

San Joaquin Delta Power Squadron

On The Water Training Guide

I AT DOCK

IMPORTANT: VESSEL MUST HAVE A CURRENT YEAR VESSEL SAFETY CHECK, CURRENT YEAR INSURANCE, AND EVERYONE ON BOARD MUST BE WEARING A PFD WHEN ON THE WATER. INSTRUCTOR MUST BE INVITED ON BOARD BY OWNER. NO EXCEPTIONS PER USPS. USPS INSURANCE WAIVER MUST BE SIGNED.

- ___ 1) Make sure everyone is relaxed and knows that this is a non-stress event.
- ___ 2) Review with the student what will be happening: maneuvering in a wide open space, maneuvering in a more confined space, anchoring, and docking (both side-tie and stern in).
- ___ 3) Stress that you will not touch the boat controls except in an emergency.
- ___ 4) Make sure that vessel is insured and has a current vessel safety check (VSC). Discuss each item contained in the VSC. Discuss a Foat Plan.
- ___ 5) Determine if the vessel has any unusual characteristics you should know about (e.g. starting problems, loading up on prolonged idle, sticky controls, anchor problems, etc.)
- ___ 6) Safety – have student show you:
 - ___ a) Vessel registration or Coast Guard Certification
 - ___ b) Life jackets (discuss locations, types and usage, and throwables)
 - ___ c) First aid kit
 - ___ d) Chart – have them identify present location (Suggest possible Marine nav apps available and Open CPN), Discuss use of onboard navigation equipment
 - ___ e) Fire extinguishers (explain about inspection procedures, use and locations)
 - ___ f) Open engine hatch, check area and smell for possible fuel leaks, hoses, electrical connections
 - ___ g) Identify all thru hulls and ball valves (when have they been exercised?)
 - ___ h) Locate battery switch
 - ___ i) Discuss head usage, trash disposal, use of visual distress devices
- ___ 7) At Helm
 - ___ a) Explain radio operation and procedures (are call and CF numbers at helm position?)

Suggest that a student manual or similar handouts be maintained at helm position in a boat book.

- ___ b) Have participant identify each gauge, purpose, and normal readings
- ___ c) Have participant explain throttle and transmission controls
- ___ d) Turn on blower (if equipped) and discuss appropriate usage
- ___ 8) Start engine(s) and check all gauges for proper readings
- ___ 9) Discuss use of thrusters if equipped
- ___ 10) Have participant turn helm all the way one way then count the number of revolutions needed to reach the opposite stop. Have them turn back $\frac{1}{2}$ the number of turns to center the helm.
- ___ 11) As soon as engine(s) warm up, have skipper/deck hand release lines and have student pull away from the dock.
- ___ 12) Discuss weather conditions and safety procedures
- ___ 13) Discuss proper procedures for leaving dock under various conditions

II UNDERWAY

1) Twin engines: Initially have student do all maneuvering in an open area using transmissions only while keeping helm centered. When student is comfortable, add slight throttle to show added maneuverability.

Stress the procedure of letting the boat do the work and not over-using transmissions and throttle

___ a) Using transmissions only, turn boat clockwise and then counterclockwise noting where the approximate pivot point of the boat is. Do this in reverse also. This will also help to determine if the boat tends to move forward or aft more with a particular engine. Explain the effect of wind and current on controlling the boat.

___ b) Discuss man overboard procedures. Practice recovering a fender or cushion (mob simulation).

___ c) While turning, increase throttle for each engine to show the effects of added rpms. Vary throttles for further maneuvering demonstration.

___ d) While maneuvering, position both transmissions in neutral to demonstrate that the boat will continue to stay in motion.

___ e) While maneuvering, lower rpm and use transmissions (reverse as needed) to bring boat to a complete stop. Use a landmark to line up with so that you know you are stopped.

___ f) Back the boat in a straight line towards a landmark using transmissions only and then add slight throttles.

___ g) Take the boat to a place where you can bow in to shore (not rocks) to simulate lining up to anchor and give them confidence in tight places. Have student run parallel to shore, then turn boat perpendicular to shore and aim for a landmark. Bring the bow of the boat in close (check for sufficient depth) and using their maneuvering skills, show how to “kick” the bow to a desired point. Talk the student through the first time and then let them do it on their own.

___ h) Discuss anchoring procedures. Find an open area with sufficient depth and anchor vessel. Discuss scope needed for the depth. Make sure that anchor is free from restrictions and ready to lower. If using a windless, make sure all areas are clear. If anchoring by hand, do not throw anchor but lower hand over hand until down. Pay out scope, cleat anchor line and back down slightly to set anchor. Watch a fixed item on land to make sure boat is not drifting and anchor is securely set.

___ i) Discuss bringing in the anchor. Have person on helm slowly move over the anchor as it is being pulled up. If needed, go slightly past in order to release the anchor from the bottom and continue to bring it up. When up, secure the anchor.

___ j) While underway, bring boat onto plane (depends on type of boat) and have student turn in both directions simulating a slalom course. At slow speed, do the same in reverse. At idle, hold a position into the wind or current.

___ k) While underway, demonstrate how throttles can be used to steer the boat if helm becomes inoperative.

___ l) Practice steering both to and from a range marker

___ m) Find something in open water (a patch of water hyacinth, a mid channel marker, a fender on an anchor) and have student maneuver the boat around the object in a circle forwards and backwards, with object on port first then starboard. Try to maintain minimum distance.

