

# A-dec® 42pro/42L Stationary Simulator



## INSTALLATION GUIDE

### Product Models and Versions Covered in this Document\*

Models	Versions	Description
42L	A	Stationary Simulator
42pro	n/a	Stationary Simulator

\*Some product models, versions, and options in this document may not be available in certain regions.

## Before You Begin

- Check with local and state code authorities about installation requirements for this product.
- If the manual shutoff valves have not been installed, install them according to prevailing building codes.
- Locate the simulator installation kit and the utility connection kit.

## Recommended Tools

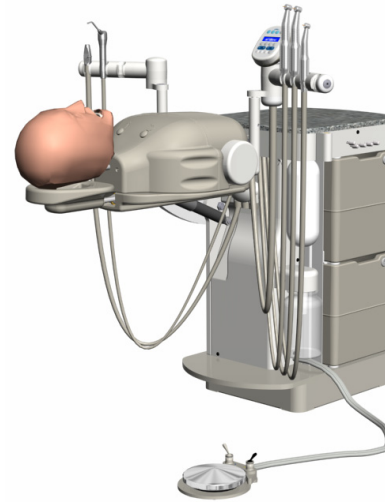
- Rotary hammer and 3/8" bit
- 9/16" socket wrench
- Hex key set
- Tubing cutters
- Phillips head screwdriver



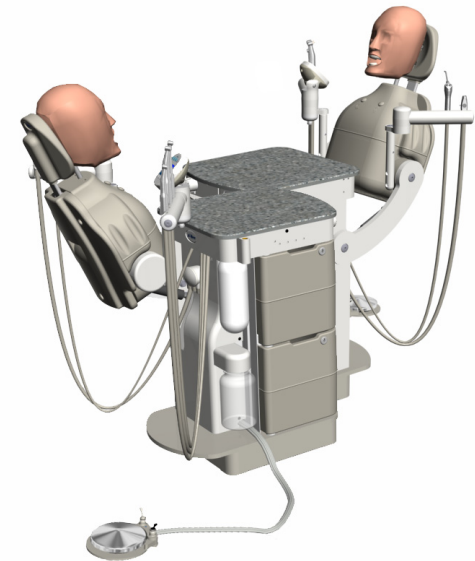
**DANGER** Failure to turn off the power before you begin this procedure can lead to electrical shock.



**WARNING** Failure to turn off the power before you begin this procedure can lead to product damage and result in serious injury or death.



Single A-dec 42L Simulator Shown



Dual A-dec 42L Simulators Shown



**CAUTION** Circuit boards are static sensitive. ESD precautions are required when touching a circuit board or making connections to or from the circuit board. Circuit boards should be installed only by an electrician or qualified service person.



**WARNING** Shock hazard. When you remove or replace the covers, take care not to damage any wiring or tubing. Verify that the covers are secure after you replace them.

## Remove the Unit From the Pallet

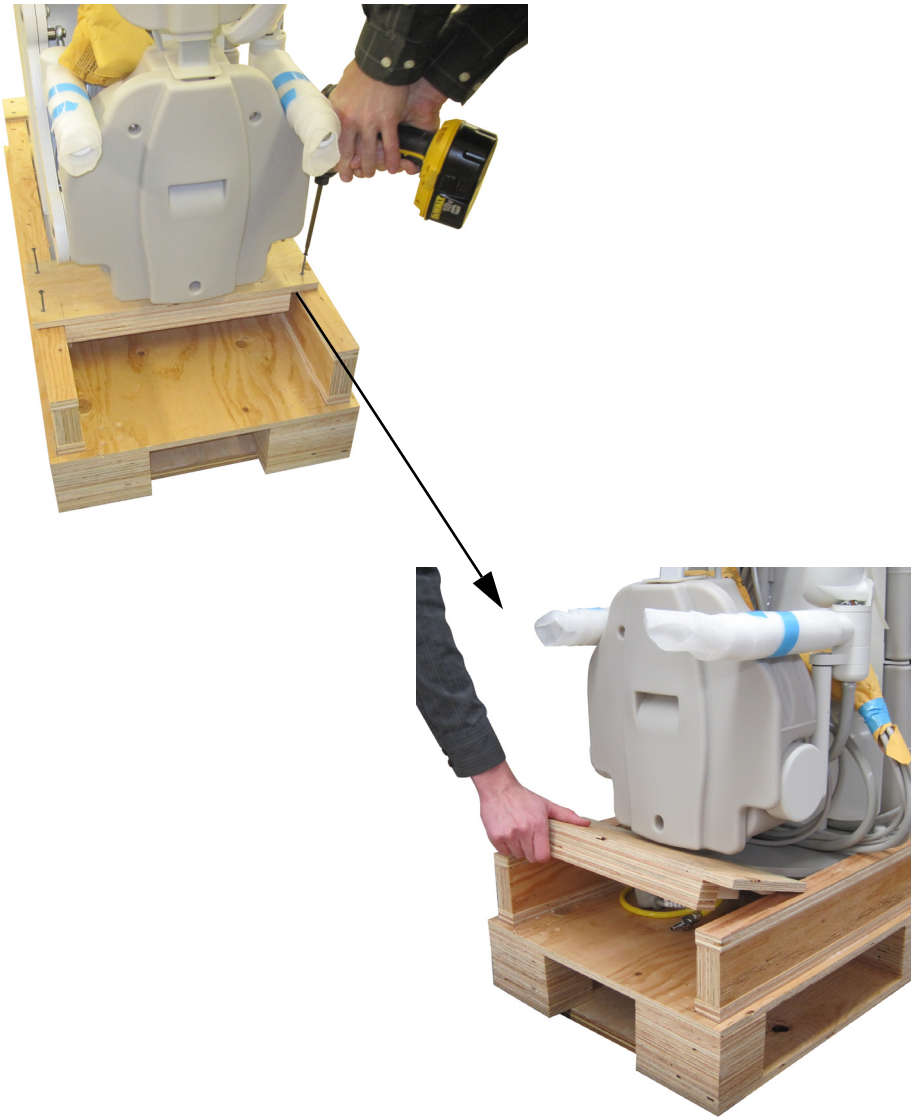
1. Remove both sets of storage bin keys from the envelope taped on the side of the unit.
2. Unlock both storage bins.



3. Open the top storage bin for easy lifting.
4. Remove storage bin contents.



5. Loosen the screws and remove the board on the torso end of the pallet.



**WARNING** Two people should lift the unit from the pallet to avoid personal injury.



**CAUTION** Do not lift the unit by the holder arms or torso area.

6. Grip two sides of the top of the unit, and lift it off the pallet.



## Place the Unit

1. Open the storage bins.

Opened Storage Bins



2. Use a 5/32" hex key to remove the two screws securing the base plate utility cover.



3. Lift off the cover and set it aside.



**NOTE** We recommend that you wait to reinstall the base plate cover until after installation is complete and the unit has been tested.

