

037N

DENTAL CHAIR

INSTALLATION
and
OPERATION
INSTRUCTIONS

 **Belmont**[®]

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Intended Use of the Product

This product is intended for the exclusive use for diagnoses, treatments and relative procedures of dentistry, and must be operated or handled by the qualified dentists or by dental staffs under the supervision of the dentist. Such dentists or dental staffs should instruct and/or assist the patients to approach to and leave from the product. Patients should not be allowed to operate or handle the product unless he/she is so instructed.

Environmental Requirements

Operating	Ambient Temperature	41°F ~ 104°F (5°C ~ 40°C)
	Humidity	30% ~ 75%
	Atmospherical Pressure	10.2psi ~ 15.4psi (700hpa ~ 1060hpa)
Storage	Ambient Temperature	14°F ~ 122°F (-10°C ~ 50°C)
	Humidity	10% ~ 80%
	Atmospherical Pressure	8.7psi ~ 15.4psi (600hpa ~ 1060hpa)

Classification

- a. Protection against electric shock : Class I Equipment, Type B Applied Parts  (Headrest, Backrest and Seat cushions)
- b. Protection against water ingress : Chair (IPX0)
- c. Equipment not suitable for use in the presence of a flammable anesthetic mixture with air or with oxygen or nitrous oxide.
- d. Mode of operation : Non-continuous operation. ON time :3min. OFF time : 15 min

Symbol



Applied part complying with the specified requirements of IEC60601-1:2005 to provide protection against electrical shock, particularly regarding allowable patient leakage current and patient auxiliary current.



Caution, warning or note

CAUTION

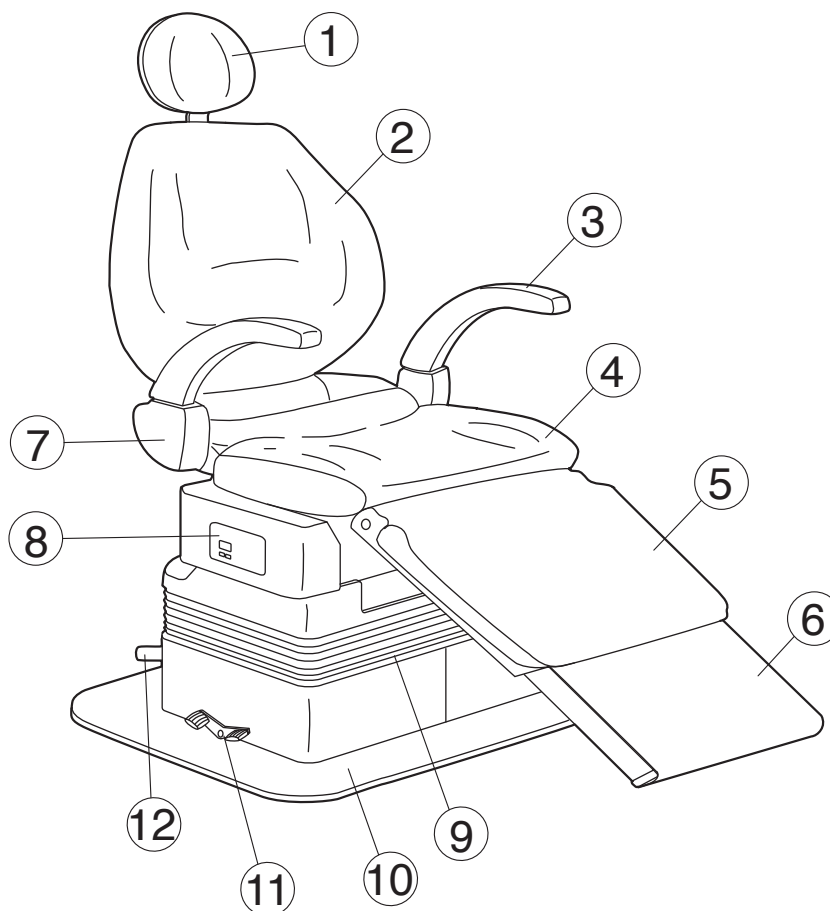
- This chair is intended to be used for dental examination and treatment. Do not use this for any other purpose than examination or treatment.
- Only a trained and qualified personnel should operate this chair.
- Follow all the safety precautions and instructions to protect patients and operators.
- During treatment keep small children, except for a patient, away from the treatment area.
- Always keep an eye on the patient so he/she shall not touch the equipment.
- Keep patient's and operator's hands, fingers or parts of the body away from moving parts of the equipment.
- In the case of defect, put a proper label on it. Call a technician of our authorized dealer.
- This product may be affected by sources that generate excessive electromagnetic waves.
- Do not install this equipment close to such devices such as elevators or communication equipment, including cellular telephones.
- Electrosurgical knives may cause the chair to temporarily malfunction. If an electrosurgical knife is to be used, turn off the main switch of the chair after the patient has been positioned.
- Take extreme care with patients that have a pacemaker. Prior to operation of the chair, ask patient to verify whether they have a pacemaker. When operating chair, be certain patient displays no indication of discomfort. Cease chair operation immediately and turn off main power switch if patient shows any sign of being affected by chair operation.
- Do not position this equipment so that it is difficult to access the main power supply outlet that the power plug of this chair is connected to.

