

The



Learn to Hydrofoil



Easy steps for you to progress from your first ride on a hydrofoil to your first jumps off the water.



Level 1 – Hydrofoil

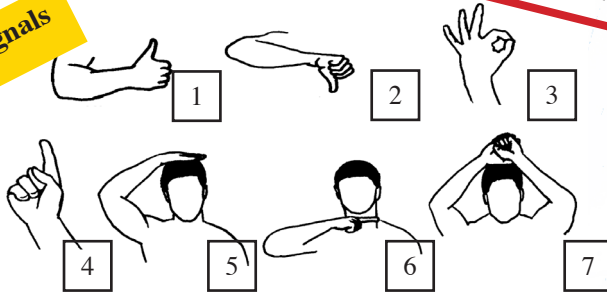
On land, demonstrate:

The seven skier hand signals

Explain five of the 15 Skier Safety Codes

Important safety rule:
Always wear flotation
Always put feet in binders
Always fasten seat-belt

Hand Signals



- 1. Speed up:** The "thumbs-up" gesture indicates that the skier would like the speed increased.
- 2. Slow down:** The "thumbs-down" gesture indicates that the skier would like the speed decreased.
- 3. OK:** If the set speed or boat path is good, the skier may use the OK signal.
- 4. Turn:** When either the skier or the driver wants the boat turned, a circle motion with the arm over the head with one finger in the air is used. It is usually followed by pointing in the direction of the turn.
- 5. Back to the Dock:** A pat on the head indicates that the skier would like to return to the dock.
- 6. Cut Motor/Stop:** A slashing motion with the hand across the neck indicates the boat is to stop immediately. This signal can be used by the skier, driver or observer.
- 7. I'm OK (after a fall):** This important signal indicates that a skier is OK after a fall. It consists of both hands clasped over the head. It should be used every time the skier falls.

Water Skier's Safety Codes

Rule 1: Always wear flotation. A properly fitted personal flotation device is designed to fit snugly, so that it won't slip up on the body during a fall. The recommended type is a jacket or vest that covers the chest, abdomen and back.

Rule 2: Always be sure your equipment is in good condition. Your personal safety and enjoyment depend on the equipment you use. Check your equipment regularly. Be sure that your skis do not have sharp or protruding surfaces that could cut or scrape the skier. Check towropes for frayed areas or broken bridles and handles. Repair or replace damaged or unsafe articles.

Rule 3: Don't give the starting signal until ready. Make sure you are ready, the slack has been taken out of the rope and you are clear of any dangerous obstacles around you. Keep your ski tips up.

Rule 4: Do not ski near docks, pilings, other boats or swimmers. Always look ahead and be sure you are aware of your surroundings and where you are going at all times. Many water ski injuries result from collisions with docks or other solid objects.

Rule 5: Never put any part of your body through the handle or wrap the line around yourself in any way.

Rule 6: Never ski in shallow water or an area where there may be obstructions above or just beneath the surface.

Rule 7: When a fall is inevitable, try to fall backward or to either side. A forward fall increases the chances of contact with the ski.

Rule 8: Know and use the skier hand signals. It is particularly important to use the skier's "I'm OK" signal after a fall if you are all right.

Rule 9: If you fall in an area where there is other boat traffic, lift one ski half way out of the water. This will signal to other boats that there is a skier in the water.

Rule 10: Never ski to the point of excessive fatigue.

Rule 11: Always ski during daylight, from sunrise to one-half hour after sunset.

Rule 12: Never ski directly in front of another boat.

Rule 13: Always use equal length ropes when skiing double.

Rule 14: Always ensure that the motor is "off" when a skier is entering and exiting the boat.

Rule 15: Always have an observer in the towboat.