4. Refer to the *A-dec 42pro/42L Stationary Simulator Full-Size Template* (p/n 86.0281.00) to place the unit.

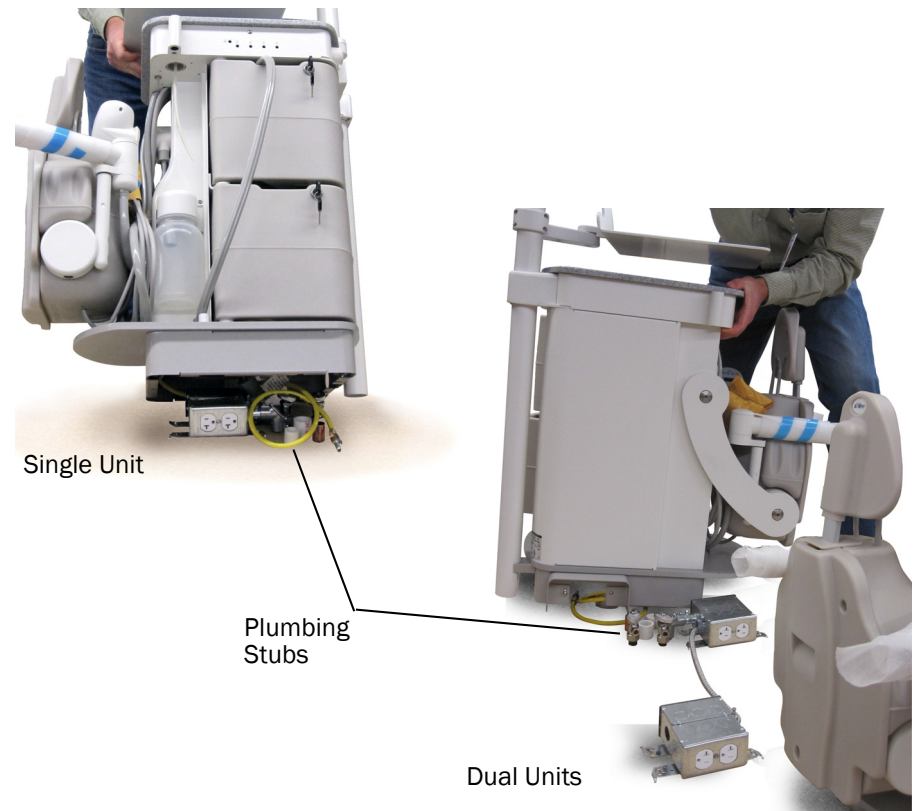


**NOTE** The template is ordered separately and does not come with the unit.



**CAUTION** Make sure the unit's power cord can be easily unplugged when placing it into position.

5. Position the unit over the plumbing stubs.



## Install the Pass-Through Bracket or Plate

1. Remove the bracket or plate from its packaging.



**NOTE** The utility pass-through bracket or plate may have shipped separate from the simulator unit.

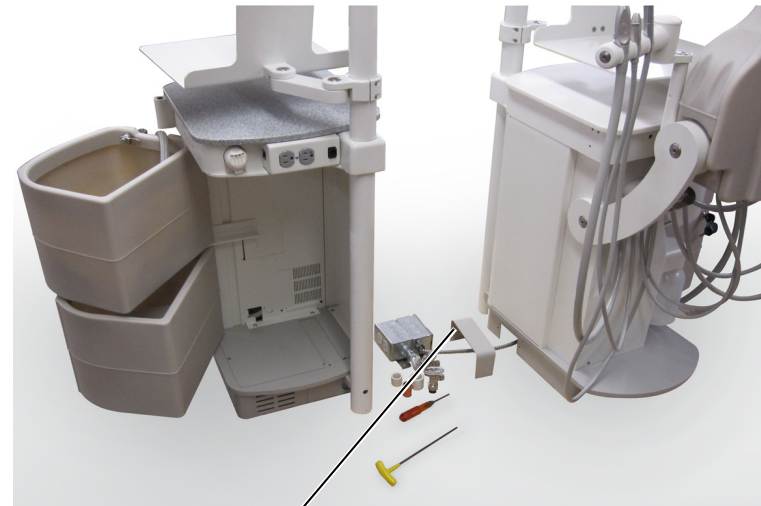
2. Install the bracket or plate.

- **Single Units Only:** Use a 1/8" hex key to install the pass-through plate, using the screws from the simulator kit.

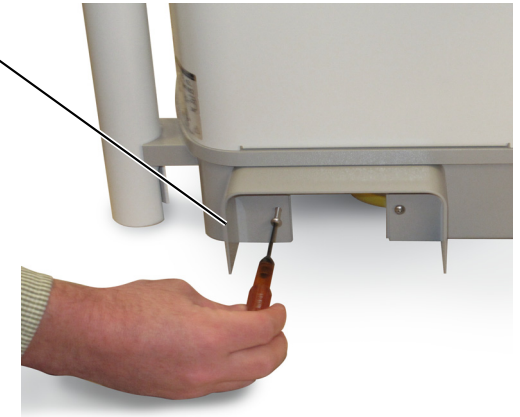


**Next Step** See "Anchor the Unit to a Concrete Floor" on page 7.

- **Dual Units Only:** Use a 1/8" hex key to install the pass-through bracket, using the screws from the simulator kit.



Utility Pass-Through Bracket



3. Route all of the tubing, except the power cord, through the utility pass-through bracket towards the utilities.



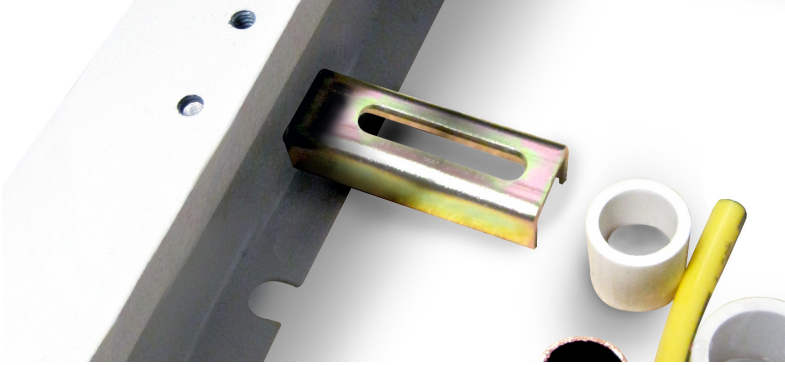
4. Move both units into their final position.

## Anchor the Unit to a Concrete Floor

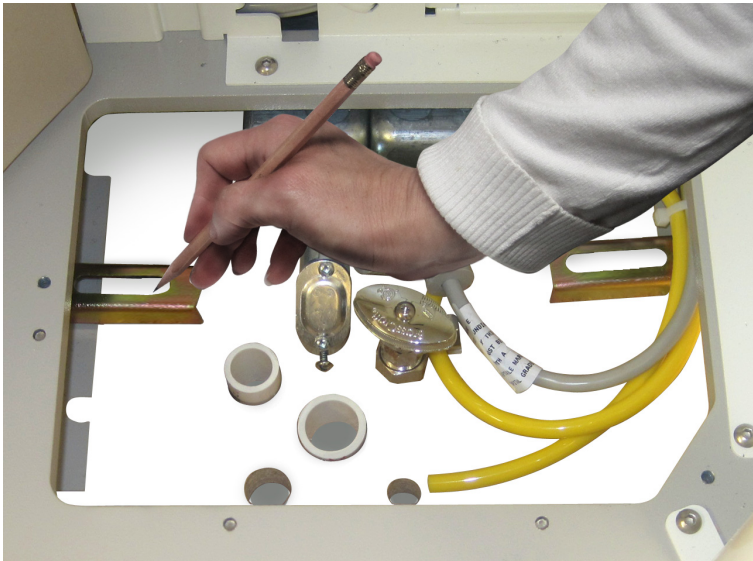


**NOTE** For floors made of material other than concrete, use the appropriate fasteners to securely mount the unit.

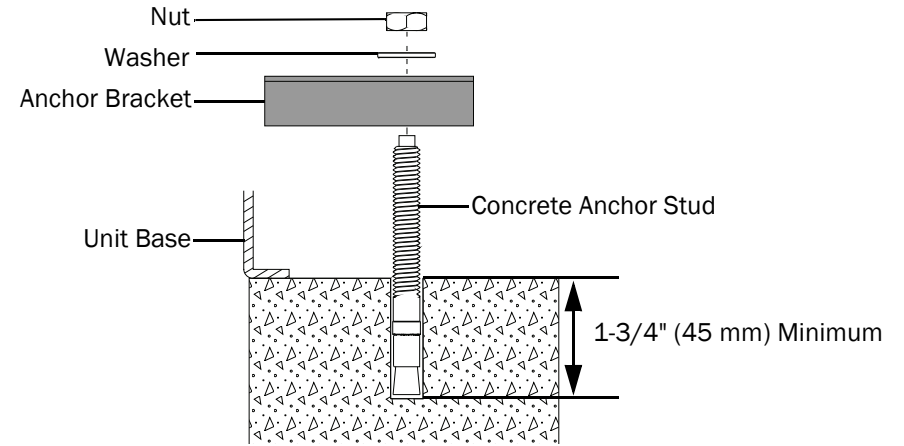
1. Place the anchor brackets over the edge of the unit base.



