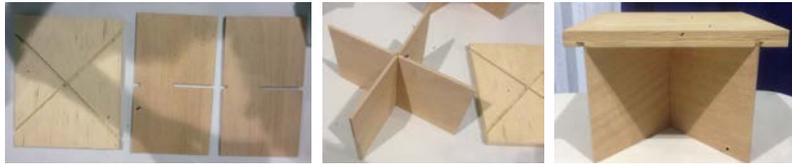


D12 BSVT Setup Instructions (page 1 of 3)

1. Set up table in desired position - note the pre-defined locations for the equipment when orienting table.
2. Open CASE #1 – Monitors, etc. Remove pieces for wooden riser platforms, assemble and place on the table at marked positions.



3. Lift one of the monitors out of case, and remove protective bag. **CAUTION: when lifting the monitor DO NOT pull by the base – the stem that connects the base to the monitor can separate if you do.** Remove one of the monitor bases from case and attach base to monitor. Note label on back of monitor and place onto the appropriate riser platform.
4. Repeat for other two monitors. Adjust positions of monitors as needed.
5. Remove remaining equipment from the monitor case:
 - power strip and clamp (used in step 6),
 - monitor power cables (used in step 6),
 - monitor video cables (will be used in step 14) and clip board with Coast Guard forms, etc.
6. Clamp the power strip to table at indicated position with silver clamp. Plug the three monitor power cords into the power strip (refer to Figure 1 below for plug arrangement). Route and plug the three power cables to each monitor.
7. Open CASE #2. Remove the two hold-down screws with washers and then remove the throttle/wheel assembly from the case and place on table at marked position. While holding the assembly, install the hold-down screws. **CAUTION: until screws are installed, assembly is unstable.** Run cable harness to back of table and plug the power cord into the power strip (refer to Figure 1 below for plug arrangement).
8. Remove remaining equipment from the throttle/wheel assembly case:
 - left and right speakers, speaker power cable and speaker audio cable (used in step 10),
 - BSVT documentation (binder and laminated forms).
9. Place the left speaker (has attached wire) under left monitor. Route left speaker wire to right speaker behind monitor riser platforms and connect to right speaker. Connect power and audio cable (green tip) to right speaker and place speaker under right monitor. Route speaker power cable to power strip and plug in (refer to Figure 1 for plug arrangement).

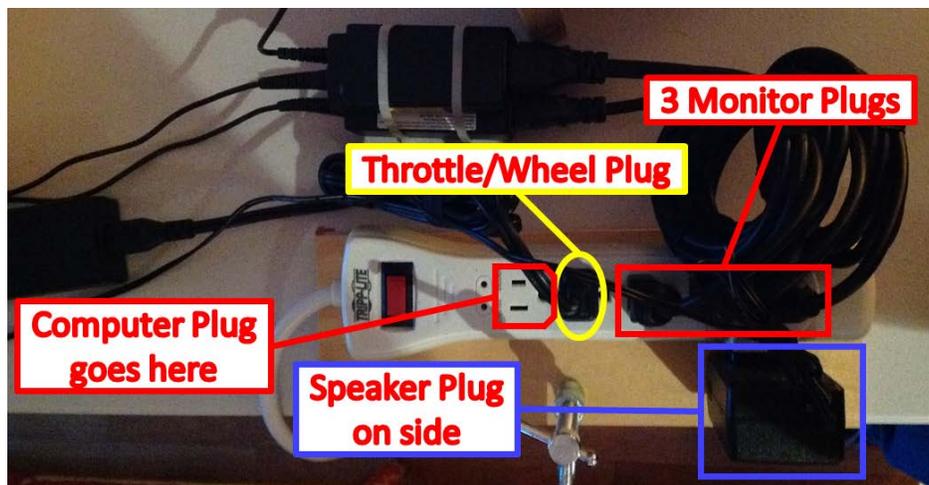


Figure 1 – Plug arrangement at power strip.

D12 BSVT Setup Instructions (page 2 of 3)

10. Open computer case (CASE #3), remove blue tarp and computer peripherals: mouse, mouse pad, keyboard and power cable. Remove computer and place on table at indicated position.

Refer to Figure 2 for computer connections made in following steps.

11. Place mouse pad and mouse to right of throttle/wheel assembly. Route mouse cable to back of table and plug into computer, USB port #4.
12. Place keyboard on top of computer and plug into computer, USB port #3.
13. Connect speaker audio cable to computer audio port.
14. Route and connect three monitor video cables from monitors to computer.

