

TPC

Laguna 2000

Electromechanical Patient Chair



Installation, Operation & User Manual

TPC

851 S. Lawson St.

City Of Industry, CA 91748

P626-810-4337 Fax 626-810-4245



Table on Contents:

Page

GENERAL INFORMATION

3

Installation and coordination

5

Motion Limit Controls

10

Operation instructions

11

Overview of controls

12

Main PCB Board

14

CLEANING & DISINFECTING GUIDE

18

Warranty

19

TROUBLE SHOOTING GUIDE

20



GENERAL INFORMATION

Model: Laguna 2000
Serial No: L2000-XXXXXXX
Rated Voltage: 120V-60Hz ~
Rated Current: 6A
Classification:
Mode of Operation: 1 min
Cool down period: 10 min
Manufactured: 1-2016

TPC



851 S. Lawson St
City of Industry, CA. 91748
Reference owner's manual 

The dental chair is marked with a product identification label including manufacture, serial number and date of manufacture. This label is located on the front lower left cover under the seat cushion.



The dental chair is marked with a Risk Class symbol. This label is located on the front of the dental chair base next to the main power switch.



The dental chair is marked with a main electrical grounding point symbol. This label is located on the front left side of the dental chair steel base frame, under the plastic cover.

TPC



The dental chair is marked with a main electrical grounding point symbol. This label is located on the front left side of the dental chair steel base frame, under the plastic cover.



The fuse is a 6 amp time lag, Fuse, 3AG, 1
1/4" L x 1/4" Dia. (31.8mm x 6.4mm)

The dental chair is marked with a fuse label symbol. This label is located under the pump cover on the front left side of the chair frame.

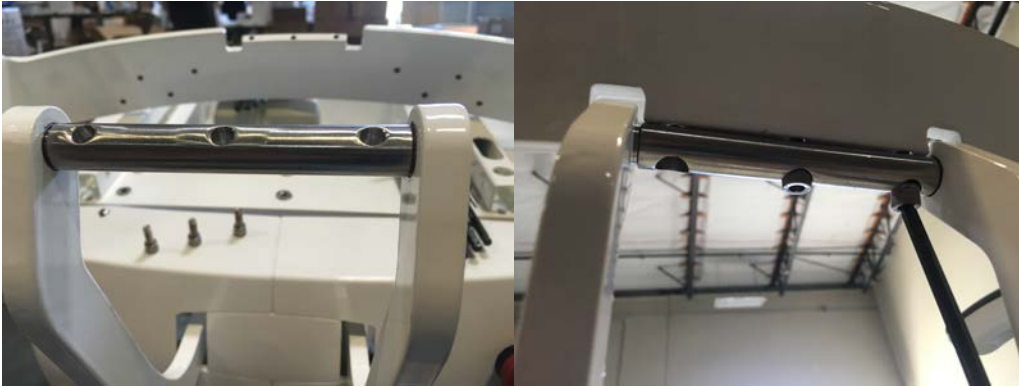
Transportation / Storage Information

- Do not store the dental chair in temperatures exceeding 130 degrees.
- Do not store the dental chair on its side. Always store upright on pallet.
- Do not stack more than 5 packaged chairs at a time on top of each other.
- Use approved pallet jack or forklift to move the dental chair.
- Do not attempt to move stacked dental chairs.
- Only store the dental chair in dry cool place.



Laguna 2000 Installation Instructions

1. Connect the backrest support arm to the backrest bracket. Use the three supplied Allen screws.



2. Install chair backrest as shown in the images below. Using the 8 Allen screws, secure the backrest frame in place.



3. Remove the side cover where chair bracket is to be installed. You will also need to remove the lower front panel shown.





4. Install the chair bracket as shown, use the included 4 Allen screws.



5. Re install the chair side cover once the bracket is installed.



6. Mount the Cup to the chair bracket.



7. Install the backrest cushion onto the frame. Make sure you align the mounting points before sliding into place.



8. Install the seat cushion onto the seat frame. Make sure you align the mounting points before sliding into place.



9. Once you have confirmed the seat cushion is in place slide it toward the backrest to lock it in place. Secure the seat cushion in place using the two supplied Allen screws.



10. Insert the headrest stem as shown.



11. Install the Pump cover and rear base covers. Use the supplied screws to secure the covers in place.





Adjusting the chair limits

1. To adjust the seat height limit, loosen nut as shown. Once the nut is not secured, you can adjust the switches position to activate at a different height. Once adjusted, secure the adjusting nut.



Emergency Stop Button

The dental chair possesses an emergency stop button. In the event that you need to stop the chair movement push in the stop switch. To disengage, turn clockwise.





Laguna 2000
Electromechanical Patient Chair
Operating instructions





Overview of Foot controls

Overview of foot control operations

1. Seat Height Adjustments

- To raise, press down on upper area of the foot control disc.
- To lower, press down on the lower area of the foot control disc.

2. Backrest Adjustments

- To raise, press down on right side of the foot control disc.
- To recline, press down on left side of foot control disc.

3. Preset Operation

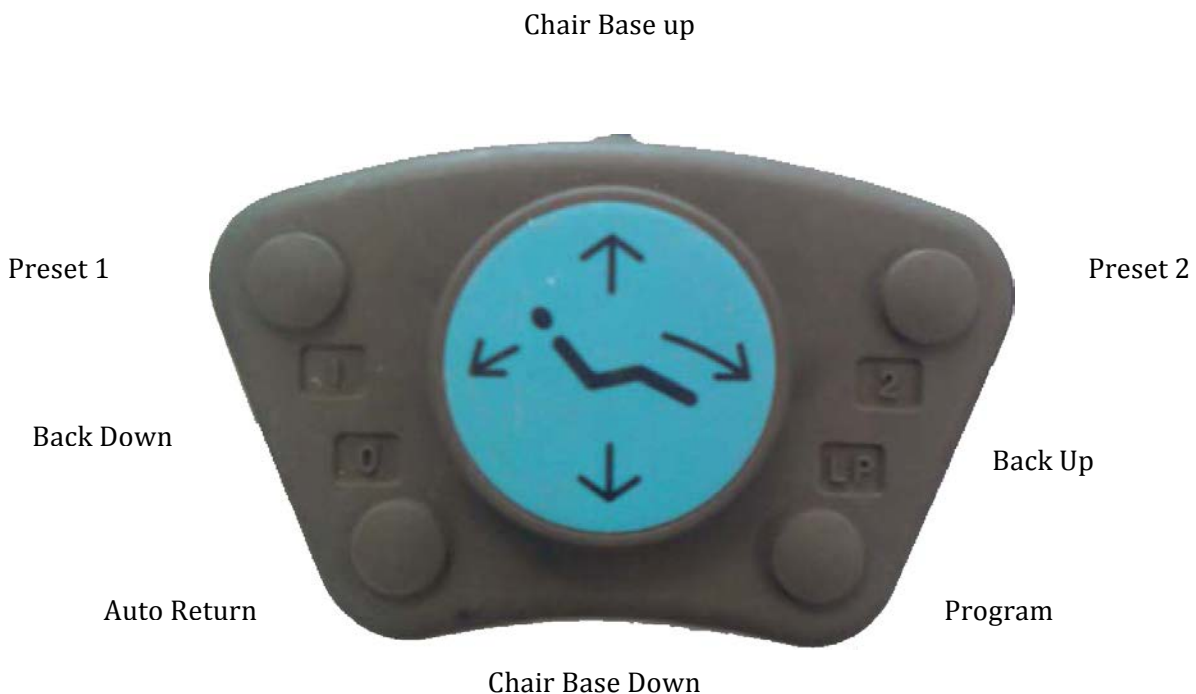
- Momentarily press pre set switch (#1, or #2) on the foot control.

