

# **J/V-Generation<sup>®</sup> Chair**



**Installation, Operation & Care Manual**

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## Section I Introduction

## J/V-Generation® Chair

This manual contains the installation, operation and care instructions and user service information for the DentalEZ® J/V-Generation® Chair.

The J/V-Generation Chair is intended to be used by trained professional dental care personnel only. The dental chair supports a patient in a reclined seated position. Operators will be position around the patients head as required for optimum access for the specific procedure being performed.

The DentalEZ J/V-Generation Chair is designed to provide trouble-free service when installed, operated and cared for according to the procedures set forth in this manual.



To ensure proper installation, carefully read all the instructions contained in this manual paying close attention to all warnings, cautions and notes.

Before starting installation procedures, please review the illustration below to become familiar with the

components of the DentalEZ J/V-Generation Chair.

After the J/V-Generation Chair is installed, please review the features, operation procedures and care guidelines with the doctor's staff. Then **leave this manual in the doctor's office** for future reference.



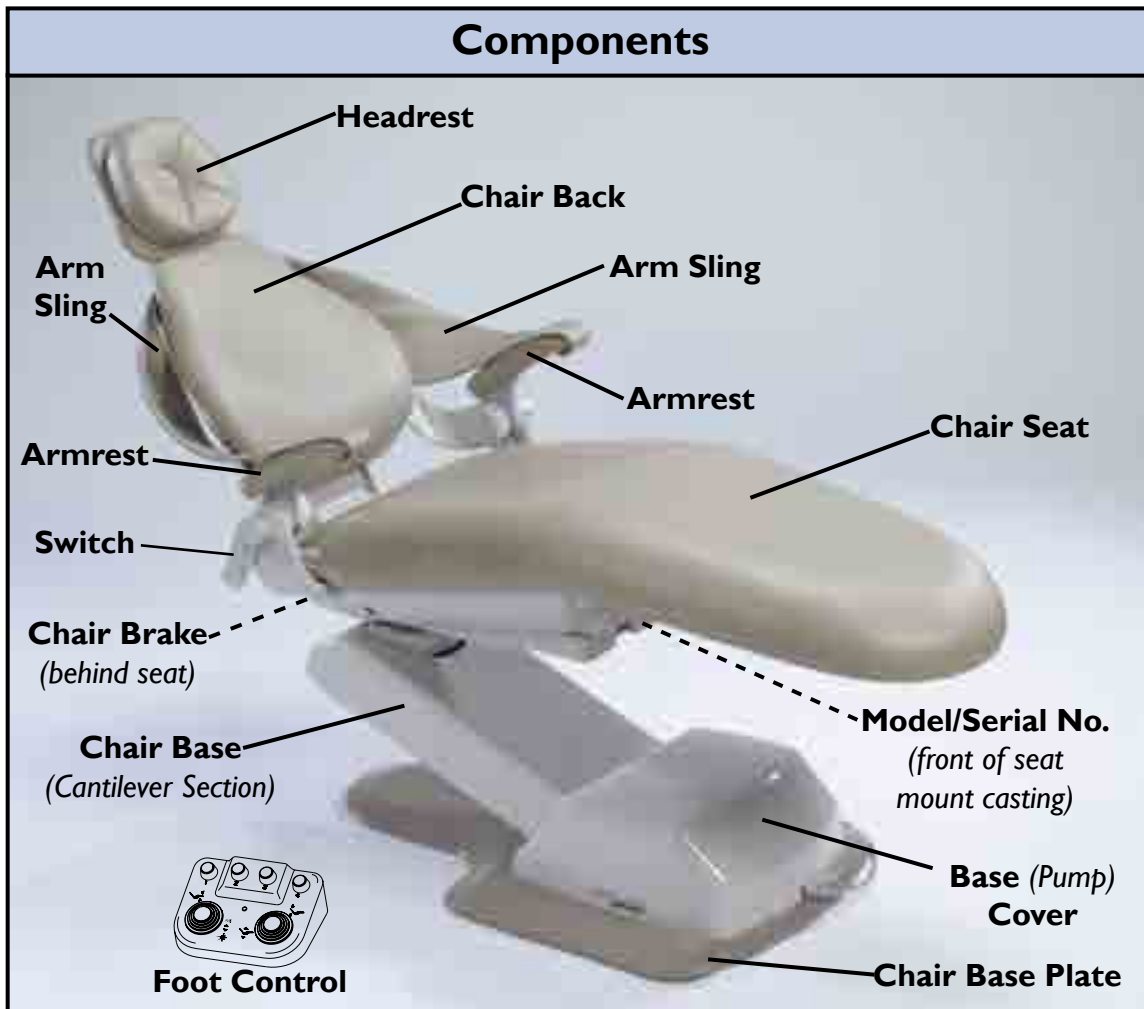
### WARNING

To prevent injury from falling or crush hazards, patients should be seated upright in the chair facing forward. Their head should be on the headrest with their feet at the toe of the chair. Their arms should be on the armrests or folded across their midsection.



### WARNING

Head rest options that contain magnets can interfere with the function of some medical devices, including pacemakers.



### Specifications

#### Environmental Specifications:

Storage/Transport Temperature:  
-29°C to 74°C (-20°F to 165°F)

Operational Temperature:  
5°C to 40°C (41°F to 104°F)

Relative Humidity Range: 0% to 95%

Indoor Use:

Altitude up to 3,000M (9,842')

Installation Category II

Pollution Degree 2

#### Electrical Power:

115V, 60 Hz, as applicable

220V, 50/60 Hz, as applicable

15 Amp fused Branch Circuit

#### Typical Assembled Weight w/delivery unit & light:

258 kg (570 lbs.)

#### Maximum Patient Weight:

136 kg (300 lbs.)

### Classifications



Medical - General Medical Equipment  
Certified as to electrical shock, fire  
and mechanical hazards only in  
accordance with UL 60601-1,  
CAN/CSA-C22.2 No. 601.1,  
CAN/CSA-C22.2 No. 60601-1 (2008) &  
ANSI/AAMI ES 60601-1 (2005).



- Type of protection against electric shock: Class 1 Equipment
- Degree of protection against electric shock: Type B Applied Parts. *The upholstery is considered an applied part.*
- Equipment not suitable for use in the presence of a flammable anesthetic mixture with air or with oxygen or nitrous oxide.
- Mode of operation: Duty Cycle: 1 min. ON, 6 min. OFF

The authorized European representative is:  
DentalEZ (GB) Ltd., Cleveland Way  
Hemel Hempstead, Hertfordshire, HP2 7DY,  
England

Phone: (01442) 269301

Attn: Mr. Jeff Whitehouse

### Explanation of Symbols and Signs:



= Caution



= Warning



= Biohazard



= Warning Dangerous Voltage



= Alternating Current



= Direct Current



= Type B Applied Part



= Protective Earth (ground)



= General Mandatory Action



= Refer to Manual (follow instructions)



= European Certification



= Serial Number



= Manufacture Date

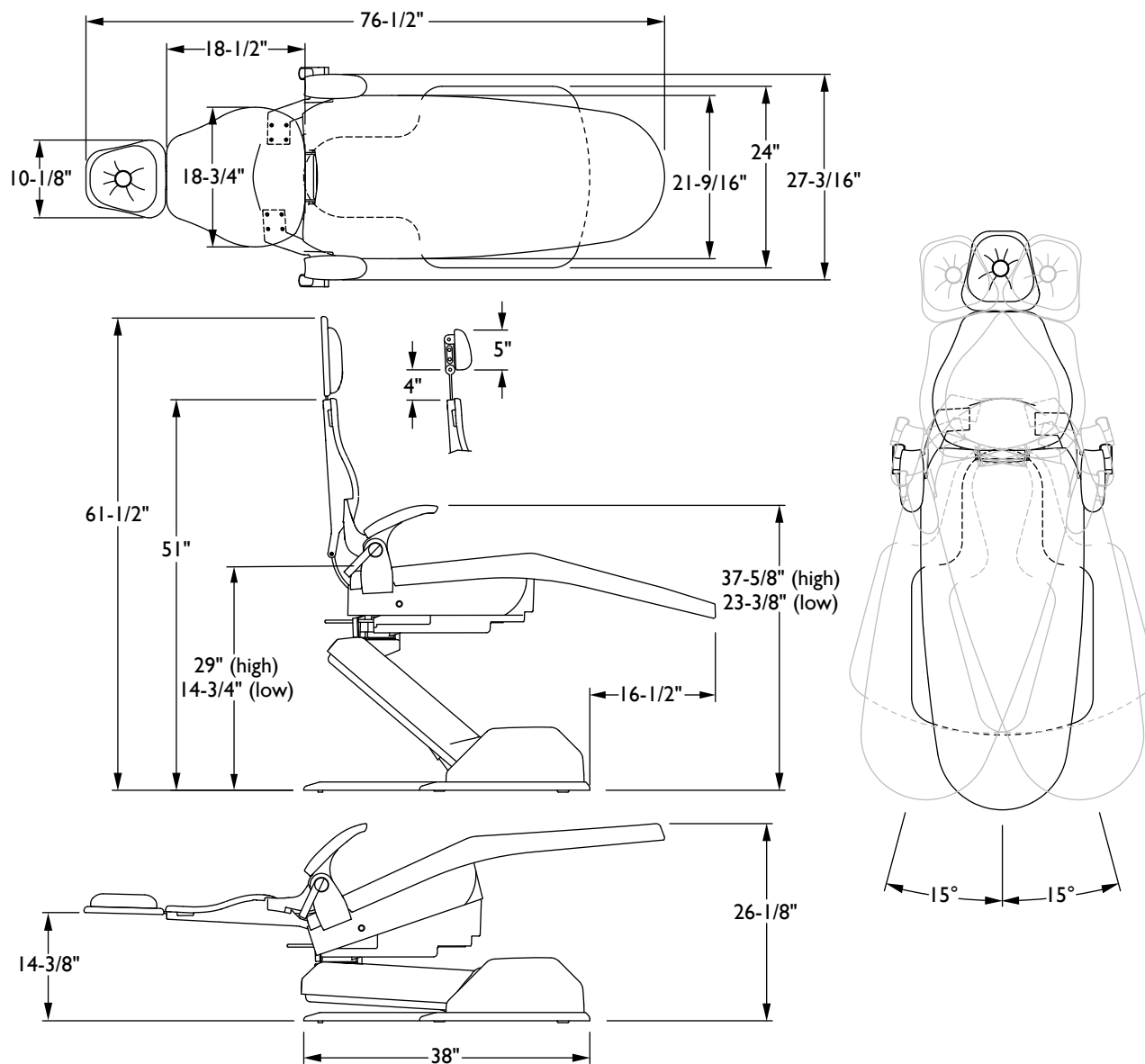


= Manufacturer

### NOTICE

- In accordance with Part 15 of FCC rules, this equipment was tested and complies with Class A digital device limits. These limits are designed to give equipment reasonable protection against detrimental interference when operated in a commercial environment.
- Medical electrical equipment needs special precautions regarding electromagnetic compatibility (EMC) and needs to be installed according to EMC information. *(See EMC Information, Pages 37 through 40.)*
- Mobile radio frequency (RF) communications equipment can affect medical electrical equipment.

## Dimensions





### WARNING



Before proceeding with electrical installation, all wiring **must** be in accordance with NEC and local electrical codes.



### WARNING



To avoid the risk of electrical shock, this equipment must only be connected to a supply mains with protective earth.



### WARNING

The plug cannot be located in a position that requires tools to access.



### WARNING

Do not modify the J/V-Generation Chair without permission from DentalEZ.



### WARNING

The use of ACCESSORY equipment not complying with the equivalent safety requirements of this equipment may lead to a reduced level of safety of the resulting system. Consideration relating to the choice shall include:

- use of the accessory in the PATIENT VICINITY
- evidence that the safety certification of the ACCESSORY has been performed in accordance to the appropriate IEC 60601-1 harmonized standard.



### CAUTION

Rating of main circuit breakers should be 20 Amp maximum.

### NOTICE

Isolating the unit from the supply mains is accomplished by unplugging the unit from the power receptacle.

### NOTICE

Wiring schematics are provided with this manual.

### NOTICE

Installation by an authorized DentalEZ dealer service technician is recommended.

### Unpacking

#### Tools Required:

- Pliers
- 1/2" Socket and Ratchet

#### Chair Carton

1. Using pliers, remove the staples that secure the shipping carton to the wooden pallet.
2. Remove the carton and packing inserts from the pallet by lifting up.
3. Using a 1/2" socket and ratchet, remove the four bolts that secure the chair base to the shipping pallet.



### CAUTION

If the chair is equipped with an **air glide option**, be careful not to damage the air bladder when lifting (**do not slide**) the chair off the pallet **and during placement** of the chair.

4. Grasp the chair mount casting and slide the chair off the pallet. (*If air glide equipped, do not slide.*)



### WARNING

The J/V-Generation Chair is shipped with a retaining strap to secure the base mechanism. **DO NOT REMOVE** this strap until the chair is out of the carton and in its position on the floor.

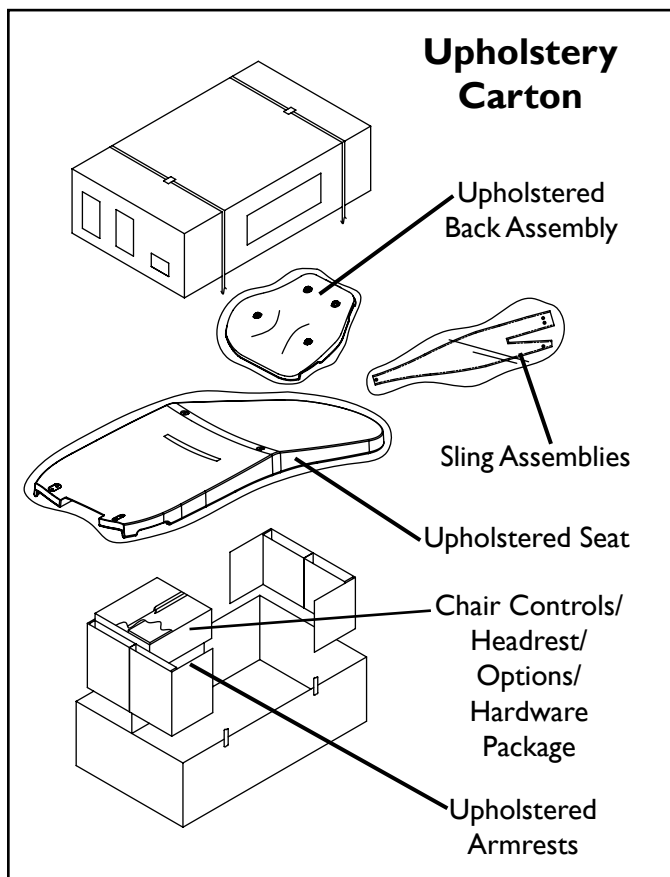
### NOTICE

For any questions about an order, please contact a DentalEZ Equipment customer service representative at **1-866-DTE-INFO**.

