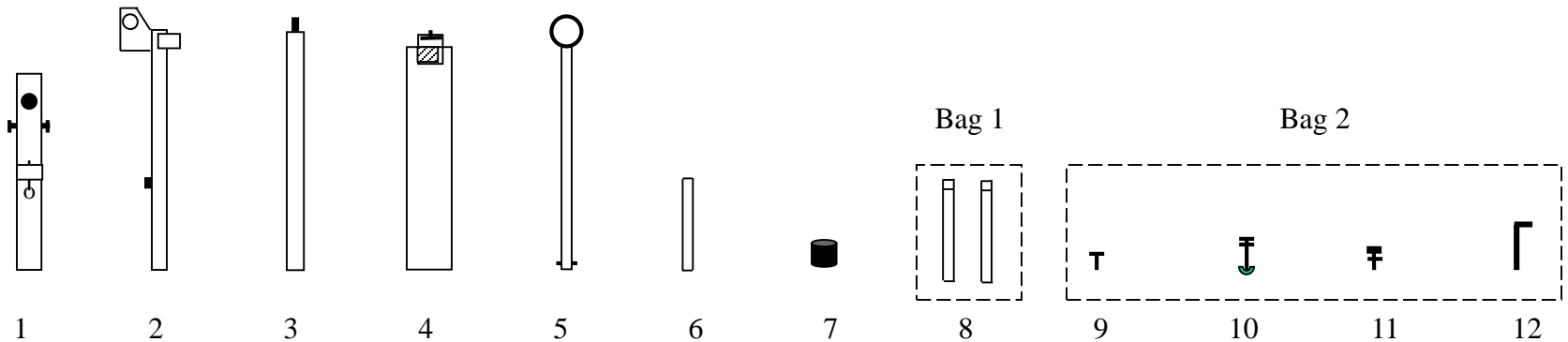
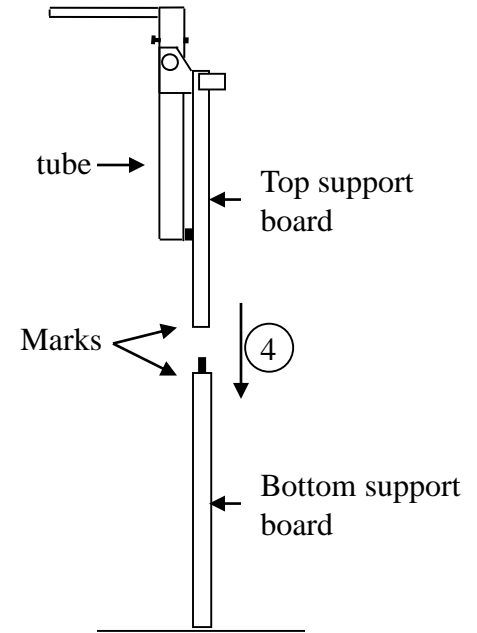
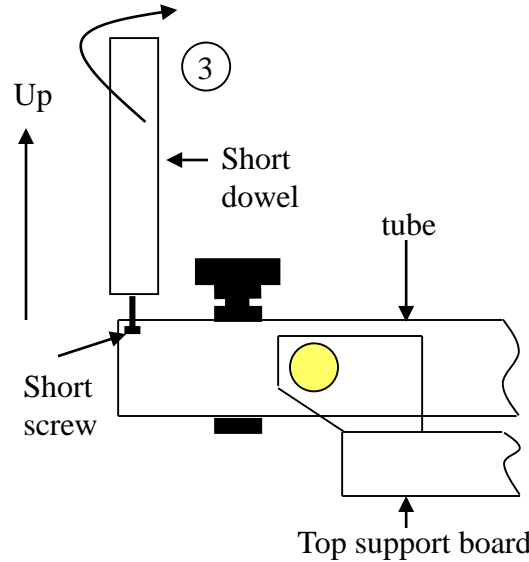
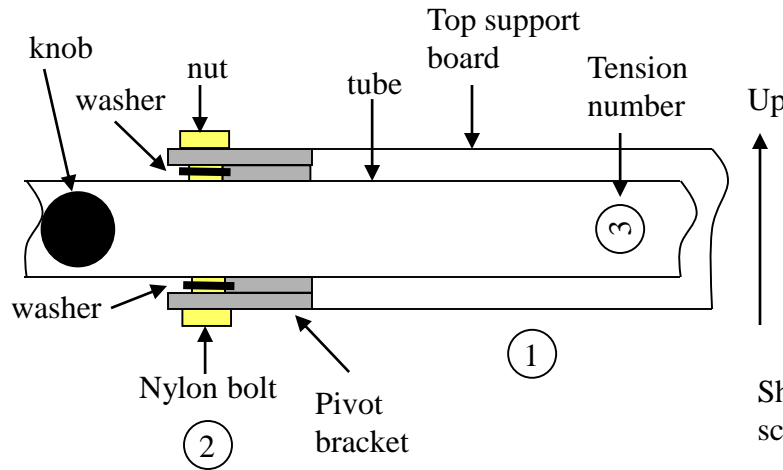


