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AJ16US Dental Chair
User Manual

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This document is intended to be used in conjunction with the equipment.

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If you want to get service information, please contact the local dealer authorized by ADS.
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1 Introduction

1.1 Product information

- **Name:** Dental chair
- **Model: AJ16US**
- **Working conditions:**

  ① Ambient temperature: 5 ℃～40 ℃.

  ② Relative humidity: ≤ 80％.

  ③ Atmospheric pressure: 12.5～15.4psi.

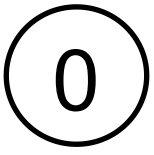
  ④ Nominal voltage: AC110 V±22 V.

  ⑤ Nominal frequency: 50/60 Hz.

1.2 Symbols explanation

Table 1

Symbol	Explanation
 Manufacturer	 Authorized Representative in the European Community/European Union
 Date of Manufacture	 Serial Number
 Fragile	 Keep Dry

Symbol	Explanation
 Refer to Instruction Manual/Booklet	 General Warning Sign
 Warning: Electricity	 Backrest Down
 Connect an Earth Terminal to the Ground	 Backrest Up
 Initial Position	 Base Down
 Set	 Base Up
 Rinse Position	 Preset Position 1
 Preset Position 2	 Preset Position 3

2 Product Overview

The AJ16US dental chair, incorporating new design concepts, provides a good balance between usability, simplicity, and comfort.



Item	Component	Item	Component
1	Headrest	6	Armrest Button
2	Backrest	7	Touchpad
3	Armrest	8	Lifting Arm
4	Seat Upholstery/Toeboard	9	Junction Box
5	Footswitch		

3 Specifications

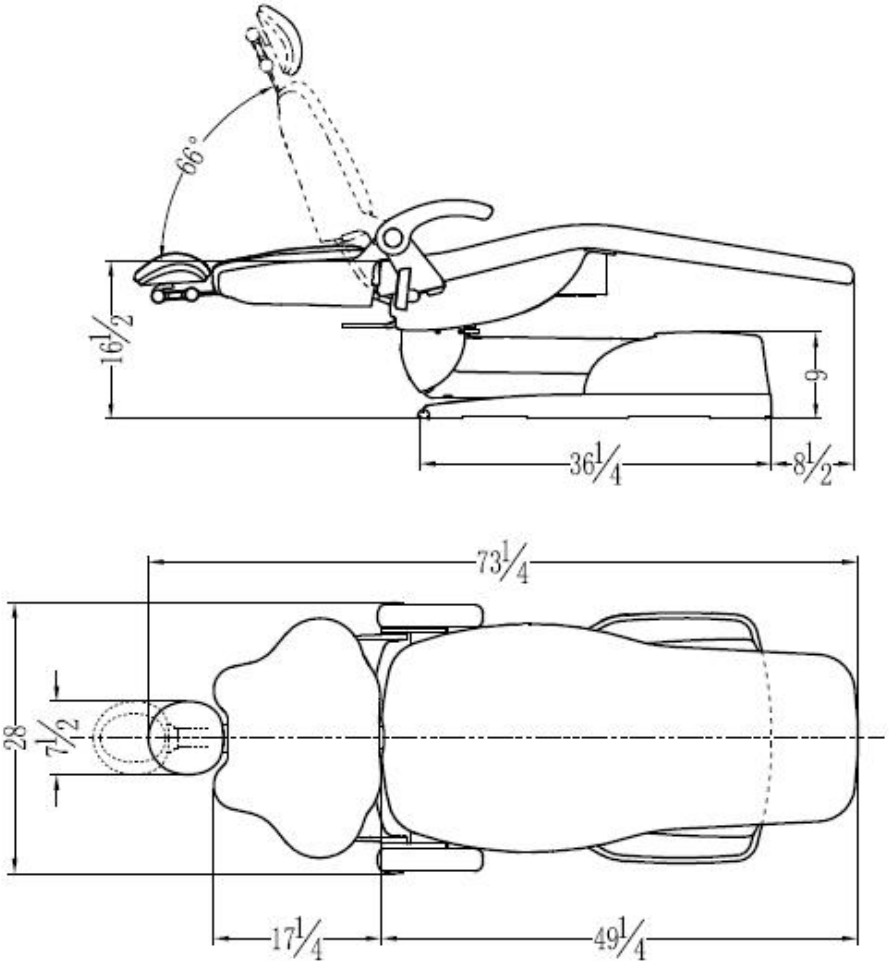
3.1 Patient Load

Patient Load: Max 135kg

Tip: Specifications are subject to change without notice.

3.2 Dimensions

Unit: inches



4 Preparations

4.1 Cautions

Before installing the unit, you should:

- Confirm the floor construction is safe to support the chair and clean.
- Reserve two manually operated valves for the air and water source.
- Exhaust the waste water and air before connecting.
- May have no necessity to use all the component described in this document when installing. Components should be evaluated before installation.

Before installing the unit, read the manual carefully:

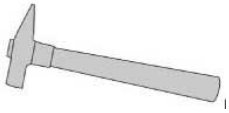
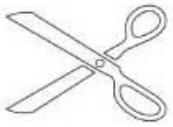
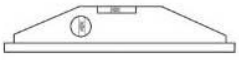
- Input voltage: AC110 V, 50/60 Hz.
- Make sure the dental unit is well-grounded.
- All electrical components and their connections need to be installed by an authorized technician.
- Only ADS-certified fuses, accessories, and spare parts can be installed on the chair.
- This device should not operate in the environment of high temperature, high humidity, vibration flammability, unbalance, or dusty.
- Only the authorized spare parts can be used in this device.
- Do not place objects within the range of motion of this chair.
- This device cannot be used in strong magnetic or electromagnetic environment.

Upholstery maintenance:

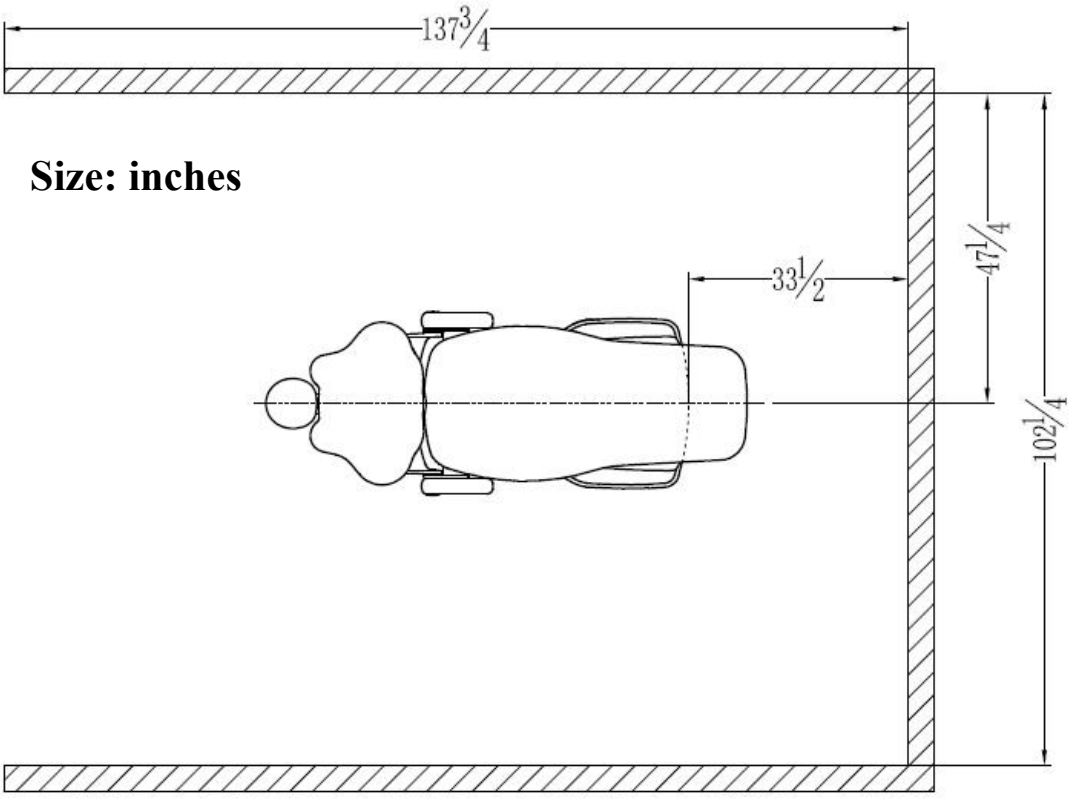
- Do not use organic solvents or alkaline detergents (such as gasoline, alcohol, etc.), as they may cause the leather to crack, become smelly, or fade.
- Avoid direct exposure to sunlight and ensure good ventilation in the room (exposure can cause the leather to crack, and poor ventilation can lead to mold growth).
- Instruct the patient to remove sharp objects (like keys) before handling the leather to prevent scratches.

4.2 Tools and Instruments

Prepare the tools and instruments below before installation.

	Electrical drill		Pincers
	Hammer		Scissors
	Leveling instrument		Flat-bladed Screw driver
	Phillip screw driver		Allen wrench
	Spanner		Hexagon socket wrench

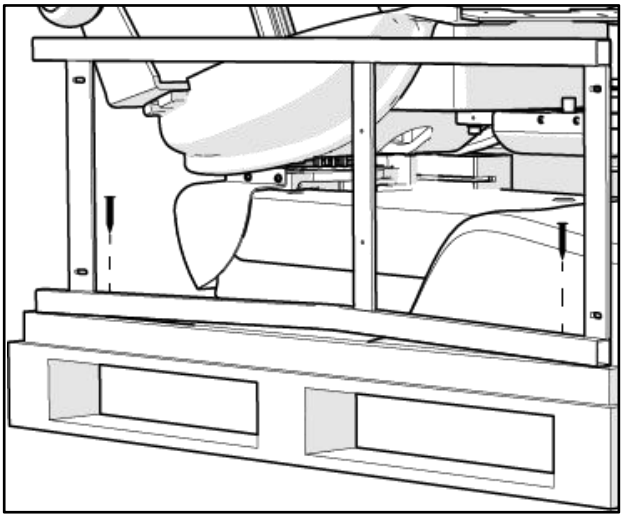
4.3 Installation Requirements

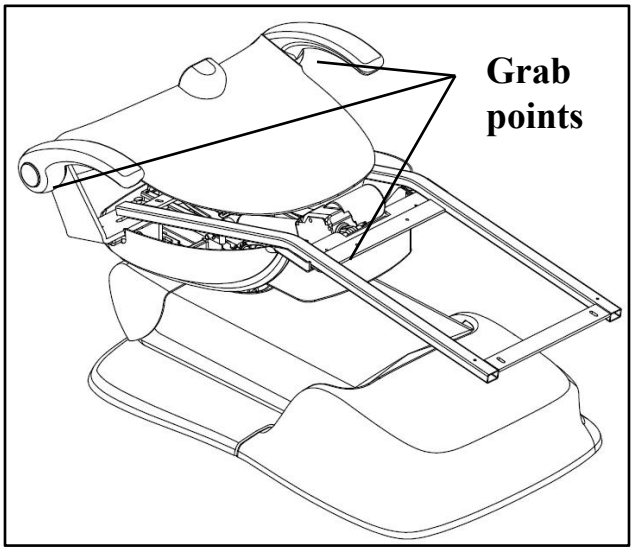


5 Installation

5.1 Place the Chair

1. Remove all objects and cardboard from around the dental chair.
2. Uninstall the fixing screw of the seat upholstery armature on the wooden pallet.
3. Hold the grab points and the front of the frame, uplift the chair and place the chair on the expected place.
4. Remove binding belt and packing.