4. Automatic Return

Momentarily press 0 switch on foot control to activate chair to return to normal position.

5. LP Program

To program a preset, move chair to desired position. Press LP, then Press the memory position 1 or 2. Then Press LP again, this will be accompanied by a longer tone when complete.





Safety Plate

Safety plate is provided in the backrest cover to stop motion of chair when object is accidentally caught underneath.



7. Armrest Rotation

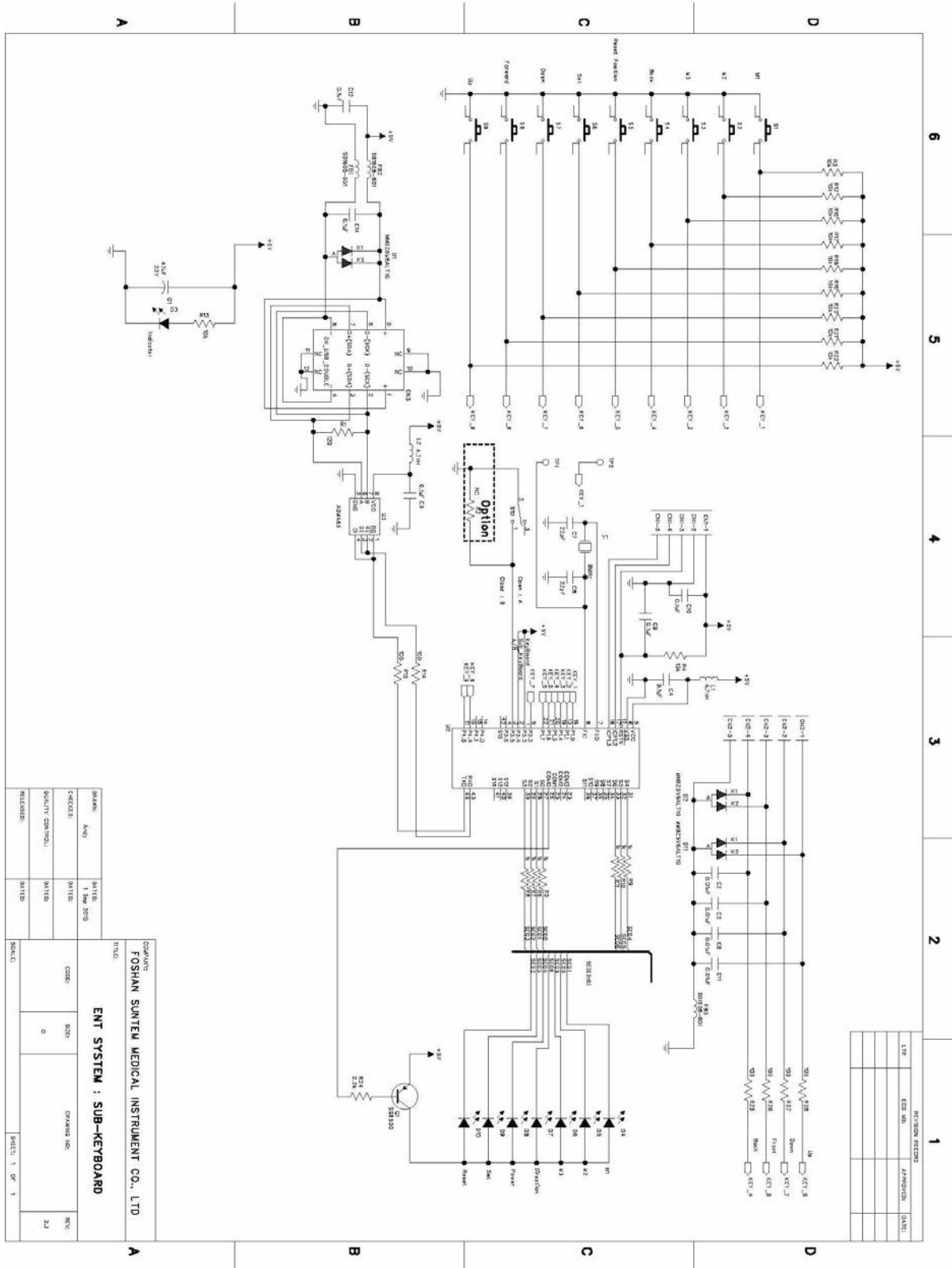
Either armrest can be rotated upward by grasping the end portion of armrest, pulling upward.