See www.CHRALS.com for support.

Parts in the box

1. Aluminum tube with nylon pivot bolt, nut, and 2 washers
2. Top support board with pivot bracket and hose clamp
3. Bottom support board with tension pins
4. Base board with aluminum brace
5. Long dowel with hose holder
6. Short dowel
7. Cylinder weight
8. 2 hook & loop ties
9. Short screw
10. Long screw + nylon washer + acorn nut
11. Thumbscrew + nut
12. Hex key L wrench





Step 1

Unwrap the hook & loop tie and discard the wire on the aluminum tube. Holding the tube vertical with knob at top, turn the knob clockwise till tension number increases to 3. Remove the nylon nut, bolt, and washers to use in the next step.

Step 2

Install the tube onto the pivot bracket using the nylon bolt, 2 washers and nut. To prevent the washers from sliding off, hold the top support board horizontal with the side up as shown and partially insert the bolt into the pivot bracket hole from the bottom. Place one washer onto the bolt and then push the bolt up through the tube pivot holes. Slide the second washer on top of the tube over the hole and continue to push the bolt through the washer and pivot bracket hole. Twist the nut onto the bolt and tighten by hand.

Step 3

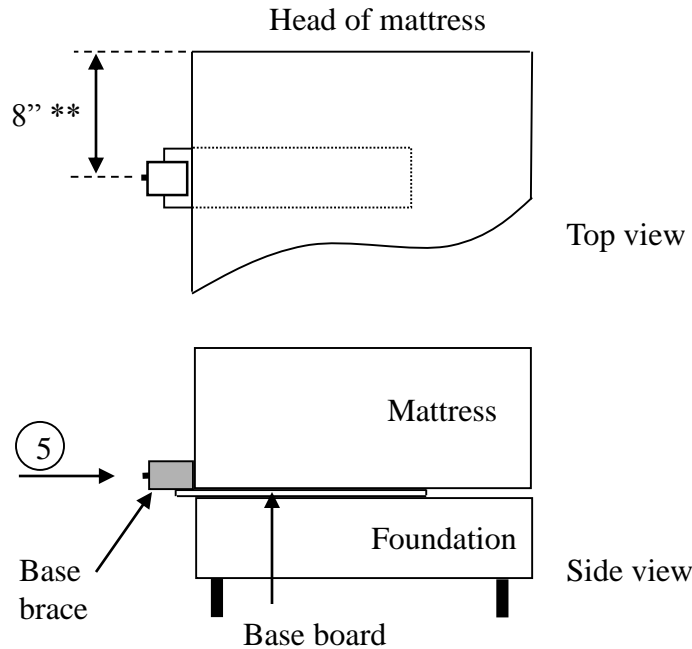
Insert short screw into hole at knob end of tube (*) and twist short dowel clockwise onto screw head with finger from inside tube. Tighten till dowel is held firm.

* If you are using a mask with a short flex hose and a hose cover, install short dowel near end cap of tube to compensate for the higher weight. Remove the end cap from bottom of tube by removing the two screws with a phillips screwdriver (not provided). After installing dowel, replace end cap and secure with one screw.