### Upholstery Carton

Remove and set aside the following items from the J/V-Generation Chair upholstery assembly packaging:

- Upholstered Back Assembly
- Sling Assemblies
- Upholstered Seat
- Upholstered Armrests
- Headrest
- Optional Foot Control
- Any ordered Options
- Hardware Package



### Chair Transport and Placement



#### WARNING

During transportation, the chair must be at its lowest height and all attachments must be secured in their lowest and most central positions possible. Failure to comply may result in injury and/or damage to equipment.



#### WARNING

**DO NOT** position the chair any place where it would interfere with unplugging the chair power cord.



#### WARNING



To prevent injury as a result of chair tipping, chair must be placed on a smooth, hard and level floor.

1. Taking into consideration the J/V-Generation Chair's specifications (*found on Page 3*) and dimensions (*found on Page 4*), position the chair in its permanent location.



**NOTE:** Make sure the chair is placed where nothing will interfere with its movement.

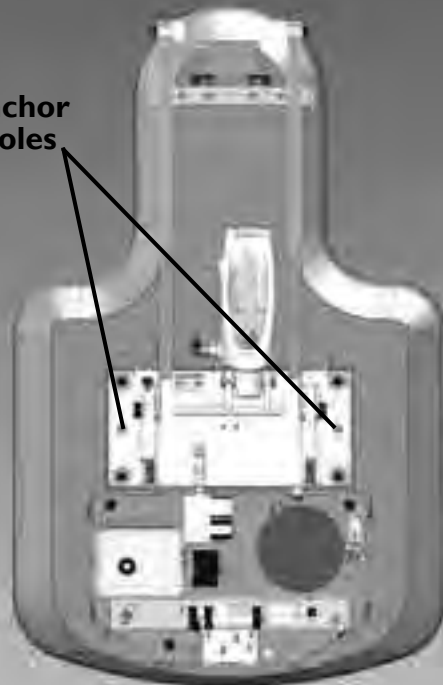
2. Remove the retaining strap that secured the base mechanism during shipment.



#### WARNING

Before mounting a delivery unit, it is recommended to anchor the chair to the floor for optimal stability.

Anchor Holes



**NOTE:** The base cover must be removed before anchoring the chair.





### WARNING

**DO NOT CONNECT** the chair **POWER** cord until all shipping hardware is removed.

### Tool Required:

- Phillips Screw Driver

### Special Installation Mode

The J/V-Generation Chair is shipped in a special installation mode. In this mode, just the chair base rises to its upper limit without the use of a controller.

When the chair power is connected, the chair base will automatically rise until it contacts the base upper limit switch and stop. Then, the chair base will lower itself slightly to its final resting position.

While the chair is in this special installation mode, it will emit a constant fast beep. Even after the base has stopped its motion, this beep will continue as a reminder that the chair is in its special mode.

Raising the chair base will give better access to the base cover rear screws making removal of the base cover easier. It will also provide extra work space to service the chair or install any chair-mounted units.

To take advantage of this special installation mode, perform the following six steps:

1. After all shipping hardware is removed and the chair is in its permanent location, connect the chair power cord to the required power source.
2. The chair base will automatically rise as described above.
3. After the chair releases itself from the upper limit switch, unplug the chair power cord.

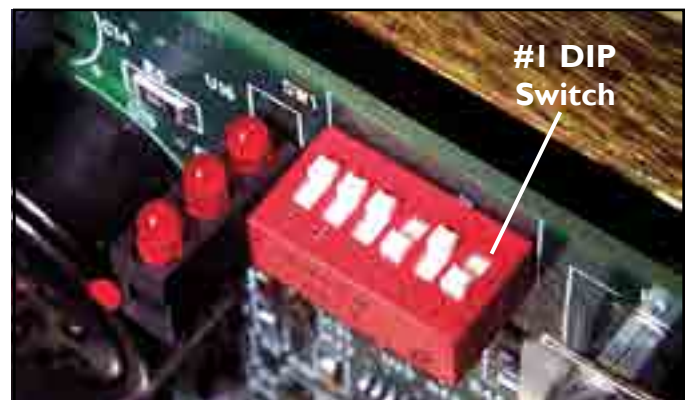
**NOTE:** To stop the base at any desired position less than its final resting position, simply disconnect the chair power cord.



4. Using a Phillips screw driver, remove the four screws that secure the base cover.
5. Gently lift off the base cover and set it aside.

**NOTE:** The base cover remains off the chair until installation is complete.

6. To take the chair out of its special installation mode, make sure the chair power is **disconnected** and set the #1 DIP switch located on the main control board to the **ON** position.



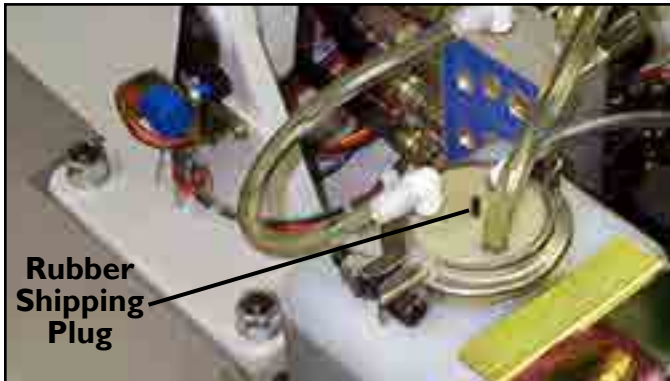


### Hydraulic System Plug

#### NOTICE



The hydraulic system is shipped with a plug in the reservoir to prevent spillage during shipment. This plug **MUST BE REMOVED** prior to operating the chair.



Rubber Shipping Plug

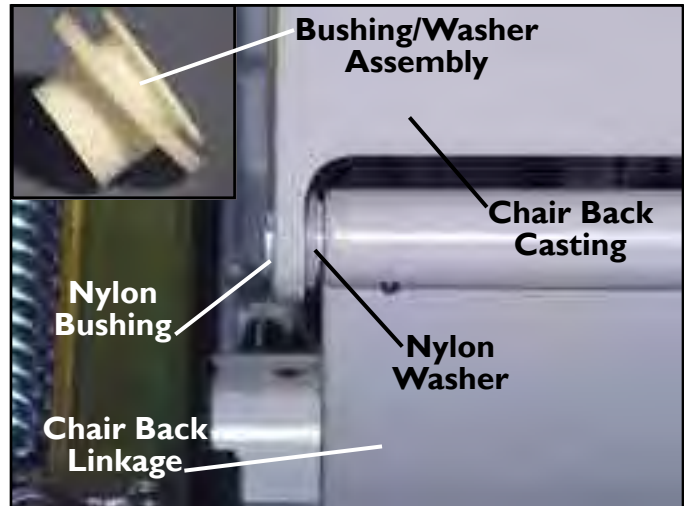
1. After taking off the base (pump) cover, remove the rubber shipping plug from the hydraulic system reservoir vent hole.
2. Leave the plug on top of the reservoir cap for future use if necessary.

**NOTE:** Oil level is factory set.

### Chair Back / Link Connection

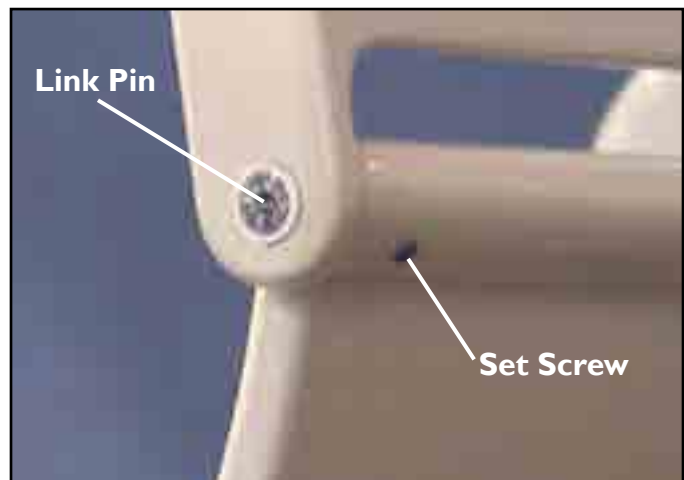
**NOTE:** The chair back is shipped disconnected from the chair back linkage.

1. Place a nylon washer on each nylon bushing. (See insert picture top next column.) Then insert the bushing/washer assemblies into both sides of the chair back casting. (The washer of the bushing/washer assembly should be mated to the inner sides of the chair back casting.)
2. Lift up the chair back casting and the chair back linkage and align the holes. Then while facing the back of the chair, insert the link pin, beveled end first, through the nylon bushing/washer assembly on the left side.



**NOTE:** The link pin should be flush with the chair back surface with the threads exposed. If necessary, tap the link pin lightly with a mallet.

3. Insert the other link pin, beveled end first, through the nylon bushing/washer assembly on the right side.
4. Insert two set screws into the tapped holes in the chair back linkage and tighten to lock the link pins into position.

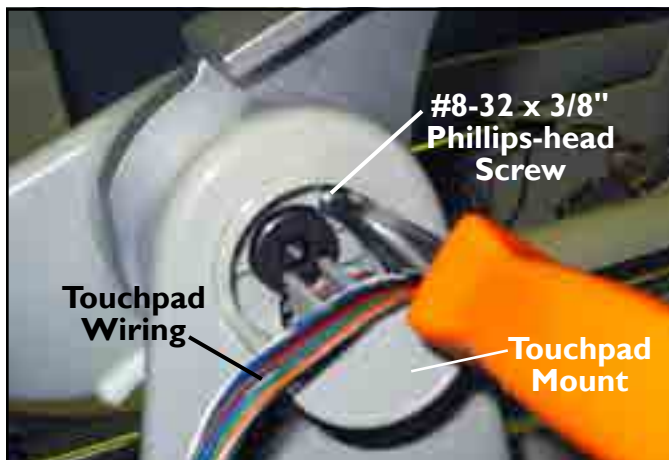


**NOTE:** If removal of the link pins is necessary, simply loosen (but do not remove) the two set screws, and thread the #8-32 x 3/8 pan-head screws (found taped to the chair back casting) halfway into each link pin. Then using pliers, pull the two link pins out. Leave the screws in the threaded holes of the pins for safekeeping.

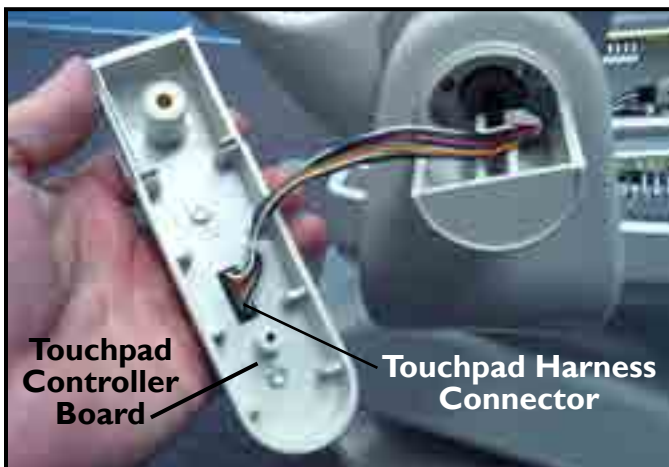
### Side Mount Chair Controls

**NOTE:** To eliminate risk of accidental breakage during shipment, the two side-mounted chair controllers are not attached to the chair.

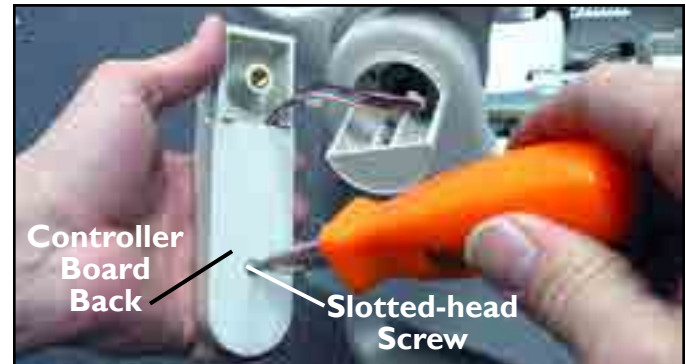
1. Use one #8-32 x 3/8" Phillips-head screw to attach one of the plastic touchpad mounts to the outside of the chair arm support.



- a. Orient the mount so that it is slanted with the side facing the rear of the chair is in a lower position than the side facing the front of the chair.
- b. The touchpad wiring should be routed through the open side area of the mount.
- c. Repeat steps to attach second mount on opposite side of the chair.



2. Attach the touchpad harness connector to the touchpad controller board. Then repeat for opposite side.



3. Using the supplied slotted-head screws, attach the backs to the controller boards.



4. Attach each touchpad controller to the touchpad mount by inserting a 1/4-20 x 1-1/4 oval head screw from the bottom of the touchpad mount into the bottom of the touchpad controller, then tighten the screw.

### CAUTION

Before connecting the chair power, make sure hands, all shipping hardware and tools are clear of the chair's moving mechanisms.

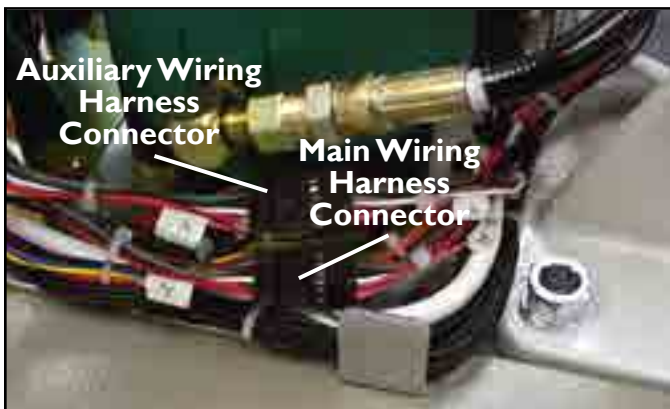
5. Connect the chair power. (The chair will emit two short beeps and the LEDs in the two side mount chair controls will light up to indicate the chair is on.)
6. Using the side mount chair controls, test all the functions of the chair.

### Delivery Units

Install chair-mounted and Magellan-style delivery units according to the manufacturer's instructions supplied with the unit.

### Auxiliary Controller Options

The J/V-Generation Chair's primary controllers are located on both sides of the chair's arm supports. The connections for these controllers are labeled **M** (*main*) on the chair wiring harness. One controller can be added to the chair and should be attached to the chair wiring labeled **A** (*auxiliary*). For installation of the additional controller follow the instructions supplied with the control package. If an auxiliary controller is added, the DIP switch settings on the main control board will need to be set before the controller is recognized (See the DIP Switch Settings, Page 22.)



### Foot Control

The foot control harness must be routed through the cord-retaining bracket, which is located underneath the cantilever section. (For more information, refer to the instructions supplied with the foot control package.)

### Unit Mounted Touchpad

A touchpad can be mounted on the delivery head of a Galaxy™ chair mounted unit. (For more information, refer to the instructions supplied with the touchpad control package.)

### Options

#### Air Glide

**NOTE:** If the air glide option was ordered, the air regulator was attached to the base chassis prior to shipment of the chair.

### NOTICE



For proper air glide operation, the floor **MUST BE LEVEL** and have a smooth, hard and non-obstructive surface.