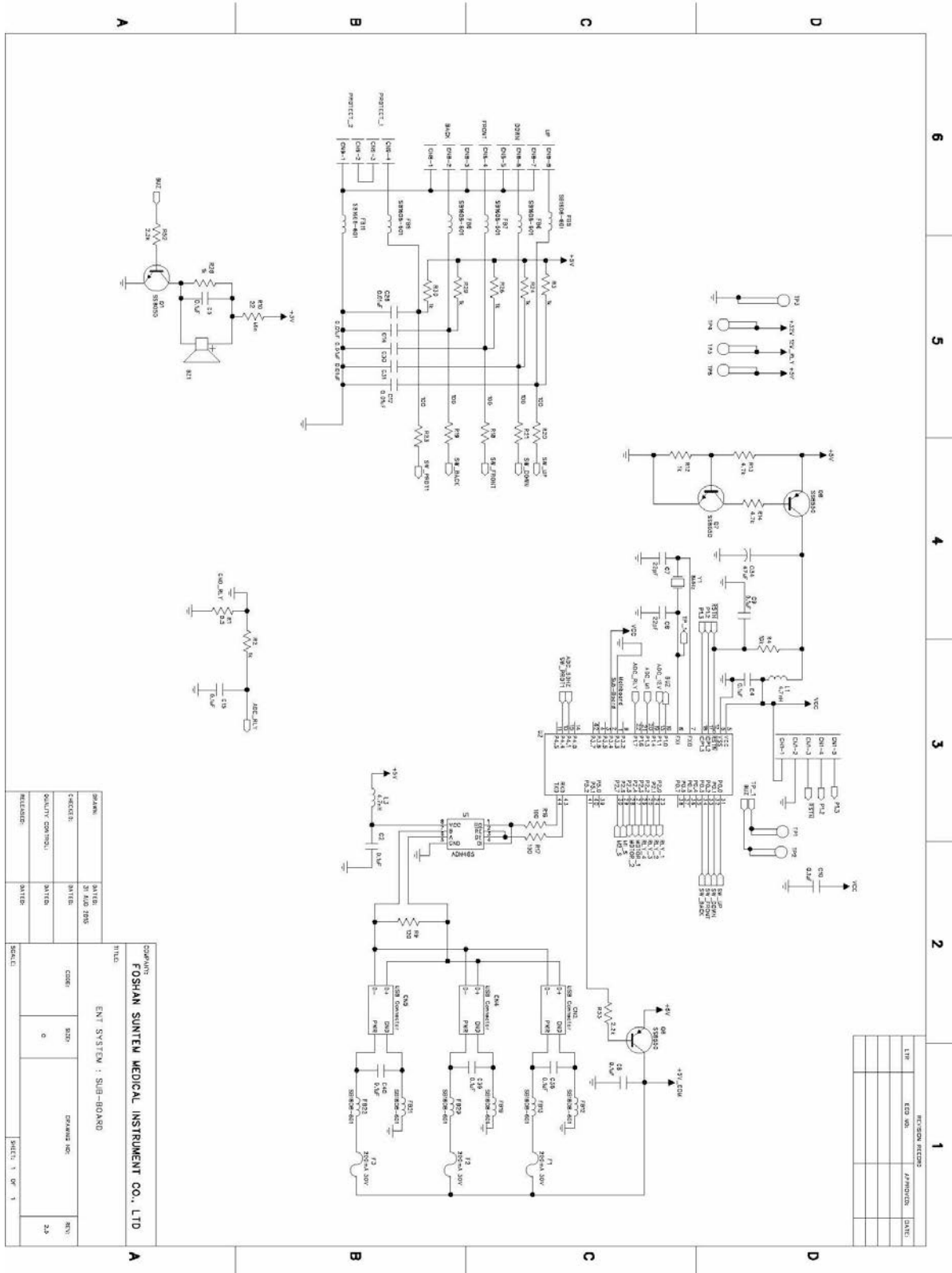


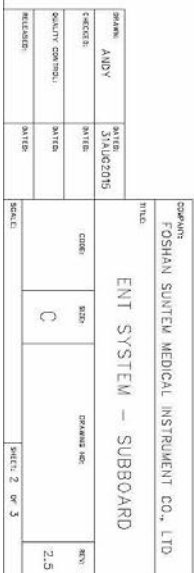
8. Headrest Adjustments

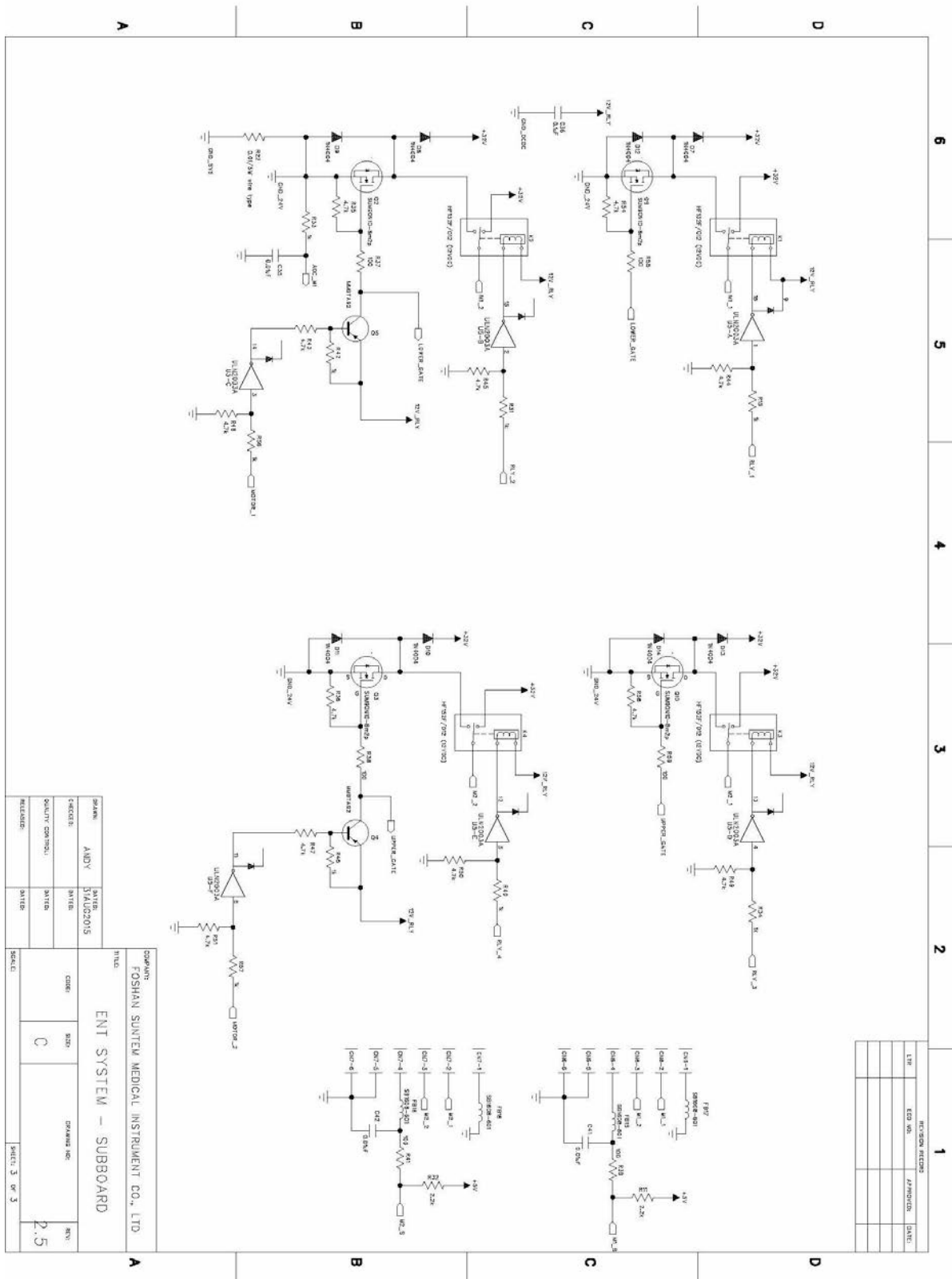
Height of headrest can be adjusted simply by pulling headrest up or down due to friction mount incorporated in backrest. Angle of articulating headrest can be changed by releasing slide bar on headrest stem