Step 4

Push top and bottom support boards together with board marks aligned. Use a side-to-side rocking motion to push together. If required, tap the end of the lower board on a concrete floor while holding the upper board to fully seat the pins.

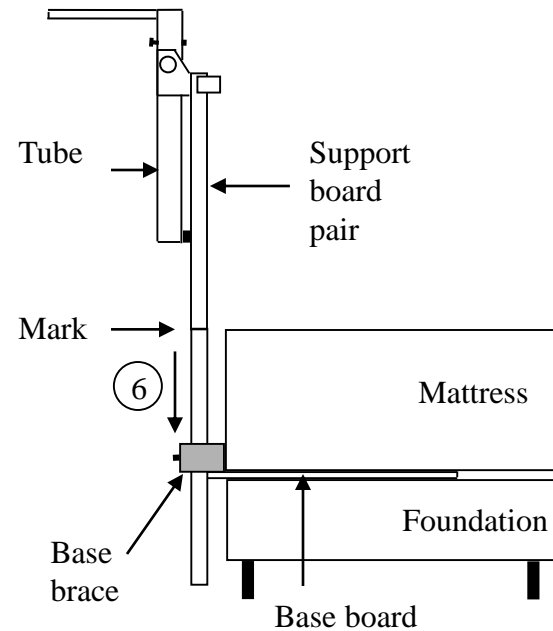
(Figures shown are for left side of bed with view from foot of bed but unit can be mounted on right side of bed)



Step 5

Slide base board under side of mattress 8" (**) from head of mattress or if nightstand is in the way, a few feet from nightstand (temporarily).

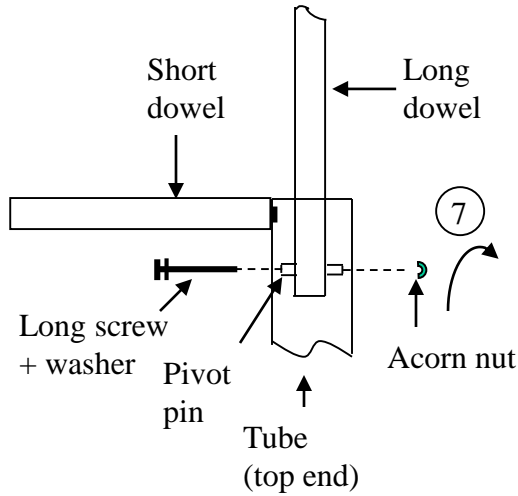
** For masks with a direct flex hose connection that angles slightly downward relative to the forehead-chin line and for oxygen tubing, it is best if the hose pulls up and toward the foot of the bed. Locate the base about 18" from the head of mattress in step 5 and use the pivot screw in bottom hole farthest from foot of bed in step 7.



Step 6

Loosen screw on base brace about 2 turns CCW. With tube on side away from bed, insert support board pair down into base brace until mark is at top of mattress. Mattress height above floor must be 17" or more so board does not touch floor. If not, you can use a saw to cut the board shorter.

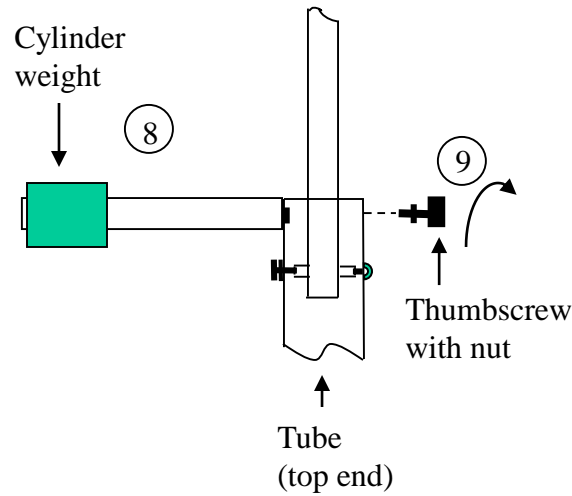
Push support board against either side of base brace to ensure it is vertical and finger tighten base screw. Use the provided hex key L wrench to further tighten screw by about one full turn. This screw must be very tight to ensure board is secure.