2. Mark the location of the concrete anchor stud for each anchor bracket.



3. Use a rotary hammer with 3/8" bit to drill holes where marked. The holes must be a minimum of 1-3/4" (45 mm) deep.
4. Remove any debris from the holes.
5. Drive a 3/8"-16 x 3-1/2" concrete anchor stud into each hole.



6. Put each anchor bracket in position, install the washer and nut on the concrete anchor stud, and tighten the nut until secure.



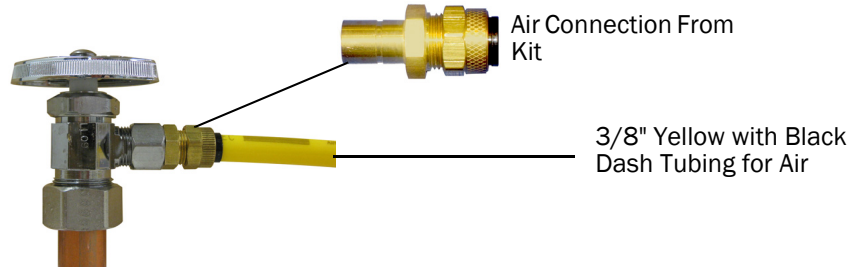
## Connect the Utilities

1. Connect utilities and attach tubing to the manual shut-off valves.

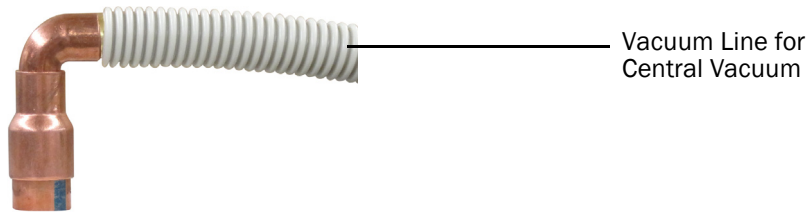
(For dual unit connections, see page 9.)

### Connect the Utilities on a Single Unit

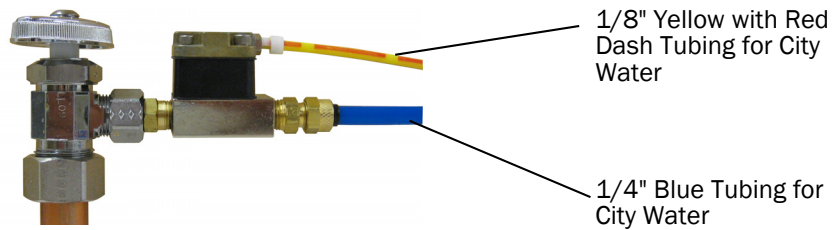
#### Air Connection



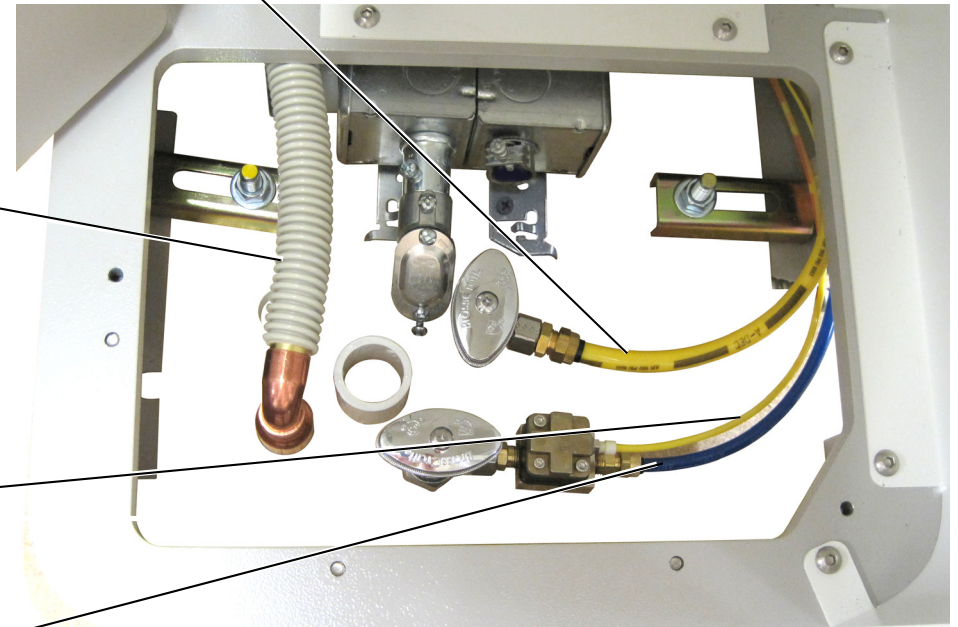
#### Central Vacuum Connection (Optional)



#### City Water Connection (Optional)



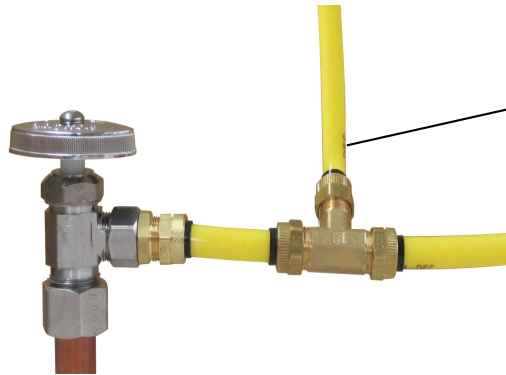
#### Single Unit Utilities





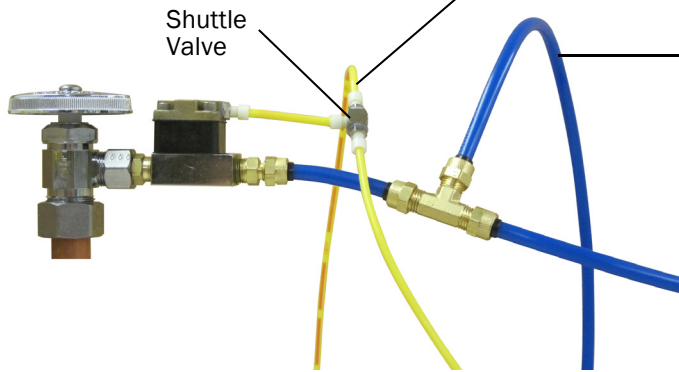
## Connect the Utilities on Dual Units

### Air Connection



3/8" Yellow with Black Dash Tubing for Air

### City Water Connection (Optional)



Shuttle Valve

1/8" Yellow with Red Dash Tubing for City Water

1/4" Blue Tubing for City Water

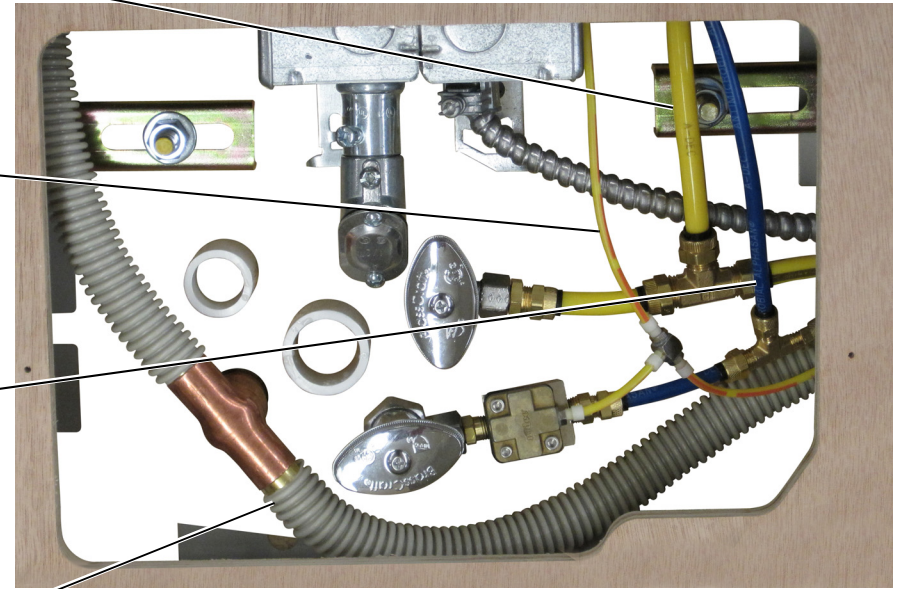
### Vacuum Line for Central Vacuum (Optional)



