



42 Supported Head-Down

Pre-requisites

Learning head-down will be one of the most challenging yet fun things you will do in the tunnel. It will be a time consuming goal to attain, but the reward will certainly be worth the effort! Head-down flight is the final static orientation in the progression; it will open many doors for your flying career and help complete you as a fully rounded flyer.

Prior to beginning the head-down progression, you will need to be very competent at:

- All belly-flying skills
- All back-flying skills
- All sit-flying skills
- At least the sit-to-sit front flip transition (knowing all sit-to-sit transitions is preferred)

You will also need to receive a full safety briefing from the tunnel instructor and a body position and skill briefing from a head-down coach.

Objectives

The primary objective is to be able to safely and successfully fly a static neutral head-down position off the net at moderate to fast wind speeds, with minimal assistance from your tunnel instructor.

Preparation

Prior to entering the flight chamber to begin this skill, it is important that you discuss with your instructor the specific plan for once you are inside. You will be directed in which way to face and set up on the net. When given the appropriate signal from the instructor, you will, while holding the net, rotate your body and place your head on the net. During the supported head-down position of your progression, your instructor will have at least one grip on you at all times.

Once your body stabilizes, you will be given the signal to release the net one hand at a time and assume a comfortable, neutral flying position.

Whether you are in the early stages of learning this skill and remain on the net, or whether you have some experience and are learning to fly a neutral position off the net, you will set up the same way each time.

Technique and Drills

Keep these key elements in mind when learning this skill:

On the net

- Set up on the net, head down holding the net
- At first, for orientation, start in a “straddle” (legs wide) position, and then switch to a “daffy” (one leg in front and one behind) position
- The “straddle” position is an easier position to begin head down to get a feel for supporting yourself on the net upside down and practicing the “bail.” The “daffy” position is more difficult but provides the right amount of lift and control initially. Later in your progression you may learn a “hybrid” type position which is a mix of the two, based upon your consistent fall rate and finally the “shelf or stall” position which is more commonly used for VFS flying
- For the “straddle” position, your legs will be straight, and spread as wide as possible (laterally)
- For the “daffy” position, your designated front and rear leg will be spread wide (longitudinally), both legs will be bent at approximately 90° to ensure that they are balanced in the wind
- Once you are stable, your coach will give you the signal to release the net one hand at a time. It is done in this manner to ensure that you maintain stability throughout the release process. Once you release you will relax your arms, initially close to your sides

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- With your arms from the relaxed position, slightly raise them to about shoulder height with a slight bend at the elbow
- The position of your head can have an effect on the line of your body, which ultimately can affect the pitch of your body in the wind causing unwanted drive. Try to avoid having your chin down toward your chest exposing your back to the wind; this can cause a forward drive. Having your head rotated back too far can expose too much of your chest and create a backward drive
- If you are signaled to do so, or if you feel any large instabilities, you will need to “bail” to your back or through to your sit-flying position
- The “bail” is completed by tucking your head forward toward your chest and performing a front flip type maneuver
- You will repeat these steps until your instructor and coach feel you are stable and ready to begin lifting off the net
- During each rotation, you will learn to balance each aspect of your position: your torso straight, your arms spread, your front and your back leg. Maintaining constant control of each unit of your position will allow you to maintain controlled neutral flight with no movement



“Daffy” Position



“Shelf” Position



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Off the Net:

- Your coach and instructor will discuss with you prior to your learning to fly your position off the net
- They will ensure that you are able to control your position in the wind speed required for you to fly off the net
- Begin in a neutral position on the net and await the instruction to lift
- To begin to raise off the net, you will need to evenly spread each part of your flying surface area to create the lift required
- Initially you will only have enough wind speed for you to lift off the net and not so much that instability can create a fast drive
- During each flight rotation, your instructor will gradually increase the wind speed after you demonstrate stability and safe practices
- Make continuous small adjustments to your body position to maintain your relative position inside the tunnel
- If you encounter any large drives or if your coach instructs you, then “bail” immediately to a sit-flying position
- The instructor will continue to have one grip on you throughout the entire process
- You will repeat the process until your instructor and coach feel comfortable with you progressing to basic head-down

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Post-Flight Questions / Suggestions

- How did your performance match the initial objectives?
- Were you able to maintain stability on the net and progress to flying off the net at moderate wind speeds?
- What techniques did you feel comfortable with and what can you improve on during the next session?
- Are you able to demonstrate correct bailing procedures?
- Are you ready to be released?

What Skill is Next?

Learning head-down is challenging both mentally and physically. There is no doubt that at certain times each session you will become fatigued. Your coach will be able to recognize this and key you to continue to work and build other flight skills such as sit-flying and other transitions that require more work. This is normal. Once you start to master head-down flight and you are flying off the net with minimal assistance from the tunnel instructor, the next step in your progression is to learn basic head-down, which will be head-down flight with the tunnel instructor releasing you solo.