Laguna 2000 Patient Chair – Care and Maintenance

No maintenance is required except normal care and cleaning.
Clean vinyl upholstery and plastic components with mild soap and water.

Barrier covers should be used on chairs for asepsis.
Surface disinfecting chemical will eventually cause some discoloring of upholstery.

Suggested Disinfectant Application

Clean dirt and stains with mild soap and water.
Moisten an applicator with disinfectant; mildly wipe the material with the disinfectant.
Do not allow the disinfectant to soak in or dry on the surface; wipe off with soap and water.

PLEASE KEEP LIQUIDS AWAY FROM ELECTRICAL CONNECTIONS!

Most electrical control switches ARE NOT hermetically sealed.
When a switch gets wet, it can self-activate, or perhaps short out and damage other system components. Keep switches dry. Avoid costly equipment damage or failure. Avoid downtime by following these guidelines:
Please DO NOT spray disinfectants directly AT OR INTO electrical switches and controls.
Simply spray these solutions onto a cloth and wipe down the control surfaces. Be careful not to saturate the cloth.

- Any action not recommended by the manufacture may cause risk of injury or shock!
FOR ADDITIONAL INFORMATION CONTACT YOUR TPC DEALER



TPC 5 YEAR LIMITED WARRANTY

Warranty Information

All of our products sold are guaranteed to be free from defects in workmanship and materials for a 1 year from date of purchase, unless otherwise stated. TPC will repair or replace any defective part at no charge. TPC will not be responsible for labor charges or shipping charges to / from the TPC facility. This guarantee does not cover normal wear or stains on surface finish. The guarantee does not cover damage resulting from improper installation, misuse or accidents incurred in shipping and handling. All claims against the freight carrier must be initiated at the time the damaged items are received. The claim is the responsibility of the customer. We are improving our products on a continuous basis. We reserve the right to make modifications without the need for prior notification and are not obliged to modify previously manufactured items. Main drive motors parts are covered under the 5 year warranty. Main chair PCB, transformer are also covered under a 5 year warranty. Major cast components are covered under the TPC limited 5 year warranty. Upholstery, arm rests and any plastic components are covered under a 1 year warranty. Only authorized service technicians should attempt to service TPC equipment. Service performed by any unauthorized technicians may result in a voided warranty.



Laguna 2000 Chair Troubleshooting

Problem	Cause	Solution
Dental Chair does not move up or down. Chair makes no sound.	No power Blown fuse Power switch off Blown transformer	Check power source Check fuse Check power switch Check transformer voltage 12vac
Dental Chair will not move, but makes a beep sound when controls are pressed	Safety switch plate Limit switch memory erased	Check safety plate Re-program limit switches. Refer to motions of limit controls
Chair makes noise when motor is running. Squealing	Damage to drive extension	Check drive extension for damage
Dental Chair does not go low or high enough	Limit switch moved or is damaged	Adjust limit switch or replace is damaged
Unable to program pre set position 1, 2 and 3	Press SET to program presets. Button may be damaged	Press Set. Replace set button on touchpad.
My chair is on but there is no control out of the touch pad	Touch pad is not connected Touch pad is burnt out	Connect touch pad Replace touch pad
My head rest does not stay in the position that I put it in	Set screws in backrest are loose.	Tighten set screws
Chair arm rest moves very Easley.	Screw is loose that holds assembly together	Tighten screw



Laguna 2000 Chair Limitations

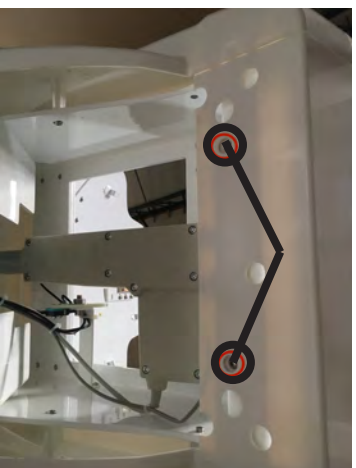
- Don't exceed the maximum weight capacity of 600 lbs or damage may occur.
- Don't let more than one patient sit in the chair at one time.
- Don't stand anywhere on the dental chair.
- Don't operate the dental chair around any flammable liquids.
- Don't exceed the maximum mode of operation time "3 min".
- Keep liquids away from electrical components.

Laguna 2000 Chair Bracket Installation procedure

1. Remove the three screws shown.



2. Remove the front cover



3. Remove the bracket cup from the chair bracket.



4. Install bracket onto the dental chair.



5. Install the side cover over the bracket as shown. Replace screws



6. Install Front cover



7. Re install the chair bracket cup to the bracket.





Lucent LED Operator Light Quick Reference Installation Guide

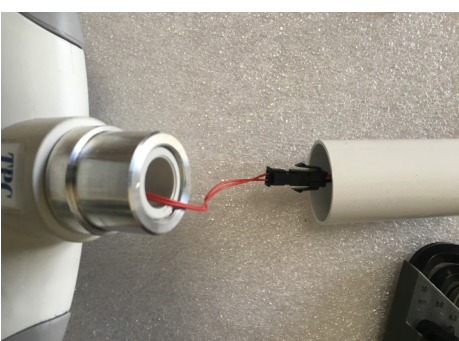
ASSEMBLING THE HEAD TO THE ARM

Remove adaptor Bushing Attach bushing to light head

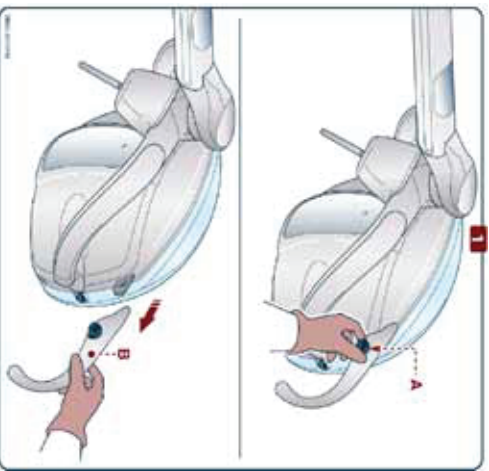


ELECTRICAL CONNECTIONS

Connect wire harness Secure light head to arm



Light Handles



Switch on / off / Adjustment

- To switch the lamp On and Off, press and release the switch to the LEFT or RIGHT side. When the lamp is switched On / Off, the device will beep (once).

