



Boat Control On-Water Training **INSTRUCTOR MANUAL**

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Module 2: Precision Docking and Boat Handling

Single Engine Boat | Skills at Idle Speed

Approx. 3-hour session



National Safe Boating Council Waiver and Release of Liability

I, _____ agree to participate in the National Safe Boating Council's *Module 2: Precision Docking and Boat Handling*. I understand that this program will have on-the water sessions, and, like any program involving water, is inherently dangerous because of the possibility of immersion and even death. I also understand and am aware that each participant will be engaging in the training that involve risk of serious injury, which might result not only from their own actions, inactions or negligence but the actions, inactions or negligence of others or the conditions of the premises or of any equipment used.

I agree to abide by the rules and regulations as set forth by the National Safe Boating Council (NSBC). I agree to obey the instructor(s) and the supervisor(s) of the training. I promise to wear any safety equipment as required by an official of the NSBC such as, but not limited to personal flotation devices, non-slip footwear and appropriate clothing for the weather conditions. Prior to departing the ramp or dock, a pre-departure checklist and safety brief will be conducted to inspect the equipment to be used, and if anything is unsafe, they will immediately advise their instructor or supervisor of such conditions and refuse to participate until condition(s) is corrected.

I certify that I am in reasonably good health and that I am able to participate in this activity without adversely affecting any health problems. I will notify the supervisor and instructor(s) of any condition that may affect any participation and of any medication which I am currently taking.

Having read this waiver, I do hereby agree to release, waive, hold harmless, and discharge the NSBC, all sponsors, representatives and volunteers, any involved government organizations or other organizations and the boards, trustees, officers, employees, or volunteers of any of them, and if applicable, owners and leasers of premises used to conduct this event from any and all liabilities to the undersigned, his or her heirs and next of kin for any and all claims, demands, losses or damages or damage to property, caused or alleged to be caused in whole or part by the negligence of the persons, entities or otherwise.

I also grant permission to the NSBC and its sponsors to use any photographs, motion pictures, recordings or any record of this training for educational and legitimate purposes.

Signature

Date

Cell Phone Number

Emergency Contact Name

Emergency Contact Phone Number

_____ Check here if you are a weak or non-swimmer

_____ Check here if on medication or have health problems that may affect participation.
(Please list on the back of this page your health problems and/or medications)

Signature (guardian if participant is a minor)

Date



IMPORTANT NOTES

- Boat Control On-Water Training Modules 1-4 are the property of the National Safe Boating Council, Inc.
- Only current National Safe Boating Council instructors may use the instructor and course materials to ensure students receive exceptional instruction.
- The National Safe Boating Council's Boat Control On-Water Training Modules 1-4 are designed to cover all elements of EDU-1 On-Water Power Standards, the American National Standard for on-water, recreational powerboating skills. A student must complete all four modules to meet the ANS standard.
- Modules 1-4 were adapted from National Safe Boating Council's Close-Quarters and Open Water Boat Control curriculum.
- This course is approximately 3 hours long, but time length may vary depending on the age and boating experience of the student.
- A single engine boat should be used to teach skills at idle speed.
- This module presents skills in various environmental conditions, using a variety of boat types, which simply will not all exist during a course. Given the variables of weather, wind, current, and facilities, it may be necessary for the instructor to adapt or alter the skills progression. If the day of the course is breezy, the calm condition skills must be adapted or omitted. Likewise, if there is no wind, or no current, some skills must be altered or omitted.



Instructor: Please copy this form and complete for each course you teach. A copy of this form is required when you report the course to the National Safe Boating Council to maintain your certification.

Boat Control On-Water Training Module 2: Precision Docking and Boat Handling		
Instructor Name:		
Date:	Location:	Number of students:
Environmental Conditions		
Wind:	Current:	Temperature:
<p><i>Note: The skills in Module 1 should be practiced and understood before Module 2 is presented. The sequence of skills as presented is a progression where some skills require proficiency of one or more previous skills. This module presents skills in various environmental conditions, using a variety of boat types, which simply will not all exist during a course. Given the variables of weather, wind, current, and facilities, it may be necessary for the instructor to adapt or alter the skills progression. If the day of the course is breezy, the calm condition skills must be adapted or omitted. Likewise, if there is no wind, or no current, some skills must be altered or omitted.</i></p>		
Boat Description		
Type:	Length:	Color:
Student Roster		
First and last name(s):	Boat Operator License No.:	Age:



Preparation (20 - 30 minutes)

Completed while tied to the dock or in a protected open water location.