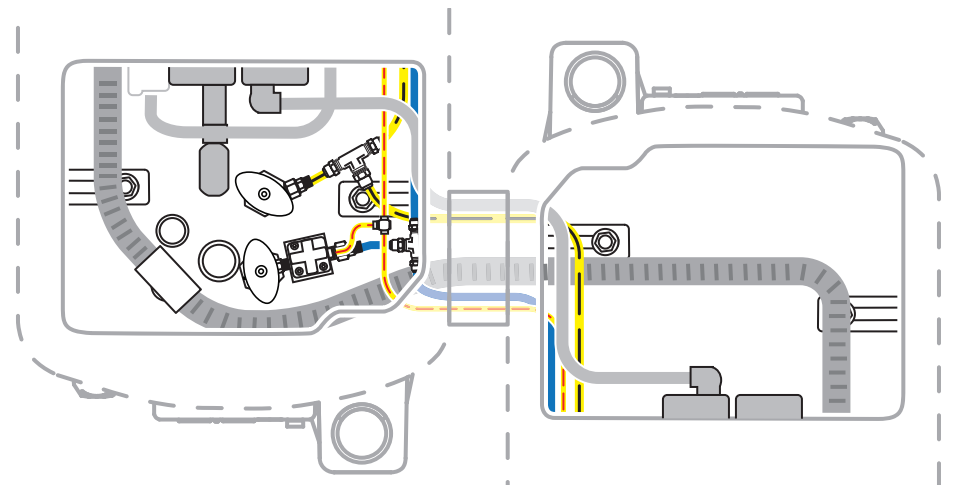
(You may need to use fittings from the kit to complete connections.)



### Dual Units Utilities



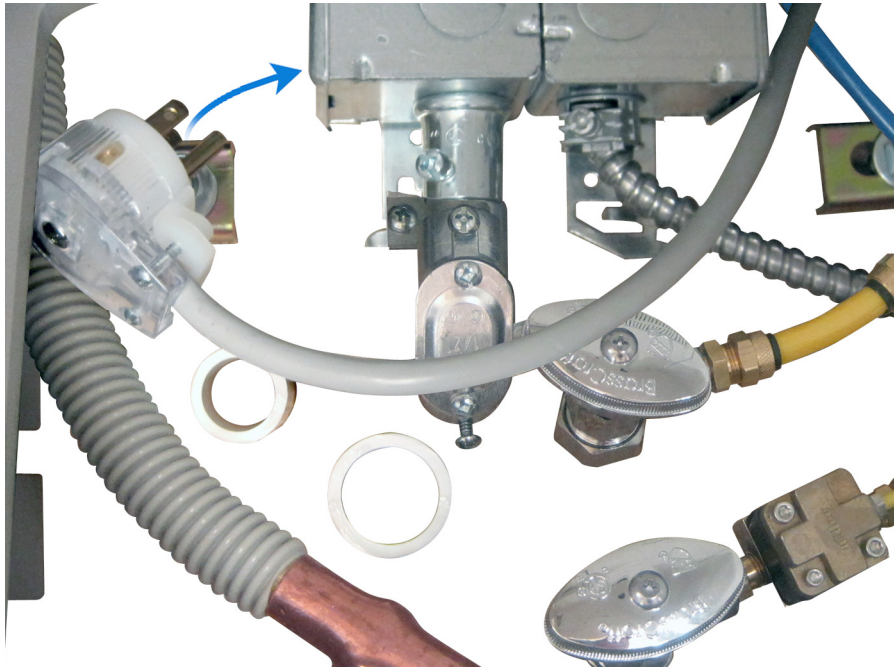
### Dual Simulator Units Connections Overview





**CAUTION** Before connecting to power, verify that the mains voltage is correct and that an earth grounded connection is included.

2. Plug in the unit to the electrical outlet.



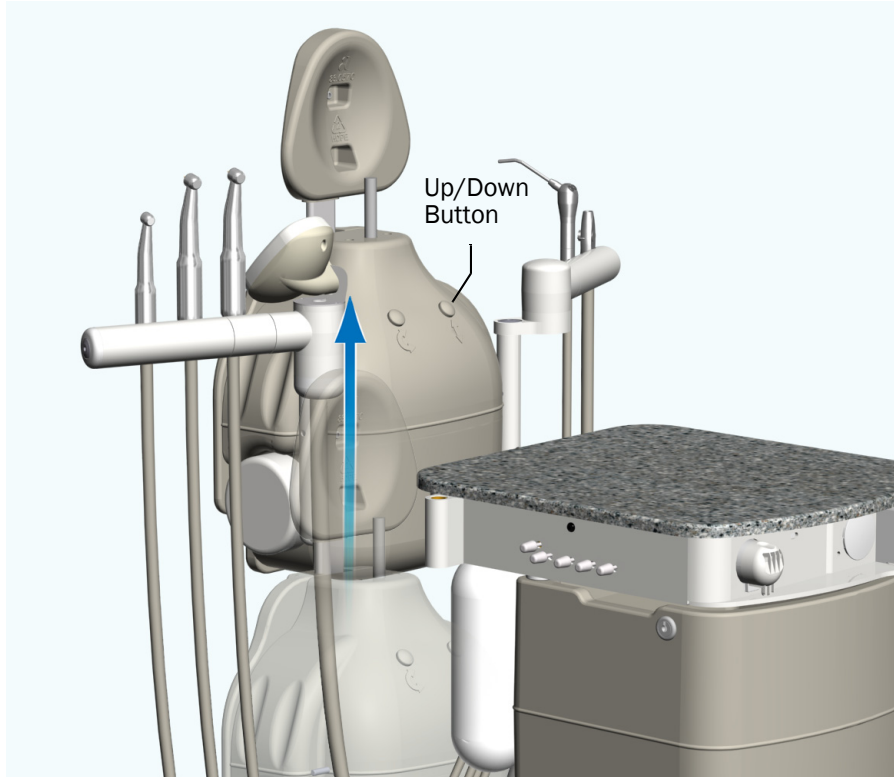
3. Open the air valve and, if installed, open the water valve.