CAUTION

The followings are prohibited.

- To modify this equipment.
- To use the equipment under any failure condition.
- To use the equipment without doing the daily and periodical check-up.
- To wipe the plastic covers with any disinfectant or detergent that contains organic solvent.
- To let a person on the chair who weighs over 300 lbs.
- To let two or more person on the chair.

1. OVERALL VIEW AND MAJOR COMPONENTS

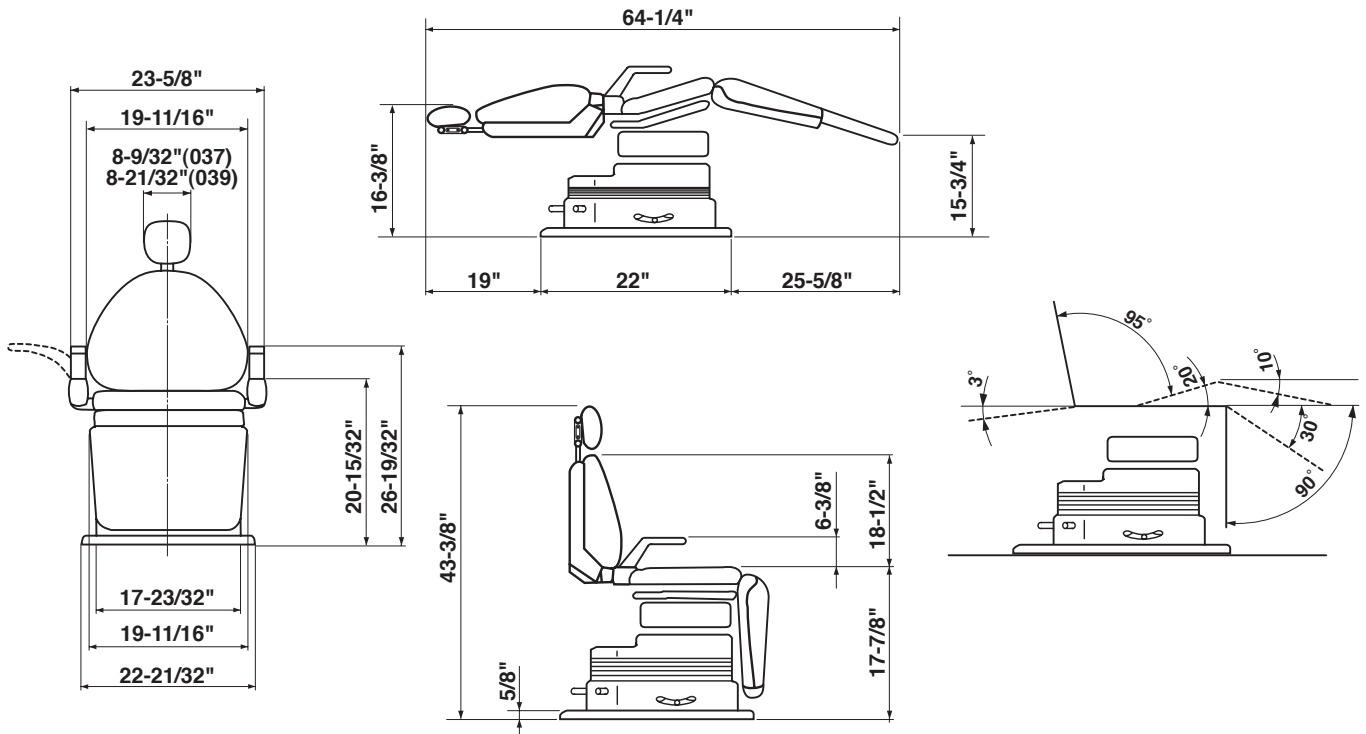


- | | |
|---------------------------|--------------------------|
| (1) ARTICULATING HEADREST | (7) ARMREST BLOCK |
| (2) BACKREST | (8) CHAIR PRESET PANEL |
| (3) ARMREST | (9) BELLOWS |
| (4) SEAT | (10) BASE PLATE |
| (5) LEGREST | (11) ROTATION LOCK PEDAL |
| (6) RETRACTABLE FOOTREST | (12) FOOT SWITCH (CHAIR) |

