

Installation
Operation
Maintenance
Troubleshooting
Version Dec/17



5000FB / Biscayne Fixed Base

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Congratulations!

All of us at Summit Dental Systems want you to know that your Palm Beach Chair has been built with the finest materials available.

The assembly and testing was completed by technicians devoted to making SDS products perform to all prescribed specifications.

Our five year limited warranty is just one of the ways we express our confidence that you will be completely satisfied with your purchase.

We appreciate your support and look forward to meeting your future professional needs through our expanding product line.

Cesar Coral

President

Product Description

The Biscayne E.L. Dental Chair was designed for the seating of patients during dental treatments. It features automatic movements used to work with left-handed and right-handed professionals. Automatic movements are powered by a DC motor.

The chair is operated by a foot control, that has 7 control functions including adjustment of the dental light intensity, seat and backrest movements, return to initial entry/exit position, and a programmable preposition which is set by the professional.

The chair has an innovative and modern round-edged design that includes a curved backrest which provides patients with ultimate comfort and allows for the best working position for the professional.

The base is ergonomically designed, made of steel, and protected by debrun antiskid. It has 2 holes that allow for the option of fastening the dental chair to the floor.

The chair has a steel-built structure with a resistant, smooth, high-shine, round-edged coating. It is coated in smooth epoxy coating, polymerized at 482°F (250°C), with phosphate process resistant to rust and cleaning products.

The headrest is removable and height adjustable. Round-edged fixed armrests are designed to ease the patient access and improve the professional's productivity by avoiding unnecessary movements and making cleaning much easier.

Important Information

Technical Specifications

Power Inlet:	115 VAC, 60 Hz or 220 VAC, 50 Hz 115V – 12Amp MDA Time Delay
Fuse:	250V, 6.3A Type T
PC Board:	Inlet 115 VAC or 220 VAC Outlet 24 VDC
Electric Motor Base:	24 VDC A duty cycle operation 1 Min. on, 4 Min. off
Electric Motor Back:	24 VDC A duty cycle operation 1 Min. on, 4 Min off

Unpacking the Chair

Pay careful attention when unpacking the chair and its accessories. Damage caused by mishandling the equipment during unpacking or installation is not covered under warranty.

New Owner

Please read, sign and submit the warranty registration form that is located at the end of this manual. Failure to return this form may void the warranty.

Serial Number

The product label can be located by raising the base of the chair all the way up and looking underneath the Lower Elevation Cover.

Storage and Transportation

Storage/Transportation	Temperature: -20°F to 122°F (-29°C to 50°C) Relative humidity: 10 – 95%
Operating Temperature	Temperature: 50°F to 104°F (10°C to 40°C) Relative humidity: 10 – 95%
Indoor Use	Altitude up to 2,000 m (6,563') Installation category II Pollution degree 2

Classifications

- a. According to the type of protection against electric shock: CLASS I.
- b. According to the mode of operation: ON/OFF.
- c. According to the degree of protection against electric shock: TYPE B APPLIED PARTS
- d. According to the degree of protection against ingress of water: ORDINARY (IPX0) PROTECTION.

According to the degree of safety of application in the presence of a flammable anesthetic mixture with air or with oxygen or nitrous oxide: - EQUIPMENT NOT SUITABLE FOR USE IN THE PRESENCE OF A FLAMABLE ANAESTHETIC MIXTURE WITH AIR OR WITH OXIGEN OR NITROUS OXIDE

ADVISORY NOTICES

This equipment should only be installed by a specialized technician authorized by Summit Dental Systems, and not doing so could result in loss of warranty.

To guarantee the safe functioning of your equipment, use only the Summit Dental Systems assembly configurations (Dental Chair, Delivery Units, Assistant's Instrumentation, and Dental Light) supplied by Summit Dental Systems authorized Dealers/Technical Assistance.

Medical Devices is for professional use only. It must be operated and utilized by specialized professional (certified professional, according to the legislation of the country) and following the instructions of the manual.

No modification of this equipment is allowed, unless authorized by the manufacturer.

No parts of this device can be serviced when it is in use with a patient.

Should it be necessary to add fluid to the hydraulic system, use only DEXRON-III/MERCON MULTIPURPOSE ATF fluid.

NOTE: Waste or used oil should be sent to a designated site for safe professional disposal.

When placing the chair in its final position, adequate space should be provided for its normal operation for the configuration in which the chair will be used

WARNINGS



CAUTION! HEAVY EQUIPMENT!

Two (2) or more persons should be involved in removing the chair from the pallet and setting it gently on the ground to its final position.

Handle only from the steel base, metal seat frame, and the armrest brackets. Do not handle by any plastic part as they may crack! Plastics damaged in this manner are not covered under warranty.