Level 1 – The Hydrofoil



Parts of the hydrofoil

- Seat
- Binders
- Foil & Upright Bar
- Ski



BEFORE EACH RIDE YOU SHOULD:

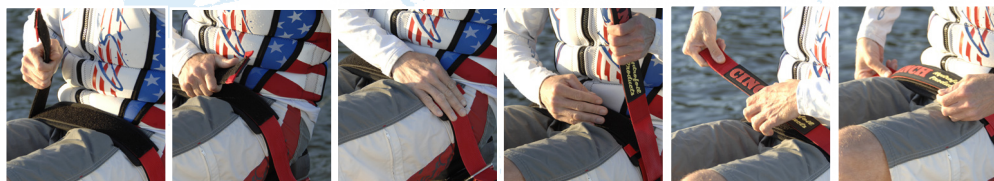
- Check the tightness of all bolts and screws.
- Check to see that your seat belt is safe to use, look for wear or fraying and replace it as needed.
- Check foot bindings for damage, weathering or cracking. Stiffness is another sign of age, replace with new ones for safety. If the hydrofoil has adjustable foot bindings, make sure they are adjusted for the rider.
- Ensure that the T-Bar is correctly fastened to the board/seat and that the wing bolts are tight.
- If you are uncertain about the safety of any item, it's best not to ride!
- Never use a slalom training handle for the hydrofoil, the "V" in these handles are too long and can pinch or bind on the board dragging the rider under. There are special training "V" type handles designed for the Hydrofoil that have a shorter "V" and wider handle.

How To Properly Hold The Handle

For hydrofoil, use the knuckles up grip.



Securing The Seat Belt



Fasten the seat belt close to your waist. This will ensure a tight and secure fit."

NEVER ride in less than 8 feet of water!

If you lose control, throw the handle away from yourself.

Be sure to secure heel straps!



Level 2 Deep-Water Start

Complete a deep-water start and maintain proper hydrofoil position for three seconds.

Proper body position for deep water start:

- Positioning yourself forward on the seat.
- Handle in hands, hands held firmly to the top of the riders knees. Not in front of the knees. This will put the rider in the perfect 90 degree starting position every time. Stay firm in this position.
- If the ski tip continually sinks upon starting and you are pulled over the front of the ski in a failed attempt to start, you must apply more pressure with your feet and move your shoulders further back.



Helpful Tip

- The time to get on top of the water should be between 3 to 5 seconds from the time of the initial boat pull.
- Sit at a 90 degree angle and keep body stiff. Elbows should be on your lap with hands above knees (not beyond the knees) and remain there while starting.
- DO NOT try to pull yourself out of the water by pulling in with your arms. When you feel the boat begin to pull you up, maintain the proper body position.
- Keep the tip of the board out of the water on startup. Try to keep approximately six inches of the board tip above water on startup.
- Keep your eyes on the boat.
- If the hydrofoil veers to the right or the left during your first attempts to start, your body weight is too far back. Reposition yourself forward on the seat, and lean further forward with your shoulders.
- Once the board is on top of the water, lean over and lower your life vest to your thighs, with arms outstretched, to keep from having the foil rise.

Suggested Towboat Speeds

When pulling a new rider from a stop, in 3-5 seconds, you should achieve and maintain a boat speed between 15-18 miles per hour.

Level 3 Learning to "Taxi"

Maintain proper body position for 60 seconds with the board touching the water.

- Tie an 18-inch piece of string around the T-Bar. This will cause enough drag and keep the hydrofoil from rising.
- A Velcro® rope Caddie will do the same trick. Place it on the T-Bar just above the front/rear wings.
- Try using tape in reverse, similar to a lint brush. Loosely wrap a strand of tape, 3 layers thick and sticky side out around the T-Bar just above the front/rear wings. This too will generate enough drag without actually sticking anything to the T-Bar.
- Once the board is on top of the water, lean over and lower your life vest to your thighs, with arms outstretched, to keep from having the foil rise."
- You will tend to go in the direction you are looking. So, keep your eyes focused on the boat at all times.



Level 4 Learning To Raise The Board

Start with the board touching the water, raise the board off the water (minimum of 6 inches), then lower the board to the water. Complete five controlled board lifts.



- Try to sit at a 90 degree angle.
- Lift your toes in order to raise the hydrofoil.
- Do not over compensate; it only takes very small movements to make the hydrofoil react.
- Raising or lowering your hands when the hydrofoil is flying in addition to forward and aft body movement all produce reactions that if over exaggerated can cause a crash! Give it time and eventually you'll find that it only takes a positive thought to make the hydrofoil do what you want.

Level 5 Going Outside The Wakes

Leave the center of the boat wakes and cut out. Cut back and return to the center of the wake. Board may touch the water as needed. Repeat this to the other side. Complete five single wake crossings in either direction.

- Look at the boat when wanting to return to the center of the wake. Also, you can slowly point your knees, or steer your knees, in the direction you wish to travel.
- If you begin to lose control, go back to the center of the wake. The air in the water from the prop wash will cause the hydrofoil to lose lift and come back to the water.



