill in staying "on line" during tow. 8. Demonstrate consistent skill in staying "on line" during a cross wind conditions of up to 30°. 9. Understand and communicate with the instructor the skills and procedure necessary to safely exit a low level line break. 10. Understand and communicate with the instructor the procedure to take should the towline fail to release or become entangled with the pilot upon release. 11. Understand and explain the mechanism for stalling a wing that is specific to towing, such as high cable tension, or excessive brake tension.
SIV **"Simulation d'Incident en Vol", Simulation of Incidents in Flight**	A pilot wanting the SIV Endorsement must present to the rating HPAC/ACVL Instructor signed proof by an SIV Instructor, of their successful completion of a SIV course consisting of the following basic criteria: 1. big ears 2. spiral descent ability 3. recovery from induced asymmetrical collapse 4. recovery from induced frontal collapse 5. recovery from induced spin 6. recovery from induced stall *Note: The SIV Endorsement is not an aerobatics Endorsement.*

H1 – Hang Gliding Student

A Student pilot has the knowledge and basic skills necessary to fly and practice within significant operating limitations. The pilot understands the HPAC/ACVL hang gliding rating system and recommended operating limitations. The pilot shall use good judgment and have a level of maturity commensurate with the rating.

1. Practical Skills
    a. Ground Handling
        i. hang check (CPC)
        ii. post landing
            1. Hang glider control appropriate for wind conditions.
            2. Unhooking prior to ground handling in moderate winds.
            3. Checking traffic.
            4. Removal of hang glider from landing area.
    b. Training Flights
        i. proper pitch control at launch
        ii. level wings and directional control
        iii. smooth transition to flight
    c. Flying Skills - six flights showing
        i. constant airspeed
        ii. smooth, straight-forward flight to pre-determined target
        iii. Confident, slight variation in airspeed and direction showing awareness of control inputs.
        iv. Smoothly increasing airspeed, and smoothly slowing airspeed showing good control.
        v. Safe, smooth landing, into wind.
2. Theoretical Knowledge
    a. Basic Aerodynamics
    b. Basic Meteorology
    c. Wind direction.
    d. Wind velocity.
    e. Terrain shape.
    f. Obstructions.
    g. Techniques of Flight
    h. Awareness of Air Regulations (that HAGAR exists)
    i. Pass the HPAC/ACVL H1 Student hang gliding written exam.
3. Safety & Risk Management
    a. Human Factors
    b. concept of pilot-in-command / transfer of responsibility
    c. Environment
    d. Equipment
        i. radio use
        ii. pre-flight
        iii. post-flight (packing, transport, storage, glider care)
    e. Emergency Procedures

Operating Limitations H1 Student Pilots:

Once the H1 Student rating is issued by HPAC the H1 - Student Pilot must:

- Fly a hang glider recommended by the manufacturer as suitable for Beginner pilots.
- Fly a hang glider equipped with wheels on the basetube.
- Conduct their flights and ground handling sessions at sites and within conditions defined by the instructor using instructor-approved equipment.

H2 – Hang Gliding Novice

Novice pilots have the knowledge and basic skills necessary to fly and practice without direct instructor supervision within operating limitations. The pilot understands the HPAC/ACVL rating system and recommended operating limitations.

Pilots must demonstrate Student level skills and knowledge before obtaining the Novice rating. All witnessed flights must be pre-planned by the pilot and discussed with the Instructor/Apprentice Instructor

Prerequisites

- HPAC/ACVL Student rating.

Requirements

- HPAC/ACVL Instructor Recommendation.
- Must have at least one Endorsement/Sign-off(s).
    i. thermal soaring
    ii. coastal/ridge soaring
    iii. aero towing
    iv. ground based towing