## Install the Manikin Head

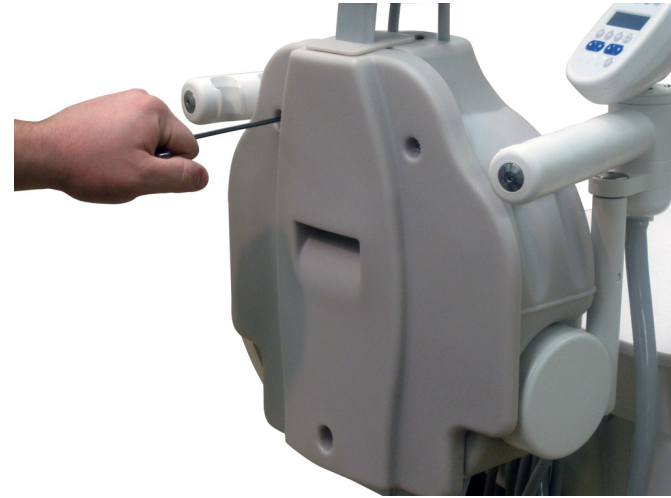


**NOTE** The manikin head is not provided by A-dec.

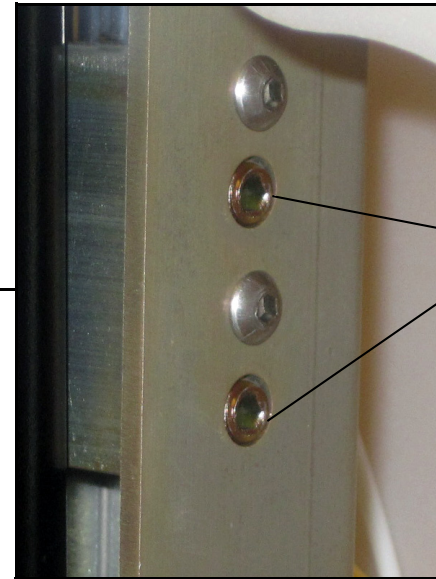
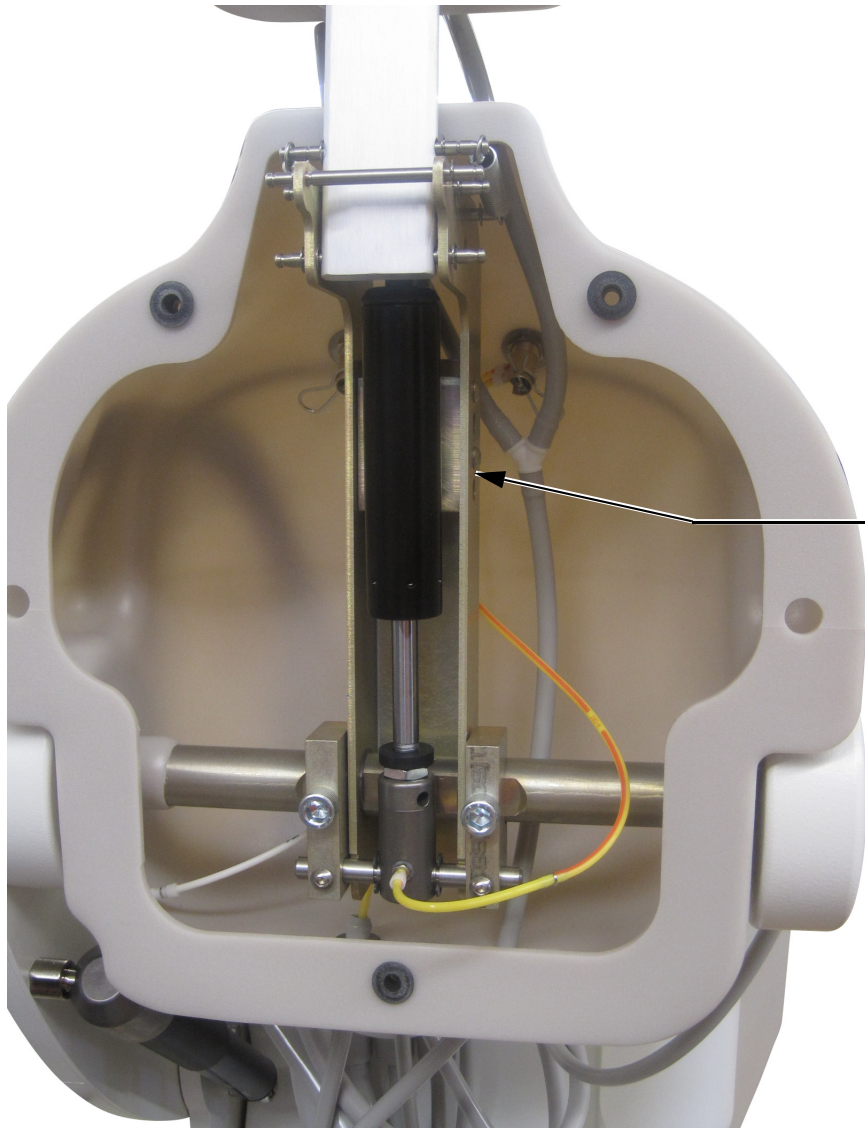
1. Remove the packaging from the holder arms and swing them out.
2. Press and hold the Up/Down button and raise the torso. Release the button to lock into position.



3. Use a 5/32" hex key to remove the three screws that attach the backrest to the torso.
4. Remove the backrest cover and set it aside.

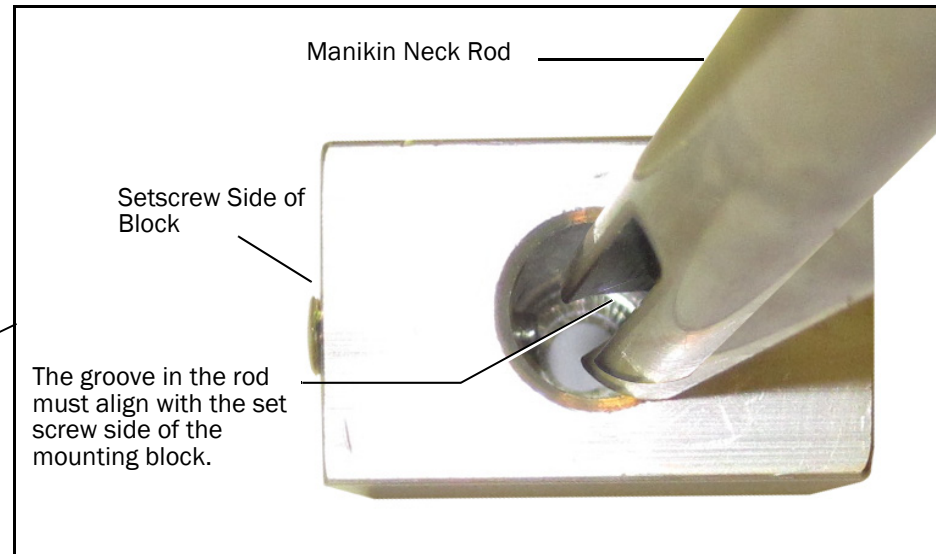
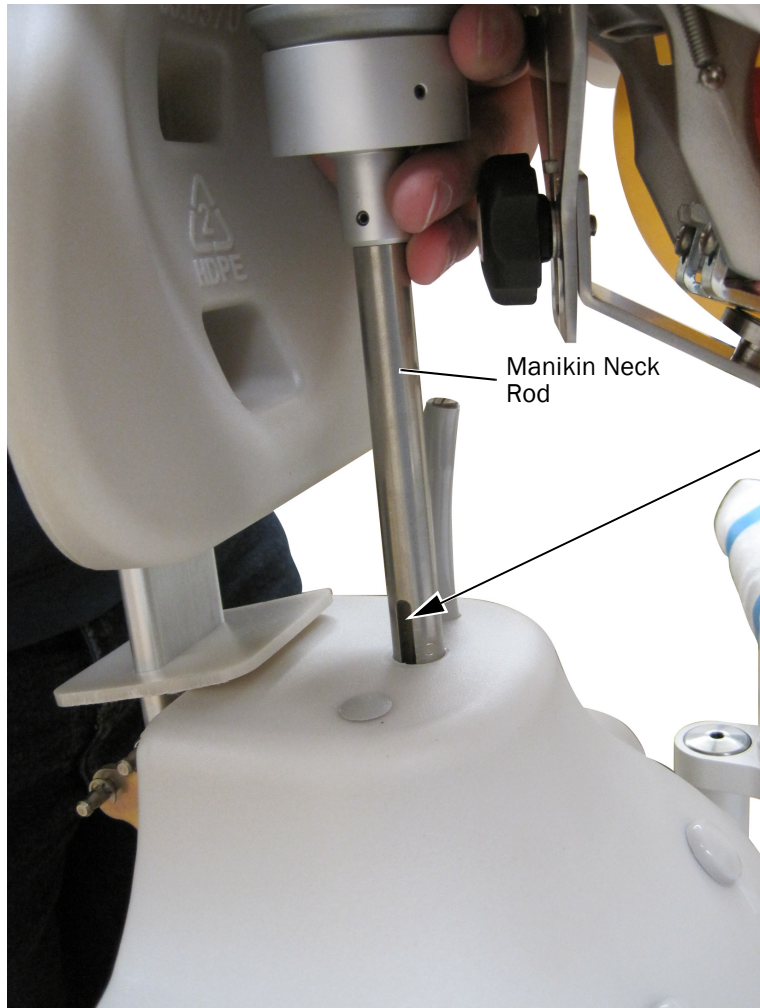


5. Use a 5/32" hex key to loosen the two setscrews on the side of the torso support bracket.



Setscrews

6. Insert the manikin neck rod into the torso support bracket.



7. Tighten the two setscrews in the torso support bracket.
8. Follow the manikin manufacturer's instructions to connect the manikin drain tube.
9. Reinstall the torso backrest.