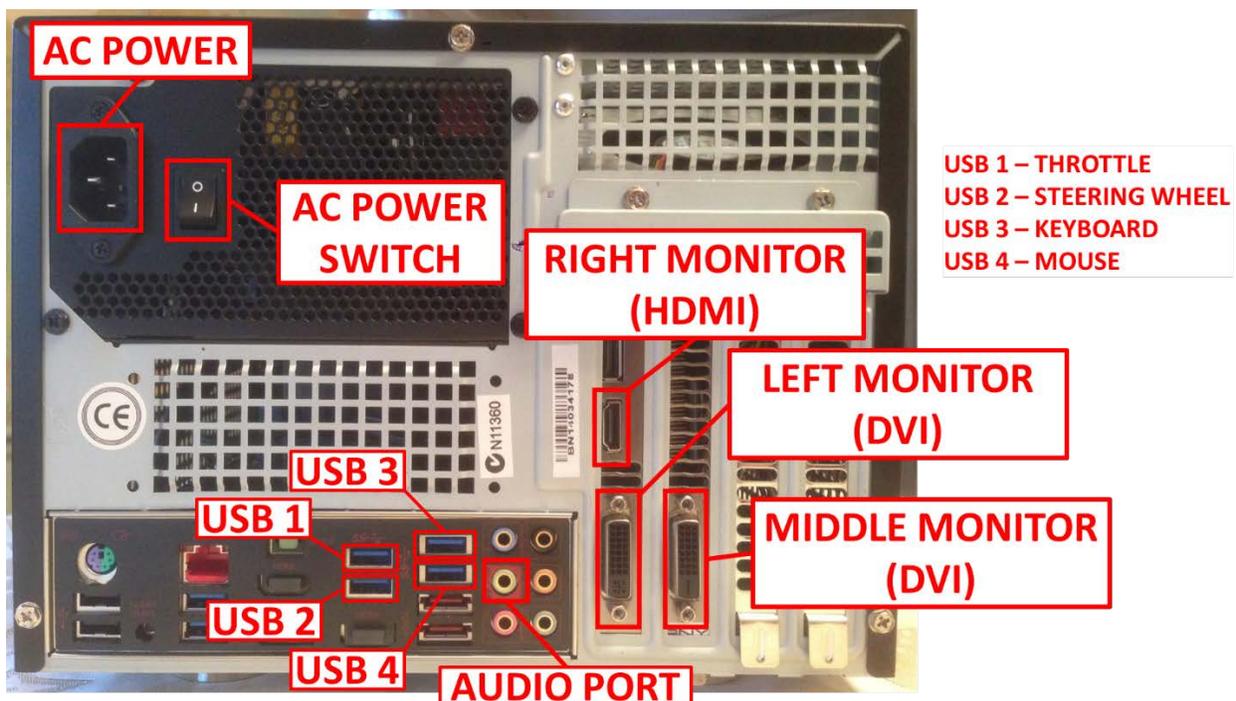
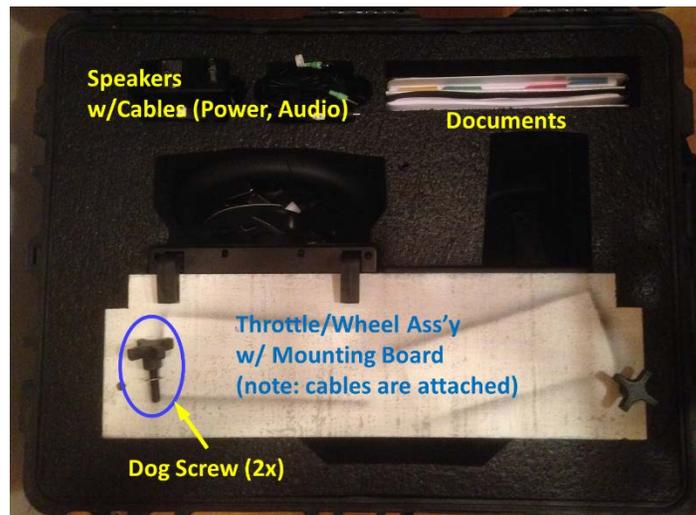


Figure 2 – Computer connections

15. From this point, go to and follow **Start-up Instructions.**

D12 BSVT Setup Instructions (page 3 of 3)

Transit Case Packing Arrangement



D12 BSVT Complete Setup



BOATING SKILLS VIRTUAL TRAINER

Start-up & Shutdown Instructions

THESE INSTRUCTIONS MUST BE FOLLOWED EXACTLY OR DAMAGE TO THE SIMULATOR MAY RESULT.