DON'T push and pull the switch. It only moves in a left and right direction.

☐ Right & Left Light handle

☐ Light switch toggle extension

☐ Light shield wrench

☐ Light bushing pre installed into arm.

Signature _____ Date _____

TPC

Mirage Dental Delivery Unit Model 2000 / 2015 Installation Instructions



TPC

851 S. Lawson St.

City Of Industry, CA 91748

P626-810-4337 Fax 626-810-4245



Table on Contents:	Page
--------------------	------

GENERAL INFORMATION

Unpacking and Inventory	3
Installation and coordination	4
Optional Cuspidor Installation	10
Cuspidor Plumbing Connections	11
Junction Box Connections	12
Post Mount Utility Center Adjustments	13
Pressure Adjustments / Tension Screws	13
Delivery Head / Tilt Adjustments	14
Tubing / Connections	15



Unpacking and Inventory

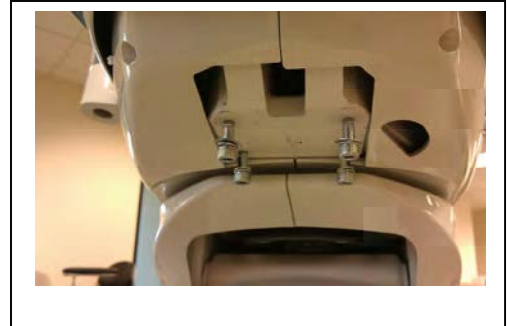
Each Mirage delivery unit will contain the following items in each box.

1. Flex arm box. This is the largest box that you will receive with the delivery unit.
 - Delivery unit flex arm
 - Assistance arm
 - Light post
 - Foot control
 - Stainless steel tray
 - Cosmetic beauty ring
 2. Post mount utility center
 - Utility center
 - Junction box (frame & cover)
 - Master controls attached to the umbilical
 - Misc beauty rings and quick connects
 - HEV/SE valves with tubing
 - Water Bottle (750 ml)
 3. Optional 2000-C Cuspidor
 - Cuspidor
 - Cup fill spout
 - Bowl rinse spout
 - Cuspidor bowl strainer
 - 2 fastening screws
-
- If at any time you have questions regarding your installation please don't hesitate to contact TPC toll free @ 800-560-8222 or via E-mail @ service@tpcdental.com



Installation Instructions.

1. Locate the four mounting bolts that were included with your dental chair. These bolts are attached to all model 4000 dental chairs. See image below for the location.



2. Remove the mounting bolts and mount the bracket as shown in the image below.



3. Leveling Chair bracket.
 - The chair bracket has a total of 8 set screws.
 - Use the lower set screws to adjust the PMU left, right, front and back. This will make large adjustments to the tilt of the post that is inserted into the bracket cup.
 - Use the upper set screws to make fine adjustments and lock the post in place.
 - Once the post is level you may fasten the set screws tightly to ensure the post stays level. If your post is not level your unit will not be level and the flex arm will drift.

4. Loosen the 8 leveling set screws, and then place the PMU (Post mount utility center) in the cup of the chair bracket. Figure1 Shown in the image below. Center the mounting post in the cup. Also verify if the PMU is aligned straight with dental chair armrest. Then proceed to tighten the set screws.



5. Verify the PMU is level before tightening the set screws on chair bracket. There are 8 set screws that will be used for leveling. If the PMU is not level the unit arms may drift. Small adjustments to the set screws will level the PMU. Level the PMU in the following directions. (left to right and front to back).



6. Place the assistant's suction arm on the PMU as shown in the image below. If the arm is not level use the leveling screw shown below (right) to adjust its angle.



Turning this screw clockwise will raise the angle of the arm. Turning counter clockwise will lower the angle of the arm.



7. Remove the PMU side cover. To remove it, pull on the lower lip to detach its magnetic connection. Place it out of the way to ensure it does not get damaged. This side cover will remain detached until the end of the installation.