## Install the Optional Dental Light

1. Make sure the master toggle is off.

### Remove the Front Cover

1. If the air vacuum system is present, remove the vacuum waste jar.



2. Remove the vacuum manifold.



3. Use a 1/8" hex key to remove the front cover mounting screws.



4. Pull the cover out from the bottom and flex as necessary to lift it out; set the cover aside.



## Install the Flexarm into the Light Post

1. Remove the flexarm and light post from the package.
2. While pulling the cable at the end of the light post, install the flexarm into the light post.



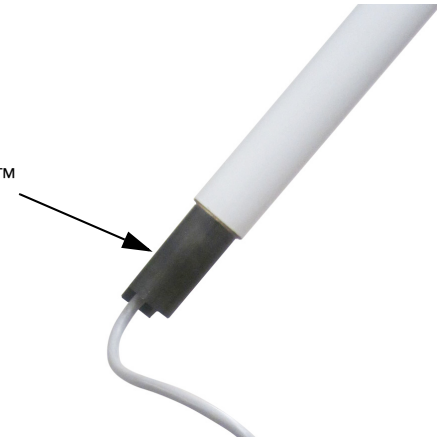
**TIP** It may be easier to lay the flexarm and light post on a flat surface while installing the flexarm.



**NOTE** To fully seat the two, the flex arm must be aligned with the light post.

3. Apply a light coating of Lubriplate™ to the rotating portion of the light post.

Apply  
Lubriplate™

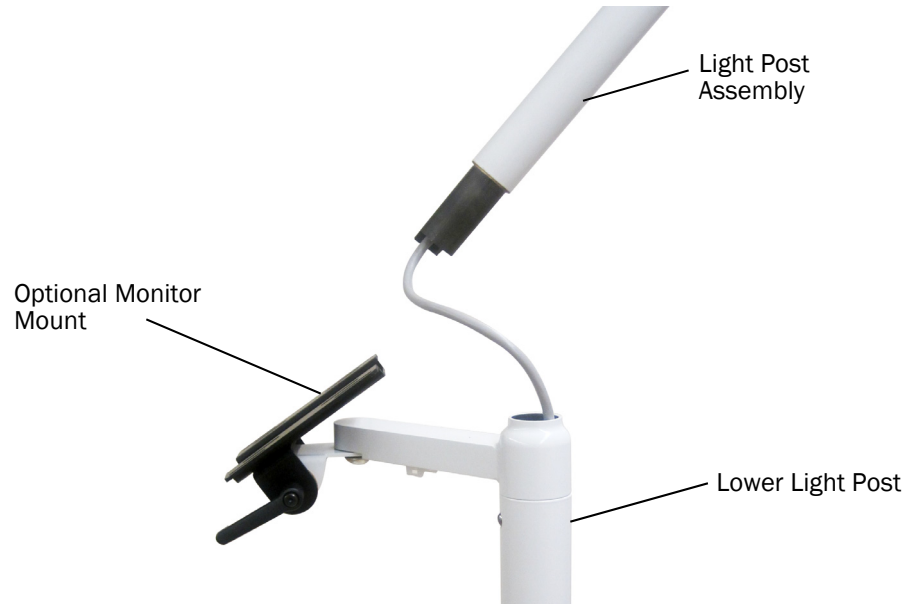


## Route the Wiring

1. Route the wiring down through the lower light post and through the opening in the cabinet.



2. Insert the light post assembly into the lower light post.



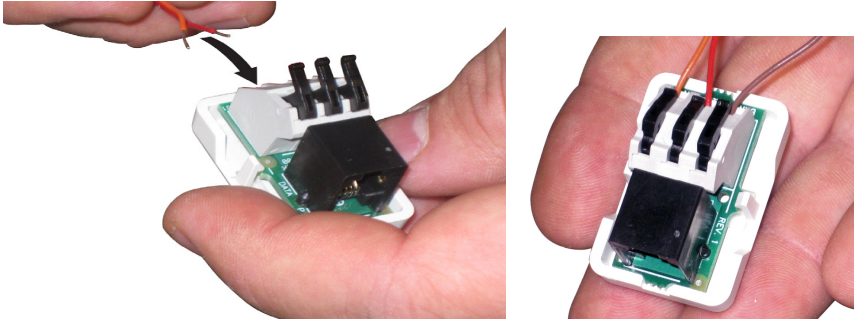
3. Insert the 3/16" stop pin from the ship kit into the hole under the rigid arm elbow cap.



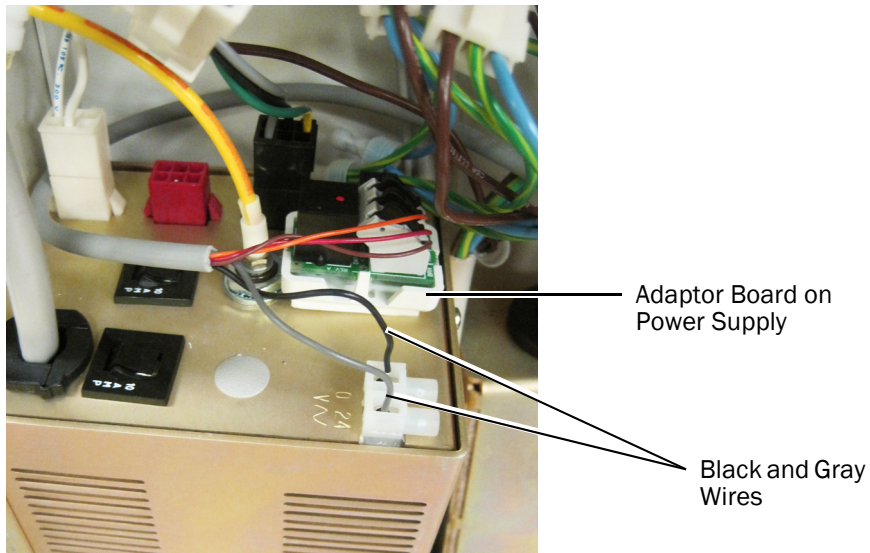


## Connect the power

1. Connect the data wires to the positions on the adaptor board as labeled: brown to BRN, red to RED, and orange to ORN.

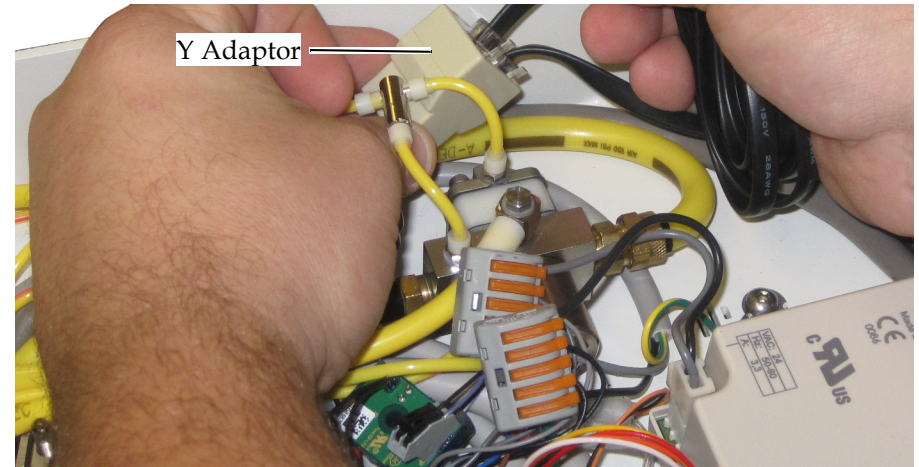


2. Peel off the protective paper and place the adaptor board on the power supply as close to the edge as possible.
3. Cut 1/8" (3 mm) off the end of the stripped black and gray wires.
4. Connect the gray wire to the 24 VAC terminal and black wire to the 0 VAC terminal.
5. Secure the wires by tightening the screws.