Do not plug or unplug anything, even peripherals like speakers or mouse, while the unit is under power! If there is a power outage or a step has been left out, follow the complete set of shutdown procedures below and then start the Power-on procedure from the beginning.

POWER-ON PROCEDURE: VERY important that this is only done in sequence specified otherwise damage to the unit or programming errors will occur! Please review all steps before starting this procedure.

- (1) Retrieve the **computer power cord** from the shipping case and plug this cord into the back of the computer and into the power strip.
 - (2) Plug the power strip into the wall.
 - (3) Turn the POWER STRIP switch to the **ON** position. Check that the RED and GREEN LEDs on the power strip (next to the switch) are illuminated.
 - (4) Watch monitor screens – all three screens should cycle through labels like “DVI”, “HDMI” and then show “no signal” and then go dark. It takes about 30 seconds for the screens to cycle through and go dark. Wait until all three screens have gone dark. If you are unsure if any of the screens are on, cycle the power switch at the lower right of the screen to verify that the screen is turned on.
 - (5) Flip the power button on the back of the computer to the **ON (=1)** position. Press the large POWER button located on the front of the computer and observe the adjacent blue power on light is lit.
- CAUTION: THE STEERING WHEEL WILL ROTATE – THIS ACTION CALIBRATES THE WHEEL FOR USE.**

To start the BSVT program, double-click on the **BSVT v4.0** icon on the upper left corner of the LEFT screen using the mouse left button.

POWER OFF PROCEDURE: VERY important that this is only done in sequence specified!

- (1) From the Main Menu of the Training Program, click **“Quit”** (green button on lower right). This will take you to the start-up screen (picture of the steering wheel in CENTER screen, BSVT program and Shutdown icons at the upper left of the LEFT screen).
- (2) Double click the **Shutdown icon** (at upper left of the LEFT screen). This will cause the simulator program to close all files and shutdown the computer. The fan will stop running. Do NOT push the power button on the front of the computer. The monitor screens will cycle down and show “no signal” and then go black.
- (3) Switch the power button on the back of the computer to the **OFF (=0)** position.
- (4) Turn the switch on the surge protector/power strip to the **OFF** position.
- (5) Unplug the power strip from wall.
- (6) Remove the MAIN computer power cord and lock in the shipping case for safe keeping (along with BSVT user survey forms and BSVT map and binder). Lock it up!

COVER THE UNIT WITH A TARP OR BLANKET FOR OVERNIGHT STORAGE OUT OF VIEW.

If you need assistance, first attempt to contact D12 Education Officer, Tom Gonsiorowski at 617-877-3276. Customer service from Virtual Driver Interactive (VDI) is on the west coast and is only available Monday-Friday, 0830 – 1630 Pacific time. Virtual Driver Interactive Customer service number is 877-746-8332 x3.

BOATING SKILLS VIRTUAL TRAINER

Coast Guard Survey

COAST GUARD FORMS: because the BSVT is the result of a Coast Guard grant, it is very important to capture user data statistics and impressions in order to report back to the Coast Guard and to justify future grant infusions. Please observe the user and use your best judgment for their demographics (gender, age), casually ask years of boating and type of boat (power, sail, paddle). At the end of the user's session ask if you can get their impressions on just two questions.

1. "On a scale of 1 to 5, how much confidence do you think using this simulator would give a new boater before starting out in a real boat on the water" (1 = no confidence, 5= very good lift in confidence)?
2. "On a scale of 1-5, how realistic do you think the simulator is compared to an actual boating on-the-water experience?"
3. "Are there any other developmental suggestions or comments you'd like for us to share with the Coast Guard and our developers?"

MOST IMPORTANT: CAPTURE EACH USER! The number of Users is the most important statistic.

BOATING SKILLS VIRTUAL TRAINER

Recovering from System Hangs

In the rare event that the BSVT goes to an unhappy place, and you are unable to get back to the Main Menu, follow these steps:

1. Retrieve the keyboard from the packing case.
2. Plug the keyboard into a USB port on the back of the computer.
3. Press these three keys simultaneously: **CTRL / ALT / DEL**
(all keys are on bottom row of keyboard).
4. Choose **START TASK MANAGER**
5. Select BSVT in the Task Manager dialog box and then click **END TASK**.
6. Close the Task Manager dialog box.
7. This returns you to the first power on screen. Double-click on the **Boat Safety VT 2.0** icon on the upper left corner of the LEFT screen using the mouse left button.
8. Now you are back to the Main Menu!