1. Place the J/V-Generation Chair on a smooth, hard and level (*vinyl, tile or terrazzo type*) floor.
2. Connect the air glide tubing to a regulated air supply source, *usually 552 kPa (80 PSI) on most dental units.*



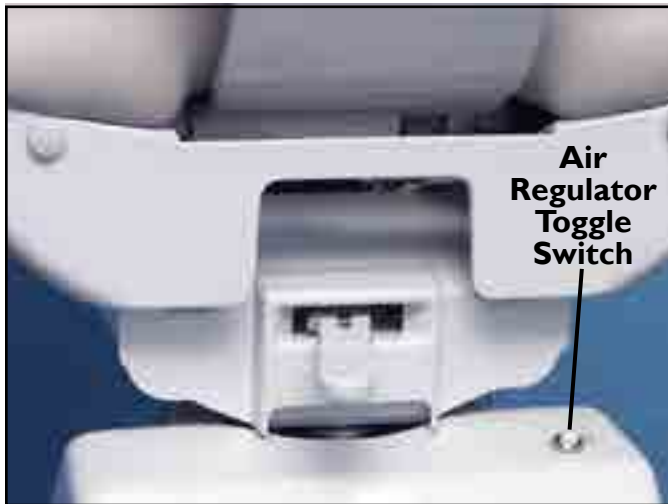
### CAUTION

To prevent air caster damage, **DO NOT EXCEED 138 kPa (20 PSI)**. If bouncing should occur, reduce the air pressure as required.



3. Adjust the air regulator located on the base chassis to 104-138 kPa (15-20 PSI).





4. Actuate the air regulator toggle switch at the rear of the chair on the base cantilever section cover.
5. Check for proper air glide operation.
6. Make sure the doctor and staff receive proper air glide feature operation instructions. (*See Operation, Optional Features, Page 19.*)

### Light Receptacle

An AC power connector is supplied with each J/V-Generation Chair to accommodate a light (up to 2 amps). The connector is located on the right side of the chair mount. A light having the proper connector can attach directly to the AC power connector, or a light receptacle plug can be installed. To install the J/V-Generation Chair light receptacle option, proceed with the following steps:

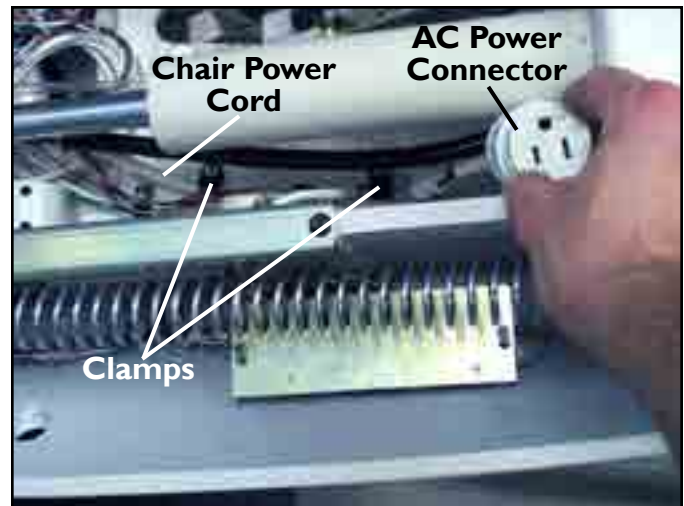
1. Raise the seat to its full **UP** position.



### CAUTION

Use only classified dental operating light, **2 amp maximum**.

2. Place the back in its full **UP** position.



### WARNING



To prevent any chance of electrical shock, always disconnect power when indicated.

3. **Disconnect** the chair power.
4. Connect the light receptacle connector to the chair AC power connector.
5. Using a 1/4" clamp and #10-32 x 3/8" screw and lock washer, secure the light receptacle cord to the chair mount casting.
6. Arrange the chair power cord so there is no slack and make sure the cord does not come in contact with any of the chair's moving parts. Then, if necessary, adjust the clamp that secures the chair power cord.

### Auxiliary Light Relay

**NOTE:** *There are three different light relays that can be installed depending on the application:*

- The **120 VAC** relay is used with a light that requires a 120 VAC connection to its transformer.
- The **220 VAC** relay is used with a light that requires a 220 VAC (single phase) connection to its transformer.
- The **24 VAC** relay is used with a DentaleZ Lumina™ Light and power module package. The Lumina light connects directly to the power module.

 <b>CAUTION</b>	
	Make sure the voltage and amperage ratings for the light relay installed is correct for the light package. <i>(The relay ratings are printed on the side of the relay.)</i>

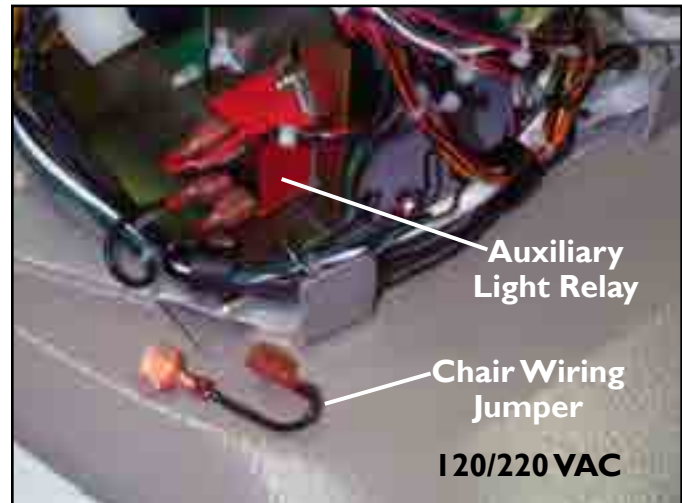
1. Raise the chair base to its full **UP** position.

 <b>WARNING</b>	
To prevent any chance of electrical shock, always disconnect power when indicated.	

2. **Disconnect** the chair power.
3. Review the wire schematic printed on the side of the relay. *(Take note of the positions for the DC positive (+) and negative (-) connections. There are two male 3/16" spade connectors on the relay.)*
4. Using the screws and nuts supplied with the auxiliary light relay, mount the relay to the main control board mounting plate.
5. Plug in the DC relay wires according to the schematic. *The red/white positive (+) and black negative (-) wires with female 3/16" spade connectors are located on the wiring harness above the relay.*

6. For 120/220 VAC connection do the following steps:

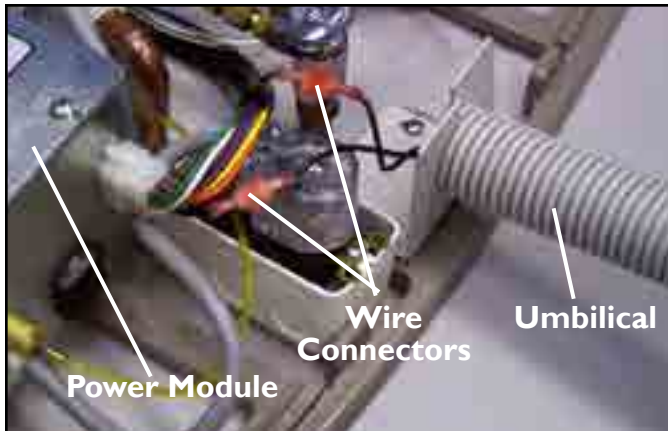
- a. Locate the jumper in the black AC wiring below the relay and remove the short black jumper with the male 1/4" spade connectors.



- b. Plug the two female 1/4" spade connectors into the male 1/4" spade connectors on the relay.
  - c. Proceed to **Step 8**.
7. For 24 VAC connection do the following steps:
    - a. Remove the four #10 screws that secure the utility service center (USC) cover and take off the cover.

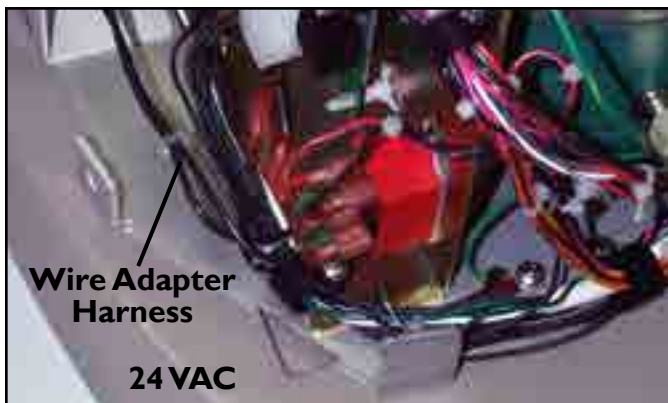
**NOTE:** *The Lumina light has two AC lines for low and high light intensities. The relay turns on and off the common wire to the light's two AC lines.*

- b. Locate the two wire connectors on the black ground wire in the power module wire harness. Then unplug the two connectors from each other.



**NOTE:** In the kit, one end of the wire harness adapter should have one tab and one receptacle connector to match the connectors on the power module harness. The other end should have two receptacle connectors. These connectors will plug onto the relay.

- c. Connect the wire adapter harness to the wire connectors on the power module harness.
- d. Route the wire adapter harness through the umbilical going to the chair.



- e. Plug the two wire connectors onto the relay.
  - f. Replace the USC cover using the four #10 screws previously removed.
8. **Reconnect** the chair power.

9. After a light has been installed and set to the **ON** position, do the following to check the operation of the auxiliary light relay:
- a. Depress the auxiliary light relay button once on the touch pad control. (*Pressing the auxiliary light relay button toggles the on/off state of the light.*)
  - b. One short beep will sound to alert the operator the light state has changed.

### — REMINDER —

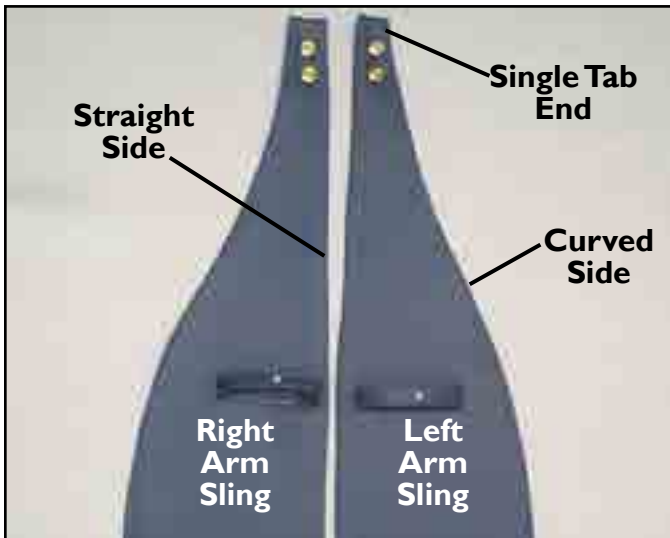
Replace the base (pump) cover using the four Phillips-head screws previously removed.



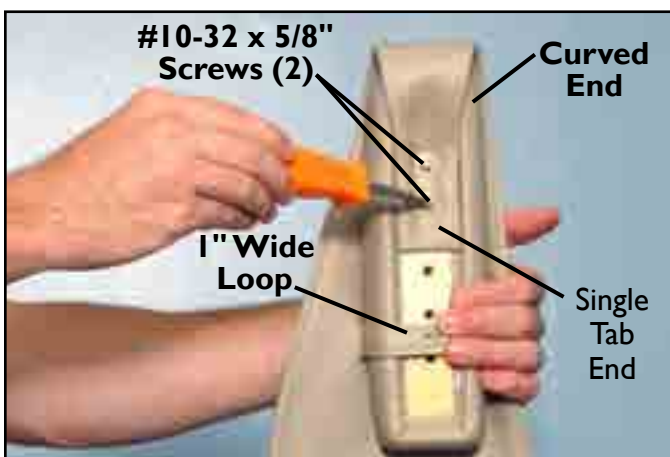
### Chair Upholstery

#### Armrests & Slings

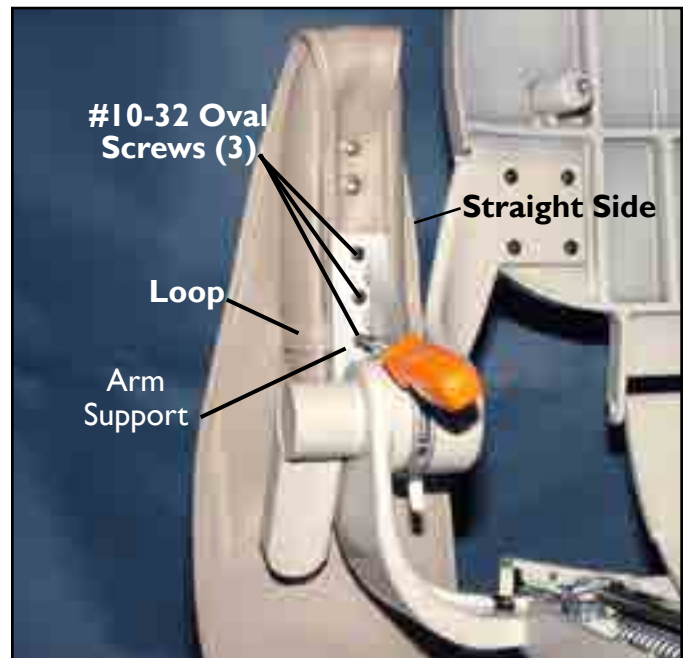
1. Determine the designation of the right and left arm sling (*straight side towards chair, curved side outward*).



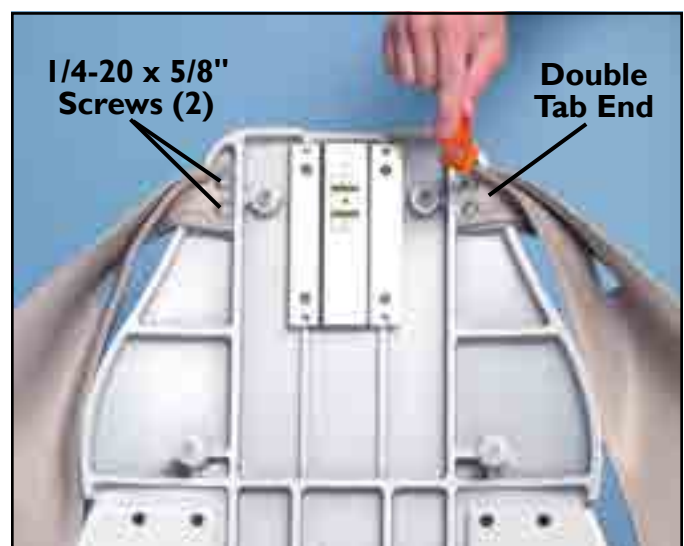
2. Slide an armrest (*upholstered side down, with rounded end of armrest towards single tab end of sling*) through the 1" wide loop on the back of each arm sling.
3. Align the two eyelets at the single tab end of the sling to the front holes at the curved end of the armrest. Then attach the slings to each armrest using two #10-32 x 5/8" screws.



4. Align the hole in the 1" wide loop over the bottom hole of the armrest. Then using three #10-32 oval-head screws attach each upholstered armrest assembly to the arm supports. Make sure the bottom screw passes through the hole in the loop.