1. Practical Skills
    a. Ground Handling
    b. Training Flights
        i. Logs more than 2 hours solo airtime
        ii. Logs 75 supervised flights including 10 at height greater than 500’ (150m)
    c. 5 landings within 100 feet (30 m) of a target; safe, smooth and into the wind. The target must be sufficiently distant from launch such that turns are required to set up an approach and avoid over-flying the target.
2. Theoretical Knowledge
    a. Pass HPAC H2 Written Exam
    b. Aerodynamics
        i. air flow
        ii. profile design / glider construction
        iii. lift and drag
        iv. stall
        v. performance
        vi. glider stability
        vii. wing loading
    c. Techniques of Flight
        i. axis of movement (pitch, roll, yaw)
        ii. launch techniques
        iii. speeds (ground, air, wind)
        iv. turns
        v. speed control
        vi. landing approaches
    d. Meteorology
        i. wind
        ii. temperature
        iii. clouds
        iv. weather forecasting
        v. air mass & systems
        vi. humidity / density / pressure
        vii. venturi
        viii. turbulence
            1. mechanical
            2. thermic
            3. wake

H2 – Hang Gliding Novice

3. Air Regulations
   a. Transport Canada / HPAC
   b. cloud flying
   c. VFR
   d. airspace classifications (TP6010)
   e. rules of the ridge
   f. right of way
   g. radios
4. Safety & Risk Management
   a. Human Factors
      i. physical
         1. hypoxia
         2. hypothemia
         3. vertigo
      ii. psychological factors
         1. alcohol
         2. medication
         3. drugs
         4. peer pressure
         5. stress
         6. ego
   b. Environment
      i. turbulence
      ii. weather forecasting
      iii. site analysis
   c. Equipment
      i. pre-flight
      ii. Critical Prelaunch Checklist (CPC)
      iii. maintenance
      iv. gear selection
   d. Emergency Procedures
      i. rapid descent techniques
      ii. water landing
      iii. tree landing
      iv. powerline
      v. reserve deployment
      vi. stall/spin/incident avoidance and recovery

Recommended Operating Limitations

- Should not fly in thermal lift exceeding your ability to maintain control
- Keep landing zone within a safe glide
- Avoid advanced maneuvers such as spirals dives, wing-overs, full stalls without guidance of a certified instructor
- Fly a glider recommended by the manufacturer as suitable for beginner or Intermediate pilots.
- Avoid flying in wind speed that exceeds ⅔ of your glider's trim speed

H3 – Hang Gliding Intermediate

The pilot has the knowledge and skills to fly most sites in mild to moderate soaring conditions, and to judge when the site and conditions are within the pilot's skill, knowledge, and experience level. The pilot understands the HPAC/ACVL hang gliding rating system and recommended operating limitations, and the CARs (Canadian Aviation Regulations) and other flying rules applicable to his/her flying (ridge rules, thermal right-of-way, CAR 602.29, airspace regulations, etc.). The pilot shall use good judgment and have a level of maturity commensurate with the rating.

Prerequisite

- HPAC/ACVL Novice hang gliding rating.

Intermediate Rating - Required Witnessed Tasks

1. Pass the HPAC/ACVL Intermediate (H3) written exam.
2. Pass the Transport Canada HAGAR exam.
3. Logs more than 10 hours solo airtime, 5 hours in the past 1 year.
4. Logs more than 150 solo flights.
5. Logs a minimum of 30 flying days.
6. 10 inland thermal soaring flights.
7. Flown at 5 different sites.
8. Has received training in and/or understands the importance and significance of:
    a. Right of way rules.
    b. Transport Canada Regulations and aircraft sectional charts
    c. Airspeed control, stalls, spins, and turbulence-induced pitch and roll forces and recoveries.
    d. The hang glider owner's manual.
    e. Current results of HPAC/ACVL Accident Report.
    f. First aid (highly recommended).
9. Gives verbal analysis of conditions on the hill, demonstrating knowledge of wind shadows, gradients, lift, sink, laminar air, turbulence and rotors, and the effect these items have on an intended flight path and turns.
10. Gives a verbal flight plan for each observed flight.
11. Shows thorough preflight of the harness, glider, and backup reserve parachute.
12. With each flight, confirms that the pilot is properly connected to the glider just prior to launch, ie hang check.
13. Demonstrates aggressive and confident launches with a smooth transition from running to flying. Flights with slow, unstable launches will not be considered adequate for witnessed tasks.
14. Demonstrates consistently safe landings on the feet and in control.
15. Demonstrates the ability to differentiate airspeed from ground speed from wind speed.
16. Demonstrates linked 180° turns along a predetermined ground track, showing smooth controlled reversals and proper coordination at various speeds and bank angles.
17. Demonstrates 360° turns in both directions, and at various speeds and bank angles.
18. Verbalizes why whip stalls are dangerous.
19. Gives a thorough verbal description of spins and spin recovery.
20. Gives a thorough explanation of the consequences of flying at minimum sink in turbulent or strong wind conditions.
21. Demonstrates 5 landings within 50 feet (15 m) of a target after flights requiring turns on approach.
22. Demonstrates proper airspeed control on landing approach when descending through a gradient.
23. Demonstrates proper airspeed for maximum distance flown into a significant headwind.
24. Acknowledges and understands the need to become familiar with site-specific restrictions and launch or landing access limits, consistent with preservation of flying privileges at a site.