BSVT TEACHING SUGGESTIONS – Before You Depart

A simple laminated checklist can be an invaluable aid in assuring that nothing is overlooked. Some of the items on your list should include:

4. Check weather conditions and forecasts
5. Check tides and currents
6. Review local charts. Identify local hazards.
7. Prepare a Navigation Plan and estimate fuel requirements.
8. Identify options or ports of refuge.
9. Prepare a float plan and leave it with someone.
10. Check all required equipment is aboard and in good working order.
11. Complete engine inspections (look/smell for fuel leaks, open seacocks, batteries on, etc.).
12. Complete Crew Briefing:
 - a. Life Jackets ON and adjusted,
 - b. Review importance of keeping hands and feet inside boat,
 - c. Point out location of all fire extinguishers, flares, first aid kits, life jackets, bilge pumps,
 - d. Explain what to do with garbage and how to operate marine toilet,
 - e. Explain crew responsibilities when leaving or returning to slip/mooring and while underway,
 - f. Review basic emergency procedures: Man Overboard, How to use the VHF for a distress call, How to start or turn-off the engine, etc.

BSVT TEACHING SUGGESTIONS – Taking the Helm

As the student takes the helm, review the following:

1. Crew brief and pre-departure checklist complete (see above list)?
2. Life jacket on?
3. Engine kill switch safety lanyard attached?
4. Clear vision ahead on three monitors?
 - a. May be necessary to sit on the throwable PFD to see clearly
5. Steering Wheel
 - a. Buttons to slew vision right and left
6. Horn
7. Mercury Marine integrated shift and throttle:
 - a. Neutral detent
 - b. Forward
 - c. Reverse
8. Trim Controls
9. Review Chart

Discuss Simulator options for Wind, Current, Day or Night
Ready to start the engine!

BSVT TEACHING SUGGESTIONS – Departing the Dock

Review with the student the location of the pivot point of the boat:

Hull shape affects pivot point

Direction affects pivot point

Typically, about 1/3 of waterline from bow when moving forward

Typically, about 1/3 of waterline from stern when moving in reverse

Backing away from the dock usually offers the best maneuvering control. It avoids the problem inherent to forward departures when the boat starts to turn on the pivot point and the stern swings into the dock.

1. NOTE: By inland rules any boat departing a berth or pier should sound one prolonged blast of the horn. This is often not done by smaller vessels as courtesy to other boaters (or boat show attendees).
2. Turn the wheel away from the dock which rotates the propeller away from the dock.
3. Shift into reverse. Back end swings away from the dock as boat backs away. To avoid scraping the bow against dock, keep your turn small until bow clears dock.
4. When clear of dock, turn wheel in opposite direction to turn boat parallel to dock
5. Center wheel, pause briefly in neutral, then shift into forward.

Discuss that wind and current will affect your strategy for departing the dock. Some strategies will use your lines – bow, stern or spring. We cover strategies in our courses for all conditions!

Note that by inland rules any boat departing a berth or pier should sound one prolonged blast of the horn. This is often not done as courtesy to other boaters (or boat show attendees).

BSVT TEACHING SUGGESTIONS – Slalom Course Lesson

Slow Speed Slalom

The slow speed slalom provides an opportunity to perform controlled steering. There is a tendency to oversteer which makes it difficult to set up for the next buoy.

The boat should be steered while beginning to pass each buoy to set up for the next and neutralized as soon as the bow begins to pass the line of sight with the next buoy and then steered back to clear the subsequent buoy.

Smooth, gradual motions with just enough steering to clear the buoy will make this exercise simple and graceful.

High Speed Slalom

The high speed slalom is performed with the boat on a plane. Use your trim tabs to bring the bow down and get up on a plane more easily. The boat starts to plane at around 3700 rpm. Discuss how planing feels when you are in the boat. Note how the rate of acceleration increases once the boat starts to plane and it is necessary to reduce the throttle.

Discuss how the pivot point of the boat moves aft as speed increases. Notice how less steerage is needed at this speed! Over steering is very common on boats and the Simulator is a wonderful tool to practice on!