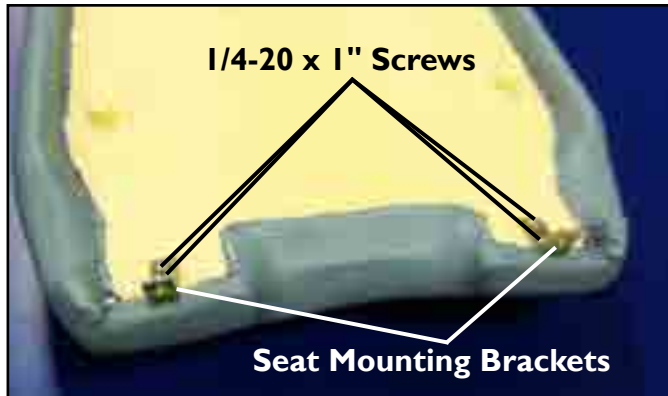


5. Using two 1/4-20 x 5/8" screws attach the double tab ends of each arm sling (*with material extending outward*) to the chair back casting.



### Seat Cushion

1. Using four 1/4-20 x 1" screws, attach both seat mounting brackets to the seat frame.



2. Place the upholstered seat cushion on the seat mount casting.
3. Attach the front of the chair seat cushion to the underside of the seat mount casting using two 1/4-20 x 2-1/4" screws.



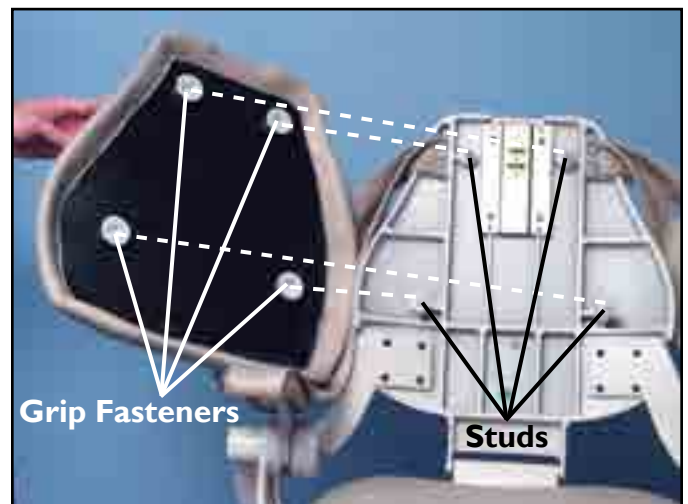
4. Slide decorator plastic covered caps on two 1/4-20 x 1" screws.
5. Attach the back of the chair seat cushion to the back of the seat mount casting using the two 1/4-20 x 1" screws with plastic caps. Then snap the decorator cap covers in place.



### Back Upholstery

**NOTE:** Make sure the blind grip fasteners are firmly secured to the back of the upholstered chair back.

1. Align the two upper and two lower blind grip fasteners on the upholstered chair back to the studs on the chair back casting.
2. Firmly press each blind grip fastener onto its corresponding stud.

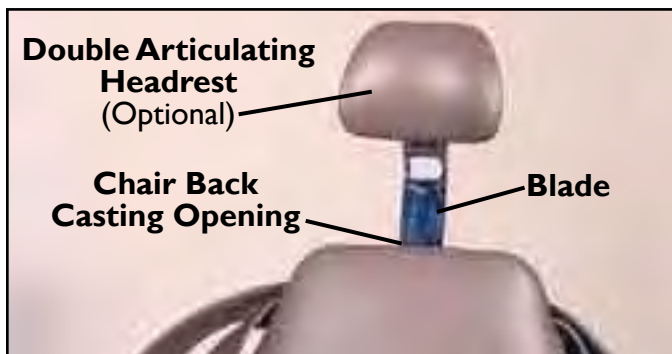
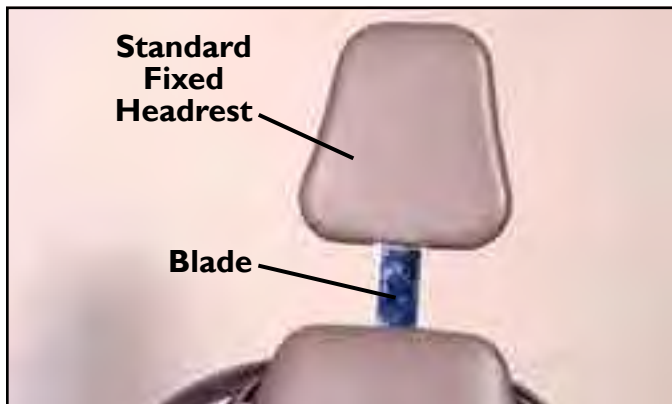


**NOTE:** Make sure the arm sling tabs are tucked in neatly.

3. Tug on each stud location to ensure the upholstered chair back is secure.

### Head Rest

1. Slide the blade of the standard fixed headrest or the optional double articulating headrest into the opening of the back casting.



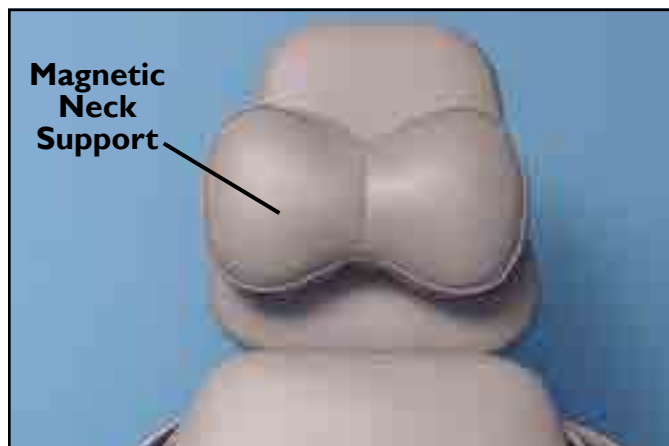
2. Place the magnetic headrest cushion or magnetic neck support on the chair or the fixed headrest of the chair.



### WARNING



The headrests pictured below contain magnets, which can interfere with the function of some medical devices, including pacemakers.. A minimum of 4" distance is required to reduce the magnetic field level below 10 gauss.



### Manual Positioning

Manual positioning of the J/V-Generation Chair is accomplished by using the touchpad controls located on each side of the chair, the foot control or the delivery unit touch pad control. The J/V-Generation Chair can be operated using one or two separate controls. To operate these controls:

1. Select the direction of travel.
2. Depress and hold the corresponding button.
3. The chair will move to a factory-set travel limit, or run until the directional button is released.

### Automatic Positioning

#### Programming Auto Positions

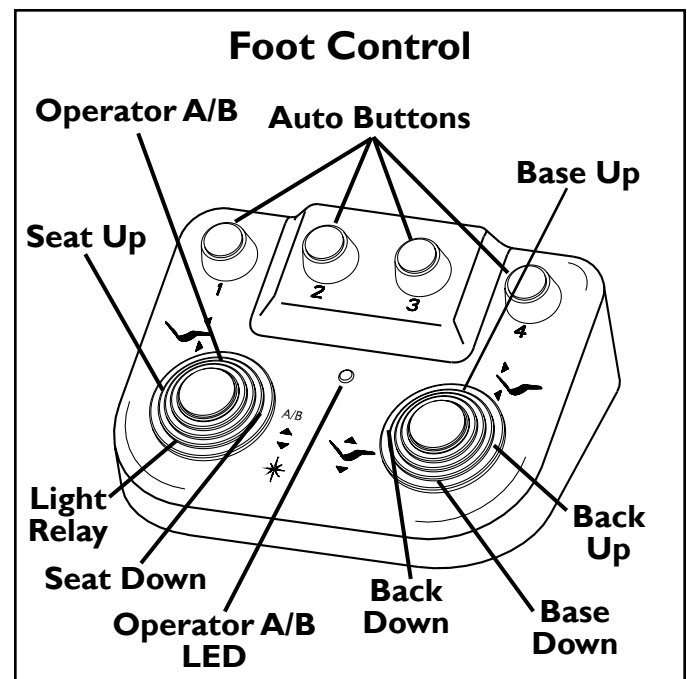
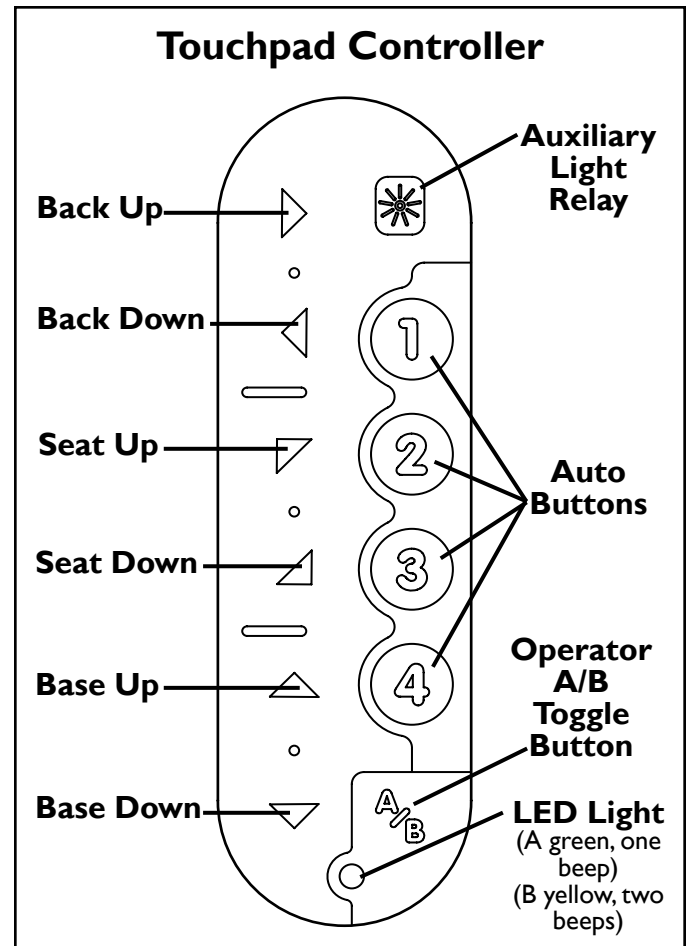
The J/V-Generation Chair back switch controls, the foot control and unit touch pad control are capable of executing eight auto positions (four on **A** mode indicated by a green LED and four on **B** indicated by a yellow LED).

To establish the pre-sets, refer to the appropriate J/V-Generation Chair switch control illustration and perform the following steps:

1. Determine **A** or **B** user by depressing the **A/B** toggle button. The **A** (green) or **B** (yellow) LED will light and one beep will sound for **A** mode and two beeps will sound for **B** mode.
2. Situate the chair in the desired auto position.
3. Press and hold the desired auto button (1, 2, 3 or 4) for approximately five seconds.

**NOTE:** The chair will beep once when the auto button is first depressed and beep again after the program is accepted.

4. Repeat Steps 1-3 to program the other three positions.





### Activating Auto Positions

To activate the auto positions:

1. Determine **A** or **B** user by depressing the **A/B** toggle button. The **A** (green) or **B** (yellow) LED will light and one beep will sound for **A** mode and two beeps will sound for **B** mode.
2. Depress the #1, 2, 3 or 4 button once on the back switch control, foot control or the unit touch pad control.
3. A beep will sound.
4. The chair will automatically stop in the programmed position selected.

**NOTE:** *Pressing any button on a chair control module while the J/V-Generation Chair is moving to a programmed position will immediately stop the movement of the chair, and three short beeps will sound. To continue and complete the automatic positioning of the chair, simply press the desired position button a second time.*

### Reprogramming Auto Positions

To change a programmed position, simply maneuver the J/V-Generation Chair to the desired position and follow the Programming Auto Positions instructions described earlier in this Section.

**NOTE:** *Reprogramming a new auto position spontaneously erases the old position.*

### Controller Functions/Modes

#### Controller Self-Calibration

When power is first connected to the chair, each attached controller having its associated DIP switch set to the **ON** position is tested and calibrated.

If a controller does not pass the calibration test, its commands are ignored and an associated LED code is generated letting the user know the controller failed the calibration test.

While the chair is idle, approximately every 15 minutes, the attached controllers are tested and calibrated to ensure they are working as expected.

### Command Time-out

When a function is moved or an auto position is activated, the chair assumes movement completion will take no longer than 45 seconds.

If a function button has been held down or an auto position has not completed in this allotted time, the chair will reset itself and restart as though it were being powered up.

If a button is stuck on a controller, it will fail the calibration test when the chair restarts and the original command will be ignored.

If an auto position was activated and for some reason could not be completed, the chair will not continue trying completion of this command when the chair restarts.

### Silent Mode

Anytime a function position button is pressed, a short beep sounds letting the operator know a function move has started. These short beeps can be silenced by changing the #3 DIP switch to the **OFF** position. (See Section VII, Dip Switch Settings for details.)

### Potentiometer Override Mode

In the event one of the three potentiometers used to measure each function's position on the chair cannot be read, the chair will automatically switch to a manual-only mode. In this mode, the chair can only be manually positioned, and the affected function's travel limits will be its limit switch position or physical limit.

A constant fast beep will sound while an affected function is being moved to alert the operator the function requires service. When the affected function is idle, no beep signal will sound.

All other functions that are operating normally will maintain their programmed travel limits without audible signals.

Auto positions cannot be set or activated in this mode because at least one of the function's positions cannot be measured.

If any auto position buttons are pressed, the chair will sound three short beeps to indicate auto positioning is not available and the chair is in manual-only mode.

### Standard Features

#### Base Lowering Safety

The following describes how this feature operates:

1. When the base cantilever section lowers and contacts an obstruction, the cover on the underside of the cantilever section moves up and activates safety switches.
2. Motion of the base stops immediately and the chair emits a constant short warning beep.

**NOTE:** *As long as the safety switches are activated, the base will not lower any further. All other chair functions, except auto programs, are still available. If the chair is moving to an auto position and the base cover moves up activating the safety switches, auto positioning will stop.*

3. Moving the base up and off the obstruction deactivates the safety switches and silences the warning beep.

#### Chair Arms

Both of the J/V-Generation Chair's arms lift to allow easy patient entry and exit.



#### Chair Rotation

The J/V-Generation Chair is capable of swiveling 15° to either side of its center position. To swivel the chair:

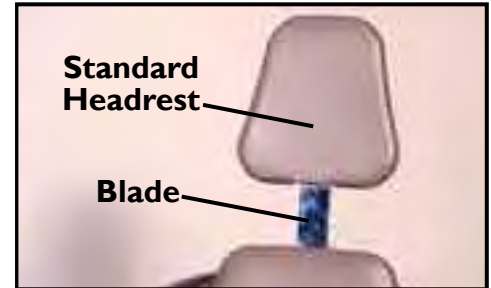
1. Release the chair brake located on the back of the chair seat casting by moving the brake handle completely to the left.



2. Swivel the chair to the desired position.
3. Lock the chair brake by moving the brake handle to the right.

### Standard Headrest

Firmly push down or pull up the blade from the chair back to change the headrest height.