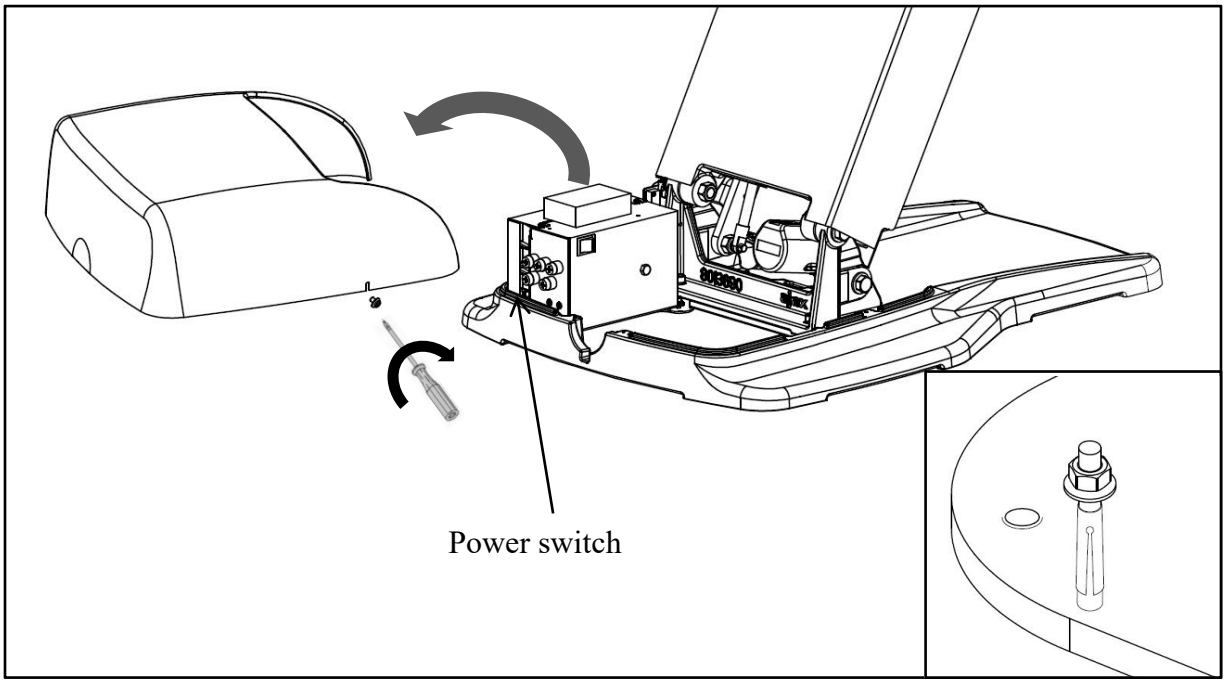
5.2 Fix the Chair

Attentions:

1.The chair must be fixed on the floor for ensuring stability, for it can be seriously damaged by wrong fixation.

2.Check out the material of the floor on the installing place. Please contact the authorized contractor to thickening the floor if its thickness is less than 82 mm.

1. Power on and activate the unit.
2. Press button  on the footswitch to raise the unit.
3. Switch off the unit and disconnect the power.
4. Remove the cover and mark the screw hole positions, then move the unit away.
5. Drill at the marked positions, insert the explosive bolt and return the unit to its position. and tighten the screw.



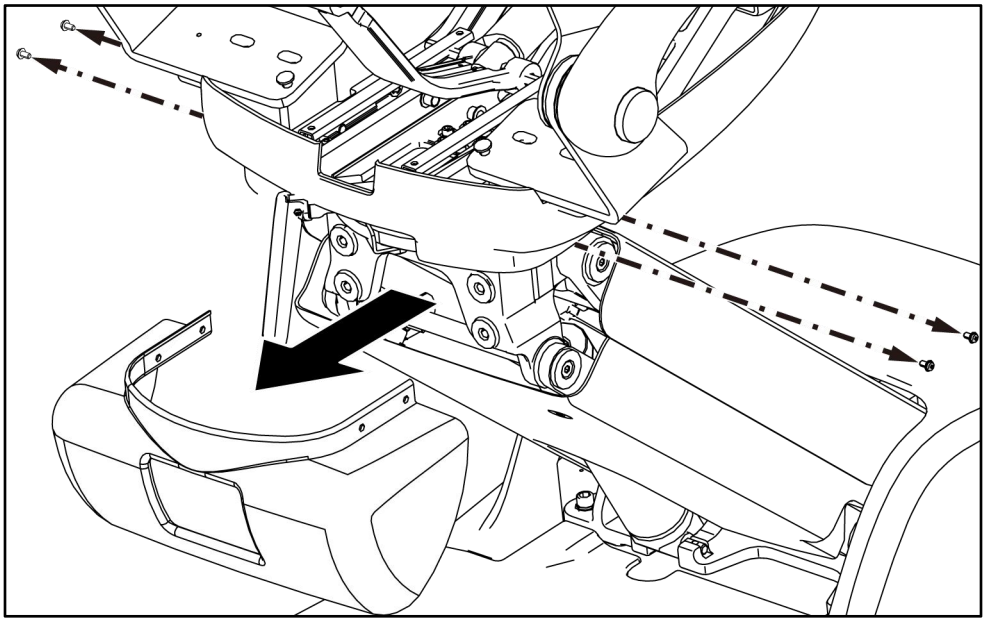
5.3 Install the Mounting Plate for Assistant's Control

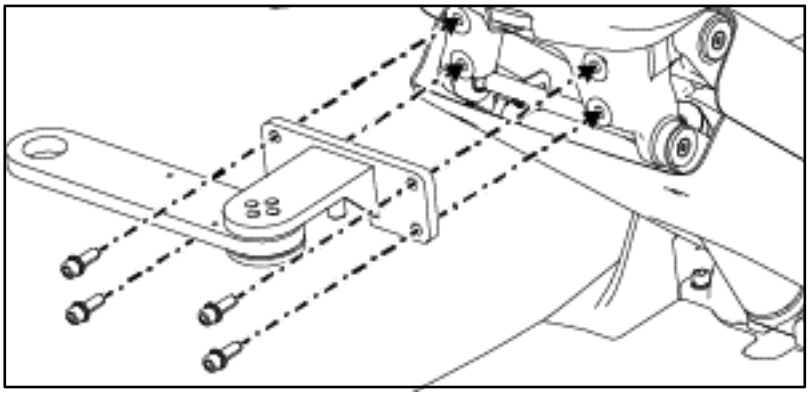
Note: There is no mounting plate of the assistant's control for the dental chair with the following delivery system:

- **Beyond 300/301**
- **Classic 100/101**

To install the mounting plate of the assistant's control:

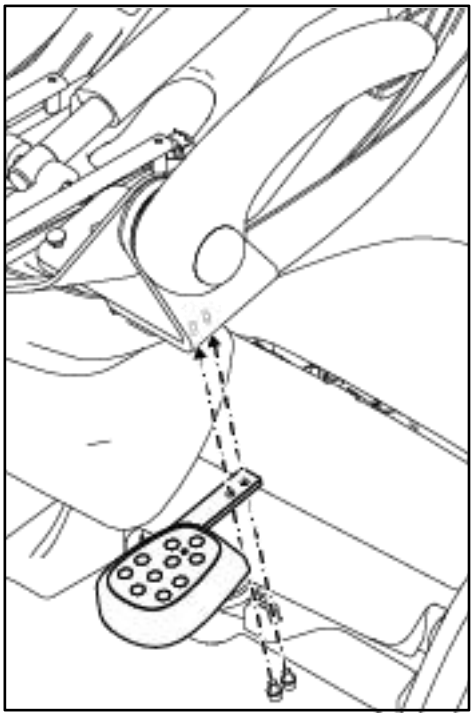
1. Uninstall the upper cover of the lifting arm by unscrewing the fixing screws.
2. Fix the mounting plate to mounting assembly of the lifting arm with screws.
3. Reinstall the upper cover with screws.