Level 6 Steering While Flying

(board in the air)

Leave the center of the wake, cut to one side, return to the center, and cut to the other side. Board should not touch the water. Complete five wake crossings.



- This is where the fun begins. Cutting through the wake and riding above choppy water gives you the first true sensation of “flying” the hydrofoil.
- Steer with your knees. Keep them together and move them slightly to the right and then to the left.
- Practice with tight S turns in between the wake.

Level 7 Learning To Jump

Jump the hydrofoil out of the water by slightly leaning back and complete the jump by landing. Complete five jumps in the flats or behind the boat.

- Keep the boat speed at 18 m.p.h. and maintain standard rope tension.
- Pull up on your feet and hold that position. The foil will rise up and this allows the wings to exit the water.”
- Try to keep hands and handle on your lap.
- In preparing to land, you should look in the direction of your landing and spot your landing.
- Land your jump at the same angle as exiting the water. This means do not adjust body position or arms while in the air.
- Before moving on, you should be able to jump over the wake, from the outside to the inside, at will.
- What **NOT** to do: If when you jump and you leave your hands high, it will pull you over the front. If you push on your feet in the air, which seems to be a natural tendency, then you will also go over the front.



Level 8 Dip & Jump

Cut outside the wake with the board riding at 18 inches above the water; dip down; initiate the jump; and complete the jump by landing. Complete five "dip and jumps" in the flats or behind the boat.

- The sharp change in direction at the bottom of the dip will generate the power to exit the water.
- The faster you change direction (down to up) the bigger your jump will be.
- **DO NOT** pull on the rope or use the rope to jump, hands should remain in the area of your lap the entire time.
- If jumping in the flats, keep eyes straight in front of you, on the horizon preferably. If jumping behind the boat, then keep eyes on the boat. This keeps you from looking straight down and landing too early.
- Jumping in the flats:
Slowly cut out in the flats.
Maintain your speed and line tension, (not too much at first).
Do your dip & jump - Keep your body positioned like you're in a rocking chair.
Do not pull on the rope or use the rope to jump, hands should remain in the area of your lap the entire time.
Try to exit and enter the water at the same angle.



Level 9 Jump In The Flats (outside the wakes)

Start outside the wake, cut away from the wake, jump and land.

Complete 5 big air jumps in the flats."

- How to jump in the flats: Start at about 5 feet outside of the wake. Cut hard (but not full effort cut) to the outside, at about 75-80 degrees from the boat (ie. 90 degrees being straight out from the boat), then straighten up slightly and jump hard without losing momentum. Keep the handle at your hip. Maintain handle position through the landing.

Helpful Tip



- It is important to maintain your cut away from the wakes. If you let off, it can cause you to fall towards the wakes, and the higher you go, the more exaggerated the mistake will be.
- When doing your jump in the flats, try to count 1-1000, 2-1000 (this will help you prepare for most advanced tricks where you need a solid jump before initiating the intended trick)
- Be sure to maintain proper boat speed. At this point, you should not be going above 22/23 m.p.h.

Level 10 Jump The Wake

Perform a wake jump. Start outside the wake, cut back to the wake, dip and jump. Complete five jumps from one side of the wake. Repeat and complete five jumps from the opposite wake.

- You should not use the wake as a ramp. Ultimately, you want the front wing to exit the water dead center in the rising wake. This means initiating the jump several feet prior to getting to the wake itself.
- When approaching the wake, you want to be aimed toward the other side of the wake. Do not aim for the back of the boat as this takes away from the power your cut is providing.
- Spot your landing. Keep your eyes focused on the horizon, straight in front of you. This keeps you looking up instead of looking down at the water."

Level 11 Double Wake Jump

Start outside the wake, cut at the wake, jump, cross both wakes and land. Complete five double wake jumps.

- You should now be riding at a boat speed of 20-22 m.p.h.
- Keep your eyes on the horizon during the entire jump. Focus on an object (like a tree) instead of looking down at the water.
- Hold the rope with both hands while jumping and land with good line tension, not a slack rope. Remember to keep hands on your lap.
- Rope length is proportional to the width of the wake you are jumping. A longer ski rope will mean a much wider wake to jump.