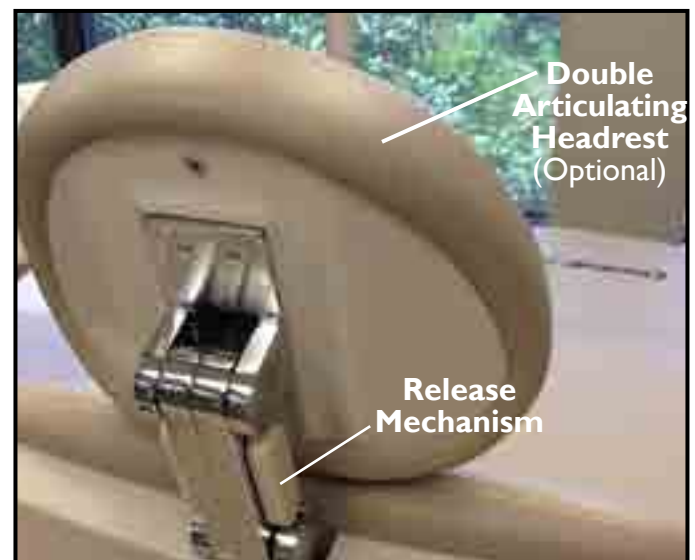


### Optional Features

#### Double Articulating Headrest

To position the double articulating headrest:

1. While facing the back of the headrest, fully depress the release mechanism.
2. Keep the release mechanism depressed and tilt the headrest until the desired position is reached.
3. Release the mechanism to lock the headrest in place.



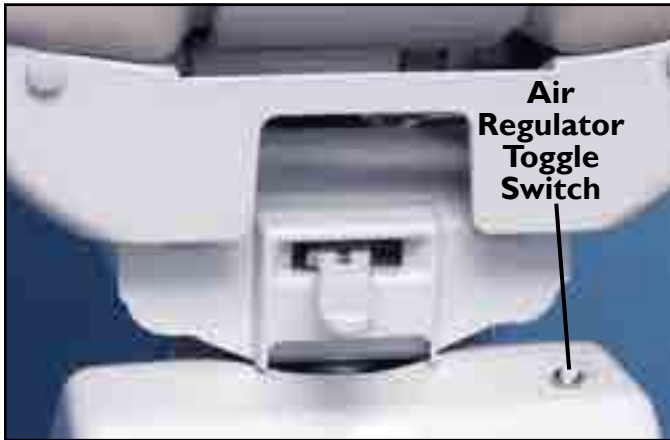
**NOTE:** *The use of disposable headrest covers is recommended to prevent soiling of the headrest. These covers may be purchased through a local dental supplier.*



### Air Glide

The air glide option aids the operator in repositioning the chair. To operate the air glide option:

1. Make sure the chair is on a smooth hard, level and non-obstructive surface.
2. Activate the air regulator toggle switch on the base cover at the rear section of the chair.



3. The rear of the chair base is supported by an air pillow and lifts off the floor.
4. When the base rear is raised, it allows the rollers on the front of the base plate to contact the floor.
5. While the chair is supported only by the rollers and air pillow, reposition the chair as desired.

### Auxiliary Light Relay

The auxiliary light relay allows the operator to turn on an attached light and then control its on/off state using the touch pad control. To operate the auxiliary light relay option:

1. Depress the auxiliary light relay button once on the touch pad control.
2. One short beep will sound to alert the operator the light state has changed.
3. Pressing the auxiliary light relay button toggles the on/off state of the light.

### Light Receptacle

*(See Installation Section, Page 10.)*



### WARNING

Improper cleaning and disinfection techniques could lead to cross-contamination. Therefore, prior to each use, properly clean and disinfect the chair's exterior in accordance with normal dental procedures.

Before attempting to clean or disinfect the J/V-Generation Chair, please read the following instructions carefully.

### NOTICE

The upholstery cleaning/disinfecting information contained in this Section is not a guarantee but represents highly recommended procedures obtained from the upholstery manufacturers.

### Cleaning



### CAUTION



Pay strict attention to all the cleaning product manufacturer's warnings and cautions.

Because any cleaning product may be harmful or irritating:

- Use protective gloves and eye protection in a well ventilated area.
- Do not inhale or swallow any cleaning product.
- Protect surrounding surfaces and clothing from exposure.

When using strong cleaning agents, such as bleach or alcohol, it is advisable to first test them in an inconspicuous area to be certain they will not damage the upholstery, plastic or metal surfaces of the J/V-Generation Chair. *(Results may vary under actual conditions.)*



### CAUTION

Cleaning agents, other than household bleach or rubbing alcohol, may contain harsh or unknown solvents. Also, these other cleaning agents are subject to formula changes made by the manufacturer without notice.

## Chair Upholstery

- To remove light soil:**
  - Prepare a solution comprised of one part neutral detergent (*household dish washing liquid*) and nine parts warm water.
  - Apply the liquid solution to the upholstery using a sponge or soft, damp cloth. *If necessary, a soft bristle brush may be used.*
  - Using a soft cloth dampened in clean water, wipe away any residue and dry.
- To remove heavy soil:**
  - Dampen a soft, white cloth with lighter fluid (naphtha) and rub the area gently.
  - Using a soft cloth rinse thoroughly with clean water and pat surface dry.
- To remove stains using bleach:**
  - Prepare a solution comprised of one part household bleach (sodium hypochlorite) and nine parts water.
  - Apply the bleach solution to the stain using a dampened, soft, white cloth.
  - Allow the bleach solution to puddle on the affected area, or apply a bleach solution-soaked cloth to the area for approximately 30 minutes.
  - Using a soft cloth dampened in plain water, rinse the treated area thoroughly to remove any bleach residue.
- To remove stains using alcohol:**
  - Dampen a soft, white cloth with rubbing alcohol and rub the stain gently.
  - Using a soft cloth dampened in clean water, rinse the treated area thoroughly to remove any alcohol residue and pat dry.
- To restore luster:**
  - Apply a light coat of spray furniture wax containing lemon.
  - Wait 30 seconds and lightly buff the surface using a clean, white cloth.

### Ultraleather™

- Spot clean with neutral detergent and water
- Air dry or dry quickly with warm setting of a hair dryer
- For stubborn stains, use mild solvent
- For extremely stubborn stains, an alcohol-based solvent can be used
- Dry cleanable by conventional methods using commercial dry cleaning solvents

*Ultraleather is a trademark of Ultrafabrics, LLC.*

### Plastic and Coated Metal Surfaces



### CAUTION

- **NEVER** use abrasives or petroleum-based cleaners on any plastic or coated metal surfaces unless otherwise specified.
- **DO NOT USE** alcohol based disinfectants on plastic surfaces.

#### 1. To remove ordinary dirt:

- Prepare a soapy solution comprised of neutral detergent (*household dish washing liquid*) and water.
- Using a soft cloth or sponge, apply this solution to the plastic and coated metal surfaces.

**NOTE:** To remove heavier dirt, apply *Formula 409®* or *Fantastik® Spray Cleaner*.

- Wipe area dry immediately using a soft cloth.

#### 2. To remove stubborn stains:

- Apply a mild abrasive such as toothpaste or liquid tooth polish using a soft, white cloth.
- Using a chamois or moist sponge, remove all traces of the mild abrasive.
- Dry the area thoroughly to prevent marking.

*Formula 409 is a registered trademark of the Clorox Company. Fantastik Spray Cleaner is a registered trademark of the Texize Division of Dow Products, Inc.*

### Metal Surfaces and Chrome Parts

For ordinary dirt, fingerprints, etc., use a non-abrasive, all-purpose cleaner.

## Disinfecting

### Upholstery

The J/V-Generation Chair's upholstery is comprised of material from the following manufacturers:

#### MOR-CARE™ Collection from MORBERN

MOR-GUARD from MORBERN was developed to meet the increased demands of hospital, contract and institutional use. Offers enhanced resistance to most common chemicals used for sterilization and cleaning in medical environments. Contains both an antibacterial and antimicrobial agents to provide resistance to a wide range of bacteria.

#### Naugahyde® BeautyGard™ from UNIROYAL

Naugahyde brand fabrics, Spirit II and Neochrome II with advanced BeautyGard contains an agent to protect it against bacterial and fungal microorganisms. This product has been formulated to achieve a superior level of disinfectability with disinfectant products containing sodium hypochlorite (common household bleach) diluted 1:10.

#### Mayfair/Savoy with Permablok<sup>3</sup>® from Spradling®

Mayfair/Savoy fabrics with Permablok advanced vinyl protection contain an antimicrobial and antibacterial protection on an anti-stain finish that is easily cleaned. Mayfair/Savoy with Permablok provides exceptional disinfectability using a wide range of cleaning products.

#### Ultraleather™ from Ultrafabrics, LLC

- Disinfect with a 5:1 non-chlorinated bleach solution
- Potentially toxic aftercare not required

*MOR-CARE is a trademark of Morbern, USA Inc. Naugahyde is a registered trademark and BeautyGard is a trademark of Uniroyal Engineered Products, Inc. Permablok<sup>3</sup> is a registered trademark of Spradling International, Inc.*

### All Other Chair Surfaces

Cavicide™ is recommended for disinfecting all other surfaces of the J/V-Generation Chair. The use of any disinfectant, other than Cavicide, may cause premature staining, discoloration or damage to the J/V-Generation Chair's materials.

*Cavicide is a trademark of Micro Aseptic Products, Inc.*

## DIP Switch Settings

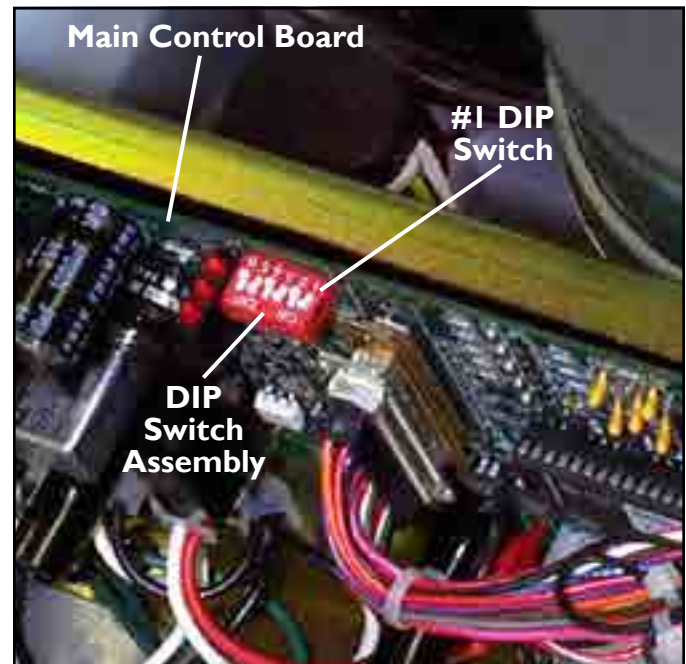
A DIP switch assembly, which is located at the top center of the main control board under the base cover, is used to set certain functions of the chair's electronic control package.

## NOTICE



Change DIP switches only while the chair power is **DISCONNECTED**. Once the chair power is reconnected, the main control board will recognize any changes made.

**NOTE:** The main control board expects at least one controller attached to the **M** (main) wiring connector. If there is no controller attached to either the **M** or **A** (auxiliary) connectors, the board will generate a service LED code that indicates one of the controllers needs checking.



DIP SWITCH	STATE	FUNCTION
#1	ON	Controller <b>M</b> is <b>ON</b> and the board assumes back switch controller is connected.
	OFF	Special Installation Mode (Base automatically rises when power is connected.)
#2	ON	Controller <b>A</b> is <b>ON</b> and the board assumes an optional controller is connected.
	OFF	Controller <b>A</b> is <b>OFF</b> and the board assumes no controller is connected.
#3	ON	Function command activation signal beeps are activated.
	OFF	Function command activation signal beeps are silenced.
#4	ON	Travel Limits Programming Mode
	OFF	Normal Operation Mode
#5	ON	Three-function Chair Mode: base, back and seat functions
	OFF	Two-function Chair Mode: base and back/seat functions
#6	ON	<b>MUST</b> be in <b>OFF</b> position.
	OFF	

## Beep Codes

The J/V-Generation Chair's electronic control package is designed to sound specific beep code signals to alert the operator of certain control conditions. Understanding the beep codes enables the operator to isolate the condition and take appropriate action.

Base conditions are indicated by a constant short beep; back conditions by two constant short beeps;

and seat conditions by three constant short beeps. Three short beeps indicate a function is not available when its button is pressed. A constant fast beep that sounds only when a function is moved indicates a potentiometer condition.

The beep code signal chart on the following page lists the audible sound, control condition and service action to take. The codes are also prioritized letting the user know that conditions listed above the indicated code are normal.

BEEP CODE	CONDITION	ACTION
Constant Fast Beep ( <b>FB</b> )	Special Installation Mode (base automatically rises)	Disconnect the chair power. Move <b>#1 DIP</b> switch to <b>ON</b> . Reconnect the chair power.
Constant Short Beep ( <b>SB</b> )	Base lower safety cover contacted and moved up activating switches ( <b>LS2 &amp; LS3</b> )	Move the base up and remove obstruction under cover.
	Cover is jammed	Move cover around until it is free then push the cover up to make sure it is working properly.
	Base upper limit switch ( <b>LS1</b> ) activated (base exceeded its upper travel limit)	Reprogram the chair's travel limits.
Constant ( <b>SB</b> )( <b>SB</b> )	Back upper limit switch ( <b>LS4</b> ) activated (back exceeded its upper travel limit)	Reprogram the chair's travel limits.
Constant ( <b>SB</b> )( <b>SB</b> )( <b>SB</b> )	Seat upper limit switch ( <b>LS5</b> ) activated (seat exceeded its upper travel limit)	Reprogram the chair's travel limits
	Seat lower limit switch ( <b>LS6</b> ) activated (seat exceeded its lower travel limit)	Reprogram the chair's travel limits.
Constant ( <b>SB</b> )	Auxiliary limit switch ( <b>LS7</b> ) wire connectors unplugged	Make sure connectors are plugged in securely.
	Auxiliary limit switch activated (user installed option)	Determine where the switch is installed and why it was activated. Then appropriately deactivate switch.
( <b>SB</b> )( <b>SB</b> )( <b>SB</b> ) When any control button is pressed (except auxiliary light relay)	Handpiece safety wire connectors unplugged	Make sure connectors are plugged in securely.
	Handpiece safety switch activated (user installed option)	Determine where switch is installed and why switch is activated. Then appropriately deactivate switch.
When any control auto button is pressed	Auto position program is not activated because one or more potentiometers are disconnected or out of range	Determine which potentiometer is locking out the auto programs by checking the service LED codes or by moving each function until a constant ( <b>FB</b> ) is signaled while the function is in motion. Check the indicated potentiometer's wiring and linkage for proper function. Then check the potentiometer resistance and voltage.
While in travel limits programming mode ( <b>#4 DIP</b> switch is <b>ON</b> and either <b>Auto 1</b> or <b>2</b> button is pressed)	Cannot program travel limits because one or more potentiometers are disconnected or out of range	Determine which potentiometer is locking out the travel limits program by checking the service LED codes or by moving each function until a constant ( <b>FB</b> ) is signaled while the function is in motion. Check the indicated potentiometer's wiring and linkage for proper function. Then check the potentiometer's resistance and voltage.
Constant ( <b>FB</b> ) only while a function is moving	The potentiometer on the activated moving function is disconnected or out of range.	Verify the suspected potentiometer by checking the service LED codes. Check the potentiometer's wiring and linkage for proper function. Then check the potentiometer's resistance and voltage.