- Conduct pre-departure checklists and safety briefing.
- Life jacket mandatory wear policy for everyone on board including proper adjustment and fit, proper for activity being used, and serviceable condition.
- Inspection of boat systems and safety equipment.
- Obtain weather conditions and forecast.
- Discuss any potential hazards or conditions in the area.
- Explain how to safely enter and move about the craft with three points of contact maintaining stability.

1. 180° Turn-Around or Pivot Turn (30 minutes)

1.1 180° Turn-Around in Open Water/Calm Conditions.

(Complete within the approximate distance of the boat's length)

(Stern left/bow right or clockwise)

- A. Starting position: boat stopped, wheel centered.
- B. Stern left: Face left, set wheel hard left, shift into reverse for 2 seconds. Shift into neutral and assess.
- C. Coast until sternway is diminished.
- D. Bow right: Set wheel hard right, shift into forward for 1.5 seconds. Shift into neutral and assess.
- E. Coast until headway is diminished.
- F. Stern left: Face left, set wheel hard left, shift into reverse for 2 seconds. Shift into neutral and assess.
- G. Coast until sternway is diminished.
- H. Bow right: Set wheel hard right, shift into forward for 1.5 seconds. Shift into neutral and assess.
- I. Coast until headway is diminished.
- J. Stern left: Face left, set wheel hard left, shift into reverse for 2 seconds. Shift into neutral and assess.
- K. Turn is complete when facing opposite direction.
- L. Maintain proper lookout throughout maneuver.



(continued - Stern right/bow left or counterclockwise)

- A. Starting position: boat stopped, wheel centered.
- B. Stern right: Face right, set wheel hard right, shift into reverse for 2 seconds. Shift into neutral and assess.
- C. Coast until sternway is diminished.
- D. Bow left: Set wheel hard left, shift into forward for 1.5 seconds. Shift into neutral and assess.
- E. Coast until headway is diminished.
- F. Stern right: Face right, set wheel hard right, shift into reverse for 2 seconds. Shift into neutral and assess.
- G. Coast until sternway is diminished.
- H. Bow left: Set wheel hard left, shift into forward for 1.5 seconds. Shift into neutral and assess.
- I. Coast until headway is diminished.
- J. Stern right: Face right, set wheel hard right, shift into reverse for 2 seconds. Shift into neutral and assess.
- K. Turn is complete when facing opposite direction.
- L. Maintain proper lookout throughout maneuver.

1.2 180° Turn-Around in Narrow Fairway (30-40 minutes)

(Space restricted area /calm conditions)

- A. Line up on fairway; enter fairway steering straight in center of fairway.
- B. Perform Standard Stop.
- C. Determine which direction to turn.
- D. Perform 180° Turn-Around making maximum safe use of room astern and maintaining adequate clearance ahead and astern.
- E. When turn is complete, center the wheel, shift into forward, steer straight out fairway.
- F. Maintain proper lookout throughout maneuver.



1.3 180° Turn-Around in Narrow Fairway

(Wind - less than 5 knot crosswind)

(Stern left/bow right or clockwise)

- A. Determine wind direction and wind speed. Do not attempt if wind exceeds 5 knots! It most likely will not work!
- B. Line up on fairway, enter fairway staying on windward side of fairway, aiming slightly upwind to offset leeway.
- C. Perform Standard Stop.
- D. Determine which direction to turn to pull the stern into the wind (*stern left/bow right steps follow*). Do Not Delay!
- E. Stern left: Face left, set wheel hard left, shift into reverse for 2 seconds. Shift into neutral and assess.
- F. Repeat shift if there is room astern.
- G. Coast until sternway is diminished.
- H. Bow right: Set wheel hard right, shift into forward for 1 second only. Shift into neutral and assess.
- I. Coast only until there is room astern. Do Not Delay!
- J. Stern left: Face left, set wheel hard left, shift into reverse for 2 seconds. Shift into neutral and assess.
- K. Repeat shift if there is room astern.
- L. Coast until sternway is diminished.
- M. Bow right: Set wheel hard right, shift into forward for 1 second only. Shift into neutral and assess.
- N. Coast only until there is room astern. Do Not Delay!
- O. Stern left: Face left, set wheel hard left, and shift into reverse long enough to finish the turn. A throttle pulse may be needed.
- P. Continue in reverse until facing slightly to windward side of fairway.
- Q. Straighten wheel, shift into forward, steer out of fairway aiming slightly upwind to offset leeway.
- R. Maintain proper lookout throughout maneuver.



2. Docking Alongside a Pier (30 - 40 minutes)

2.1 Docking: Starboard Side to Pier/Calm Conditions

- A. Approach pier at slight angle in forward at idle speed, aiming for a spot along pier.
- B. Shift into neutral, coast while aiming at target, steering with rudder effect only.
- C. Coast until bow is near pier and headway is nearly stopped.
- D. Shift into reverse, set wheel (a turn or so) toward the pier (right). Stern swings to pier as headway slows.
- E. Shift into neutral when boat is stopped and parallel to pier.
- F. Secure the boat.
- G. Maintain proper lookout throughout maneuver.

