RP-VITA Dock
Installation Instructions

Document Revision History

Change Date	CO#	Rev.	Author	Change Description
12/13/12	2037	001	D. Sanchez	Initial Release
2/26/13	2155	002	D. Sanchez	Added information of overall size and location of dock when installed. Additional tests were added to verify installations within alcoves.

Overview: This procedure defines the operations required to install and test an RP-VITA Docking Station (20-16104-XXX).

Materials Required:

- RP-VITA Dock
- Power Cord with Ferrite
- RP-VITA Robot
- 18-16315-XXX, RP-VITA Dock Installation Template
- Hardware:
  - 4X ¼" Diameter X 2¼" Long Screws for Concrete.
  - 4X ¼-20 screws with hollow wall anchors. Screws should be button, slotted, or pan head.

I. Locate an installation area that meets the following requirements:

1. Verify the identified mounting position is close enough for the RP-VITA Dock power cord to reach the outlet. The cord is approximately 3 feet long. See Figure 1 for overall dock dimensions once installed.

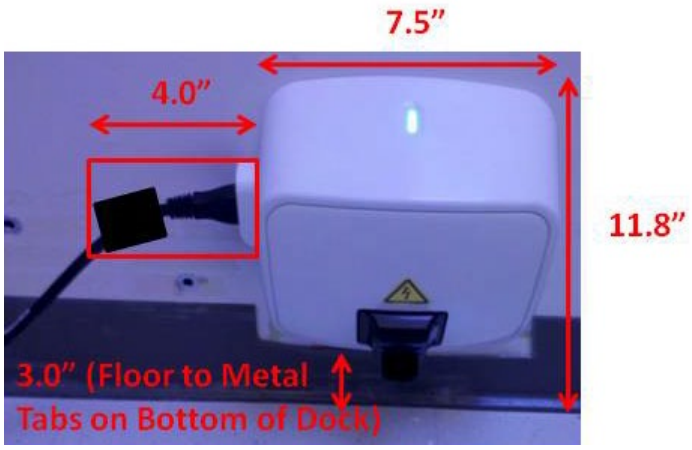


Figure 1

2. Flat Wall
   - At least 36" of flat wall required.

- Minimum 18” of flat wall measured horizontally from the center of the RP-VITA Dock, on either side of the RP-VITA Dock.

3. U-Shaped Alcove or U-shaped area with neighboring equipment.
    - Width of wall between side walls or other obstacles should be at least 36”.
    - Each of the side walls or equipment must be at least 18” from the center of the docking station.

II. Have hospital mount wall anchors in wall.

1. Locate the appropriate hospital facilities personnel for approval and assistance with the installation. The hospital will be required to drill the holes in the wall, as well as, install wall anchors appropriate for drywall, brick, or concrete. Fasteners other than those included in the kit may be required.
2. Mark locations for drilling holes.
    - Refer to “18-16315-XXX, RP-VITA Dock Installation Template” to position the mounting template upright against the wall with its bottom edge touching the floor.
3. Use a pencil to mark the hole positions indicated on the template. Have hospital personnel drill holes and install wall anchors. This should not be performed by an ITH employee.
4. If necessary, remove a small portion of the baseboard to eliminate any possible interference with the docking station. The dock has a passive vertical alignment mechanism and must be free to move vertically through its full range of travel.

III. Mount RP-VITA Dock to Wall

1. Remove cover from front face of dock (see Figure 2).

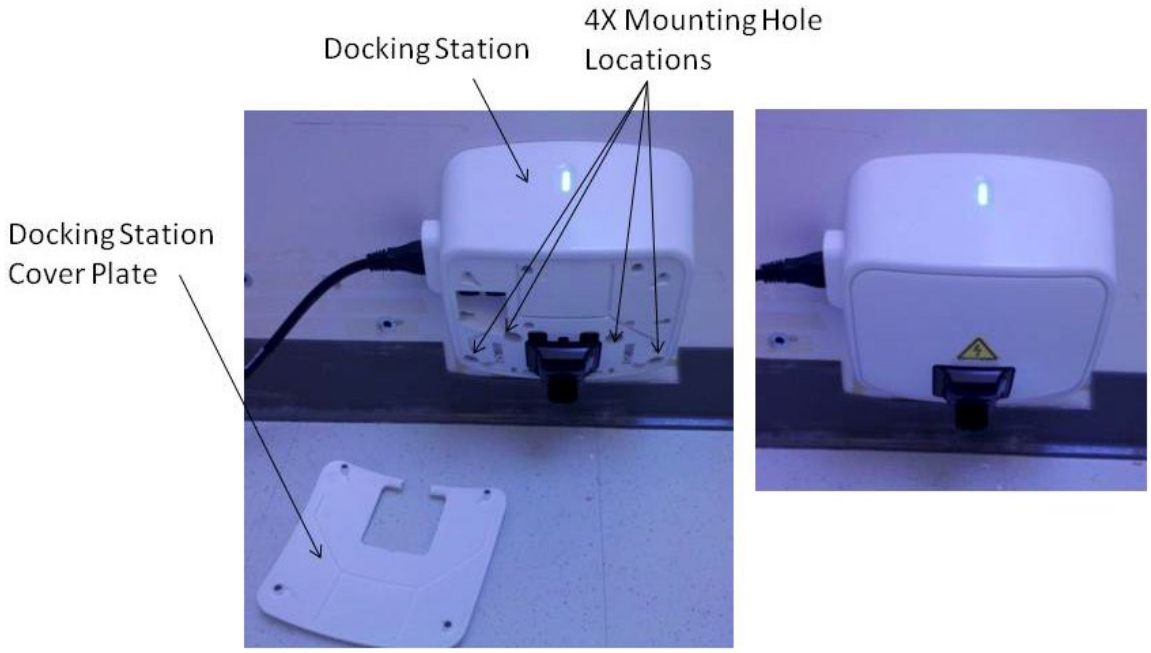


Figure 2

2. Hold dock in position with its rear mounting plate holes aligned with the wall mounting holes. Tighten all 4 mounting bolts (see graphic on mounting template for bolt size limitations).
3. Replace cover on front face of dock.
4. Move the dock up and down through its range of travel and verify that it is not rubbing against the wall or interfering with the baseboard.
5. Verify that the top flat surface of the dock alignment wedge is approximately 4.2” above the floor (see Figure 3).