H3 – Hang Gliding Intermediate
Recommended Operating Limitations for Intermediate (H3) Pilot • Maximum base wind of 16 mph (25 km/h). • Maximum peak gusts to 19 mph (30 km/h). • Maximum gust rate of 6 mph (10 km/h) in 10 seconds. • Avoid steep turns close to the ground. • Does not fly beyond the limitations stated by the manufacturer for that wing. • Initiates downwind turns only with 300 feet (100 m) of clearance outward from the hill or ridge in winds above 12 mph (20 km/h), and 250 feet (75 m) of clearance in winds above 9 mph (15 km/h). • Does not fly in thermals where peak climb rates exceed 800 fpm (4 m/s) or where significant vertical cloud development exists. • Upon mastering the above skills, an Intermediate pilot should pursue new maneuvers, sites, and conditions with the guidance of a HPAC/ACVL Certified Advanced hang gliding instructor or observer.

H4 – Hang Gliding Advanced

Advanced pilots have the knowledge and skills to fly technically demanding sites in strong soaring conditions, and to judge when the site and conditions are within the pilot's skill, knowledge, and experience level. The advanced pilot understands the HPAC/ACVL hang gliding rating system and recommended operating limitations, and the CARs (Canadian Aviation Regulations) and other flying rules applicable to his/her flying. Knowledge of First Aid is highly recommended. The pilot will fly using good judgment and have a level of maturity commensurate with the rating.

Prerequisite

- HPAC/ACVL Intermediate rating (H3).
- Pass HAGAR exam

Advanced Rating - Required Witnessed Tasks

1. Pass the HPAC/ACVL Advanced (H4) written exam.
2. Pass the Transport Canada HAGAR exam.
3. Logs more than 75 hours solo airtime.
4. Logs more than 250 solo flights.
5. Actively flying hang gliders for more than 3 years.
6. 25 mile (40 km) cross country flight.
7. 5 flights at each of 5 different sites in Intermediate level conditions, of which 3 were inland.
8. Logs a minimum of 80 flying days.
9. At least 3, 1-hour flights in thermal lift without sustaining ridge lift. Flights must originate from at least 2 different sites in Intermediate level conditions.
10. At least 1, 1-hour flight in ridge lift without sustaining thermal lift.
11. Flown a minimum of 5 different models or sizes of hang gliders.
12. Demonstrates preflight of the harness, wing, and reserve parachute.
13. With each flight, demonstrates a method of establishing that the pilot is properly connected to the glider, ie. hang check just prior to launch.
14. Demonstrates aggressive and confident launches, with a smooth transition from running to flying.
15. Demonstrates safe & smooth landings on the feet and in control.
16. Demonstrates ability to allow clearance when doing 360° turns by demonstrating figure eights:
    a. In a wind sufficient to cause drift, two points will be selected on a line perpendicular to the wind.
    b. The pilot will fly along a line parallel to that joining the pylons, slightly downwind of the pylons, toward a point midway between them. During the crosswind leg, the pilot will establish the degree of wind drift. At the midpoint between the pylons, the pilot will make a smooth, deliberate upwind turn and enter a figure eight course consisting of smooth turns of constant ground track radius around the pylons (centered on the pylons) with straight segments at the midpoint between the pylons.
    c. The pilot must complete two consecutive figure eights in which the airspeed, bank angle, and turn rate are altered smoothly around the course such that the proper ground track is held and the drift is compensated for, without overcompensation or hesitation.
17. Demonstrate three consecutive landings within 10 feet (3 m) of a target after a flight which requires turns on approach. In smooth conditions, the spot location should be changed by the Observer, for each of the three flights. Flights should be a minimum of one minute and 200 feet (60 m) AGL.
18. Demonstrates smooth coordinated 360° turns in both directions, with reversal at various speeds and bank angles appropriate to the rating level.
19. The instructor or observer must be confident that the pilot can check in and fly Advanced rated sites without endangering spectators, other pilots, or jeopardizing the site.