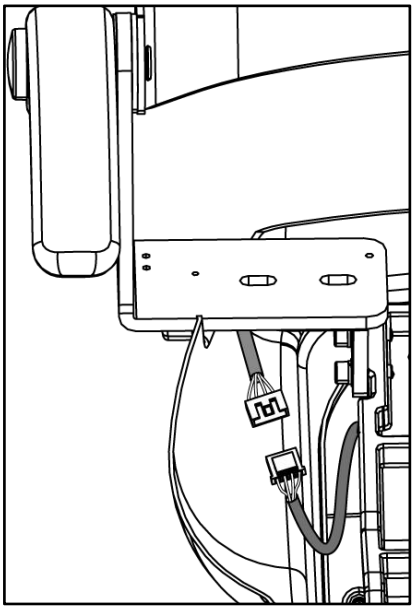




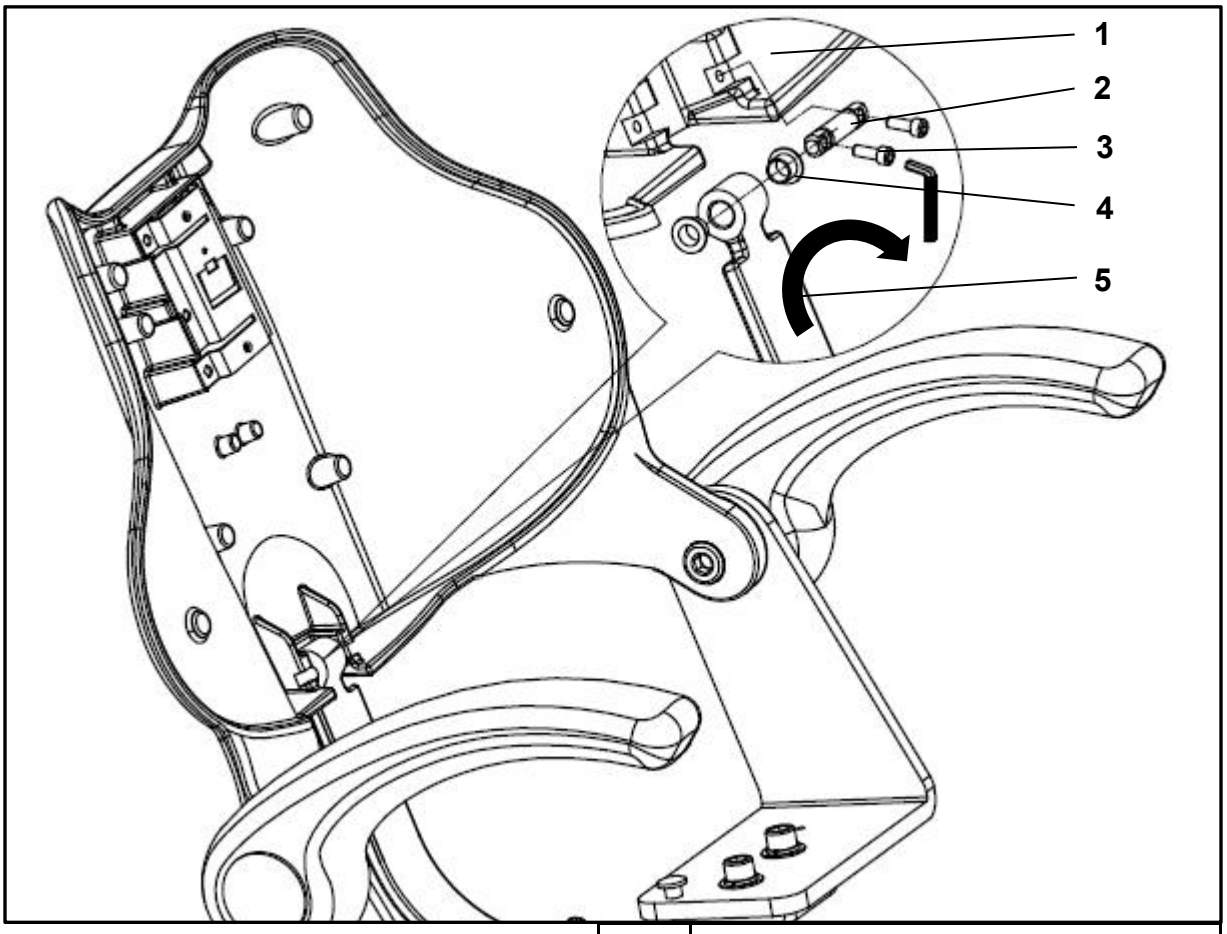
5.4 Install the Touchpad

1. Fix the touchpad mounting bracket to the armrest base.
2. Uninstall the fixing screw of the chair frame cover at the bottom of the armrest base.
3. Pull down and hold the chair frame cover slightly to create a gap between the cover and the base.
4. Route the plug of the touchpad cable into the chair frame through the gap.
5. Release the chair frame cover.
6. Slide the touchpad cable into the slot on the chair frame cover.
7. Connect the plug of the touchpad cable to the socket of the cable reserved in the chair frame.
8. Place the terminal joint of the cables into the gap between the chair frame and the chair frame cover.
9. Secure the chair frame cover back to the armrest base with the fixing screw.





5.5 Install the Backrest



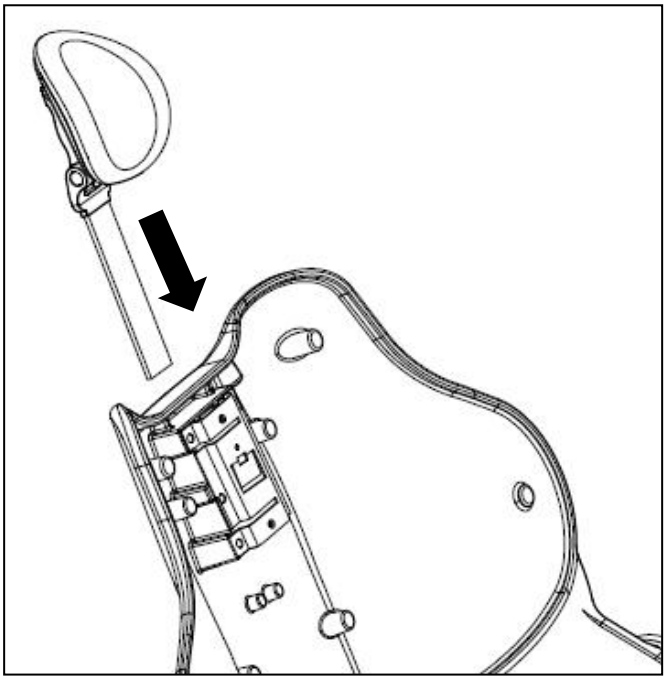
1	Backrest Upholstery Armature
2	Mounting Shaft
3	M6*20 Inner hex fillister screw
4	GFM-1214-10 Slide Bearing
5	Back Pivot

Pass the mounting shaft through the back pivot. Secure the shaft on backrest with the cap screw assembly.

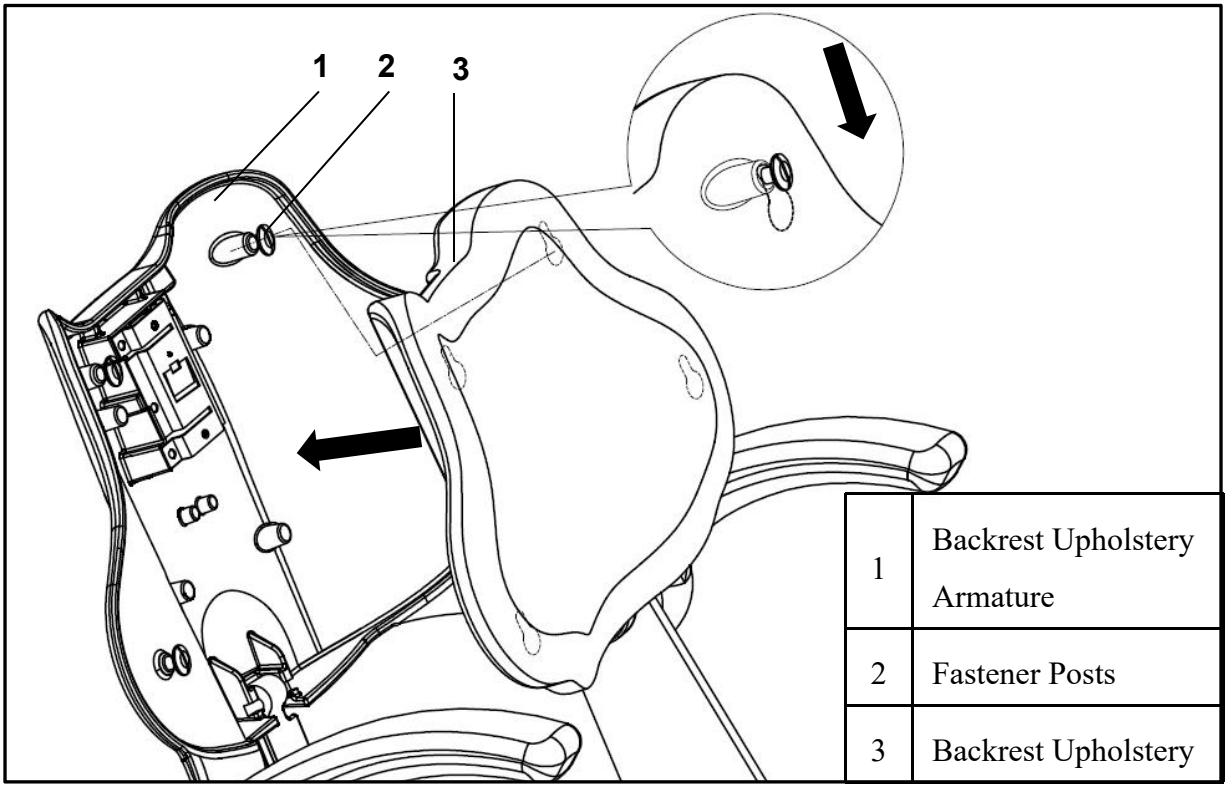
Tool:
5mm hex wrench

5.6 Install the Headrest

Insert the headrest glide bar into the slot of the backrest upholstery until full seated.