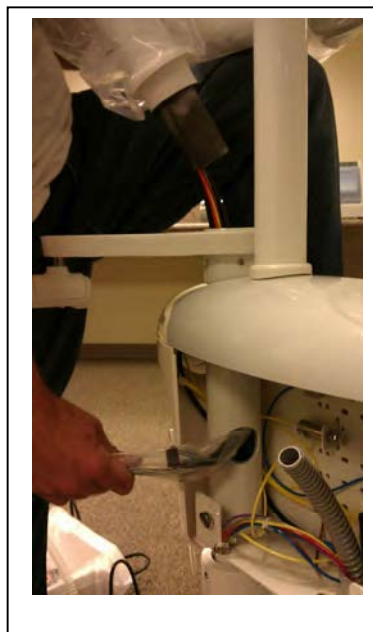


TPC

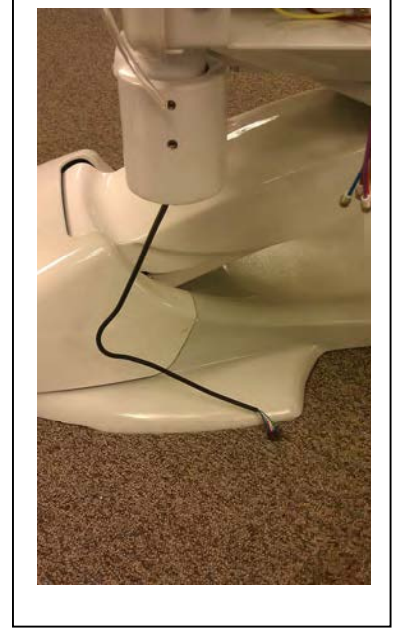
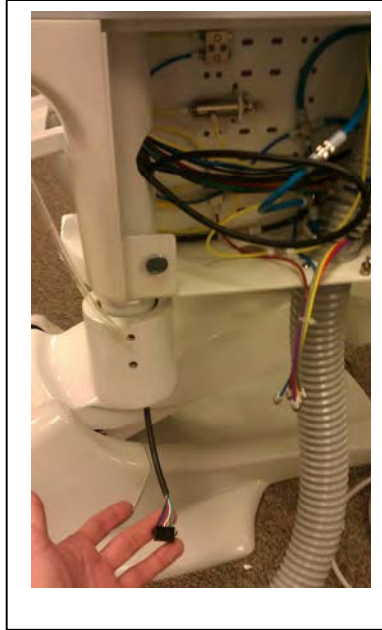
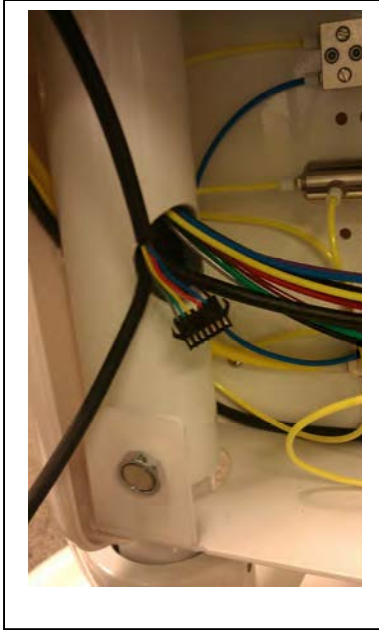
8. If you are installing a post mounted light insert it as shown in the images below. Make sure you place the cosmetic ring over the light post before inserting. Tighten the set screw to secure the light post in place.



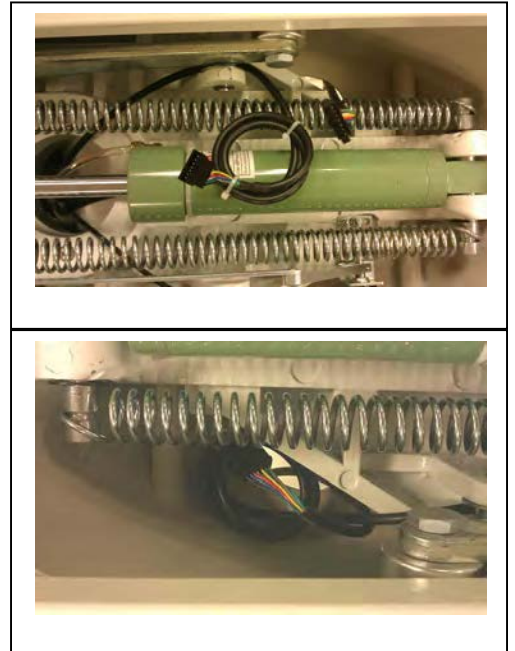
9. Take the delivery unit flex arm out, and place the additional cosmetic ring on it as shown below. Once in place, take all lines and feed it through the bushing assembly as shown. Verify that the arm seats completely down in the bushing assembly. Lower the cosmetic ring to cover the seam between the assistant's arm and the delivery unit flex arm.



10. You may now remove the plastic from the bundle of tubing that you fed through in the previous step. Take the touch pad wire shown below and feed it through the chair bracket as shown.

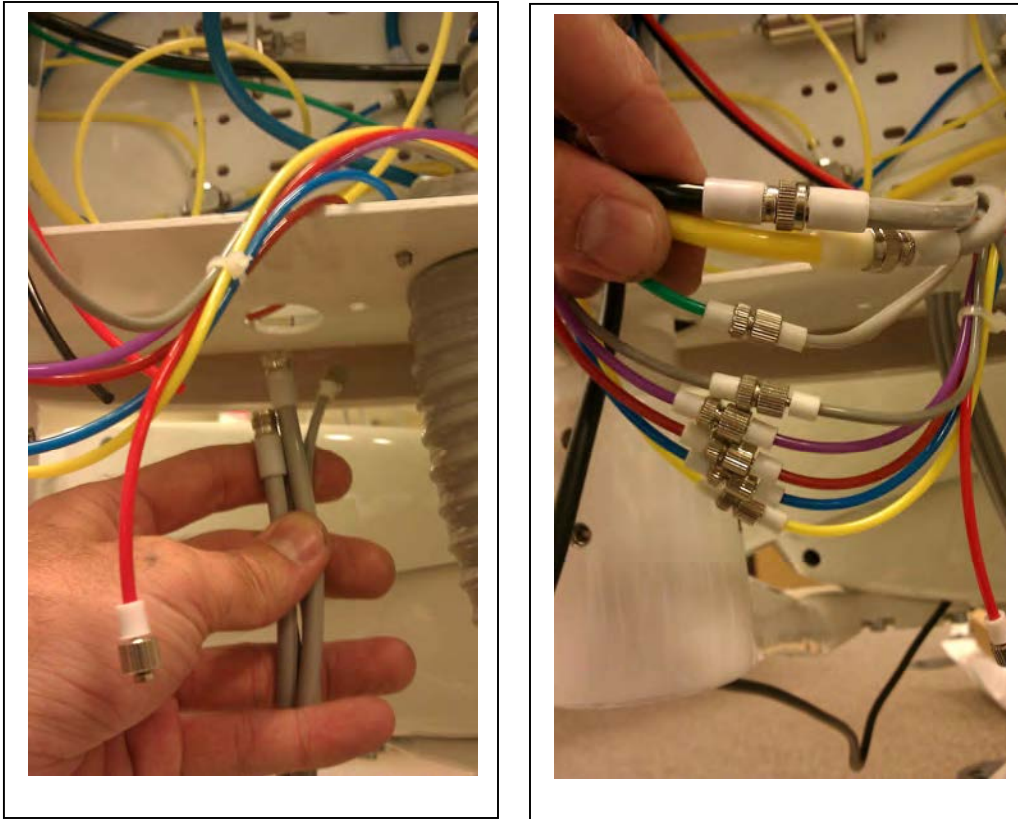


11. Route the touch pad cable along the chair bracket channel. Then feed it through the "cut out" in the plastic shroud. Connect the touchpad wire and place it aside as shown.



TPC

12. Take the delivery systems foot control and feed it through the bottom of the PMU. Make the following connections from your foot control to the tubing within the PMU side box.