Hang Gliding Endorsements	
TS **(Thermal Soaring)**	The Thermal Soaring Endorsement signifies that the pilot understands the special conditions and has demonstrated the flying skills required to fly safely in moderate to strong thermal conditions (400-1200 fpm, 2-6 m/s) 1. Demonstrates controlled, calm and confident flight in conditions requiring quick, deliberate, substantial, and correct control application. 2. Demonstrates the ability to launch unassisted with strong consistent launches in winds less than 3 mph (5 km/h). 3. Demonstrates proper directional control and correction in turbulent conditions. 4. Demonstrates sustained flight in moderate thermal conditions without the aid of ridge lift. 5. Demonstrates smooth and correctly timed speed control in turbulent conditions. No stall. 6. Logs five 30-minute thermal flights without sustaining ridge lift. 7. Demonstrates understanding of high altitude conditions (e.g., air density, cloud suck, anabatic and catabatic conditions, hypoxia, hypothermia). 8. Demonstrates consistent safe landings in thermic conditions with zero damage to person or glider.
CR **(Coastal / Ridge flying)**	The Coastal or Ridge Soaring Endorsement signifies that the pilot understands the special conditions and has demonstrated the flying skills required to fly safely in the strong laminar wind flow found on ridge and coastal sites which in turn makes soaring possible. 1. Demonstrates 2 high-wind (9-19 mph, 15-30 km/h) launches. 2. Demonstrates the ability to judge and allow for proper clearance from a ridge obstacles and aircraft. 3. Demonstrates a consistent ability to top land in 12-19 mph (20-30 km/h) laminar flow wind and be able to identify the different approaches needed in landing in those wind speeds. 4. Understands and explains the causes, variations and problems associated with venturi. 5. Understands and explains the causes, variations and problems associated with wind gradient. 6. Demonstrates how to brief and instruct a ground crew in assisted launch techniques and explain when an assisted launch is necessary. 7. Explains proper strong wind landing procedures and how to keep from being turned down wind, as well as various strong wind glider unhooking technique.
GT **(Ground-based Towing)**	Ground-Based Towing is defined as any method of towing where the mechanism providing the towing force remains on the ground. 1. Participates in an instructional course whose focus is the theory and practical demonstration of the skills, techniques, methods, equipment and communication skills needed for the type of towing being practiced, ie foot launch, cart, wheel, or vehicle. 2. Understands and discusses towing pressure. 3. Demonstrates consistent ability to launch in no wind with the method for which the pilot has received instruction, ie foot launch, cart, wheel, or vehicle. 4. Demonstrates an ability to communicate both with hand or leg signals and by radio. 5. Understands the term "lock out" and describes how to avoid it. 6. Demonstrates consistent skill in staying "on line" during tow. 7. Demonstrates consistent skill in staying "on line" during a cross wind conditions of up to 30° 8. Understands and communicates with the instructor the skills and procedure necessary to safely exit a low level line break. 9. Understands and communicates with the instructor the procedure to take should the tow line fail to release or become entangled with the pilot upon release.