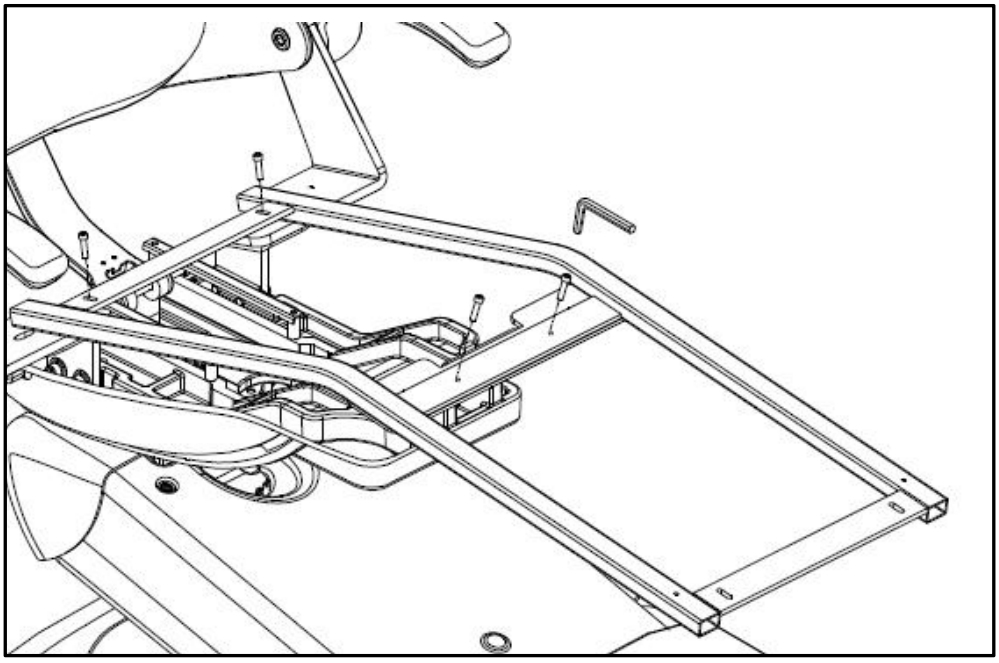
5.7 Install the Backrest Upholstery



1	Backrest Upholstery Armature
2	Fastener Posts
3	Backrest Upholstery

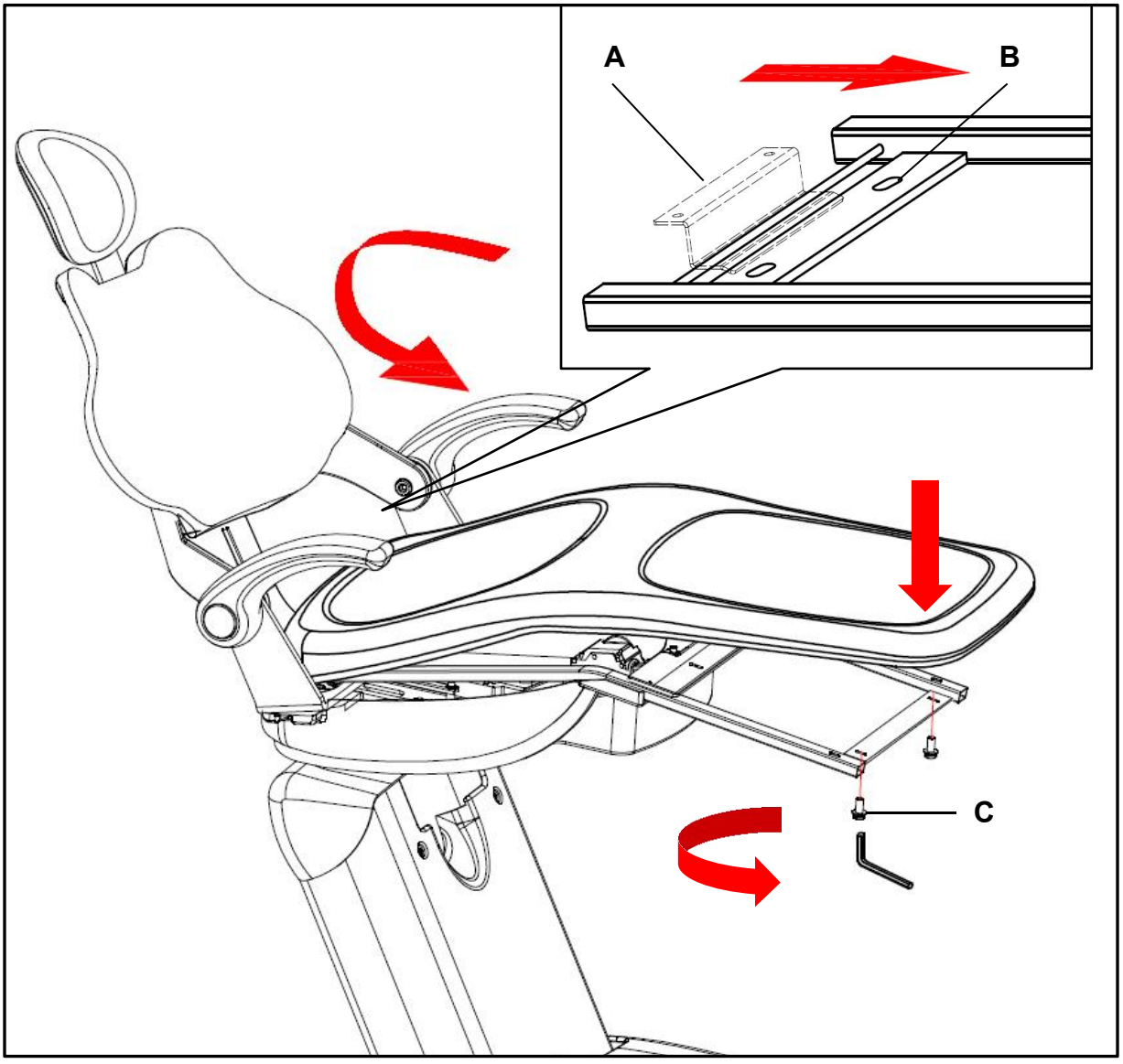
Place the key holes in the backrest upholstery over the fastener posts on the back upholstery armature. Push down until the backrest upholstery inserts into place.

5.8 Install the Seat Upholstery Armature



1. Place the seat upholstery armature on the chair frame.
2. Align the screw holes of the armature and the chair frame.
3. Secure the armature with 4 hexagon socket screws.

5.9 Install the Seat Upholstery



A	Mounting Bracket
B	Seat Upholstery Armature
C	M5*16 Hex Cap Screws

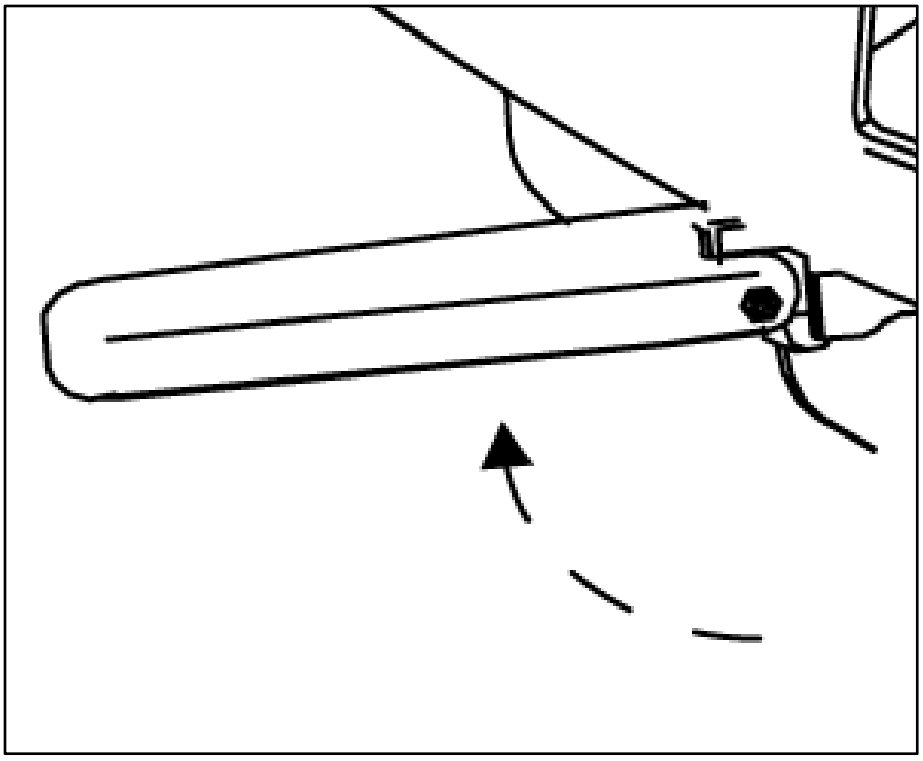
Install the Seat Upholstery

1、Place the seat upholstery on the seat upholstery armature.

2、Secure the bracket and the rear end of the seat upholstery armature together.

3、Use two screws to secure the front section of the seat upholstery.

5.10 Unfold the Chair Rotation Lever



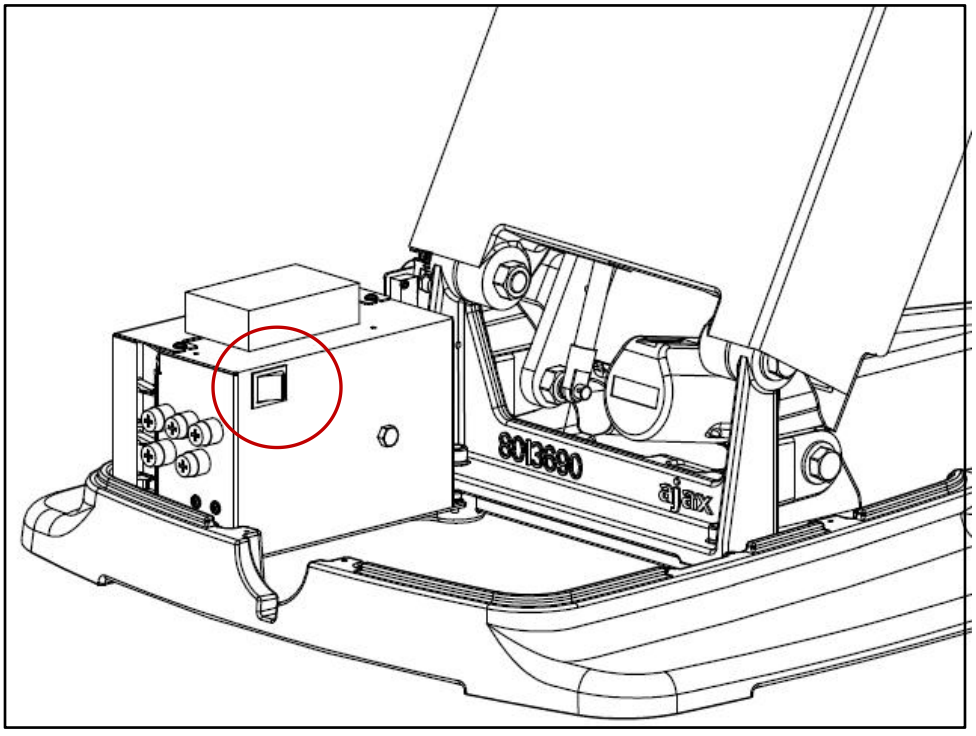
Lift the lower part of the lever used for locking or unlocking the chair rotation.

6 Operations

6.1 Power

The power switch of the equipment is in the position shown in the figure. The power switch controls power supplying of the dental chair and its delivery system.

Power off for not using in a long term or before maintenance.



6.2 Chair Positioning

You can operate the chair manually or by footswitch.

6.2.1 Footswitch Operations

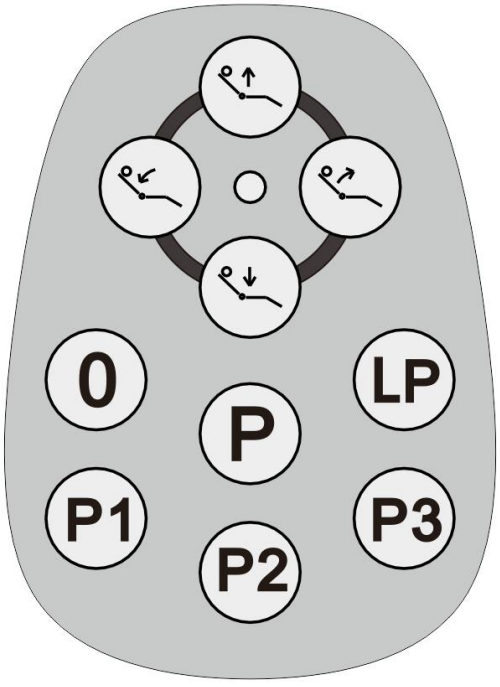
The base up/base down button raises and lowers the dental chair. Press the up or down arrow on the electric footswitch and hold until the dental chair is adjusted to the expected position.