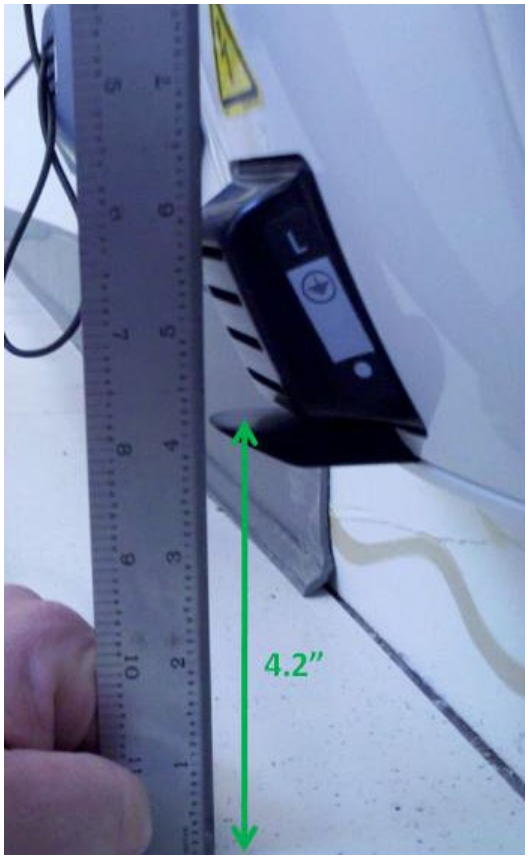


Figure 3

6. Plug in AC cord and verify that the LED on the top of the dock is illuminated green.

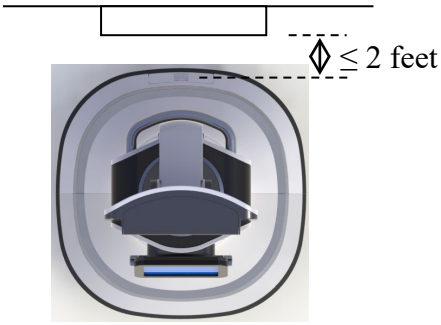
IV. Test RP-VITA Dock

1. Load the relevant map for the hospital floor.
2. Push the robot into the powered dock and verify that the LED on the top of the dock blinks green.

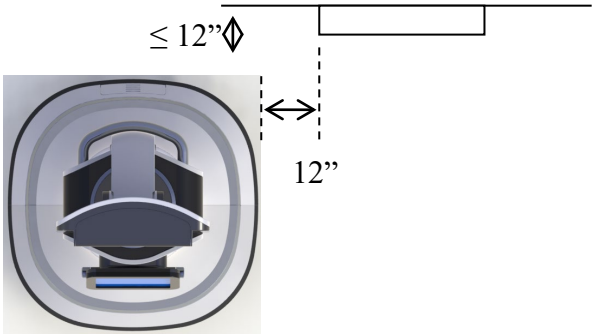
3. Use the base software Mapping Internals tool and select “Tag Current Location”. Type in “Dock” for the location and select the “Localize in map when when docked” check box. “Dock” (no parentheses) should be spelled explicitly as written as it is case sensitive.

4. Look at the robot’s map to verify the tag location, as well as, the robot’s position and orientation with respect to the tag location.

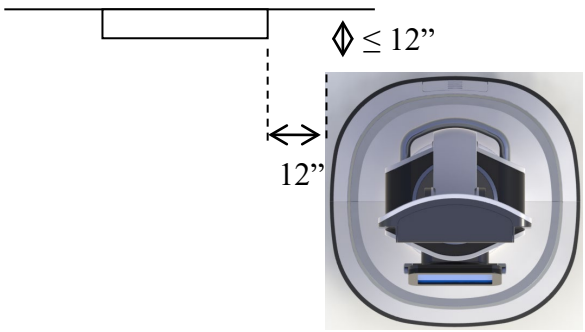
5. Face the front of the robot straight at the RP-VITA Dock, with the robot perpendicular to the wall. The front of the robot should be within two feet of the RP-VITA Dock. Initiate an auto-dock by touching the “Dock” button on the chest display touchscreen.



6. Place the robot back parallel to the wall with the front pointing out from the wall. Have the robot 12” to the left of the RP-VITA Dock. Initiate an auto-dock by touching the “Dock” button on the chest display touchscreen.



7. Place the robot back parallel to the wall with the front pointing out from the wall. Have the robot 12” to the right of the RP-VITA Dock. Initiate an auto-dock by touching the “Dock” button on the chest display touchscreen.



8. If the dock has been installed within an alcove, check that the robot can be driven out of the alcove via teleop from a Control Station.

9. If the dock has been installed within an alcove, verify that it can return to the dock autonomously when positioned just outside of the alcove.

10. If the dock has been installed within an alcove, verify that it can return to the dock autonomously when positioned to the right of the alcove opening.

11. If the dock has been installed within an alcove, verify that it can return to the dock if positioned to the left of the alcove.

12. If the dock has been installed within an alcove that is adjacent to a door or curtain, verify that it can autonomously return to the dock when positioned 10 feet away from the alcove when the adjacent door/curtain is in either open or closed states.