Hang Gliding Endorsements	
AT **(Aerotowing)**	Aerotowing is defined as any method of towing where the mechanism providing the towing force is an aircraft. 1. Participates in an instructional course whose focus is the theory and practical demonstration of the skills, techniques, methods, equipment and communication skills required for aero towing. 2. Understands and discusses towing pressure. 3. Demonstrates consistent ability to launch in no wind with the method for which the pilot has received instruction, ie foot launch, cart, wheel. 4. Demonstrates an ability to communicate both with hand or leg signals and by radio. 5. Understands the term "lock out" and describe how to avoid it. 6. Demonstrates consistent skill in staying "on line" during tow. 7. Demonstrates consistent skill in staying "on line" during a turn by the tow plane. 8. Understands and communicates with the instructor the skills and procedure necessary to safely exit a low level line break. 9. Understands and communicates with the instructor the procedure to take should the tow line fail to release or become entangled with the pilot upon release.

Application for Student (H1/P1) to Advanced (H4/P4) Rating

6. Certified instructors are responsible to forward rating applications to the HPAC Office within 10 days of signing the application form.

7. Pilots must send in a scan of the letter from Transport Canada confirming they have passed the HAGAR exam before ratings requiring the HAGAR exam can be recorded at the Office.

8. Ratings received by the office more than 10 days after the date on the application form shall have an effective date of not more 30 days prior to the date of receipt.

9. Rating application forms are available on the HPAC/ACVL website.

Requirement for Master Rating

10. The HPAC/ACVL BoD will award all Master pilot ratings.

11. Pilots seeking a Master Rating can apply in writing to the President. In the application, the candidate must describe his/her accomplishments and contributions to the sport of hang gliding and paragliding. Alternatively, a HPAC/ACVL member can submit a nomination on behalf of a pilot.

12. An applicant for a Master's rating must have an advanced rating and 250 hours of flight time in the activity for which the rating is sought. Upon reception of an application for a Master's rating, the BoD will rate the applicant's accomplishments against the criteria below. A score of 25 points is required to qualify a pilot for a Master's rating.

Accomplishment	Point Value
Service on the Executive, Board of Director and/or Officer level of the national association.	0-6
Service in outreach programs or committee levels of the national association. This includes HPAC/ACVL committee chair person, representative to the FAI/CIVL or provincial or national aviation related associations.	0-4
Service on the Executive or Board of Directors of a Provincial Association	0-4
Service at the committee or officer level of any provincial association. Includes Board of Director's, secretaries, representatives to the HPAC, committee chair persons, representatives to provincial aviation related associations	0-2
Service at the executive or director level of a club or regional association	0-6
Service at the committee or officer level of any club or regional association. Includes secretaries, representatives to the provincial associations, committee chair persons, representatives to local or provincial aviation related associations.	0-3
Responsibility for the organization of a hang gliding or paragliding competition or responsibility for direction of the meet	0-4
Responsible assistance in the operation of a hang gliding or paragliding competition. Eg: launch director, launch assistant, landing director or landing assistant, chief scorer or scoring assistant, pylon judge	0-2
Certification and record of accomplishments as an HPAC Instructor	0-4
Editing a local, provincial or national Newsletter or Webmaster for a Web site pertaining to Hang Gliding and / or Paragliding	0-5
Canadian Correspondent for a foreign hang gliding or paragliding publication	0-2
Contribution of articles on hang gliding or paragliding for publication or for press release	0-2
Representing Canada in FAI/CIVL sanctioned competitions	0-5
Production and release of a documentary, film, television coverage or commercial advertisement on hang gliding or paragliding	0-4
Establishing an FAI approved world record in a category pertaining to hang gliding or paragliding	0-4
Other contributions worthy of consideration — Noting the total point total awarded will take into consideration the weighting of the above criteria	Open

13. Master Pilot ratings will be awarded at the ADM following the receipt of an application provided the application is received no later than two months before the ADM.

14. There is no fee for an application for a Master rating.

Foreign Rating Equivalent

15. Current members of the HPAC/ACVL who have or receive a foreign rating, as well as new applicants to HPAC/ACVL are required to contact an HPAC-certified instructor to have their skills and knowledge tested to determine the equivalent HPAC/ACVL pilot rating for which they may be qualified. It is the responsibility of the HPAC-certified instructor to submit a standard rating form to the HPAC office.

Responsibilities

16. The BoD is responsible for reviewing applications for, and award, Master (H5/P5) ratings.

17. The Executive Director is responsible for reviewing applications for, and award, Student (H1/P1) to Advanced (H4/P4) ratings.