The backrest up/backrest down button controls the movement of the backrest. Press the right or left arrow on the footswitch panel and hold until the backrest is adjusted to the expected position.



0	Initial Position
1	Preset Position 1
2	Preset Position 2
P	Setting
LP	Rinse Position
	Backrest Down
	Backrest Up
	Base Up
	Base Down

6.2.2 Touchpad



0	Initial Position
P1	Preset Position 1
P2	Preset Position 2
P3	Preset Position 3
P	Setting
LP	Rinse position
	Backrest Down
	Backrest Up
	Base Up
	Base Down

6.2.3 System Status Indicator

A system status indicator is an LED light that indicates the system status. If the indicator light is on, the dental unit is on and ready for the operations.

6.2.4 Initialize the Dental Chair

To initialize the dental chair with motor system:

- Press and release (0): the chair base is lowered to the lowest position, the backrest is raised to the highest position.

Caution: the dental chair with motor system requires to be initialize in any of following situations:

. First installation.
. Replacing any motor.
. Replacing the chair circuit board.
. Adjusting or replacing limit switches.
. Abnormal chair movement .

To initial the dental chair with hydraulic system:

1. Press and hold **P** (about 12 seconds) until hearing 2 short beeps
2. Press **P1** to hear 1 short beep.
   Press and hold **P** (about 12 seconds) until hearing 2 short beeps
3. Press  to raise the backrest.
4. Press **0**.
5. Press and hold  until the chair base moves to the upper limit.
6. Press and hold  until the chair backrest moves to the lower limit.
7. Press **LP**.

Caution: the dental chair with motor system requires to be initialize in any of following situations:

- First installation
- Replacing the chair circuit board
- Replacing, repairing, or adding any position feedback potentiometer or the corresponding wiring
- Adjusting or replacing limit switches
- Abnormal chair movement

Attention!

When initializing the system, avoid extending the cylinder to its full extent to prevent damage to the hydraulic pump.

6.2.5 Customize the Preset Positions

1. Move the chair base and backrest to the expected position and adjust dental light to the expected condition (On or Off).
2. Press **P** (about 3 seconds) until indicator light is on and one beep is heard.
3. Release the **P** soft key.
4. Press the **1**, **2** or **3** soft key to hear a short beep.
5. Press and hold the **P** soft key (about 2 seconds) until the setting mode LED indicator flashes twice and two short beeps is heard.

The current chair positions and dental condition is set as a preset position.

6.2.6 Soft Key Description

a. Backrest Up 

Press and hold the soft key: The backrest continuously moves up and stops if releasing the soft key or if the backrest reaches the position limit.

b. Backrest Down 

Press and hold the soft key: The backrest continuously moves down and stops if releasing the soft key or if the backrest reaches the position limit.

c. Base up 

Press and hold the soft key: The base continuously moves up and stops if releasing the soft key or if the base reaches the position limit.

d. Base Down 

Press and hold the soft key: The base continuously moves down and stops if releasing the soft key or if the base reaches the position limit.

e. Initial Position 

Press and release the soft key: the chair base is lowered to the lowest position, the backrest is raised to the highest position, and the dental light is turned off.

Press and release the soft key again: the chair base and backrest are restored to the previous positions. And the dental light is on.

NOTE: If the chair is stopped in a position during the procedure due to an external factor, for example, power outage or external force, the chair keeps stopping in this position even if the external factor is eliminated.

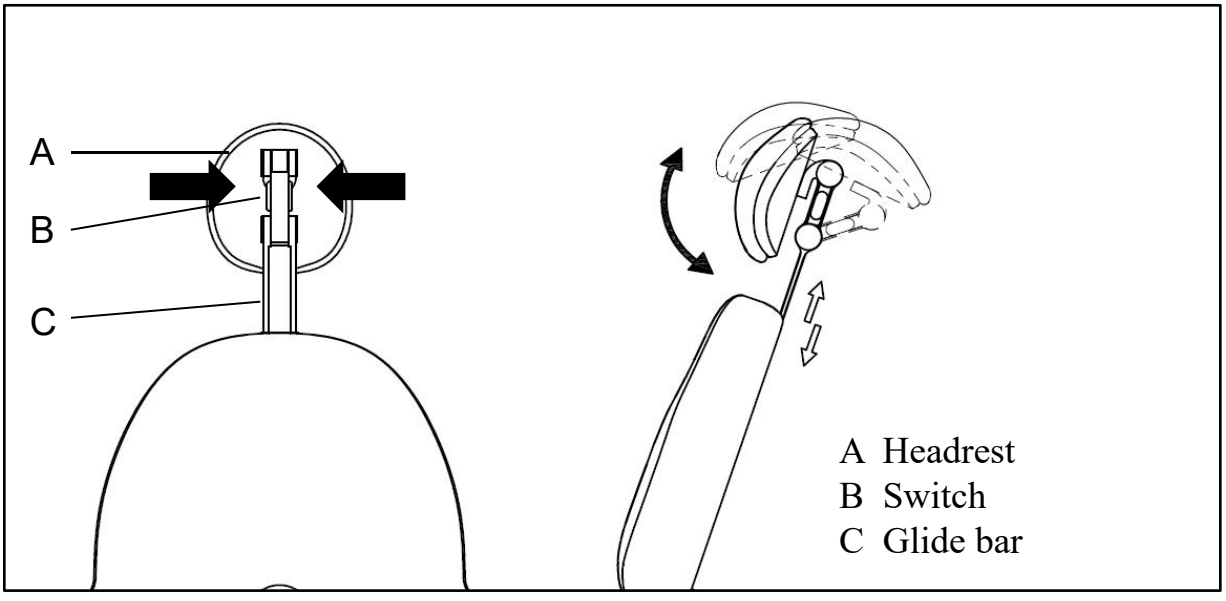
f. Rinse Position 

Press and release the soft key: the backrest is raised to highest position, and the light is off.

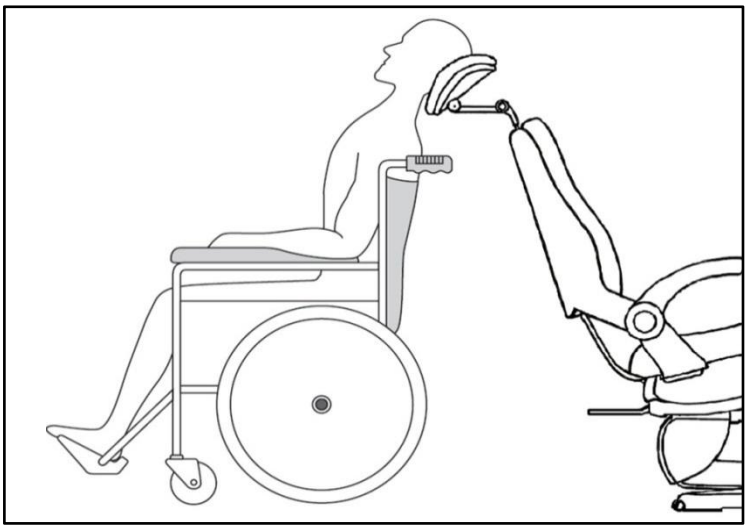
Press and release the soft key again: the backrest is restored to previous position. And the light is on.

NOTE: If the chair is stopped in a position during the procedure due to an external factor, for example, power outage or external force, the chair keeps stopping in this position even if the external factor is eliminated.

6.3 Headrest Adjustment



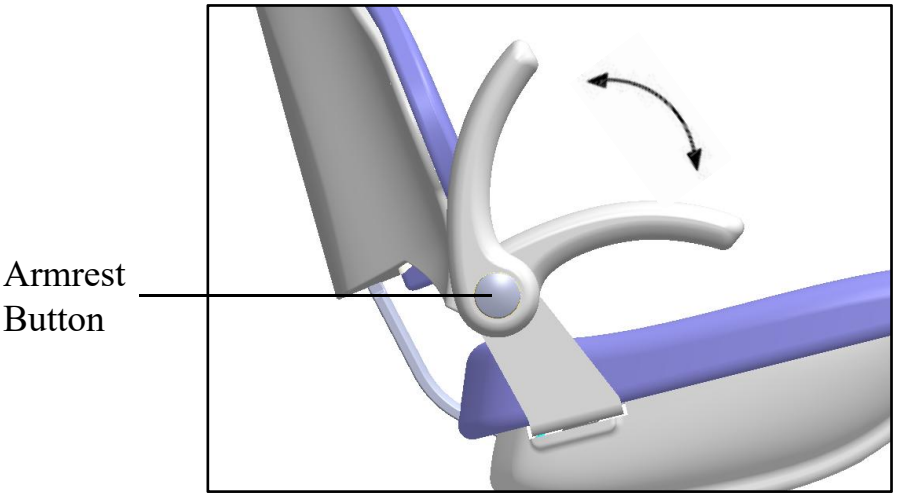
1. Press and hold the switch behind the headrest.
2. Adjust the headrest to the desired position.
   - Headrest extension length: 0-150 mm.
3. Release the switch to lock the headrest.



To position the headrest for a wheelchair:

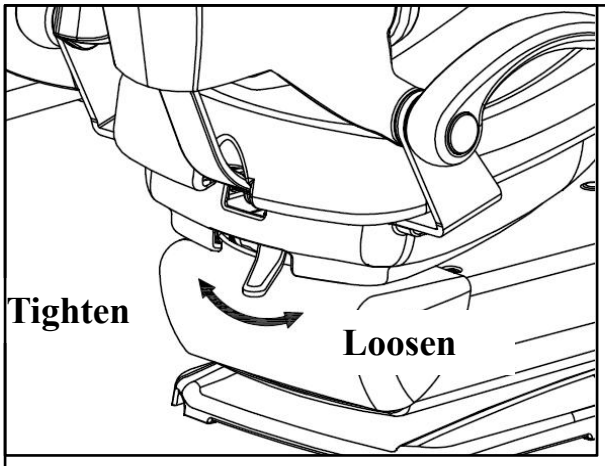
1. Position the headrest as shown in the figure.
2. Fully raise the backrest.
3. Position the wheelchair and the dental chair back to back.
4. Move the dental chair up or down, as needed, to adjust the headrest height.
5. Lock the wheelchair wheels.