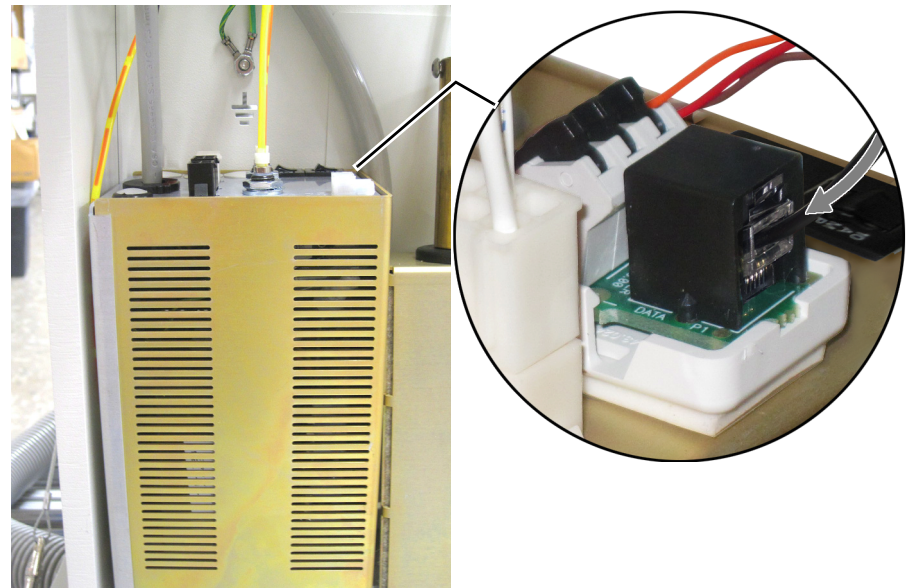


6. Use a 1/8" hex key to remove the control head cover.

7. Connect the data line jumper from the adaptor board to the DCS Y adaptor in the control head.



8. Connect the other end of the DCS cable to the adaptor board on the power supply.



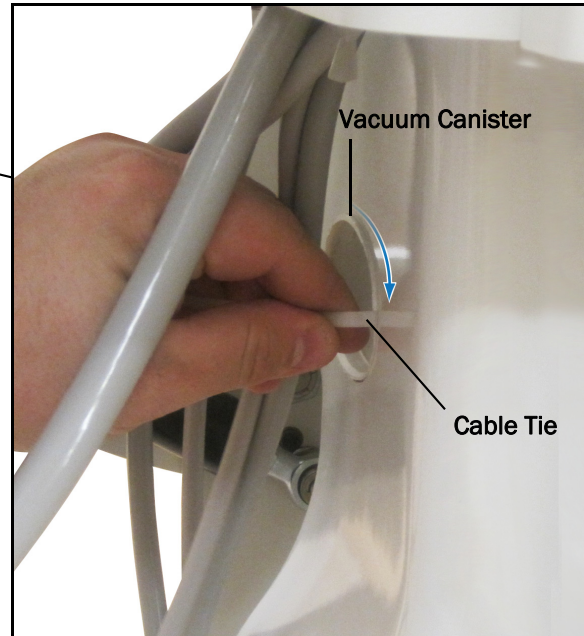
9. Plug in the light.

## Reattach the Covers

1. Reattach the top cover.
2. Reattach the front cover.



**TIP** If necessary, use a cable tie or small flat blade screwdriver to assist in installing the front cover over the vacuum canister.