Step 7

Insert long dowel 1.5” into tube and align the pivot pin to the hole next to short dowel. Insert screw with washer under head through the hole and pivot pin to bottom of tube. Move dowel to align screw to bottom hole farthest from head of bed (**) (use flashlight to see down tube better) and push screw through hole. Hand tighten acorn nut on screw. If available, use a #1 phillips screwdriver to tighten the screw to ensure the nut doesn’t loosen with time.

Note: If you are using oxygen tubing see last page.

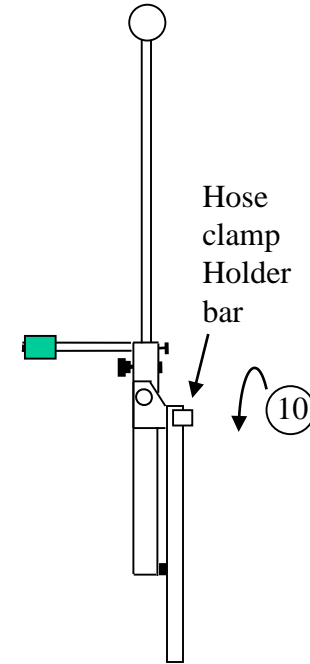


Step 8

Lift the two tabs of the cylinder weight, spread it open, and place it over the short dowel. Locate the weight flush to the end of dowel. Push the two halves of the weight together until the two tabs click in place.

Step 9

Insert thumbscrew with 3 CW turns and spin nut CW till seated on tube to secure thumbscrew. This allows the dowel to swing. Later you may want to tighten this thumbscrew against the dowel to lock the dowel in either extreme limit position.



Step 10

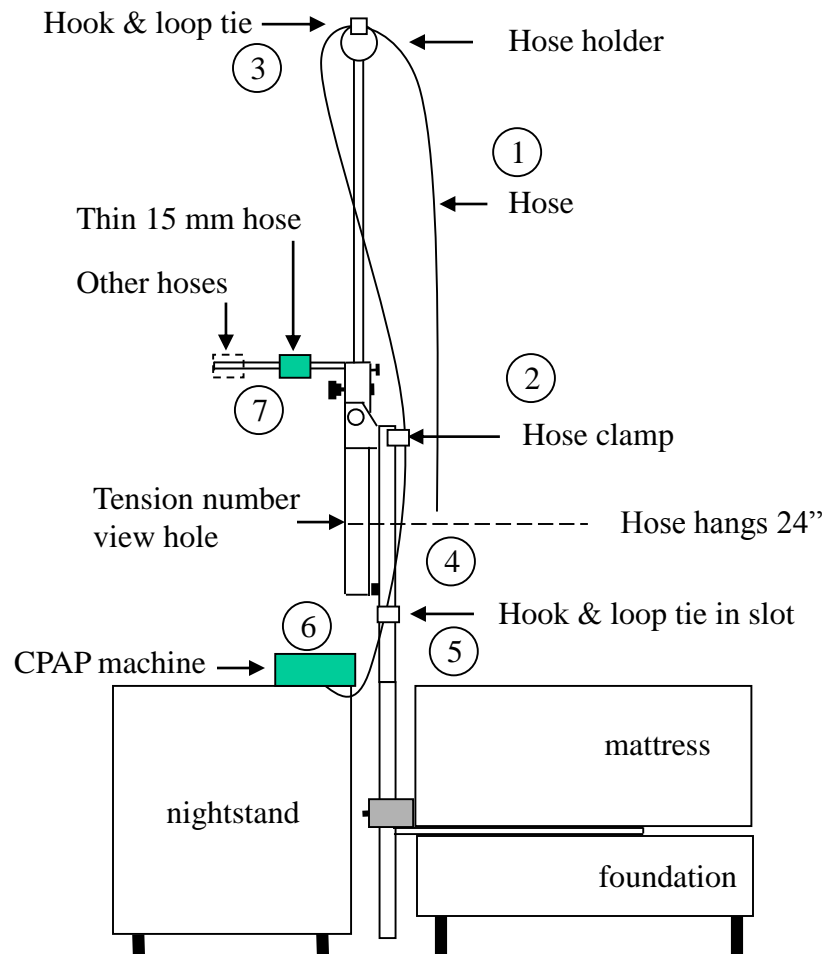
Rotate hose clamp holder bar so it is horizontal and pointing to foot of bed.