6.4 Armrest Adjustment

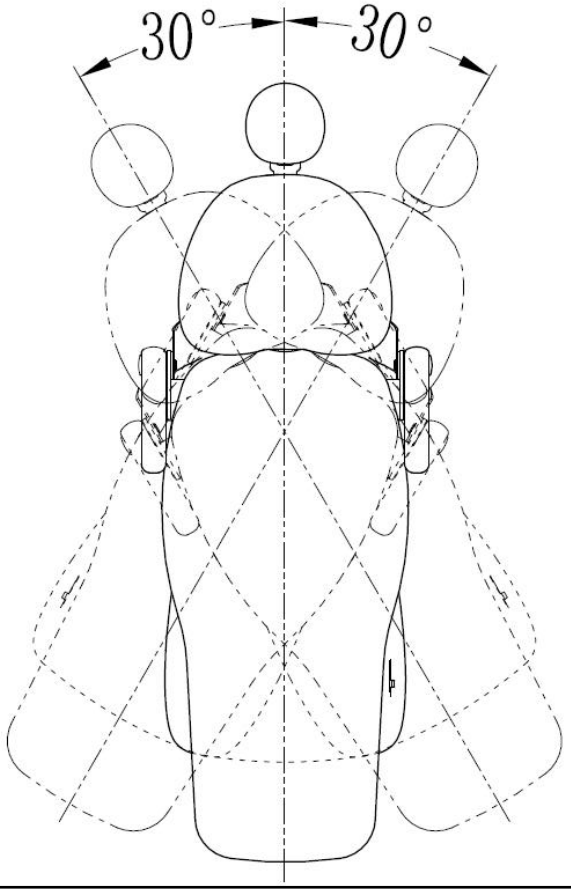


1. Press and hold the armrest button.
2. Adjust the armrest to the desired position.
3. Release the button to lock the armrest.

6.5 Chair Rotation



- The chair swivel brake restricts rotation of the chair to keep the chair from moving during a procedure.
- To release the swivel brake, pull the brake lever to the right. To engage the brake, pull the brake lever firmly to the left.



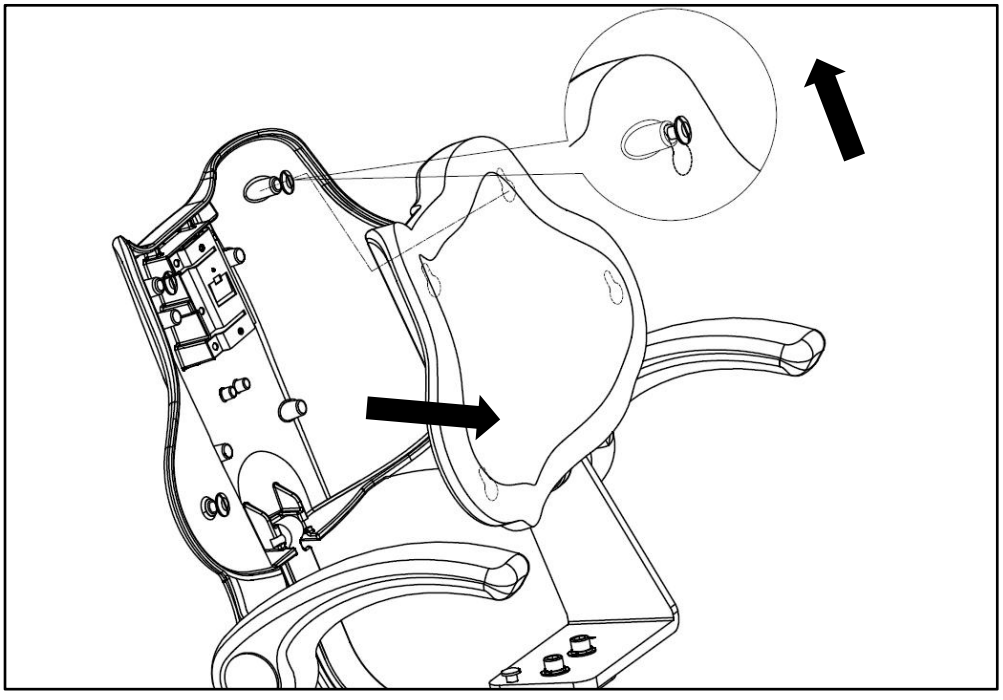
7 Maintain the Upholstery

The special design of upholstery is easy to remove and replace. They are installed on backrest, seat, and headrest of the chair.

Backrest upholstery

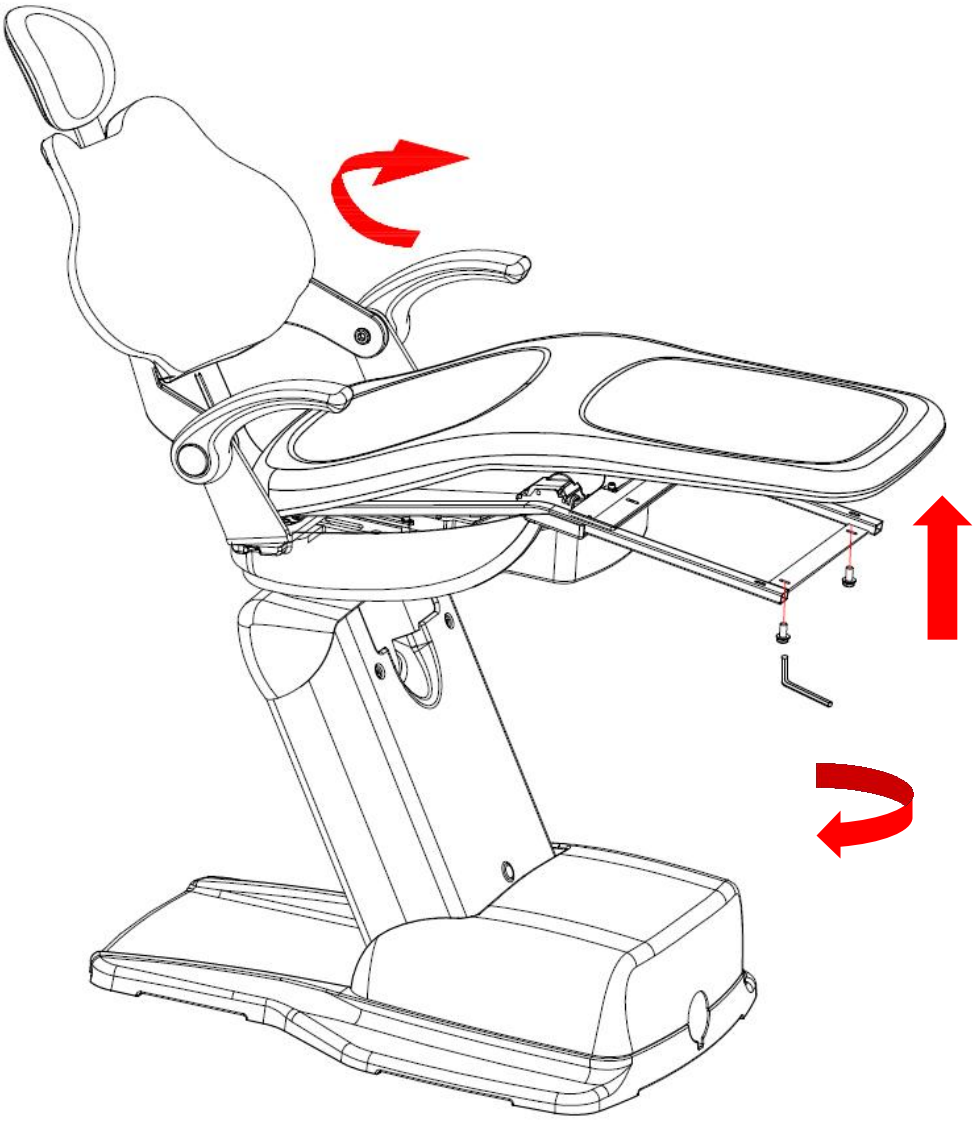
To take off the upholstery from backrest, hold the bottom edge of upholstery firmly and lift it up (1 inch or 25 mm), then lift the upholstery from the backrest of the chair (shown in the figure below).

To reinstall the upholstery, place the key holes in the backrest upholstery over the fastener posts on the back upholstery armature. Push down until the backrest upholstery inserts into place.