3. Replace the vacuum manifold.

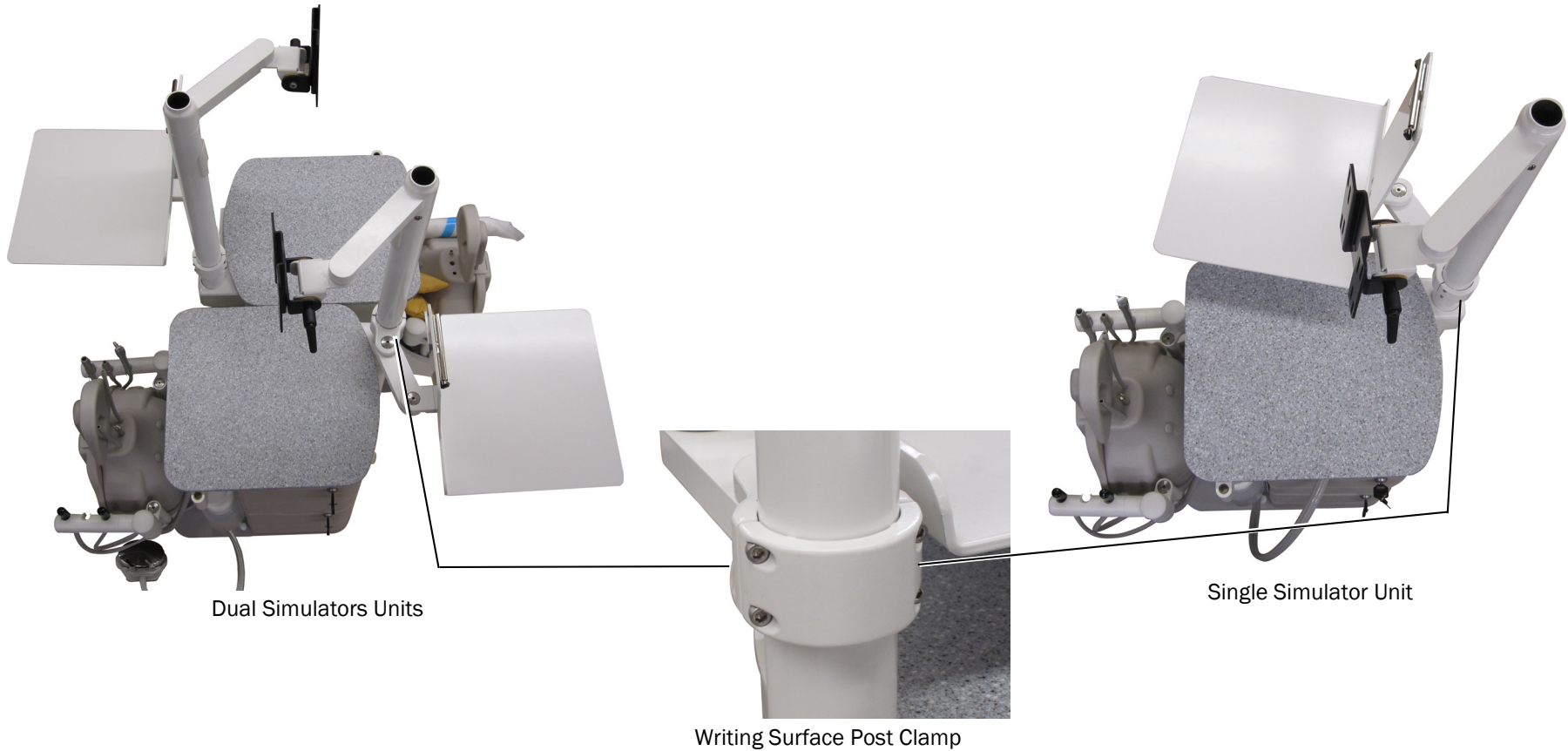


4. If the air vacuum system is present, replace the vacuum waste jar.



## Install the Optional Writing Surface

1. Use a 5/32" hex key to loosen the four screws on the writing surface post clamp.



2. Rotate the assembly to the desired location.

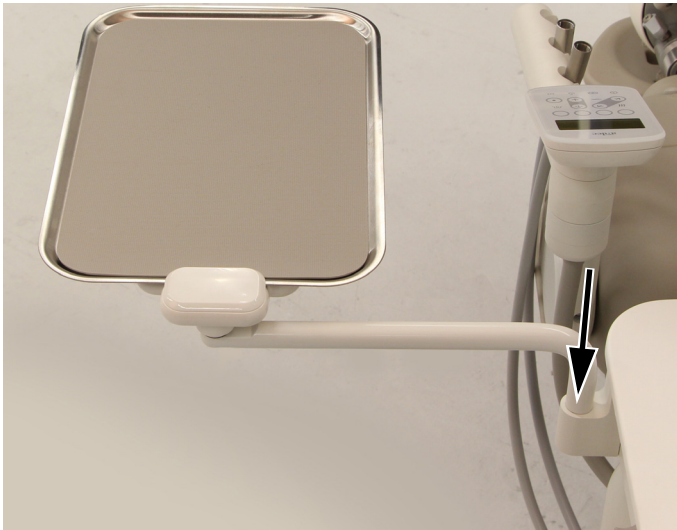


**NOTE** Make sure the writing surface is high enough so it clears the simulator control head.

3. Retighten the screws on the writing surface post clamp.

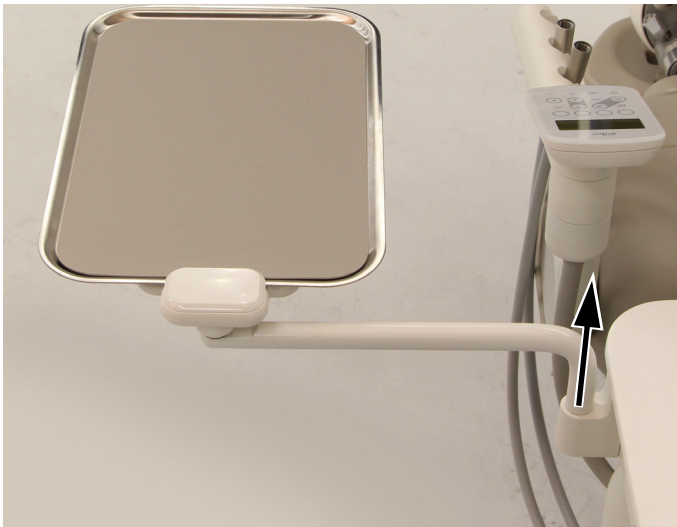
## Install the Optional Tray Holder

1. Insert the tray holder mount into the bracket.



## Move the Tray Holder to the Opposite Side of the Unit (Optional)

1. Remove the tray holder mount from the bracket.

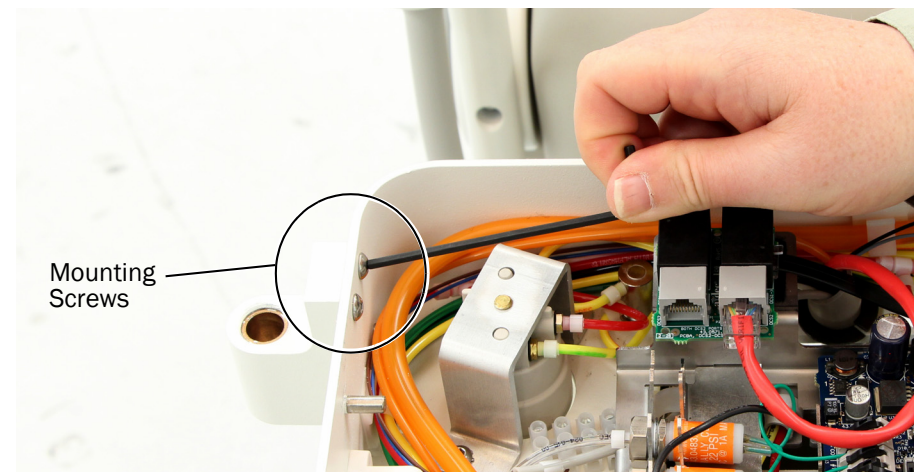


**WARNING** Shock hazard. When you remove or replace the covers, take care not to damage any wiring or tubing. Verify that the covers are secure after you replace them.

2. Use a 1/8" hex key to remove the screw that secures the worksurface. Slide the work surface towards the torso and lift up to remove it.



3. Use a 1/8" hex key to remove the bracket mounting screws inside the control head.



4. Remove the bracket and install it on the opposite side, applying blue Loctite® 242™ on the threads of the screws.



**WARNING** Shock hazard. When you remove or replace the covers, take care not to damage any wiring or tubing. Verify that the covers are secure after you replace them.

5. Replace the worksurface and secure it with the screw.



6. Reinstall the tray holder mount in the relocated bracket.

## Install the Optional Self-Contained Water Bottle

1. Slide the water bottle over the supply tube.



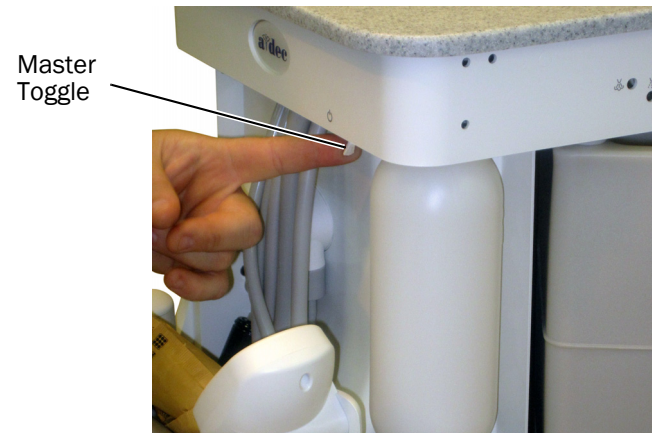
2. Screw the bottle into the receptacle.

## Turn On the Master Toggle



**NOTE** If the optional AVS vacuum is present, make sure the black toggle on the foot control is flipped away from the yellow dot so the vacuum generator will not run.

1. Flip the master toggle to the on position.



## Customize Touch Control Settings



**NOTE** Touch control symbols and icons are proprietary to A-dec, Inc.

Touch controls are optional.

### CP5i Control Pad

For touchscreen and control pad use, see the *A-dec DS7/CP5i/CP5 Touch Controls Instructions for Use* (p/n 86.0857.00) at [a-dec.com/touchscreen-manual](http://a-dec.com/touchscreen-manual).



### Simulator Touchpad

To customize simulator touchpad settings, refer to the *Programming* chapter of the *A-dec Simulator Service Guide* (p/n 86.0298.00).



## Configure A-dec+™ Gateway Software

A-dec+ Gateway is optional.

For configuring connectivity features, see the *A-dec+™ Software Platform Instructions for Use* (p/n 86.1030.00) at [a-dec.com/connectivity-manual](http://a-dec.com/connectivity-manual).



### Test the Unit

- Test all functions of the utilities.
- Check all plumbing connections.
- Verify that the torso moves up and down.
- Verify that the air pressure gauge reads 80 PSI inside the control head. To remove the control head cover:
  - (1) Use a 1/8" hex key to remove the screw on the side of the control head.
  - (2) Slide the top forward, and then lift off the cover.

### Finish the Installation



**WARNING** Shock hazard. When you remove or replace the covers, take care not to damage any wiring or tubing. Verify that the covers are secure after you replace them.

- Reinstall the base plate utility cover.
- Instruct the faculty, students, and maintenance staff as appropriate on the operation and maintenance of the equipment.
- Refer to the *A-dec Simulator Service Guide* (p/n 86.0298.00) for function and settings information.

## Store the Remaining Parts

We recommend that any uninstalled parts be stored with the unit for future use. Simulator parts include:

- Water QD flow control valve
- Air QD fitting
- Flow adjustment and storage bin keys
- Syringe tips
- HVE tube
- Silicone rubber HVE tip

## Regulatory Information

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For required regulatory information and the A-dec warranty, see the *Regulatory Information, Specifications, and Warranty* document (p/n 86.0221.00) available in the Resource Center at [www.a-dec.com](http://www.a-dec.com).



For quick access to this document online, scan, tap, or click this QR code, which points to [a-dec.com/regulatory-guide](http://a-dec.com/regulatory-guide).

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