___ n) Prepare boat for docking. Follow VHF procedures and call for permission to dock.

___ o) Discuss, demonstrate, and practice use of lines, proper cleating, different knots, hitches

___ 1) Make sure all fenders are out on the side of the boat and positioned at the appropriate height for how the boat is to be moored. When sterning in, make sure there are sufficient fenders on the stern or swimstep as appropriate.

___ 2) Make sure all lines are secured to boat, run outside the rails and stanchions, and ready for mooring.

___ 3) Bring the boat in, side to dock. Approach dock at dead idle going in and out of gear as necessary to minimize forward momentum. Aim bow at the point you wish to be in the middle of the boat when you stop. Approach the dock at a 30 to 45 degree angle and as you near the focus point, briefly reverse the outboard engine to swing the stern into the dock. If needed, momentarily put the inboard engine in forward to assist. Always return to neutral and let the momentum of the boat do the work for you. Secure bow, stern, forward and aft spring lines. Discuss the effect of wind and current.

___ 4) Leaving the dock. Take a turn on the forward cleat and bring the line back up to the boat. Release all other lines and gently put inboard engine in reverse and use outboard engine in forward to get your alignment. When you are clear astern, put both engines in reverse and back out until you are clear to maneuver and leave. Discuss the effect of wind and current.

___ 5) Stern the boat in. Discuss the effect of wind and current. Have fenders, spring lines, and stern lines ready as above. Have someone call out distances to the dock.

___ 6) Practice turning boat 180 degrees and re-docking close to the dock. Try not to go off the dock any more than 5 or 10 feet on the bow when turning.

___ 2) Single Engine

Same exercises as twin engines, however, turning in place is done by applying full helm in 1 direction using little transmission and throttle and doing the same in the opposite direction. Transmission operation will depend on what maneuvering is to be accomplished. Discuss the effects of prop wash and the tendency for the stern to move to starboard

Discuss various programs available related to GPS, navigation/charting and talk about radar, chart plotters, etc.

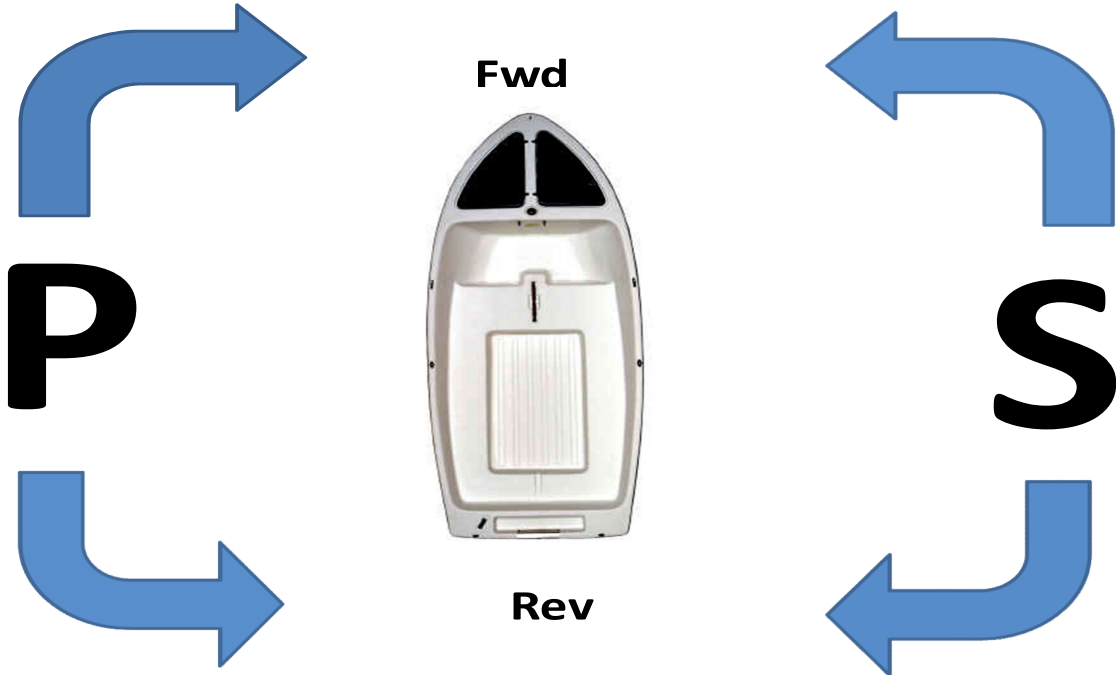
Skipper Disabled

- 1) Make sure boat is placed out of gear and dead in the water if underway
- 2) Put on life jacket if not already wearing one.
- 3) Make skipper comfortable
- 4) Call for help using radio procedures discussed.
- 5) Where is the closest place to take the skipper?
- 6) Make a decision to either anchor or proceed to nearest port.
- 7) Know your location and boat information so you can provide it to rescue personnel.
- 8) If the boat is at rest, turn on blower (if equipped) and prepare bow line and aft corner lines so that they are ready for easy retrieval at the dock or by emergency personnel prior to starting engines.

Encourage student at every opportunity and tell them they are doing a god job. Congratulate them on a job well done. Watch what you say, what you do, and how you say or do it. The squadron image in on display.

Note: This training guide follows all guides of the USPS/America's Boating Club

Twin Engine Maneuvering



Outboard and Inboard Outboard Maneuvering