2.2 Docking: Port Side to Pier/Calm Conditions

- A. Approach pier at slight angle in forward at idle speed, aiming for a spot along pier.
- B. Shift into neutral, coast while aiming at target, steering with rudder effect only.
- C. Coast until bow is near pier and headway is nearly stopped.
- D. Shift into reverse, set wheel (a turn or so) toward the pier (left). Stern swings to pier as headway slows.
- E. Shift into neutral when boat is stopped and parallel to pier.
- F. Secure the boat.
- G. Maintain proper lookout throughout maneuver.

2.3 Docking: Wind Conditions Using Ferrying Maneuver

- A. Determine wind direction.
- B. Plan an approach and maneuver. Explain what you are going to do
- C. Perform maneuver.
 - Depending on wind speed you may position bow or stern-to-wind
 - Acquire appropriate ferry angle to wind
 - Maintain angle and adjust as needed for control and/or effectiveness
 - Ferry to pier, prevent leeway with adequate reverse shifts
 - Secure boat properly, use of lines and fenders
- D. Maintain proper lookout throughout maneuver.



3. Departing a Pier (30 - 40 minutes)

3.1 Departing: Starboard Side to Pier/Calm Conditions

- A. Cast off lines.
- B. Shift into reverse, set wheel ($\frac{1}{2}$ turn or so) away from pier (left). Stern swings away from pier as sternway begins.
- C. Center the wheel, stay in reverse
- D. Secure the gear when clear of pier.
- E. Maintain proper lookout throughout maneuver.

3.2 Departing: Port Side to Pier/Calm Conditions

- A. Cast off lines.
- B. Shift into reverse set wheel ($\frac{1}{2}$ turn or so) away from pier (right). Stern swings away from pier as sternway begins.
- C. Center the wheel, stay in reverse.
- D. Secure the gear when clear of pier.
- E. Maintain proper lookout throughout maneuver.

3.3 Departing: Wind from Pier

- A. Determine wind direction.
- B. Plan a maneuver.
- C. Perform maneuver.

Cast off lines, wind will move boat from pier, taking wind and other boats into consideration, adjust wheel and throttle to get to open water.
- D. Maintain proper lookout throughout maneuver.

3.4 Departing: Wind into Pier

- A. Determine wind direction.
- B. Plan a maneuver.
- C. Perform maneuver.

Keep bow line around cleat, shift into reverse set wheel to move steer away from pier, once boat is close to perpendicular to pier release bow line and back boat into wind, when clear of pier adjust wheel
- D. Maintain proper lookout throughout maneuver.



4. Proper Lookout (20 minutes)

Note: This skill can be incorporated in the first lesson

4.1 Maintain a proper lookout

- A. While performing all maneuvers, maintain a proper lookout to observe and monitor all other boats operating in the area, and if necessary, to avoid risk of collision, maneuver in accordance with the Navigation Rules.
- B. While performing all maneuvers, maintain a proper lookout to observe and avoid all hazards in the area.
- C. While operating in close-quarters, maintain a proper lookout to evaluate proximity to piers, docked boats, lee shore, etc.

Note: Assess room available and maintain adequate clearance at all times.

Using S.C.A.N. to maintain a proper lookout

In keeping a proper lookout, it is important the boat operator keep their mind focused on scanning the area where they are operating. To better understand the process, we will use the acronym **SCAN**: Search, Concentrate, Analyze, and Negotiate.

Search the area all around your craft. This is a 360-degree examination of everything on the water, around your boat. Distances away will close or open depending on your speed or the speed of the observed boat or object. The faster you are operating, the farther out you will need to search.

Concentrate on what you are seeing. Is it a boat? What type? What is it doing? What is its relative speed? Is it a stationary object? Drifting or anchored? These are questions you must consider while you look at the various observed boats or objects.

Analyze what you are watching. Is it closing in on your position or going away from you? Remember, if the object you are observing is at a constant bearing with decreasing range (meaning you are getting closer to it and its relative position to you is not changing), it is on a collision course. If it is another boater, do you believe they see you? Never assume you are seen by the other boat operators. Determine this by the way and direction they are operating. Analyze how far away the boat or object is and how fast it is closing the distance between you and it.

Negotiate – What are you going to do? Slow down, turn away from the boat or object, and head in a different direction? Remember the Navigation Rules. Know the proper action to take while meeting head on, crossing, or overtaking another boat.

End of Module 2: Precision Docking and Boat Handling