Fig. 1-1 OVERALL VIEW

2. DIMENSIONS AND SPECIFICATIONS

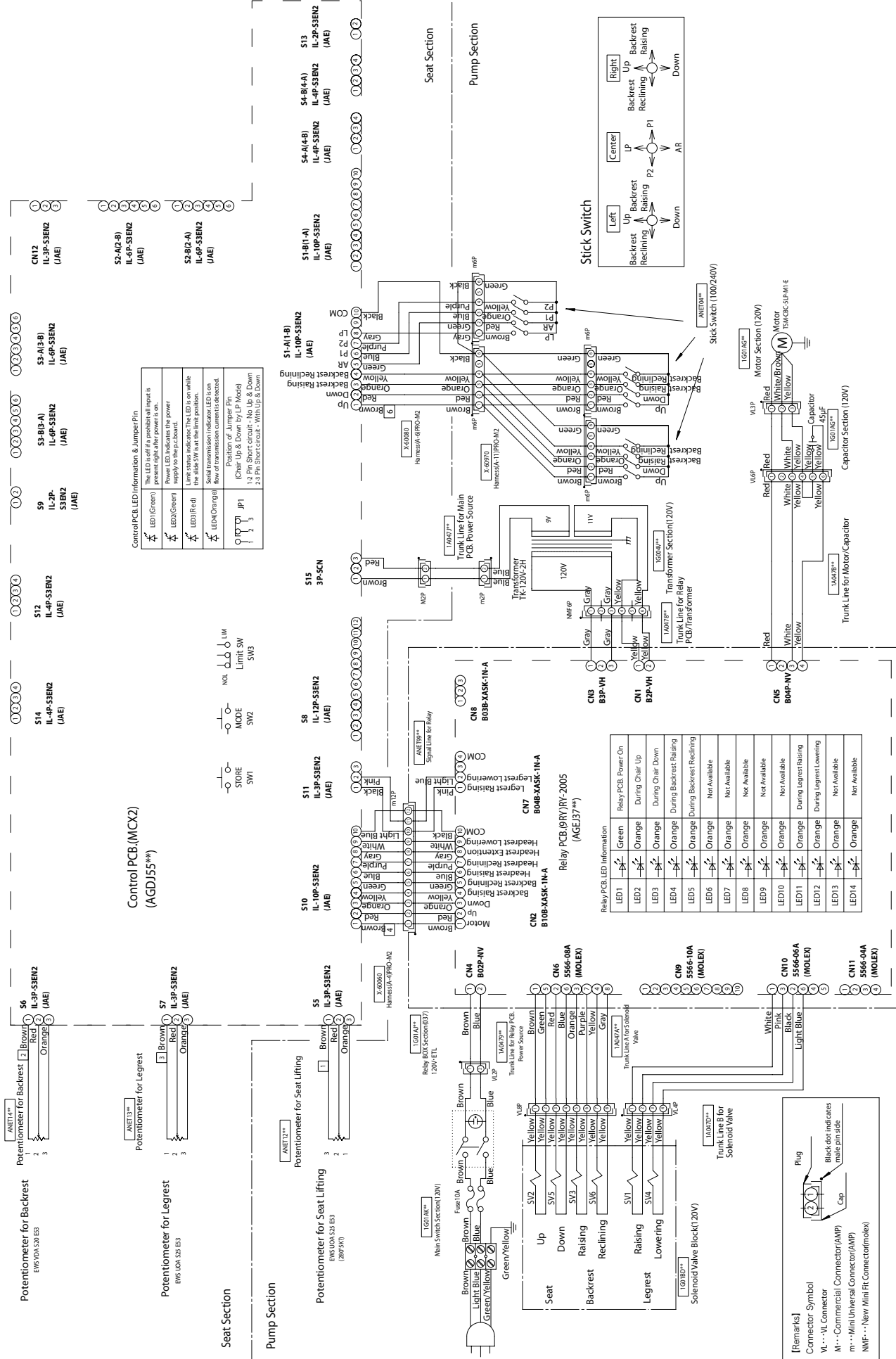
2-1. Dimensions



2-2. Specifications

CHAIR WEIGHT	-----	330 lbs
BASE DIMENSION	-----	22" x 22-5/8" x 5/8"
INITIAL HEIGHT	-----	17-7/8"
SEAT ELEVATION STROKE	-----	10-1/4"
LEGREST EXTENSION	-----	9-1/16"
ROTATION	-----	220 Degree Total (110 Degree. Left & Right)
MOTOR PUMP	-----	Type 5LP
PUMPING CAPACITY	-----	0.72 L/min. (0.19 gal/min)
HYDRAULIC FLUID	-----	900 cc (30 fl.oz)10W Non Detergent Hydraulic Oil
POWER REQUIRED	-----	115V 50 / 60Hz 5.7 / 3.6 A

3. ELECTRICAL DIAGRAM



4. INSTALLATION PROCEDURES

- 1) Place chair crate just behind the planned location for the chair.
- 2) Open the crate and remove all packing materials.
(Do not use sharp instrument that can damage upholstery.)
Slide the chair off palette into the place.
DO NOT LIFT THE CHAIR BY ARMRESTS OR BACKREST.
- 3) Once the chair is located, but **BEFORE PLUGGING INTO POWER**, do the followings ;
 - (1) Remove red bolt with a caution tag located on chair seat-plate.
 - (2) Grasping red tag on bellows, pull out rubber plug of oil reservoir.
 - (3) Save above red bolt and rubber plug in case the chair is ever reshipped in the future.
- 4) Remove 3 nuts and washers under the seat.
Attach the seat on seat-plate and fix it by screwing the nuts and washers from underneath the seat-plate.
- 5) Attach bellows to bellows support.
 - (1) Loosen and remove 4 Phillips screws on bellows support-rear, then remove the bellows support-rear from the chair.
 - (2) Hang the top plate of bellows on the edge of bellows support-front, and hang the top-rear plate of bellows on the edge of bellows support-rear.
 - (3) Reattach bellows support-rear with hanging bellows on to the chair by screwing 4 Phillips screws.
- 6) Unpack the small carton containing accessories. Check following items in it.
Headrest Assembly 1 pce.
Flat Head Wood Screw (Pie.4.8 - 40) 4 pcs.
Anchor Plug (7 x 30)..... 4 pcs.
For an 037N chair, slide headrest into slide mount on top of backrest.

- 7) Fixing the chair on the floor
Fix the chair base on the floor with bolts.
Chair base fixing points are shown in figure 3-1.
In case of wood floor, fix the chair base with attached flat head wood screws.
In case of concrete floor, fix the chair base with attached anchor plug and flat head wood screws.

CAUTION

Chair must be fixed to the floor with bolts to prevent from falling down.
When fixing chair to the floor, be careful not to damage pipings under the floor.