Step 11

If required, move base to 8” (**) from head of mattress by lifting mattress slightly and sliding base over. When arm is horizontal, tube should be parallel to the headboard or wall.

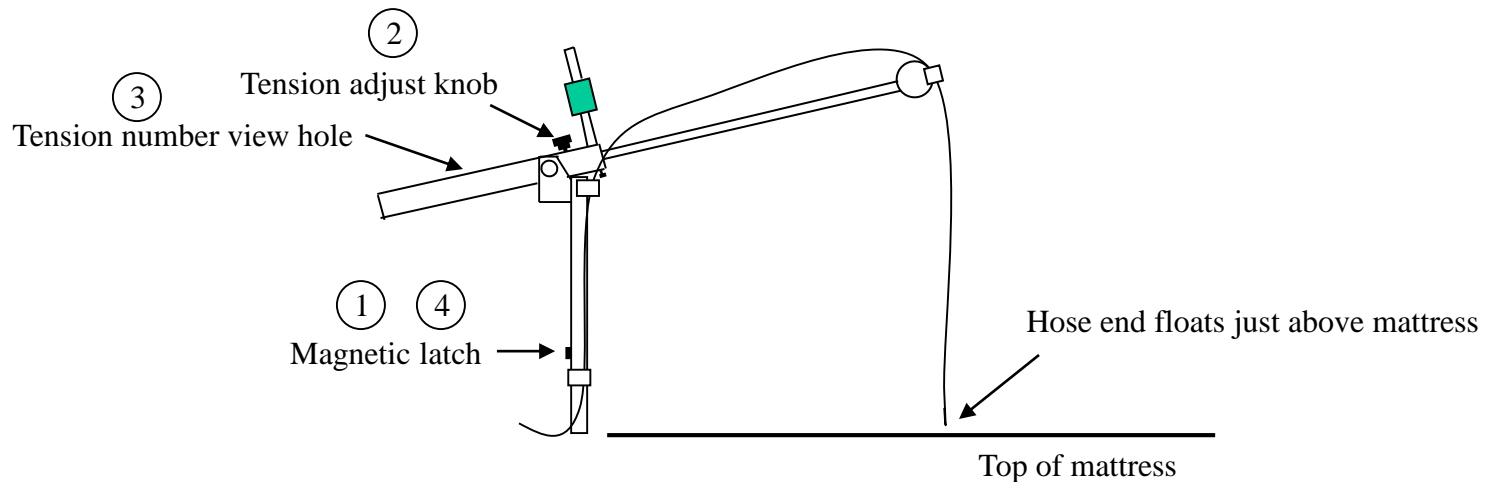
Assembly is complete!
Mounting the hose comes next.

Hose mounting instructions



- Step 1** Drape hose over hose holder so that end of hose at mask connection hangs level with tension number view hole (24")
- 2** While holding hose on top of hose holder with one hand, push the hose hanging away from bed into hose clamp with the other hand.
- 3** Insert hook & loop tie in the holder opening and wrap it **very snugly** around the hose with the tie in the holder notch.
- 4** Route hose down along narrow side of board to hook & loop tie slot location below bottom of arm tube.
- 5** Insert hook & loop tie into board slot and secure snugly around hose.
- 6** Connect the hose to your CPAP machine on the nightstand. If hose is too short, use short extension hose plus coupler or 8 ft hose.
- 7** If you are using a thin 15 mm hose (not heated or covered), relocate the cylinder weight on the short dowel so it is spaced about 1.5" from the tube (two finger widths).