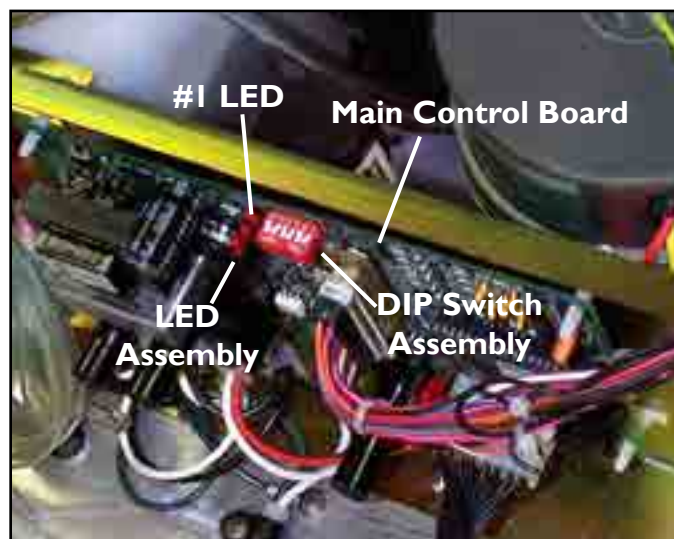


## LED Codes

There is a three-light LED assembly on the main control board that indicates each power up mode and various service conditions the chair may encounter. The LED assembly is located at the top center of the main control board (left of the DIP switch assembly) under the base cover.

The power-up codes are described in the table below.

A service condition LED code chart appears on the next page. The LED codes are prioritized from top to bottom letting the user know the conditions listed above the indicated code are normal.



## LEGEND

**LED States:** ● = On ○ = Off \* = Blinking

*(The LED nearest the main control board is number one.)*

	LED CODE	BEEP CODE	DIP SWITCH	MODE
PC Board	● ● ● ○ ○ ● ○ ● ○ ● ○ ○ ● ● ● ○ ○ ○	(SB)	#1 On, #4 Off	Normal Operating
	● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ○ ○ ○	(SB) (SB) (SB) (SB) (SB)	#1 On, #4 On	Travel Limits Programming
	* * *	Constant (FB)	#1 Off	Special Installation (base automatically rises)

## Service Instruction

If the area of concern is not addressed in this manual, contact your local DentalEZ full-service dealership. Please have the following product information available:

- Model Name: \_\_\_\_\_
- Model Number: \_\_\_\_\_  
*(found on the front of the seat mount casting)*
- Serial Number: \_\_\_\_\_
- Date of Installation: \_\_\_\_\_





LED CODE	CONDITION	ACTION
● ● ●	Special installation mode	Disconnect the chair power. Move <b>#1 DIP</b> switch to <b>ON</b> . Reconnect the chair power.
○ ○ ●	A/D converter failure	Replace the chair main control board.
○ ● ○	EEPROM failure	Replace the chair main control board.
○ ● ●	Handpiece safety wire connectors unplugged	Make sure connectors are plugged in securely.
	Handpiece safety switch activated (user installed option)	Determine where the switch is installed and why it was activated. Then appropriately deactivate the switch.
● ○ ○	Base lower safety cover contacted and moved up activating switches ( <b>LS2 &amp; LS3</b> )	Move base up and remove obstruction under the cover.
	Cover is jammed	Move the cover around until it is free, then push the cover up to make sure it is working properly.
	Base upper limit switch ( <b>LS1</b> ) activated (base exceeded its upper travel limit)	Reprogram the chair's travel limits.
● ● ○	Back upper limit switch ( <b>LS4</b> ) activated (back exceeded its upper travel limit)	Reprogram the chair's travel limits.
● ○ ●	Seat upper limit switch ( <b>LS5</b> ) activated (seat exceeded its upper travel limit)	Reprogram the chair's travel limits.
	Seat lower limit switch ( <b>LS6</b> ) activated (seat exceeded its lower travel limit)	Reprogram the chair's travel limits.
○ ● ○	Auxiliary limit switch ( <b>LS7</b> ) wire connectors unplugged	Make sure connectors are plugged in securely.
	Auxiliary limit switch activated (user installed option)	Determine where the switch is installed and why it was activated. Then appropriately deactivate the switch.
○ ○ ●	Base potentiometer ( <b>P1</b> ) is disconnected or out of range	Check the base potentiometer's wiring and linkage for proper function. Then check its resistance and voltage.
○ ● ●	Back potentiometer ( <b>P2</b> ) is disconnected or out of range	Check the back potentiometer's wiring and linkage for proper function. Then check its resistance and voltage.
● ● ●	Seat potentiometer ( <b>P3</b> ) is disconnected or out of range	Check the seat potentiometer's wiring and linkage for proper function. Then check its resistance and voltage.
● ○ ○	Controller <b>M</b> (main) will not calibrate	Check wiring for breaks or loose connections. Check for stuck switches.
		Make sure a controller is connected to the <b>M</b> wiring. If only one controller is used, it should be connected to <b>M</b> .
		Disconnect and reconnect chair power forcing controller calibrations. Replace controller if it still will not calibrate.
● ○ ●	Controller <b>A</b> (auxiliary) will not calibrate	Check wiring for breaks or loose connections. Check for stuck switches.
		If a controller is not connected to <b>A</b> , change <b>#2 DIP</b> switch to <b>OFF</b> so it will not calibrate.
		Disconnect and reconnect chair power forcing controller calibrations. Replace controller if it still will not calibrate.
○ ○ ○	Normal	

### Programming Travel Limits

#### Tools Required:

- Phillips Screwdriver
- Tape Measure

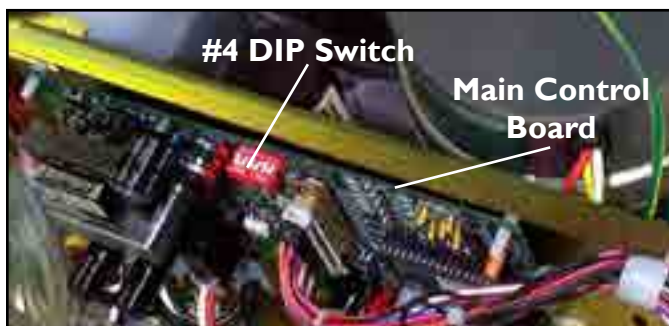
1. Raise the chair base and seat to their full **UP** position, and place the chair back in a halfway position.



### WARNING

To prevent any chance of electrical shock, always disconnect power when indicated.

2. **Disconnect** the chair power.
3. If the upholstered seat was installed, take it off by unsnapping the decorator plastic cover caps on the back and front of the chair seat mount casting and removing and retaining the 1/4-20 x 5/8" screws with plastic caps from the back and front of the chair seat cushion.
4. Take off the base (pump) cover by removing and retaining the four Phillips-head screws that attach it to the base plate.
5. On the main control board, flip the #4 DIP switch to the **ON** position. *(This will place the chair in its travel limits programming mode when the chair's power is reconnected.)*



**NOTE:** All three LEDs on the board will light up five times, along with a short beep each time, to indicate the chair is in its travel limits programming mode.

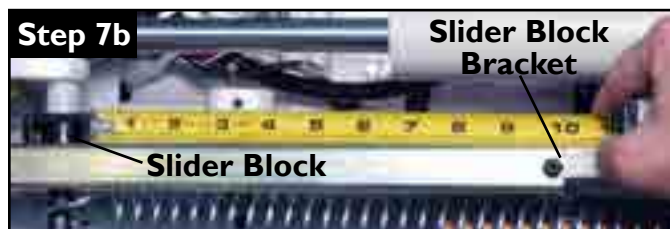
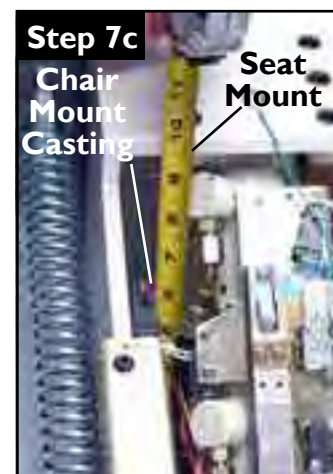
6. **Reconnect** the chair power.

**NOTE:** The upper and lower travel limit values specified are factory settings. Values within the ranges are valid depending on specific applications. Different travel limit values may be required to achieve adequate clearance for accessories attached to or near the chair.

**NOTE:** Any one of the two possible controls connected to the chair can be used to set the travel limits.

7. Perform the following steps to program the **upper limits**:

- a. Move the base up until the distance between the bottom of the chair mount casting and the top of the cantilever support casting measures between **23-1/4"** and **23-3/8"**.
- b. Move the back up until the distance between the edge of the slider block bracket and the front edge of the slider block measures between **10"** and **10-1/8"**.
- c. Move the seat up until the distance between the chair mount casting and the bottom edge of the seat mount casting measures between **9-1/2"** and **9-5/8"**.



- d. Press and release the auto #1 button on a control.



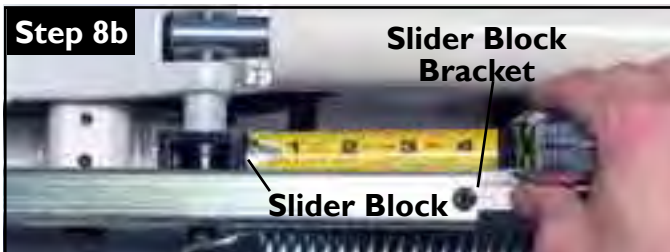
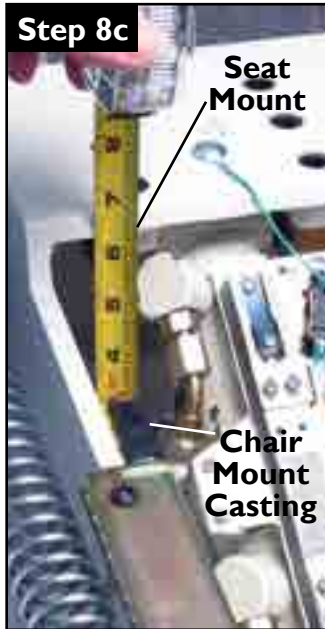
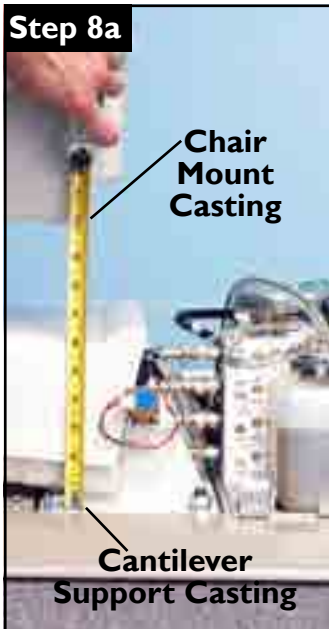
## CAUTION

Do not press the auto button for more than one second.

**NOTE:** A short beep will sound when the button is pressed, another will sound when the button is released. The second beep indicates the travel limits have been stored.

8. Perform the following steps to program the lower limits:

- a. Move the base down until the distance between the bottom of the chair mount casting and the top of the cantilever support casting measures between 10" and 10-1/8".



- b. Move the back down until the distance between the edge of the slider block bracket and the front edge of the slider block measures between 4" and 4-1/8".
- c. Move the seat down until the distance between the chair mount casting and the bottom edge of the seat mount casting measures between 6-1/8" and 6-1/4".
- d. Press and release the auto #2 button on a control.



## CAUTION

Do not press the auto button for more than one second.

**NOTE:** A short beep will sound when the button is pressed, another will sound when the button is released. The second beep indicates the travel limits have been stored.



## WARNING

To prevent any chance of electrical shock, always disconnect power when indicated.

9. **Disconnect** the chair power.
  10. Flip the #4 DIP switch back to the **OFF** position. (This will place the chair back into its normal operating mode.)
  11. **Reconnect** the chair power.
  12. Move each function to their programmed limits to verify they have been properly set. (Each function should stop before activating a limit switch or reaching a physical stop.)
- NOTE:** If a limit was adjusted to accommodate an accessory, make sure the resulting clearance is sufficient.
13. Replace the pump cover using the four Phillips-head screws previously removed.
  14. Replace the seat using the four 1/4-20 x 5/8" screws with plastic caps previously removed.
  15. Reprogram the auto positions.

### Control Valve Speed Adjustment

#### Tools Required:

- Phillips Screwdriver
  - Flat-head Screwdriver
  - Safety Glasses
1. Raise the chair base to its full **UP** position.
  2. Take off the base (pump) cover by removing and retaining the four Phillips-head screws that attach it to the base plate.

**NOTE:** Adjustable flow control valves, located in the hydraulic control valve, are used to set the chair function speeds. The base and back cylinders are single acting cylinders. They have two flow control valves each (UP and DOWN) to control their speeds. The seat cylinder is double acting and requires four flow adjustment valves. Valves marked **(PWR)** are for in coming fluid. Valves marked **(RET)** are for outgoing fluid. The (RET) valves are adjusted first to set a gross speed and the (PWR) valves are used for fine tuning the speeds. Once the (RET) flows have been set, they should not be readjusted.

**NOTE:** Function times given are based on a 200-pound person sitting in the chair.



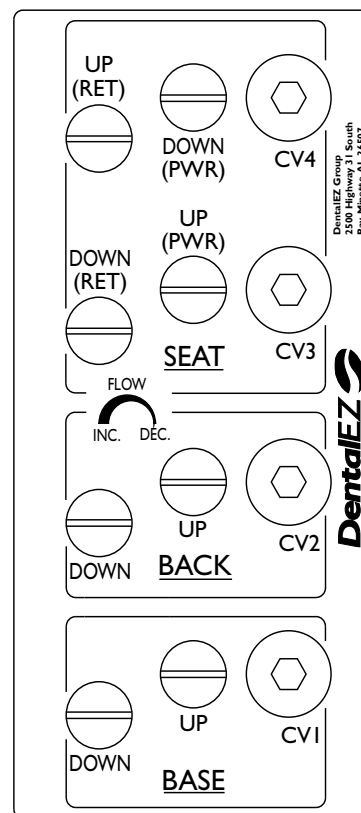
### WARNING



**WEAR SAFETY GLASSES** while adjusting the valve. Flow control valves should not be turned out farther than the top of their heads being even with the valve body surface.

Adjustment of the flow control valves beyond the valve body surface may result in oil leakage with uncontrolled motion of the chair and the possibility of a valve being ejected from the valve body.

- a. Move the base up and down adjusting the flow controls until it takes 12 seconds for the base to move either up or down the full travel.
- b. Move the back up and down adjusting the flow controls until it takes 12 seconds for the back to move either up or down the full travel.





- c. Adjust the UP (PWR) and DOWN (PWR) flow adjustment screws all the way open (counterclockwise). The valves are open when the top of the screws are approximately level with the valve body.
- d. Adjust the UP (RET) and DOWN (RET) flow adjustments all the way closed (clockwise).