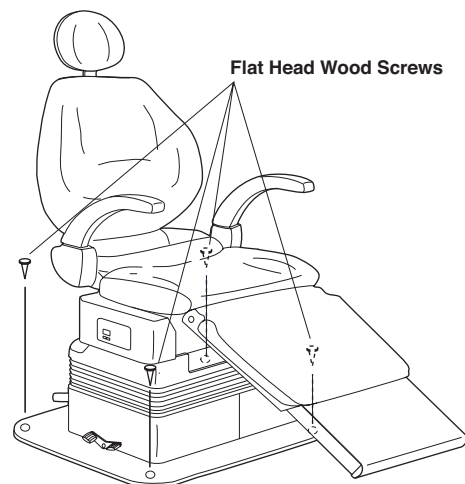


Fig. 4-1 Fixing chair on the floor

AFTER INSTALLATION

Once the chair is installed according to above steps, check the all chair function following the operation procedures in this booklet.

5. OPERATION PROCEDURES

⚠CAUTION

To avoid the risk of electric shock, this equipment must only be connected to a supply mains with protective earth. Grounding reliability can only be achieved when the equipment is connected to an equivalent receptacle marked HOSPITAL ONLY or HOSPITAL GRADE.

The Belmont 037N chair was designed for maximum simplicity of operation. However, taking a few moments to familiarise yourself with the operation of the chair will make its operation comfortable and simple for you and your patients.

5-1. Main Power Switch

- 1) Plug the chair into an appropriate electric power source.
- 2) Turn on the Main Switch located on left side of Pump Cover. (See Fig. 4-1.)

⚠CAUTION

Operate the Main Power Switch by hand only. Turn off the main switch after daily operation. Do not touch any switch with a wet hand, as it might cause electric shock.

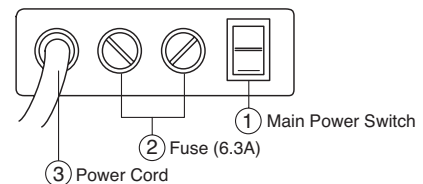


Fig. 5-1 Main Power Switch

⚠CAUTION

Before use

- Check connection of switches and make sure that the device functions properly.
- Make sure that grounding wire is connected.
- Make sure that cables are properly and perfectly connected.
- Be careful when you use the equipment combined with another, as it may lead to inadequate decision or danger.

Patient Entry

- Do not operate the chair until patient is fully seated. Patient head, back and feet must be in full contact with seat cushions. Patient hands must be placed on top of forward facing armrests or on their lap. All patients are at risk of potential injury if these precautions are not followed.
- Do not allow patient to sit on the heaviest, armrest or on the backrest. Do not give too much load on the chair cushions. Failure to do so might lead to malfunction or an accident, such as fall from the chair or break of the device

During use

- Do not use the chair longer than required for examination or treatment.
- Always watch the patient and the equipment to make sure nothing is wrong.
- If anything wrong is observed with the equipment or the patient, take a proper action, such as stopping the use of equipment as well as keeping the patient in safe.
- Keep an eye on the patient not to touch the equipment.
- Do not touch the patient and the fuse holder simultaneously.

After use

- Turn off the switch and pull of the power supply plug.
- Clean the equipment and get it ready for use.

5-2. Controls

Basic Control Function (FIG.5-2)

- Chair manual control functions are duplicated on both sides of the pump cover.
- Chair auto control functions are equipped on rear side of the pump cover.
- Chair rotation function are equipped on right side of the pump cover.

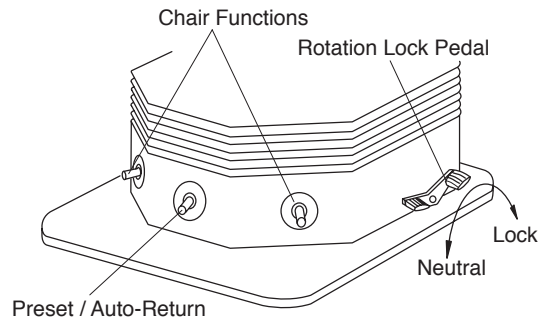


Fig. 5-2 Control Switch Location

1) Chair Manual Controls (See Fig. 5-3.)

(1) Seat Height Control

- To raise : Move either side mounted foot switch up.
- To lower : Move either side mounted foot switch down.

(2) Backrest Control

- To raise : Move either side mounted switch right.
- To reclining : Move either side mounted switch left.