Hose lift tension adjustment



How to adjust hose lift tension

Hose lift tension on the mask can be adjusted using the tension adjust knob located on top of the aluminum tube. Turn the knob clockwise (CW) to increase lift tension (hose rises) or counter-clockwise (CCW) to decrease lift tension (hose drops). The tension number view hole shows the tension from 1 to 17 where 1 is the lowest and 17 is the highest tension. Note that the arm angle must be between 45 degrees and vertical for the counterweight to slide down in the tube as the knob is turned CW for higher tensions. The arm can be in any position as the knob is turned CCW for lower tensions. It is recommended to just watch the tension number as you make an adjustment to be sure the number is changing. If not, raise the arm to greater than 45 degrees to allow the weight to slide down.

- Step 1** Release the magnetic latch by pulling hose down and away from support board.
- 2** Adjust tension so that the end of hanging hose floats just above the mattress (move the pillow away).
If you are using a mask with a flex hose that cannot be disconnected, adjust the tension so that the mask is lightly resting on the mattress with a right angle bend in the hose near the mask and skip the next step.
If you need to increase the lift tension higher than 17, remove the long dowel and move the short dowel to the end cap end of the tube (see step 3 * of assembly instructions). Reinstall the long dowel and then readjust tension.
- 3** Read the tension number and turn the knob CCW to decrease it by 2 (hose hanging without mask only).
- 4** To return to the storage position, push the hose up until the arm is vertical and the magnetic latch clicks.
- 5** The CHRALS S10 is now setup for your first night of restful sleep.
- 6** This initial setup should perform well in most cases, however, if you want to be sure of getting optimum performance, continue with the next section “Optimizing Performance”.

Optimizing performance (page 1 of 2)

After initial hose lift tension adjustment

Perform a simulated movement of mask and hose to check tension as follows:

Connect the mask to the hose and move the mask to the approximate back and side sleeping positions that you will be in (return pillow to normal location). The arm should move from a 45 to 60 degree angle range for the back position to near horizontal for the side positions. As you move the mask, feel the mask tension and observe the hose slack. If there is too much slack in both the side and back positions, increase the lift tension slightly by 1/2 step at a time. If there is too much lift in both the side and back positions, decrease the lift tension slightly by 1/2 step at a time. You may need to change the lift tension from the initial setting by as much as 2 numbers primarily to compensate for the variation in hose flexibility. A stiff standard 19 mm hose directly connected to the mask typically needs lower lift tension in the side positions to reduce the pull on the mask due to sharp bends.

If you need to optimize the back and side lift tensions independently, adjust tension for the side positions (arm near horizontal) first with tension adjust knob and then adjust tension for the back position by sliding the cylinder weight on the short dowel away from the arm to increase lift or toward the arm to decrease lift. If the weight doesn't slide easily, unclick the tabs to move it and then relock tabs. It is recommended to move the weight at least 1/2" at a time to produce a noticeable difference. This difference is most noticeable as a change in slack when using a mask with a flex hose. If you do not notice an improvement, leave the weight in the recommended position (see last step of "Hose mounting instructions").

How to wrap and tighten the hook & loop tie around a hose

Hold the tab next to the slot in the tie between your thumb and forefinger. Now pull the tie end through the slot with the other hand. As you pull the tie, keep it close to your thumb so it doesn't stick to itself. When the tie is almost snug, rotate the entire tie so that the tab is on top of the hose. Now pull on the tab to tighten around the hose while holding the long end of the tie in place. Wrap the long end of the tie around the tie on the hose.

Optimizing performance (page 2 of 2)

After the first few nights of use

To be sure that you are getting the optimum performance from your CHRALS S10 refer to the following possible improvements that you may want to make.