**NOTE:** *With the flow adjustments closed all the way, the seat may not move at all until the valve is adjusted open a little.*

- e. Move the seat up or down while opening the corresponding (RET) flow adjustments.
  - f. Continue adjusting the flows until the seat moves from its full up and down positions in about seven seconds both ways.
  - g. Adjust the UP (PWR) and DOWN (PWR) flow adjustment screws all the way closed (clockwise).
  - h. Move the seat up or down while opening the corresponding (PWR) flow adjustments.
  - i. Continue adjusting the flows until the seat moves from its full up and down positions in about nine seconds both ways.
3. Raise the chair base up.
  4. Replace the base (pump) cover.

## Disposal of Equipment

### Disposal and Decommissioning of DentalEZ products:



**Note:** All local regulatory requirements for disposal and decommissioning of equipment apply.

**Electrical Salvage:** Remove all circuit board and electrical cabling for recycle as electrical salvage.

**Metal Salvage:** Remove all aluminum and steel components for recycle as metal salvage.

**Plastic Salvage:** Remove all plastic components for recycle as plastic salvage.



**Biologically Contaminated Salvage:** Cuspidor, waste lines from the cuspidor, and the oral extraction lines should be handled with precaution and disposed of appropriately.

**Non-Salvage Components:** All other material unsuitable for recycling should be disposed of properly.



Controls	
Part/Kit Name	Part/Kit No.
Delivery Head Touchpad Option	3658-384
Touchpad Assembly	3517-140
Touchpad Membrane Switch	3801-986
Touchpad Circuit Board	3801-761
Foot Control Option	3625-548
Back and Foot Control Circuit Board	3801-763
Foot Control Cord	3801-764
Light Relay Option (115 VAC)	3625-549
Light Relay Option (220 VAC)	3625-591
Light Relay Option (24 VAC for power module)	3625-596
Handpiece Safety Switch Option	3625-562

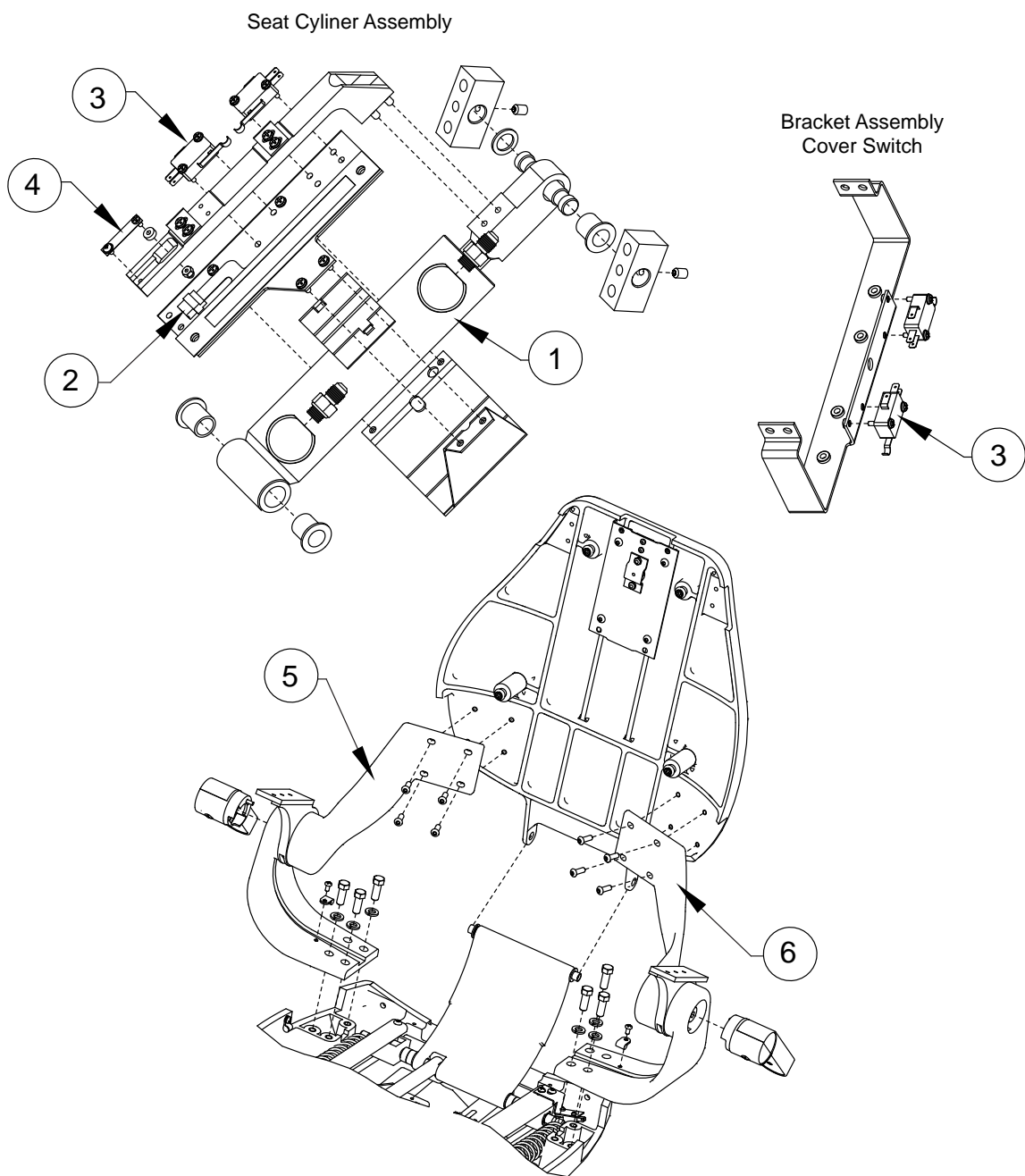
Electrical	
Part/Kit Name	Part/Kit No.
Master Circuit Board (115 VAC)	3801-765
Master Circuit Board (220 VAC)	3801-788
Fuses (115 VAC)	3801-766
Fuses (220 VAC)	3801-767
Main Wiring Harness	3801-768
Power Cord (115 VAC)	3801-769
Power Cord (220 VAC)	3801-770
Pump Motor Capacitor (115 VAC)	3801-409
Pump Motor Capacitor (220 VAC)	3801-410
Solenoid Valve (115 VAC)	3801-424
Solenoid Valve (220 VAC)	3801-425
Base Potentiometer	3801-435
Limit Switch (All)	3801-431
Seat Potentiometer	3801-771
Back Potentiometer	3801-819
Touchpad Wiring	3802-048
Touchpad Control Wiring	3802-047
Light Receptacle Option	3625-495

Exterior Components	
Part/Kit Name	Part/Kit No.
Brake Cover	3802-050
Brake Handle	3801-803
Top Cantilever Cover	3801-787
Bottom Cantilever Cover	3801-756
Seat Casting Cover	3802-051
Base (Pump) Cover	3802-052
Top Cantilever Cover (Magellan Cuspidor)	3802-054
Bottom Cantilever Cover (Magellan Cuspidor)	3802-053
Chair Pivot Cover (Magellan Cuspidor)	3802-055

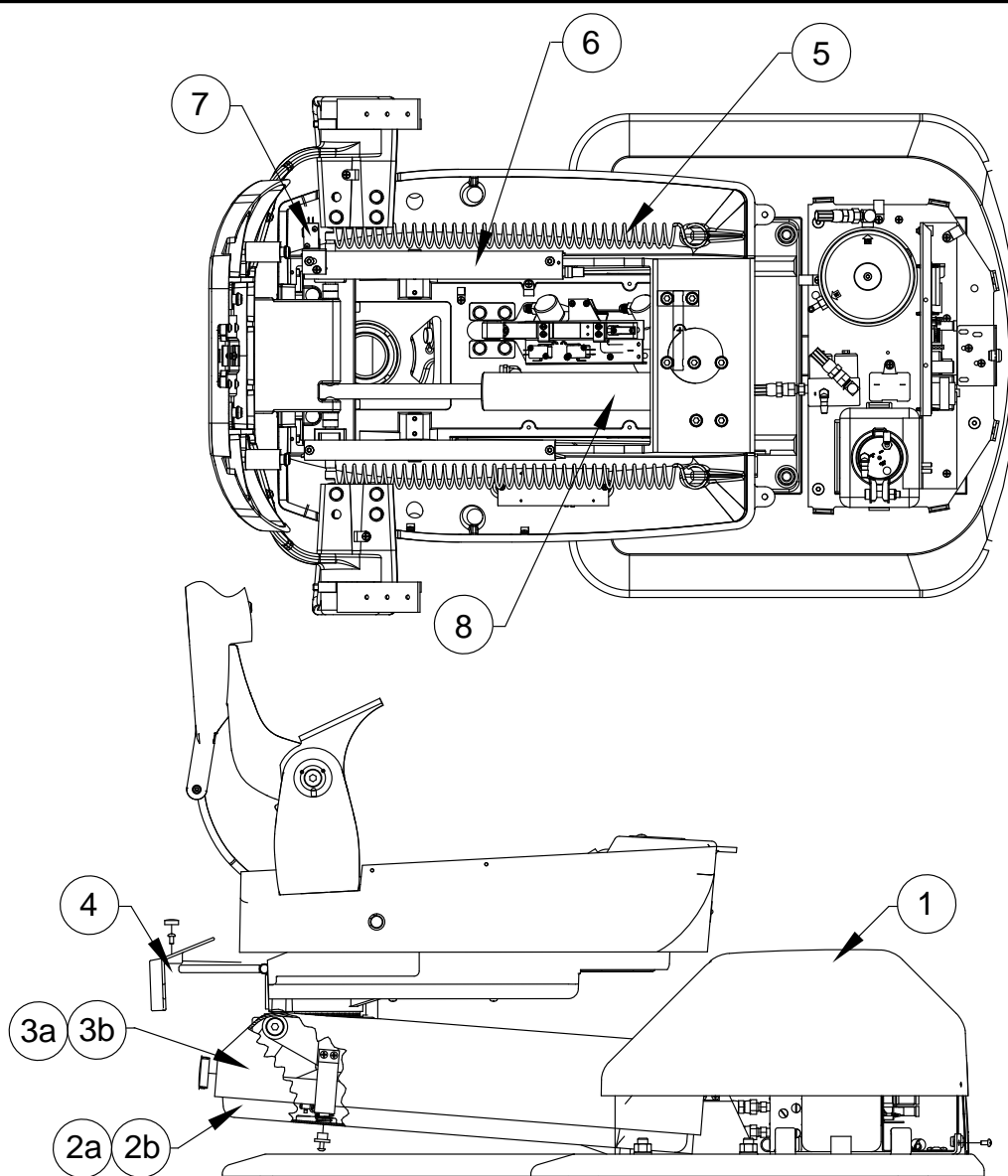
Hydraulic	
Part/Kit Name	Part/Kit No.
Pump (115 VAC)	3801-774
Pump (220 VAC)	3801-775
Valve (115 VAC)	3801-776
Valve (220 VAC)	3801-777
Fluid Reservoir	3801-778
Base Cylinder	3801-429
Seat Cylinder	3801-783
Back Cylinder	3802-049
Hose (Pump to Valve)	3801-780
Hose (Base Cylinder)	3801-784
Hose (Back and Seat Up)	3801-781
Hose (Seat Down)	3801-782
Base and Back Cylinder Vent Tubing	3801-418
Pump and Reservoir Tubing	3801-417
Hydraulic Oil (One Pint)	3801-549

Mechanical	
Part/Kit Name	Part/Kit No.
Seat Pivot Pins	3801-772
Spring	3801-445
Back and Seat Potentiometer Actuator	3801-773
Air Glide Caster	3801-680
Air Glide Regulator	3801-791
Air Glide Toggle Switch	3801-792

Upholstery	
Part/Kit Name	Part/Kit No.
Plush Back Cushion	3802-036
Plush Arm Cushion	3802-037
Plush Seat Cushion	3802-038
Ultra Back Cushion	3802-039
Ultra Arm Cushion	3802-040
Ultra Seat Cushion	3802-041
Dual Durometer Headrest	3802-042
Standard Back Cushion	3802-019
Standard Arm Cushion	3802-043
Standard Seat Cushion	3802-044
Seat Lower Cover	3802-046
Standard Headrest Cushion	3801-827
Standard Headrest Magnetic Cushion	3801-826
Double Articulating Headrest Cushion (optional)	3801-535
Sling Set	3802-045
Back Blind Grip Fasteners	3801-742



Seat/Back Cylinder Assembly		
#	Part/Kit Name	Part/Kit No.
1	Back/Seat Cylinder	3801-772
2	Back/Seat Potentiometer	3801-445
3	Safety Limit Switch	3801-773
4	Potentiometer Actuator	3801-680
5	Support Assembly, RH	3801-791
6	Support Assembly, LH	3801-792



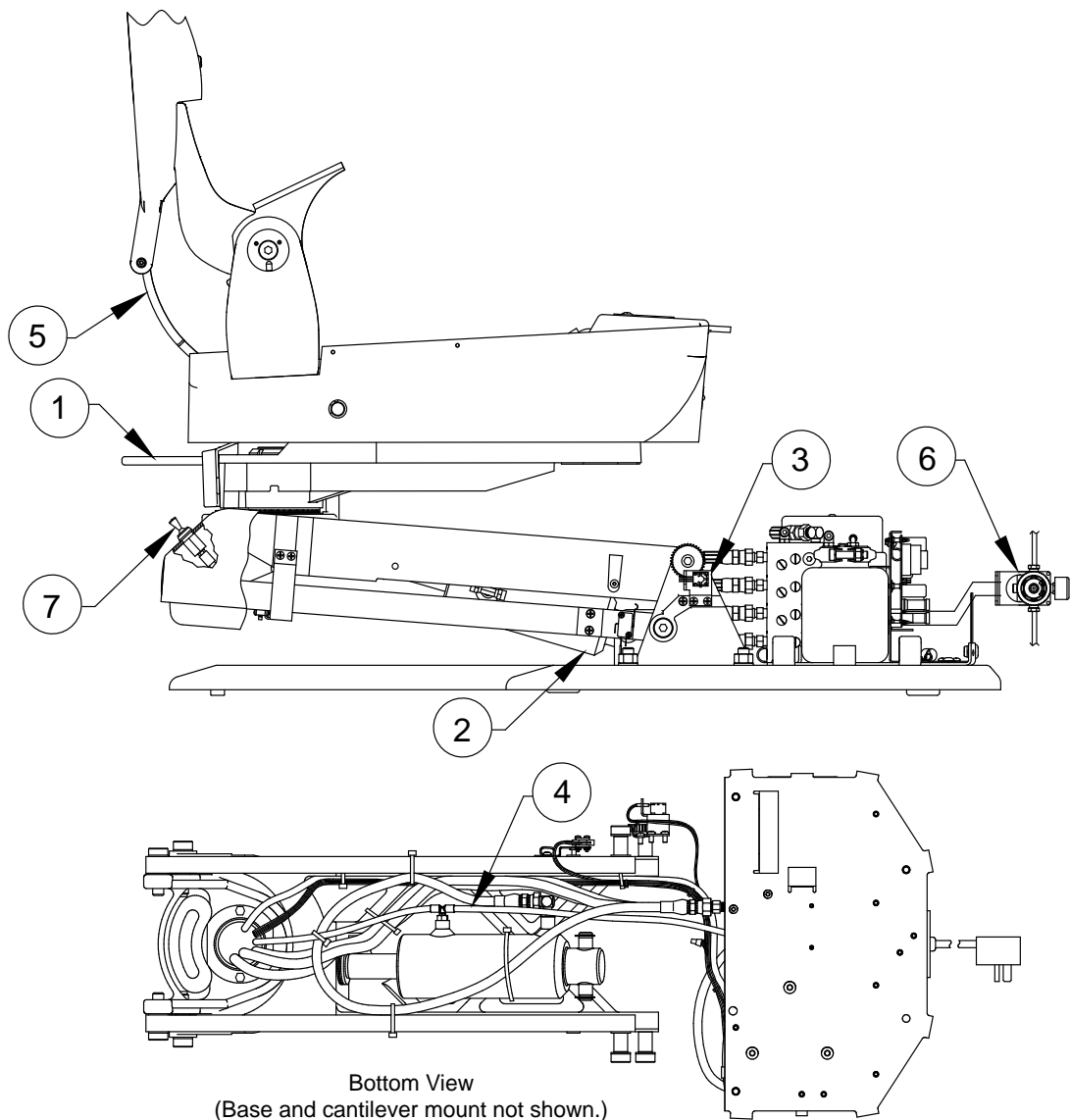
Covers		
#	Part/Kit Name	Part/Kit No.
1	Base (Pump) Cover	3802-052
2a	Lower Cantilever Cover	3801-756
2b	Lower Cantilever Cover (Chair w/Magellan)	3802-053
3a	Upper Cantilever Cover	3801-787
3b	Upper Cantilever Cover (Chair w/Magellan)	3802-054
4	Brake Cover	3802-050
5	Main Extension Spring	3801-445
6	Back Membrane Potentiometer	3801-819
7	Limit Switch	3801-444
8	Back Cylinder	3802-049

Chassis Assembly  
115 V Power Unit

(Power cord wiring not shown for clarity.)