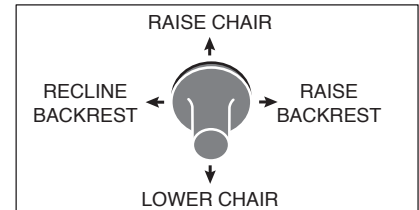


Fig. 5-3 Chair Manual Control

2) Chair Auto-mode Controls (See Fig. 5-4.)

(1) Preset Mode Controls(1.2.3)

037N chair has two preset positions and last position memory. To place the chair in each position with footrest extension. Momentarily move the foot switch located on rear side of the pump cover.

- 1 (Preset 1) : Move rear mounted switch right.
- 2 (Preset 2) : Move rear mounted switch left.
- 3 (LP) : Move rear mounted switch up.

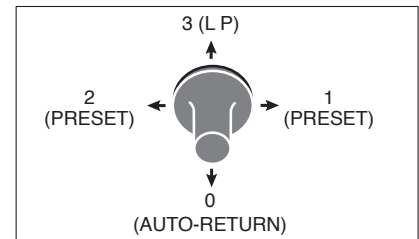


Fig. 5-4 Chair Auto-mode Control

(2) Auto-return Control (0)

- To return the chair to the patient entry position (fully lowered with the footrest retracted), Momentarily move rear mounted foot switch down.

3) Chair Rotation (See Fig.5-5)

Release rotation lock by pressing "N" footpad and lock chair in desired position by pressing "L" footpad.

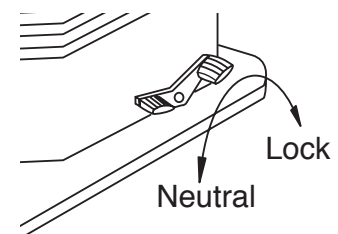


Fig. 5-5 Rotation Lock Pedal

5-3. Headrest Adjustment (See Fig. 5-6)

(1) Height Adjustment

Press down or pull up the headrest for height adjustment.

(2) Angle Adjustment

Grab the headrest release lever on headrest mechanism and move to desired position.

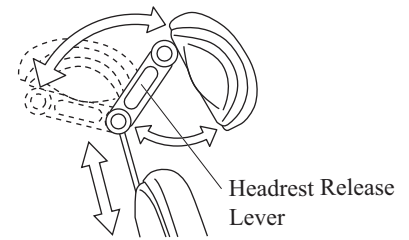


Fig. 5-6 Headrest Adjustment

⚠ CAUTION

Take care not to pinch the fingers with the headrest mechanism.

5-4. Positioning of Headrest (See Fig. 5-7)

- (1) Seat patient upright and all of the way back on the chair.
- (2) Position the bottom of the headrest cushion so it is even with the occipital of the patient's head.

Viewing the lower arch (See Fig. 5-7)

- (1) Using the latch release button (white), pivot the headrest cushion halfway toward the patient's head.
- (2) Have the patient lean back on the headrest.
- (3) Using the chair controls, place the patient in the desired operating position.

Viewing the upper arch (See Fig. 5-7)

- (1) Lower the backrest and raise the base of the chair.
- (2) Slide the headrest in.
- (3) Support the patients head/headrest cushion while pressing latch release button.
- (4) Tilt the headrest cushion until the desired upper arch position is obtained.

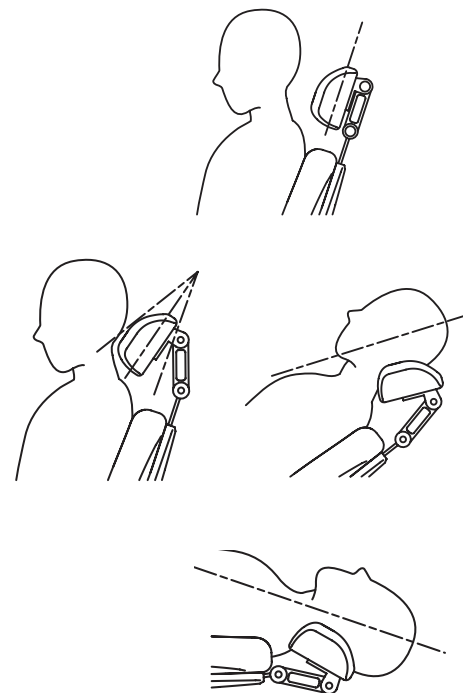


Fig. 5-7 Positioning of Headrest

5-5. Armrest Rotation (See Fig. 5-8)

Either armrest can be rotated outward by pulling.