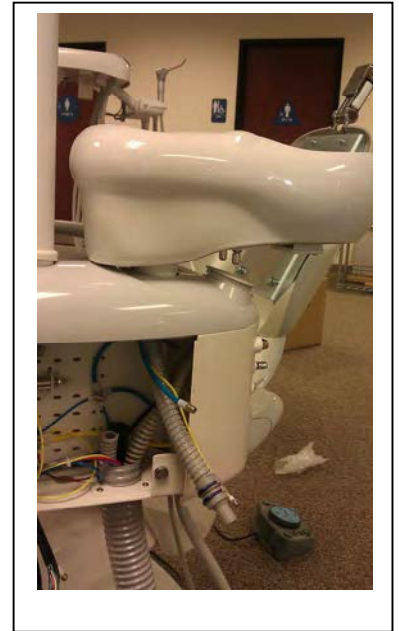
13. Tubing connections

- Grey female from foot control to Black supply to the flex arm.
 - Grey male from foot control to Yellow supply from Umbilical.
 - Green female from foot control to Green male from the flex arm.
 - Grey female from umbilical to Grey male from the flex arm.
 - Purple female from umbilical to Purple male from the flex arm.
 - Dark Red female from umbilical to Dark Red male from the flex arm.
 - Blue female from umbilical to Blue male from the flex arm.
 - Yellow female from umbilical to Yellow male from the flex arm.
 - You will have two spare lines available the event of a tubing failure.
14. There is also two additional lines that will be left unused if you are not installing the optional 2000-C cuspidor. One large water supply line and a small yellow air supply line that has a cap on it.

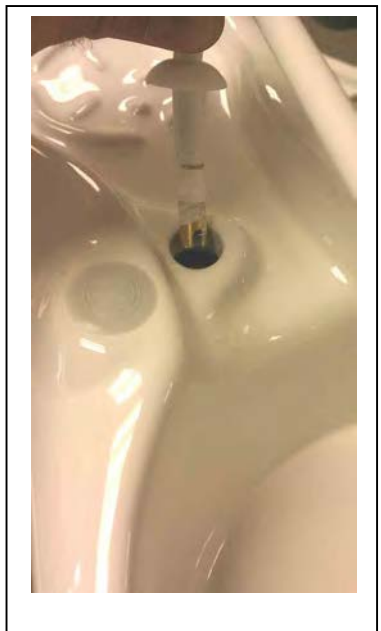


Optional Cuspidor Installation

If you are installing the optional 2000-C cuspidor, remove the Cuspidor housing cover as shown. To install the cuspidor, slide the cuspidor into the cuspidor bushing housing. Make sure the cuspidor is completely seated in the bushing.

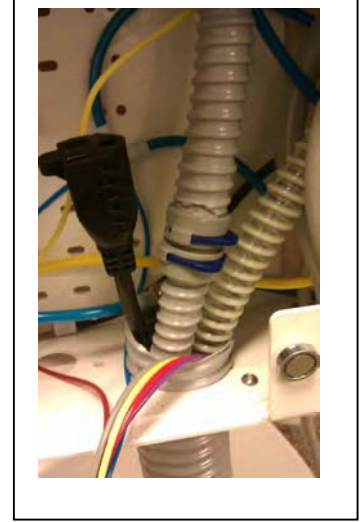


15. Take the cup fill and bowl rinse spout and insert them into the corresponding sockets. When inserting the spouts into the sockets make note of the notches in the cuspidor socket and the spouts that are being inserted into them. They will only seat properly one way. Do not remove the Teflon tape that is wrapped around the spouts. See images below. Place the cuspidor strainer in the bowl.

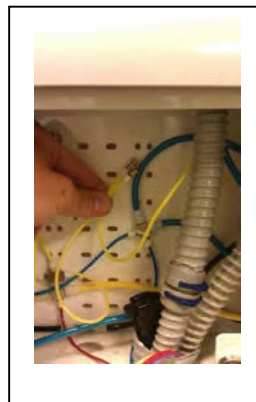
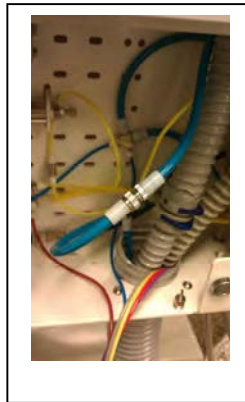
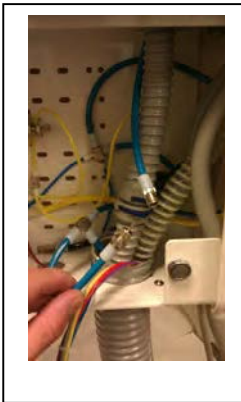


Cuspidor Plumbing Connections

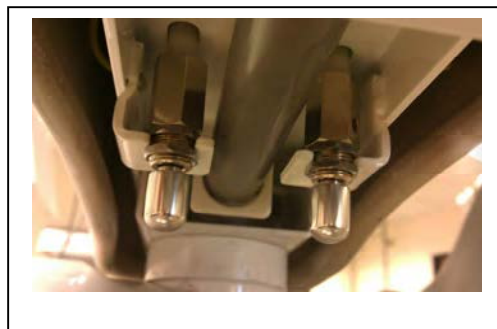
16. Connect the drain line. Remove the blue locking tab to separate the quick connect from the junction. Insert the removed end into the drain line tubing. Connect the two ends together and replace the locking clip.



17. Remove the cap from the large water supply line, Connect the water supply line to the cuspidor. Remove the cap from the signal air line, then connect it to the cuspidor.

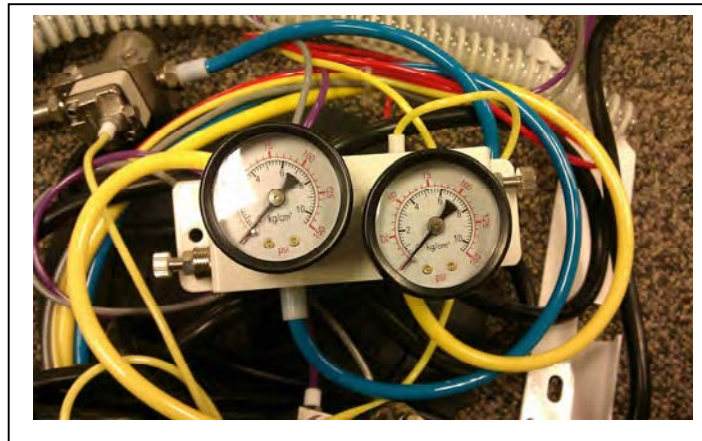


18. The 2000C cuspidor possesses timing adjustments. In the event that you need to make adjustments, the timing pressure release valves are located on the bottom of the cuspidor. These adjustments will shut off the water flow so that you may fill a specified cup size, or bowl rinse cycle time.

