

A Guide To Freefly

Centre de Paracaigudisme Costa Brava/Babylon Freefly S.L.
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A Guide to Freeflying

Introduction

Freefly means learning forms of body flight in multi-positions: Head Up, Head Down, Tracking and following diagonal trajectories. To achieve this it's necessary to have a good understanding of the body's aerodynamics in Freefly.

A novice Freeflyer should gain experience of the relative wind striking their body in different places other than on their belly. It is useful to experiment with aerial movement through several of the body's axes.

A good starting point would be performing front and back loops and/or barrel rolls, starting from and returning to the familiar 'belly-to-earth' position. It is also recommended that you obtain some Formation Skydiving experience. This is not a requirement for Freeflying, however it is certainly very useful for developing your general flying skills.

It is possible to learn to Freefly on your own, but the fastest and safest way to progress is to jump with an experienced, qualified instructor. You can alternate solo jumps with coaching jumps, in this way you consolidate what you have learned before moving on to the next step.

Freefly Safety Rules

Ensure you have a full safety briefing from a qualified instructor at the Drop Zone that you are intending to jump at.

Parachute

Your rig must be in appropriate condition:

- Hand-deploy BOC (bottom of container) or pull-out system is mandatory.
- Tight riser covers.
- **EXCELLENT** condition of the spandex pocket, i.e. to avoid a premature opening.
- Hand-deploy bridle well protected.
- Closing loops (main and reserve) sufficiently tight and in a good condition.
- Automatic safety release equipment (AAD) is mandatory.
- FXC 12000 is unsuitable and therefore unacceptable for Freefly.
- Elastic bungee in between leg-straps is recommended.

Altimetry & Helmet

- One audible altimeter is mandatory, a second is recommended.
- A visual altimeter is mandatory.
- A helmet is mandatory, very important so as to hear your audible altimeter.
- A single point release system is highly recommended for camera helmets.
- Do not jump with a helmet equipped with a camera bracket WITHOUT using the camera (the bracket is a sharp dangerous object and possibly a safety hazard).

Clothing

- Avoid clothing that may open in freefall (secure zipper system on jumpsuit).
- Avoid clothing that may cover your handles.
- Avoid clothing that can stretch too much (e.g. long sleeved sweat shirt).

Harness

- The harness should be tight enough to avoid it moving during freefall.
- Pay particular attention to your chest strap and make sure you do it up tight.

On Exit

- The minimum altitude for a Freefly jump is **3000m/10.000ft**.
- The group order for exit should be decided to obtain a maximum separation between the groups according to experience.
- You should know that RW (flat) flyers have more drift than Freeflyers. It is therefore recommended that with no wind, or tail-wind conditions Freeflyers should exit first before any flat groups. With head-wind conditions Freeflyers should exit after RW flyers.
- Ask a local instructor about exit order. Some Drop Zones have specific rules regarding exit order.

In Freefall

- Freeflying involves **much higher** vertical speeds than flat work. This higher vertical speed can translate into faster and further horizontal movement. Understanding of this matter is essential to avoid a collision in freefall.
- Make sure you are always aware of your altitude. During a Freefly jump you are moving **much faster** towards the ground than any other jumps!
- Always work 90° from the jump run axis (whether you are alone or in a group).
- Always keep visual on the other members of your group especially at break off.
- Avoid radical level changes (for example going onto your belly) when you are working the vertical.

Break Off and Opening

- Minimum break off altitude for **more than a two-way** group is **5.500ft**.
- Minimum break off altitude for **a two-way** is **5.000ft**.
- Before break off visual awareness is critical, i.e. everyone knows where everyone else is.
- Freeflyers should go into a progressive track to ensure safe break off.
- If possible always track 90° to the jump run.
- Perform a barrel roll to check there is no one above you, prior to opening.
- If someone is below you and you are clear-**PULL!**
- After opening fly your canopy 90° from the jump run. This allows free space for the skydivers who have jumped after you. Do this until you can see the groups that jumped before and after you.

CHAPTER I: Learning to Fly Head Up

You can start with solo jumps.

1.1 Ball Position (back-to-earth position)

The first stage for any novice Freeflyer to learn is the Ball position, which is used for safety and recovery. It is also used to transition from one position to another and helps maintain a fast and consistent fall rate. It is important to become proficient in this position before moving on to the next step.

1.2 Head Up Position on Exit and in Freefall

The easiest way to exit Head Up is to present your back to the relative wind facing the tail of the plane. In freefall you can enter a Head Up position from the Ball position, which you have developed in earlier jumps.

The parachutist should pay particular attention to the angles of their limbs and back.

A beginner falling out of their position should return to the Ball position, regain control and then attempt a Sit Flying position again.

It is better to start from the slowest and progress to the faster positions, i.e. sit to intermediate position, to stand. Working on these stages will enable you to control your fall rate.

The aim is to achieve a controlled, vertical, symmetric position.

1.3 Head Up Exercises

Turns, Head Up/Head Up transition with a front/back loop and side transition.

For these exercises you should emphasise the quality of the execution of each part of the movement.

Forward and backward movement is achieved in Head Up flight by pushing the hips forwards or backwards in relation to the upper torso.

Pushing hips forward creates a forward movement and vice versa.

Attention should be paid to working on levels when moving in a horizontal direction.

A few jumps with an instructor will prevent you from acquiring bad habits and will help you to achieve a correct basic position.

CHAPTER II: Learning Tracking

2.1 Belly and Back Tracking

Before attempting any Tracking jump ask a local instructor about the current wind conditions before deciding which direction to track in.

Check whether any other groups on your load are doing a Track jump and make sure all of you are aware which direction each group is heading in (this will be in opposite directions to one another).