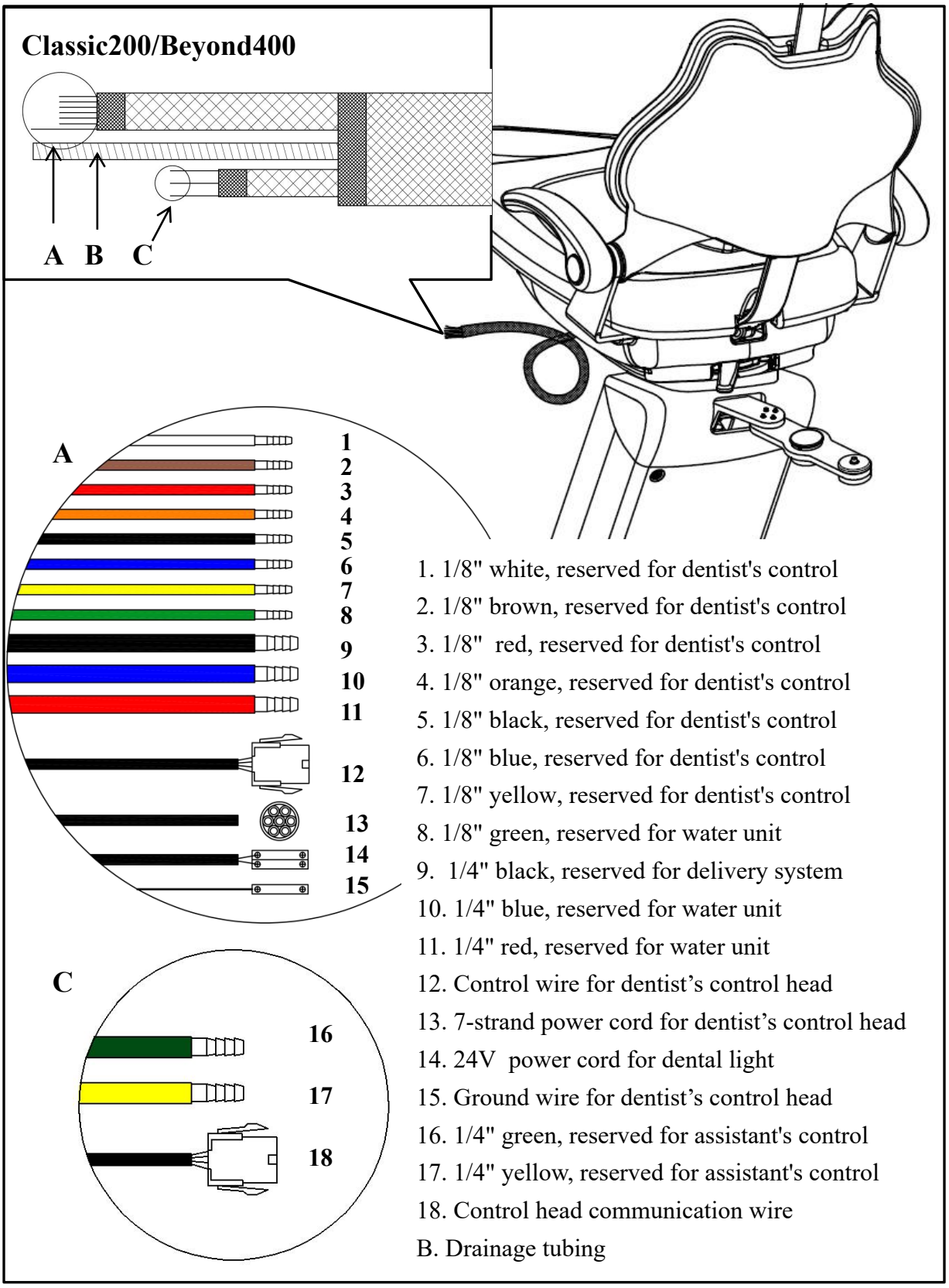


Seat upholstery

Loosen the screw at the front end of the upholstery, push the upholstery forward, then remove the seat upholstery.



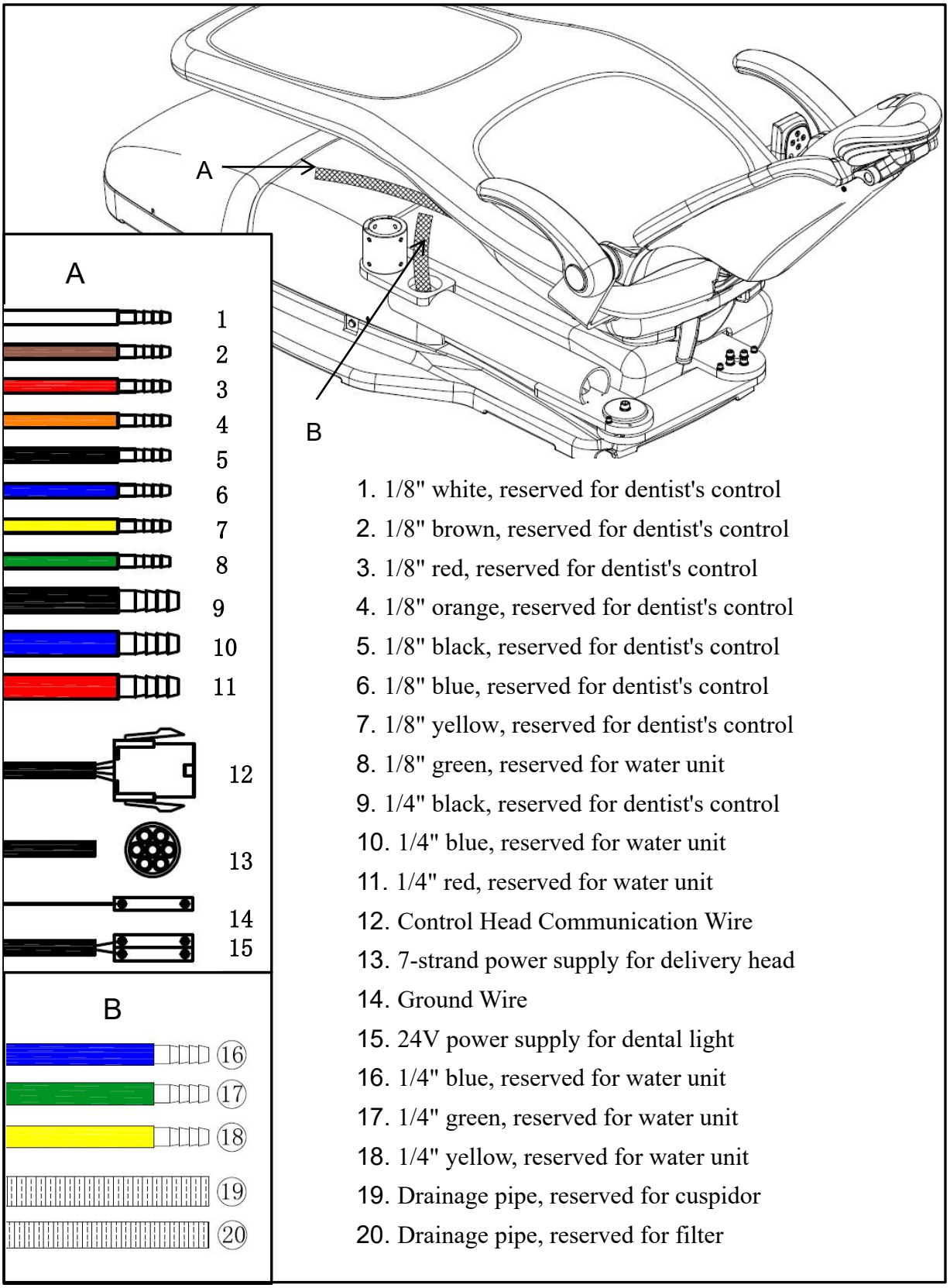
8 Reserved Wire and Tubings



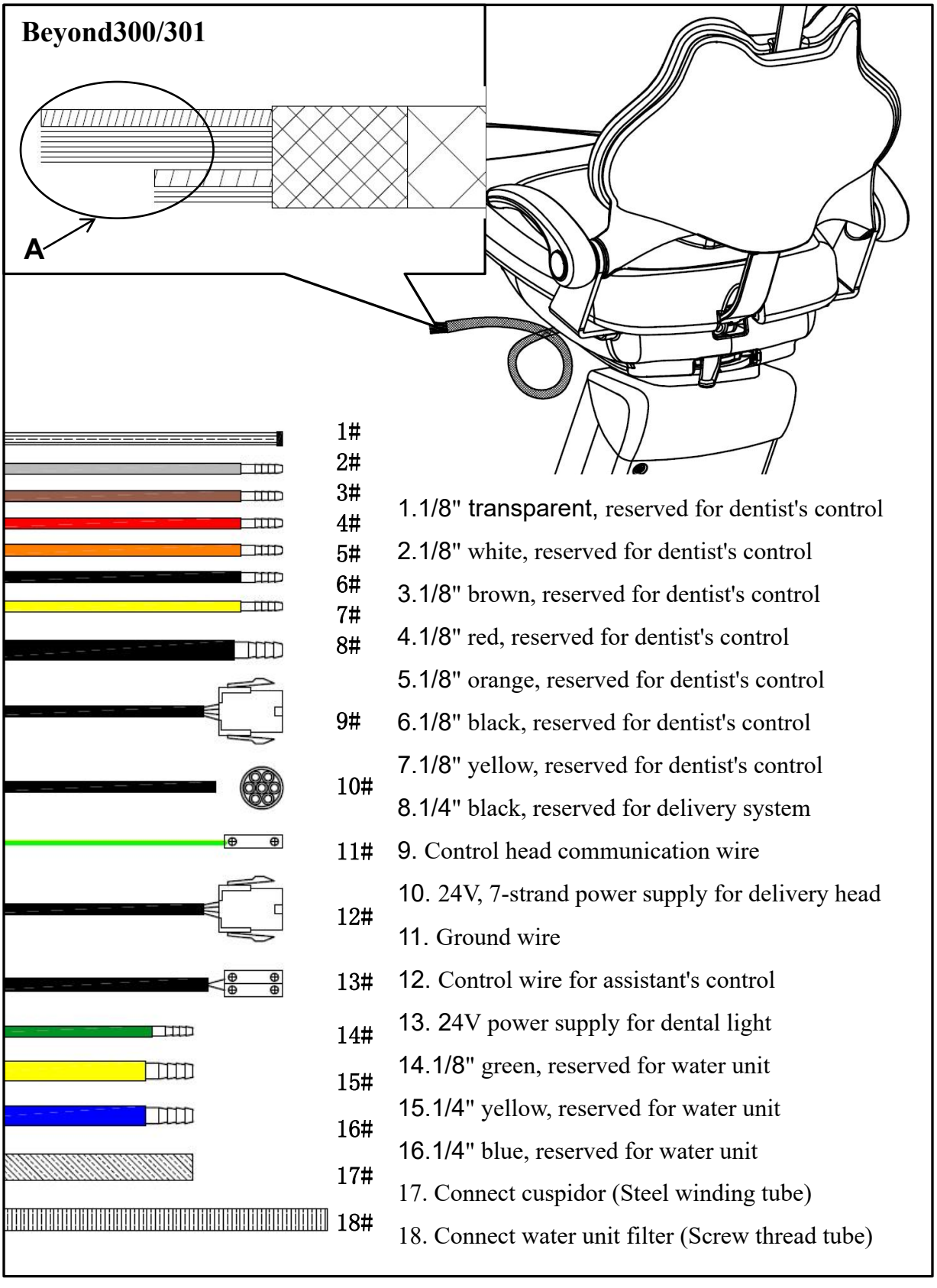
1. 1/8" white, reserved for dentist's control
2. 1/8" brown, reserved for dentist's control
3. 1/8" red, reserved for dentist's control
4. 1/8" orange, reserved for dentist's control
5. 1/8" black, reserved for dentist's control
6. 1/8" blue, reserved for dentist's control
7. 1/8" yellow, reserved for dentist's control
8. 1/8" green, reserved for water unit
9. 1/4" black, reserved for delivery system
10. 1/4" blue, reserved for water unit
11. 1/4" red, reserved for water unit
12. Control wire for dentist’s control head
13. 7-strand power cord for dentist’s control head
14. 24V power cord for dental light
15. Ground wire for dentist’s control head
16. 1/4" green, reserved for assistant's control
17. 1/4" yellow, reserved for assistant's control
18. Control head communication wire