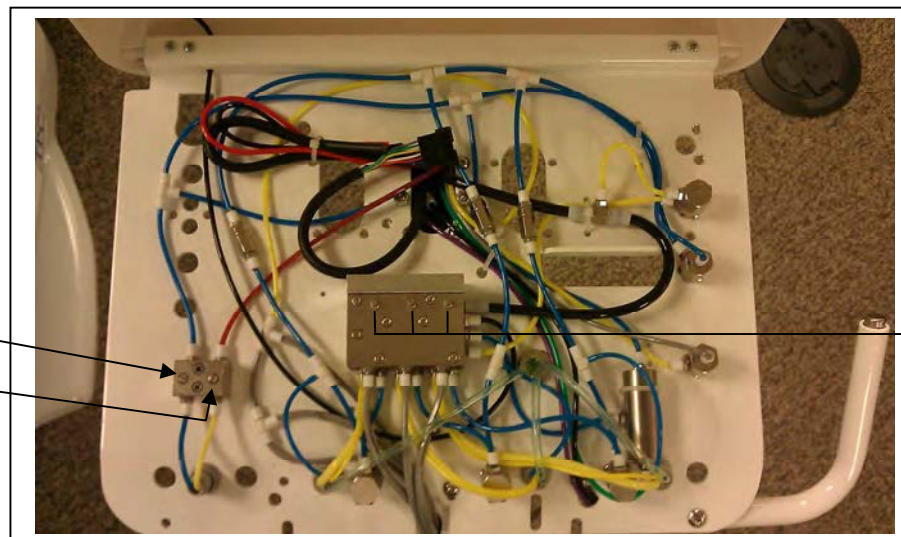


Junction Box Connections

19. Before making any connections in the junction box, be sure to clear the supply lines. If there is any debris in the air line it will collect on the micron filter. Verify the line is clear.
20. Once the lines are verified and cleared, you may connect the master controls. The master controls are similar looking. One is for the Air which is identified by the large yellow tubing that exits the back end of the master control valve. The master control for the water line is identified by the large blue line that exits the back of the master control valve.
21. Once the connections are made you may open the angle stops or equivalent shut off valve. Once the valve is open you may check the master control gauges and verify that the pressures are set accordingly. Air pressure should read approximately 80 PSI. Water pressure should read 40 PSI.



22. Once air and water pressure are set, you may now make adjustments to the syringe blocks if necessary. Also check your handpiece pressure and adjust accordingly.



Syringe Block:

Water Adjustment

Air Adjustment

Handpiece

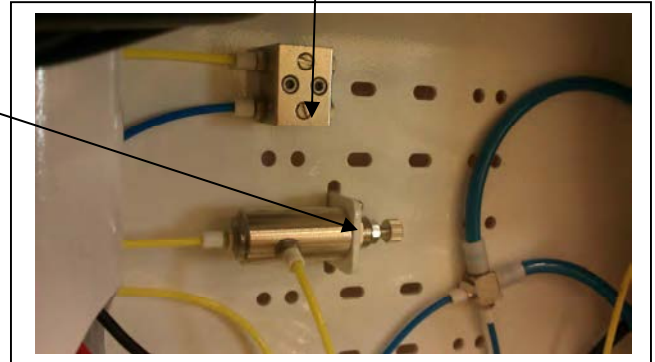
Pressure Adjustment

Use a flat head screw driver to make adjustments. Turning clockwise will decrease the pressure. Turning counter clockwise will increase the air pressure.



Post mount utility center adjustments (PMU)

1. There are two main adjustments that can be made in the PMU.
 - Assistant's side syringe block adjustments
Turning the screw counter clockwise will increase the air / water pressure.
Turning the screw clockwise will decrease the air / water pressure.
 - Water bottle pressure adjustments
Loosen the lock nut, then turn the knob counter clockwise to decrease the air pressure. Turn the knob clockwise to increase pressure.
DONT allow more then 40PSI of air pressure to supply the bottle.



Tension Adjustments

2. In a situation that you need to add tension to the delivery unit flex arms please see the following locations. NOTE: tension adjustments are only a temporary fix for drifting arms. If your arms are drifting first verify the PMU is level. Check the light post to verify its plum. If light post is not level make the proper adjustments by re-leveling the unit.



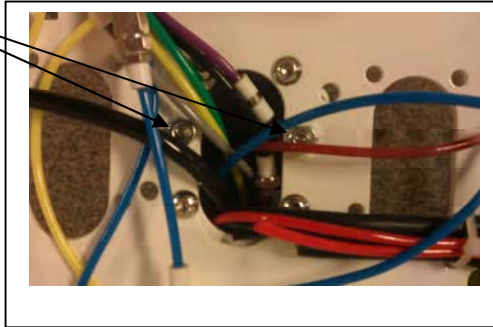
Tension spring adjustment

3. If you need to make adjustments to the tension spring in the flex arm follow the procedure below.
 - Remove the flex arm cap cover.
 - Use a 3/8" ratchet with 2" extension
 - Turn clockwise to increase the tension
 - Turn counter clockwise to decrease tension.
 - Only make adjustments in half turn increments.



delivery head leveling and tilt adjustments

4. If you need to level the unit head or adjust the tilt use the following adjustments.
- Loosen the 4 Allen screws that attach the unit head to the short control arm. See image. Once the screws are loose, use the two adjustment screws in the center on each side to level the head.



- To adjust the unit head tilt, remove the flex arm end cap closest to the delivery unit head. Loosen the stop nut, and using an Allen wrench turn the adjustment screw clockwise to increase the tilt of the delivery unit head. Turn the adjustment screw counter clockwise decrease the tilt.

*Stop Nut

*Adjustment Screw





Tubing and connections

Junction Box

1. Yellow 6 X 4 Air Supply line
2. Blue 6 X 4 Water Supply line
3. Grey Master Switch Supply
4. Yellow Master switch return
5. Purple Air brake supply
6. Red Spare

Post mount utility center (from umbilical to delivery unit arm)

1. Yellow 6 X 4 Supply line T to unit head.
2. Black 6 X 4 from output from foot control
3. Small Yellow / Small Yellow Master Switch return
4. Small Gray / Small Gray supply line to master switch
5. Small Purple / Small purple Supply to break
6. Small Blue / Small blue water supply line
7. Small burgundy Spare line
8. Small Green / Gray (wet dry toggle from F.C)
9. Small Black Spare (to flex arm)
10. Small Red Spare (to flex arm)