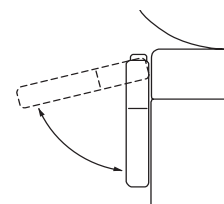


Fig. 5-8 Armrest Rotation

5-6. Safety Stop

Automatic travel in all automatic mode can be instantly cancelled at any time by momentarily pressing any control switch.

6. ADJUSTMENT OF POSITIONING

6-1. Auto Return (AR) , Preset (1.2) , and Rinsing Position (LP) Setup (Fig.6-1)

There are two different setup procedures but the results are the same.

1) Setup Procedure 1.

- (1) Move the chair to desired position by manual control switches.(Fig.6-1)
(Also, move the legrest to the desired extension or retraction limit position)

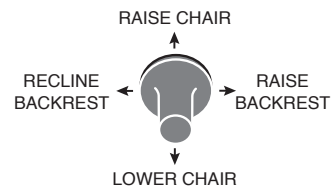


Fig. 6-1 Stick switch (Manual)

- (2) Move the stick switch (0 or 1 or 2 or 3) for that position until the beeper sounds (about 5 seconds) to complete the procedure.(Fig.6-2)

0 : Auto return

1 : Preset-1

2 : Preset-2

3 : (LP) Rinsing position as the last position

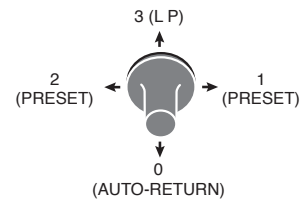


Fig. 6-2 Stick switch (Auto-mode)

2) Setup Procedure 2.

- (1) Move the chair to desired position by manual control switches.(Fig.6-1)
(Also, move the legrest to the desired extension or retraction limit position)

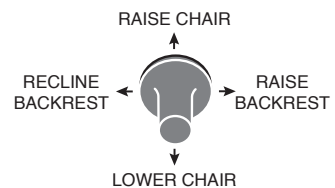


Fig. 6-1 Stick switch (Manual)

- (2) Press and hold down the “Store” SW (about 2 seconds)(Fig.6-3).
After the initial beeper sound, the beeper keeps on sounding once at the “pip, pip” (ten times at one second intervals).

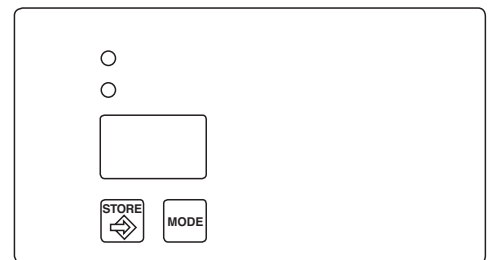


Fig.6-3 Chair Preset Panel

- (3) Press the stick SW (1 or 2 or 3) for that position to complete the procedure.(Fig.6-4)
If the step 3 does not take place within 10 seconds, the procedure is terminated.
(Setup of the Auto return position is not available.)

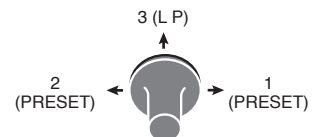


Fig. 6-4 Stick switch (Auto-mode)

- (4) To exit the procedure during the step 2, press the “Store” SW once again.

7. CARE AND MAINTENANCE

7-1. Cleaning and disinfection

CAUTION

Do not spray liquids directly onto chair surfaces.

In order to prevent damage to electrical components and systems, do not apply excess cleaning solution onto chair surfaces.

Routine Care

Clean plastic and upholstery surfaces regularly using a mild soap and water solution.

When cleaning, use a dampened cloth only, as excess cleaning solution can flow into the chair and cause permanent damage to electrical components.

Barrier Technique

Use of disposable barrier products should be the first choice for the protection of dental equipment. Disinfectants leave behind a surface residue that accumulates over time and eventually damages equipment and upholstery surfaces.

Chemical Disinfection

If a chemical disinfectant is to be used on chair or upholstery surfaces, contact the manufacturer of the disinfectant prior to use.