B. Drainage tubing

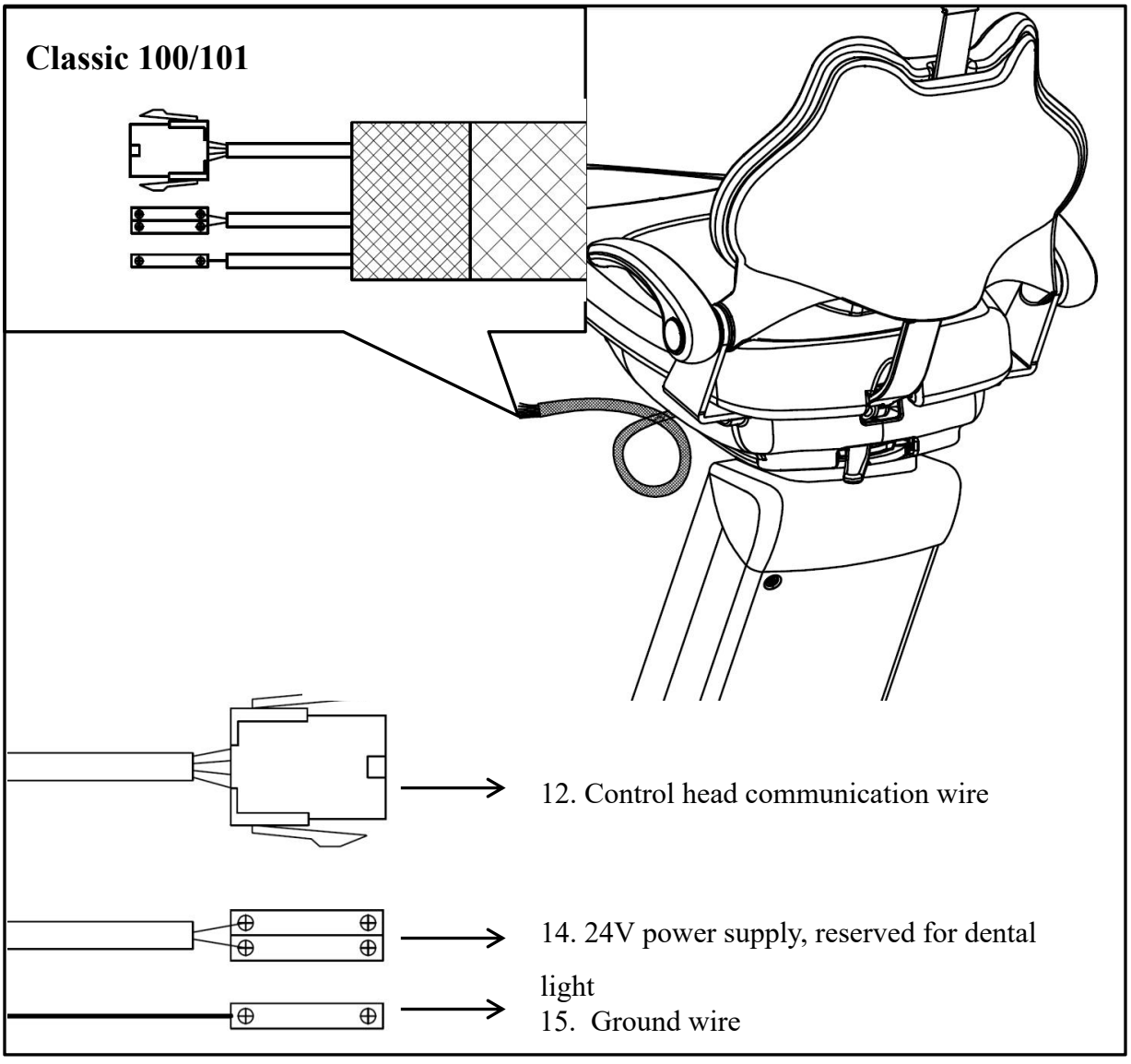
Classic201/Beyond401



1. 1/8" white, reserved for dentist's control
2. 1/8" brown, reserved for dentist's control
3. 1/8" red, reserved for dentist's control
4. 1/8" orange, reserved for dentist's control
5. 1/8" black, reserved for dentist's control
6. 1/8" blue, reserved for dentist's control
7. 1/8" yellow, reserved for dentist's control
8. 1/8" green, reserved for water unit
9. 1/4" black, reserved for dentist's control
10. 1/4" blue, reserved for water unit
11. 1/4" red, reserved for water unit
12. Control Head Communication Wire
13. 7-strand power supply for delivery head
14. Ground Wire
15. 24V power supply for dental light
16. 1/4" blue, reserved for water unit
17. 1/4" green, reserved for water unit
18. 1/4" yellow, reserved for water unit
19. Drainage pipe, reserved for cuspidor
20. Drainage pipe, reserved for filter



1.1/8" transparent, reserved for dentist's control
2.1/8" white, reserved for dentist's control
3.1/8" brown, reserved for dentist's control
4.1/8" red, reserved for dentist's control
5.1/8" orange, reserved for dentist's control
6.1/8" black, reserved for dentist's control
7.1/8" yellow, reserved for dentist's control
8.1/4" black, reserved for delivery system
9. Control head communication wire
10. 24V, 7-strand power supply for delivery head
11. Ground wire
12. Control wire for assistant's control
13. 24V power supply for dental light
14.1/8" green, reserved for water unit
15.1/4" yellow, reserved for water unit
16.1/4" blue, reserved for water unit
17. Connect cuspidor (Steel winding tube)
18. Connect water unit filter (Screw thread tube)


Classic 100/101
12. Control head communication wire
14. 24V power supply, reserved for dental light
15. Ground wire

9 Upholstery Cleaning and Disinfection

The upholstery provides users with unparalleled comfort, excellent aesthetics, and reliable quality. The upholstery comes with a one-year warranty covering defective materials and workmanship. Following these instructions can help to ensure a longer life for the upholstery.

Cleaning

Users can clean the upholstery using a mild solution, a non-ionic detergent, water, or cleaners without alcohol, bleach, or ammonia. Do not use abrasive cleansers or tools, as they can permanently damage the surface of the upholstery.

Disinfection

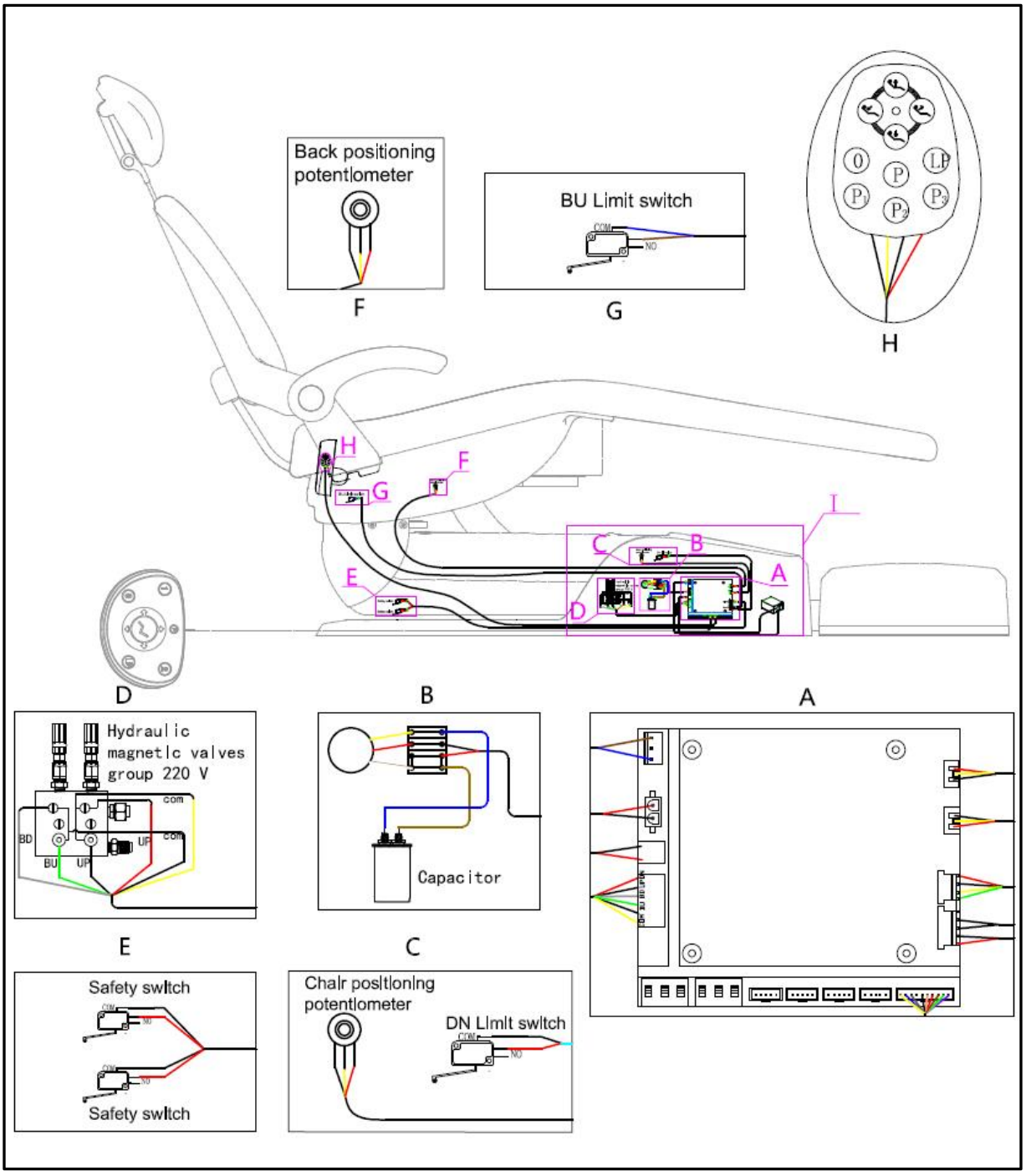
Recommend disinfecting the leather once a month with a 3% hydrogen peroxide solution, a leather cleaner, or a 3% multi-enzyme cleaner, following the manufacturer's instructions to ensure effective disinfection, and then fully wiping it down with water.

Caution:

Do not disinfect the upholstery with alcohol, potentiated glutaraldehyde disinfectant, liquid bleach, benzalkonium chloride disinfectant, or any kind of acid or alkaline disinfectants, as these can lead to the aging, cracking, or color fading of the upholstery. If an improper material is used and the upholstery is damaged, such as leather cracking, aging, or color fading, the warranty becomes void.

10 Wiring Diagram

Dental Chair with Hydraulic System



We reserve the right to make any alteration which may be due to technical improvements.





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