1. If the hose is pulling or pushing too much on your mask, try adjusting the tension. The tension can be adjusted while in the sleeping position by reaching around the arm and turning the tension knob. Ensure that the arm is 45 degrees or higher if increasing tension to allow the weight to slide down in the tube. The tension number window is not visible from the sleeper's position so you must get out of bed to view it (sorry but the simple design does not allow this convenience!). For reference, about one half turn of the knob changes tension number by one.
2. If you find that the dowel swinging is annoying or not required, then fix the dowel in one of the two limit positions. Spin the nut up on the thumbscrew counter-clockwise to expose the screw threads, tighten the thumbscrew to press against the dowel side, and then finger tighten the nut against the arm to hold the screw securely.
3. If you are experiencing mask leaks while sleeping, a more flexible hose may help, especially if your mask does not have a short flexible hose. A 6 ft 15 mm thin hose, which is more flexible than a 19 mm standard hose, works well to provide lighter mask tension if it is compatible with your CPAP machine. This will significantly reduce tension on the mask for the sharper hose bends that may occur near the mask when sleeping on your side. Another option is to add a short flexible 15mm hose plus coupler between the mask and main hose.
4. If you need more side-to-side or head-to-foot movement range, the hanging hose length can be increased from 24" to 28". Be sure that the hose can still reach the CPAP machine (if not, use a short extension hose plus coupler or 8 ft hose). Readjust hose tension as required. The arm height may need to be raised if the arm angle exceeds 60 degrees.
5. If the arm is not lifting the hose high enough to remove slack in the back position (arm angle may be exceeding 60 degrees), try raising the arm height by a few inches. To adjust the arm height, hold the arm support board, loosen the base mount screw with the hex L key wrench (counter-clockwise), and slide the board up or down the desired distance while keeping it vertical. Tighten the screw with the hex key L wrench (clockwise) until the board is very secure and doesn't move up and down or sideways.

Using the storage feature

During the day the arm should be in the vertical storage position to keep the hose off the bed and to allow any moisture to drain from the hose.

There are two ways to release the arm from the storage position before sleeping:

1. Sit on the side of the bed, close to the hanging hose, and connect the hose to your mask. Lay down in bed and the magnetic latch will release as the hose pulls on the arm.
2. After laying down in bed, pull the hanging hose down and away from the arm support board to release the magnetic latch, and connect the hose to your mask.

To move the arm into the vertical storage position while in bed, disconnect the hose to the mask (or remove the mask) and push the hose up. You should hear a click when the arm is magnetically latched.

If desired you can hang your mask on the short dowel with or without the hose attached.

Care of your CHRALS S10

The CHRALS S10 requires no periodic maintenance. The aluminum arm can be cleaned of fingerprints by wiping with a paper towel and isopropyl rubbing alcohol. The brushed aluminum tube scratches easily so avoid contact with any abrasive objects.

If the relative humidity decreases significantly from when the base screw was first tightened, further tightening may be required due to slight board contraction.

Adapting the CHRALS S10 for oxygen tubing use

Since oxygen tubing is thinner and lighter than a CPAP hose there are differences in the assembly, mounting of tubing, and lift tension adjustment.

Assembly instructions for oxygen tubing use

Follow the same assembly instructions as for a CPAP hose except as noted below.

Steps 1 – 7 same

- 8** Lift the two tabs of the cylinder weight, spread it open, and place it over the long dowel near the middle. Push the two halves of the weight together until the two tabs click in place.
- 9** Move the end of the dowel to foot of bed limit position and screw in the thumbscrew plus nut to press tightly against the dowel side. Finger tighten the nut against the tube to hold the screw securely.
- 10** Rotate hose clamp holder bar so horizontal and pointing to foot of bed.
- 11** If required, move base to 18" from head of mattress by lifting mattress slightly and sliding base over.

Oxygen tubing mounting instructions

- Step 1** Drape the tubing over the tubing holder so that the mask connection or cannula neck cinch hangs at a length about 4" below the tension number view hole (28" hanging length).
- 2** Insert hook & loop tie in the holder and wrap it snugly around the tubing.
- 3** Push the tubing hanging away from the bed into clamp on upper support board and wrap a hook & loop tie diagonally around the clamp and tubing to hold the tubing in the clamp. If desired, cut the tie to a shorter length.
- 4** Route tubing down along narrow side of board to hook & loop tie slot location below bottom of arm tube.
- 5** Insert hook & loop tie into slot and secure snugly around tubing.
- 6** Connect tubing to your oxygen supply unit.

Oxygen tubing lift tension adjustment

Adjust the tension knob so that the mask/cannula is lightly resting on the mattress with a right angle bend in the tubing near the mask or cannula neck cinch (move the pillow away).