A useful exercise is to start to become efficient in Tracking on your belly, once you feel confident you can start to perform barrel rolls.

Progress to practicing a Back Tracking position and then, alternate between flying on your back and your belly.

Make sure that you maintain the same heading throughout the whole jump (90° to the jump run).

It's important to keep a check on the distance you are covering and consider opening higher.

Tracking is a basic technique known by all skydivers but it is also a discipline in itself within Freefly.

CHAPTER III: Learning to Fly Head Down

You can try to fly Head Down alone or with an instructor. NEVER attempt it with an unqualified Freeflyer that, for instance, suggests they jump with you to be your reference in Head Up!!!

In this case neither flyer will have enough knowledge or experience to ensure safe proximity during the jump. The risk of a high-speed collision then arises.

A high-speed collision may result in serious or fatal injury of either or both jumpers.

3.1 Head Down Position on Exit and in Freefall

The best way to exit Head Down is to present your body, head on, to the relative wind, keeping your entire body straight and fluid.

In freefall you can enter this position from Head Up by performing a half cartwheel and then opening into a 'legs-wide' Head Down position.

You can also achieve the Head Down position from a Back Track or the Ball position.

Whilst learning Head Down, the position should be maintained for a few seconds only, 4 to 5 seconds maximum.

When aiming for the vertical you must always be aware of your body angle to prevent any fast and uncontrolled horizontal movement.

Return to Head Up or the Ball position in between each attempt. Check your heading after each exercise. Make sure you are working 90° from the jump run.

3.2 Head Down Exercises

Once you are controlling the vertical position, with an absence of unnecessary horizontal movement, you will work on:

- Performing turns on the vertical axis.
- Head Down/Head Down transitions with a front/back loop, and side transitions.

For these exercises it is important that you emphasise the quality of the execution of each part of the movement.

The CPCB Freefly Compulsory Basic Training (CBT)

Aims and Objectives of CBT

Initially CBT enables you to participate in two-way Freefly jumps. You can then progress to larger groups according to the level and experience of the other flyers.

No skydivers are allowed to participate in a group Freefly jump without CBT or equivalent. To satisfy the evaluation criteria of CBT you must be able to demonstrate the following:

Evaluation Criteria

Head Up Position

Maintain equilibrium with ease.
Rotation through every axis.
Controlling levels and proximity.

Head Down Position

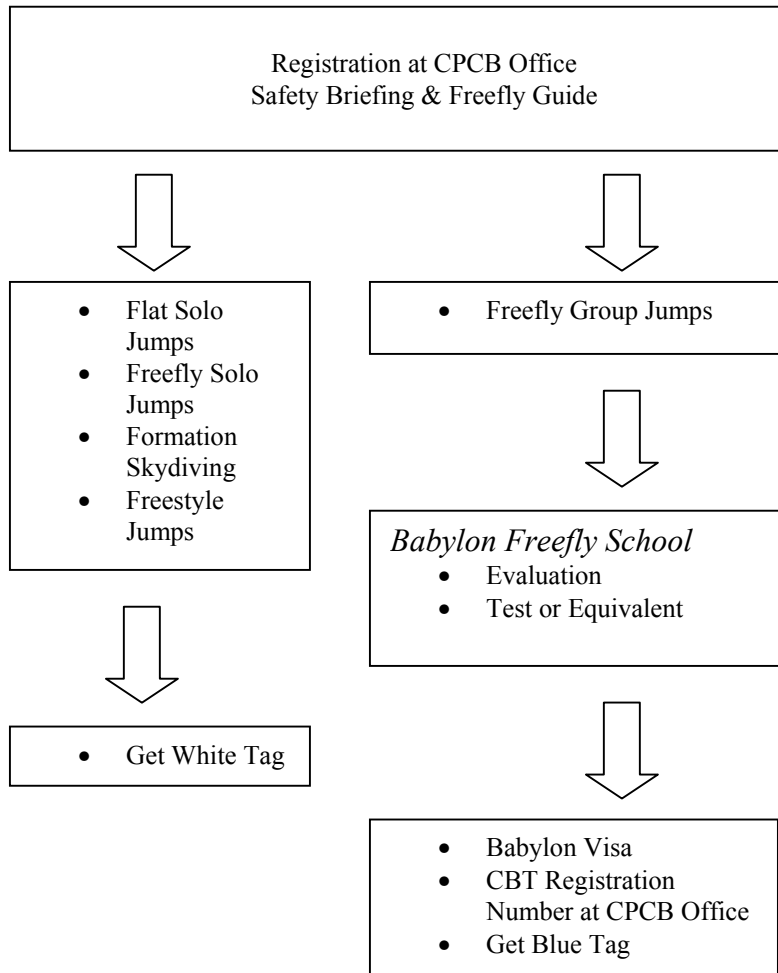
Being vertical (**No time limit**).
Working in full safety.
Visual control according to reference.
Respecting axes.
Proper reaction to loss of position.

Break Off & Tracking

Altitude awareness and initiate break off.
Go into a progressive efficient track.
Respect heading and barrel roll visual check.

Knowledge of Specific 'Freefly Safety Rules' (pages 2 to 5).

The Freefly Registration Process



DECLARATION

I HAVE READ THE ABOVE AND DECLARE THAT
I HAVE UNDERSTOOD ALL THE SAFETY
REQUIREMENTS, RULES AND RECOMMENDATIONS
NECESSARY FOR FREEFLY SKYDIVING AT THE CPCB,
EMPURIABRAVA, SPAIN.

NAME.....

CBT REGISTRATION NUMBER.....

DATED.....

SIGNED.....

INSTRUCTOR.....

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