Equipment Note: Positive Shimming – If you are fighting to keep the board off the water, adding a shim in front of the front bolt of the rear wing will make the ski ride off the water a little easier. It will also make the cuts and jumps easier as well because you do not have to fight the negative lift of the hydrofoil. Handy shims? Buy a pack of guitar picks and use them individually or glue two together to make different sized shims.

Level 12 Grabs & Floaters

Learn grabs and floaters – During a jump, let go with one hand (grab) or 2 hands (floater), and touch the seat (or board/tower/strut) for different grabs. Control the landing and ride away.

- Floaters: The best point in a jump to attempt a floater is just as you are at the peak of the jump, not sooner. If you let go of the rope while there is full tension, it will spring back toward the boat. There is less tension at the peak of the jump so this is the best time to attempt a floater.

Arc method of riding: At this level, you should be aware of line tension. One of the best ways to achieve the line tension aspect of riding is the pendulum effect or arcing like a pendulum, away from the boat. By throwing the trick with the arc, you can maintain line tension throughout the trick. Throwing tricks straight across the wake or even toward the boat, instead of the arc, creates slack in the rope.

1. Cut out but don't completely straighten out.
2. Maintain your arc wide so you get closer and closer to being parallel with the boat.
3. Throw your trick with line tension maintained throughout.

Level 13 Dismount Flip

Learn to do a dismount flip. Cut outside the wake, release the handle, control the jump and initiate a backward flip to land the board on the water.

ALWAYS use a trick release on the boat for the rope when attempting inverts and advanced tricks, and you should be comfortable cutting at full speed on the foil and maintaining line tension. The rider should be familiar with, and use, the Arc Method of riding.

Level 13 con't - Dismount Gainer

Boat speed should be in the 19-21 m.p.h. range.

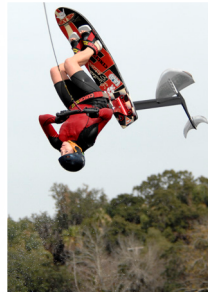
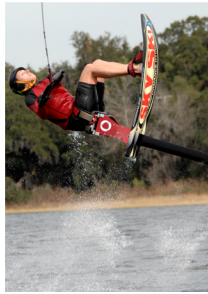
- Similar to the jump directions above, jump at the 75 to 80 degree point on the arc.
- Initiate your jump.
- As your hydrofoil begins to exit the water, say "one one-thousand" and release the handle. This will give you a slight pause to separate the jump from the invert.
- You can initiate the invert by quickly pushing your shoulders and head back a bit. Think about sitting in a recliner, use the move that is needed to get the back of the recliner to recline a bit. Just a sharp budge, that's all it takes.
- Although you won't see much on your first attempts, try to start seeing the water as you're upside down. As you come around, you will see the horizon in front of you, and you can "pull" your legs up, so the hydrofoil will clear the water and land softly. Upon initiating the dismount gainer (back flip), release the handle and grab under both thighs. This will lock the 90 degree body position as you flip the board."
- So, the first step in the progression is to hold on to the rope through the jump, and let the hydrofoil exit the water. When you begin to see sky, let the rope go.
- After a couple of these, work on holding on to the rope until you are upside down. When you are looking backward, let the rope go, etc.
- Soon, you will be landing the foil in the water, and the rope will be in your hands... you'll be riding away.



Level 14 – Backward Invert In The Flats (outside the wakes)

Learn a backward invert in the flats with either one hand (gainer) or two hands (roll) on the handle. Complete an invert and control the landing to ride away with the handle.

- The main thing to focus on to ski this trick away is to begin looking for the water as soon as possible. You will learn that rope tension will be your friend, and help you pull your **hydrofoil** underneath you, but at first, you don't need the rope tension. Look for the water, then up slightly (maybe to see the horizon), and put the **hydrofoil** underneath you and ride it away!
- Just simply doing this trick with both hands will initiate a roll. Everything else is the same as the gainer.



Level 15 – Backward Invert At The Wake

Perform backward invert at the wake. Cut at the wake, complete an invert with two hands on the handle, control the landing and ride away.



- Remember the wake jump steps from before. You do NOT want to use the wake as a ramp for the board as it will take away some of the energy when the board slaps the water.
- During the jump, keep hands firmly at inside hip (this will be the trick pivot point). Look up and over your outside shoulder.

Congratulations!
You are now a Hydrofoil rider!



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