Obtain verification from the disinfectant manufacturer that their product will not damage the chair or upholstery surfaces.

Unacceptable Disinfectants

The following chemicals may damage equipment and upholstery:

- * Alcohol based solutions
- * Bleach
- * Phenol / Alcohol combinations
- * Foam spray products
- * Benzalconium chloride solutions

Use with Caution

- * Water based phenolic disinfectants, following manufacturer's exact instructions for use.

CAUTION

Warranty does not cover damage to equipment and upholstery caused by disinfectant solutions.

7-2 Storage and working lifetime

7-2-1 Storage

1. Keep the equipment away from water.
2. Keep in a circumstances safe from influence by temperature, humidity, wind, sun light, air containig salts and minerals.
3. Care about stability such as inclination, vibration and impact, including handling and transportation.
4. Do not keep the equipment in a place where chemicals are or where gas is emitted.

7-2-2 Lifetime

Provided that the recommended and authorized care and maintenance are correctly performed, the working lifetime of this equipment is 10 years from the date of initial shipment from the manufacturer.

7-3. Daily Check-up of functions by the end user

The end-user is responsible for daily check-up of the equipment. In the case end user does not do this, it is allowed that you outsource it to a technician authorized by us.

In order to assure safety use of this equipment, please carry out the following check-up in a frequency as indicated below.

No.	Item (Frequency)	How to check and diagnose	Influence of not doing check-up	Actions when any incom- pliance is found
1	Safety functions (Daily. Before opening office)	During pre-set movement or auto-return movement, press any key for chair operation and the chair should automatically stop.	Injury caused by move- ment of the chair during treatment or pinching with chair and other equipment or furniture.	Call to a technician of our authorized dealer.
2	Function of each switch (Daily. Before opening office)	Each switch for chair operation should work correctly.	Defect of movement may cause an accident.	Call to a technician of our authorized dealer.
3	Wiping off water (Daily. Before closing office)	Make sure that no water is left that were spilt during treatment.	Water will caus rust	Wipe off water with a soft and dry cloth.
4	Stain removal of external parts (Daily. Before closing office)	Visually make sure that no dust, chemical or other material is left on the chair.	Such chemicals will cause discoloration, dete- rioration and break of the plastics.	Thoroughly clean the chair following the cleaning instruction in this book, regardless the result of this check-up. For tough stains, use mild detergent solvency.
5	Main power switch (Daily. Before closing office)	Make sure that the main power switch is off	Accident or defect of the equipment	In the case the main power cannot be turned off, Call to a technician of our authorized dealer.
6	Moving parts (Weekly)	Make sure that the chair does not make any abnormal noise during automatic movement	Accident or defect of the equipment	Call to a technician of our authorized dealer.
7	Oil leakage (Weekly)	Make sure that there is no hy- draulic oil on the floor or chair base leaking from the cylinder.	Defect of the equipment	Call to a technician of our authorized dealer.
8	Power supply cable (Monthly)	Power supply cable should not be abnormally bent, pinched or damaged, and the plug should be firmly inserted to the power outlet and not covered with dust.	Accident or defect of the equipment	Clean and rearrange the cable. For replacement, call to a technician of our authorized dealer.

7-4. Guideline for Periodical Check-up

- Some parts and components of the products are degraded or deteriorated depending on the frequency of use, so yearly check-up and maintenance, as well as replacement of consumable parts, are required.
- For check-up and repair, call a technician of our authorized dealer.

Parts and components that require periodical check-up

No.	Parts Description	Standard Lifetime
1	Headrest Mechanism	2 years
2	Electric wiring of moving parts	2 years
3	Swithes for operating equipment	2 years
4	Transformer	3 years
5	Control PCBs	3 years
6	Hydraulic cylinder and related parts	5 years

Consumables

No.	Parts Description
1	Power supply cord
2	Cusions and Upholsteries

7-5 Disposal

- This is not an infecious device, but prior to disposal make sure that no parts of the device is infected.
- Follow the federal, state and local regulations for disposal.

NOTE

This equipment should be installed by a professional technician(s) of our company or a company authorized by us. Follow the installation manual enclosed with this manual for details of installation.

Company or person authorized to install this equipment

Name :

Address :



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