(Umbilical bracket and power cord not shown for clarity.)

Hydraulic		
#	Part/Kit Name	Part/Kit No.
1	Hydraulic Valve (115 VAC)	3801-776
2	Solenoid Coil	3801-424
3	Pump (115 VAC)	3801-774
4a	Capacitor, 45 uf	3801-897
4b	Capacitor, 50 uf	3801-410
5	Hydraulic Reservoir	3801-778
6	Master PCB (115 VAC)	3801-765
7	Main Wiring Harness	3801-768
8	Power Cord (115 VAC)	3801-769
9	Tubing, Clear PVC, 15'. 3/8"	3801-417
10	Hydraulic Pump Hose	3801-780
11	Seat Down Hydraulic Hose	3801-782
12	Back & Seat Up Hydraulic Hose	3801-781
13	Base Hydraulic Hose	3801-784
14	Hydraulic Oil (One Pint)	3801-549



Mechanical		
#	Part/Kit Name	Part/Kit No.
1	Brake Handle, 1/2" Shaft	3801-803
2	Lift Cylinder	3801-429
3	Potentiometer/Pinion Gear	3801-435
4	Tubing, Clear, 15', 1/4"	3801-418
5	Link Retro Kit	3802-059
6	Air Glide Regulator*	3801-791
7	Air Glide Toggle Valve*	3801-792

\*Only chairs with air glide.



## DentalEZ® Group

## DentalEZ Equipment Division

## J/V-Generation® Chair

The DentalEZ Group and its employees are proud of the products we provide in the dental community. We stand behind these products with a warranty against defects in material and workmanship as provided below.

In the event you experience difficulty with the application or operation of any of our products, please contact our Technical Service Department at our expense at **1-866-DTE-INFO** (1-866-383-4636).

If we cannot resolve the issue by telephone, we will arrange for a representative to contact you or suggest that the product be repaired by a dealer service technician.

If product repair or return is required, we will provide you with a **Return Authorization** number and shipping instructions to return the product to the proper facility. If the product is under warranty, we will ask you to provide proof of purchase, such as a copy of your invoice. Please be sure to include the **Return Authorization** number on the package you are returning. **Products returned without a Return Authorization number cannot be repaired.**

Freight costs for product returns are the responsibility of the customer. Products under warranty will be repaired or replaced at our sole discretion and returned at our expense. Products outside the warranty limits will be repaired and returned with costs invoiced to the customer. We are not responsible for shipping damages. We will, however, help you file a claim with the freight carrier. Written repair estimates are available.

DentalEZ warrants the **J/V-Generation Chair** to be free of defects in material and workmanship, under normal usage, under the following terms:

The following items are covered under this limited warranty for a period of three (3) years from the date of installation:\*

- Structures: Base Plate, Castings, Chair Seat and Back
- Hydraulic System: Cylinders, Solenoid Valves and Pump
- Electronics: Master Circuit Board and Foot Control Circuit Board, Chair Control

The upholstery package is covered under this limited warranty for a period of one (1) year from the date of installation.

Please note the following additional terms of our warranty and return policy:

- Warranties cover manufacturing defects only and do not cover defects resulting from abuse, improper handling, cleaning, care or maintenance, normal wear and tear or non-observance of operating, maintenance or installation instructions. **Failure to use authorized parts or an authorized repair facility voids this warranty.**
- **Liability is limited to repair or replacement of the defective product at our sole discretion. All other liabilities, in particular liability for damages, including, without limitation, consequential or incidental damages are excluded.**
- **THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. NO EMPLOYEE, REPRESENTATIVE OR DEALER IS AUTHORIZED TO CHANGE THIS WARRANTY IN ANY WAY OR TO GRANT ANY OTHER WARRANTY.**

**WARRANTY REPAIRS:** Parts repaired or replaced on a product that is in warranty will be warranted for the duration of that product's original warranty.

**NON-WARRANTY REPAIRS:** The warranty on parts either repaired or replaced on an out-of-warranty product will cover the repaired part only and will be for the time frame of a new parts warranty period.

**PRODUCT RETURN:** Opened products or product returns more than a year old cannot be returned for credit. There will be a 15% (\$25.00 minimum) restocking charge on all items authorized for return.

*\* Provided conditions defined in the Installation, Operation and Care Manual are met.*

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## WARNING

- Use only replacement cables listed in Parts Section. Other cables and accessories may negatively affect EMC performance.
- When the J/V-Generation Chair is used adjacent to other equipment, observe the Chair to verify normal operation.

Table 1

Guidance and manufacturer's declaration - electromagnetic emissions		
The J/V-Generation Chair is intended for use in the electromagnetic environment specified below. The customer or the user of the J/V-Generation Chair should assure that it is used in such an environment.		
Emissions test	Compliance	Electromagnetic environment – guidance
RF emissions CISPR 11	Group 1	The J/V-Generation Chair uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.
RF Emissions CISPR 11	Class A	The J/V-Generation Chair is suitable for use in all establishments, other than domestic establishments and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.
Harmonic emissions IEC 61000-3-2	Class A,	Not Applicable
Voltage fluctuations/flicker emissions IEC 61000-3-3	Class A	Not Applicable


Table 2

Guidance and manufacturer's declaration – electromagnetic immunity			
The J/V-Generation Chair is intended for use in the electromagnetic environment specified below. The customer or the end user of the Chair should assure that it is used in such an environment.			
Immunity test	IEC 60601 Test level	Compliance level	Electromagnetic environment - guidance
Electromagnetic discharge (ESD)  IEC 61000-4-2	$\pm 6$ kV contact  $\pm 8$ kV air	$\pm 6$ kV contact  $\pm 8$ kV air	Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30 %.
Electrical fast transient/burst  IEC 61000-4-4	$\pm 2$ kV for power supply lines  $\pm 1$ kV for input/output lines	$\pm 2$ kV for power supply lines  $\pm 1$ kV for input/output lines	Mains power quality should be that of a typical commercial or hospital environment.
Surge  IEC 61000-4-5	$\pm 1$ kV differential mode  $\pm 2$ kV common mode	$\pm 1$ kV differential mode  $\pm 2$ kV common mode	Mains power quality should be that of a typical commercial or hospital environment.
Voltage dips, short interruptions and voltage variations on power supply input lines  IEC 61000-4-11	$< 5\% U_T$ ( $> 95\%$ dip in $U_T$ ) for 0.5 cycle  $40\% U_T$ ( $60\%$ dip in $U_T$ ) for 5 cycles  $70\% U_T$ ( $30\%$ dip in $U_T$ ) for 25 cycles  $< 5\% U_T$ ( $> 95\%$ dip in $U_T$ ) for 5 sec	$< 5\% U_T$ ( $> 95\%$ dip in $U_T$ ) for 0.5 cycle  $40\% U_T$ ( $60\%$ dip in $U_T$ ) for 5 cycles  $70\% U_T$ ( $30\%$ dip in $U_T$ ) for 25 cycles  $< 5\% U_T$ ( $> 95\%$ dip in $U_T$ ) for 5 sec	Mains power quality should be that of a typical commercial or hospital environment. If the user of the Chair requires continued operation during power mains interruptions, it is recommended that the Chair be powered from an uninterruptible power supply or a battery.
Power frequency (50/60 Hz) magnetic field IEC 61000-4-8	3 A/m	3 A/m	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.

Table 4

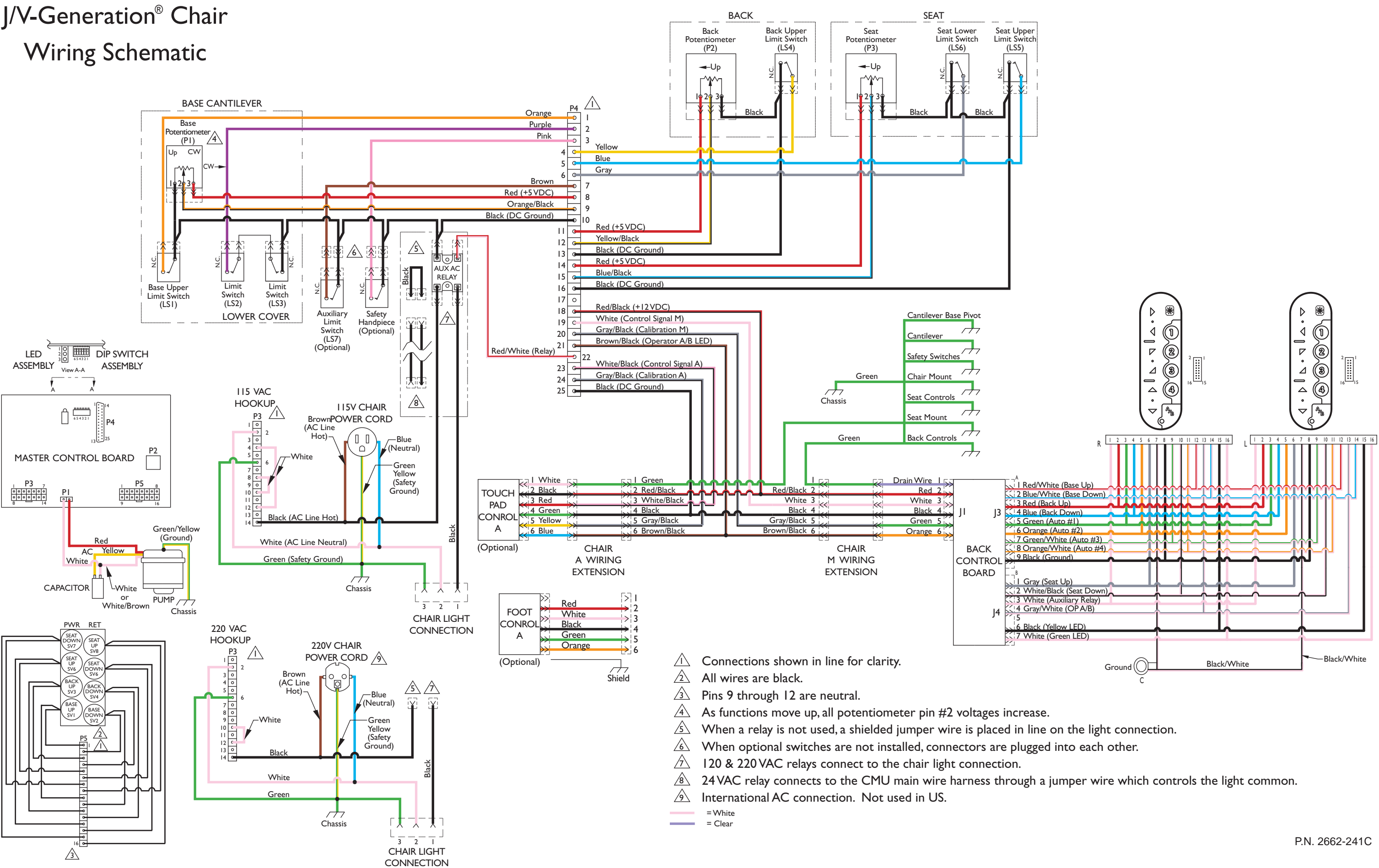
Recommended separation distance between Portable and mobile RF communications equipment and the model @ 3Vrms			
The J/V-Generation Chair is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the J/V-Generation Chair can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the Chair as recommended below, according to the maximum output power of the communications equipment.			
Rated maximum output power of transmitter W	Separation distance according to frequency of transmitter m		
	150 kHz to 80 MHz $d = \left[ \frac{3.5}{v_1} \right] \sqrt{P}$	80 MHz to 800 MHz $d = \left[ \frac{3.5}{E_1} \right] \sqrt{P}$	800 MHz to 2.5 GHz $d = \left[ \frac{7}{E_1} \right] \sqrt{P}$
0.01	0.12	0.12	0.23
0.1	0.34	0.34	0.74
1	1.7	1.7	2.3
10	3.7	3.7	7.4
100	11.7	11.7	23.3
For transmitters rated at a maximum output power not listed above, the recommended separation distance d in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where P is the maximum output rating of the transmitter in watts (W) according to the transmitter manufacturer.			
Note 1: At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.			
Note 1: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.			

Table 6

Guidance and manufacturer's declaration - electromagnetic emissions			
The J/V-Generation Chair is intended for use in the electromagnetic environment specified below. The customer or the user of the Chair should assure that it is used in such an environment.			
Immunity test	IEC 60601 Test level	Compliance Level	Electromagnetic environment - guidance
Radiated RF IEC 61000-4-3	3 V/m 80MHz to 2.5 GHz	3 V/m	Portable and mobile RF communications equipment should be used no closer to any part of the J/V-Genertion Chair including cables, than the Recommended separation distance calculated from the equation applicable to the frequency of the transmitter.  $d = 1.7 \sqrt{P}$ 80 MHz to 800 MHz  $d = 2.3 \sqrt{P}$ 800 MHz to 2.5 GHz
Conducted RF IEC 61000-4-6	150 kHz to 80 MHz	3 Vrms	$d = [3.5/V1] \sqrt{P}$  Where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation distance in meters (m).  Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, should be less than the compliance level in each frequency range.  Interference may occur in the vicinity of equipment    marked with the following symbol:
NOTE 1 At 80 MHz and 800 MHz, the higher frequency range applies.			
NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.			
<sup>a</sup> Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the J/V-Generation Chair is used exceeds the applicable RF compliance level above, the Chair should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as reorienting or relocating the Chair.			
<sup>b</sup> Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 3 V/m.			



J/V-Generation® Chair  
Wiring Schematic





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