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

The mains plug should remain accessible when the chair is installed. **DO NOT** position the chair making it difficult to disconnect the power plug from the mains.

Turn power off before servicing. To completely power off the chair you must unplug the equipment from the power source. All electrical work replacement should be done with equipment unplugged from outlet.

The use of Accessories, transducers, and cables other than those specified by the manufacturer, may result in increased Emissions or decreased Immunity of the Chairs.

Medical Electrical Equipment needs special precautions regarding EMC and needs to be installed and put into service according to the EMC information provided in this manual.

Portable/Mobile RF communications equipment can affect Medical Electrical Equipment.

SDS Biscayne E.L. Fixed Base Chair MUST be fixed to the floor:

The Dental Chair has 4 holes located on the base plate under the front cover for fastening it to the floor.



Guidance and manufacturer's declaration - electromagnetic emissions

The Biscayne E.L. Chair is intended for use in the electromagnetic environment specified below. The customer or the user of the Biscayne E.L. Chair should assure that it is used in such an environment.

EMISSION TEST	COMPLIANCE	ELECTROMAGNETIC ENVIRONMENT GUIDANCE
RF Emissions CISPR 11	Group 1	The Biscayne E.L. 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 B	The Biscayne E.L. Chair is suitable for use in all establishments, including 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	
Voltage Fluctuations/ flicker emissions IEC 61000-3-3	Complies	

Guidance and manufacturer's declaration – electromagnetic immunity

The Biscayne E.L. Chair is intended for use in the electromagnetic environment specified below. The customer or the user of the Biscayne E.L. Chair should assure that it is used in such an environment.

IMMUNITY TEST	IEC 60601 TEST LEVEL	COMPLIANCE LEVEL	ELECTROMAGNETIC ENVIRONMENT GUIDANCE
Electrostatic Discharge (ESD) IEC 61000-4-2	± 6 kV contact ± 8 kV air	± 6 kV contact ± 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	± 2 kV for power supply lines ± 1 kV for input/output lines	± 2 kV for power supply lines ± 1 kV for input/output lines	Main power quality should be that of a typical commercial or hospital environment.
Surge IEC 61000-4-5	± 1 kV differential mode ± 2 kV common mode	± 1 kV differential mode ± 2 kV common mode	Main 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	Main power quality should be that of a typical commercial or hospital environment. If the user of the Biscayne E.L. Chair requires continued operation during power mains interruptions, it is recommended that the Biscayne Chair be powered from an uninterrupted 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.

NOTE: U_T is the a.c. mains voltage prior to application of that test level.

Guidance and manufacturer’s declaration – electromagnetic immunity

The Biscayne E.L. Chair is intended for use in the electromagnetic environment specified below. The customer or the user of the Biscayne E.L. Chair should assure that it is used in such an environment.

IMMUNITY TEST	IEC 60601 TEST LEVEL	COMPLIANCE LEVEL	ELECTROMAGNETIC ENVIRONMENT GUIDANCE
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz to 80 MHz	3 Vrms	<p>Portable and mobile RF communications equipment should be used no closer to any part of the Biscayne E.L. Chair, including cables, than the recommended separation distance calculated from equation applicable to the frequency of the transmitter.</p> <p>Recommended separation distance $d = 1P.2 \sqrt{\quad}$ $d = 1P.802\text{MHz}\sqrt{\quad}$ to 800 MHz $d = 2P.8003 \text{ MHz}\sqrt{\quad}$ to 2.5 GHz</p>
Radiated RF IEC 61000-4-3	3 V/m 80 MHz to 2.5 GHz	3 V/m	<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).</p> <p>Field strengths from fixed RF transmitters as determined by an electromagnetic site survey^a should be less than the compliance level in each frequency range^b.</p> <p>Interference may occur in the vicinity of equipment marked with the following symbol</p>

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 peoples.

Fields strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateurs radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To access 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 Biscayne E.L. Chair is used exceeds the applicable RF compliance level above, the Biscayne E.L. Chair should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as re-orienting or relocating the Biscayne E.L. Chair.

^b Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 3 V/m.

**Recommended separation distance between
 portable and mobile RF communications equipment and the Biscayne E.L. Chair**

The Biscayne E.L. Chair is intended for use in the electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the Biscayne E.L. Chair can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the Biscayne E.L. 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 $d = 1P.2 \sqrt{\quad}$	80 MHz to 800 MHz $d = 1P.2 \sqrt{\quad}$	800 MHz to 2,5 GHz $d = 2P.3 \sqrt{\quad}$
0.01	0.12	0.12	0.23
0.1	0.38	0.38	0.73
1	1.2	1.2	2.3
10	3.8	3.8	7.3
100	12	12	23

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 power 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 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

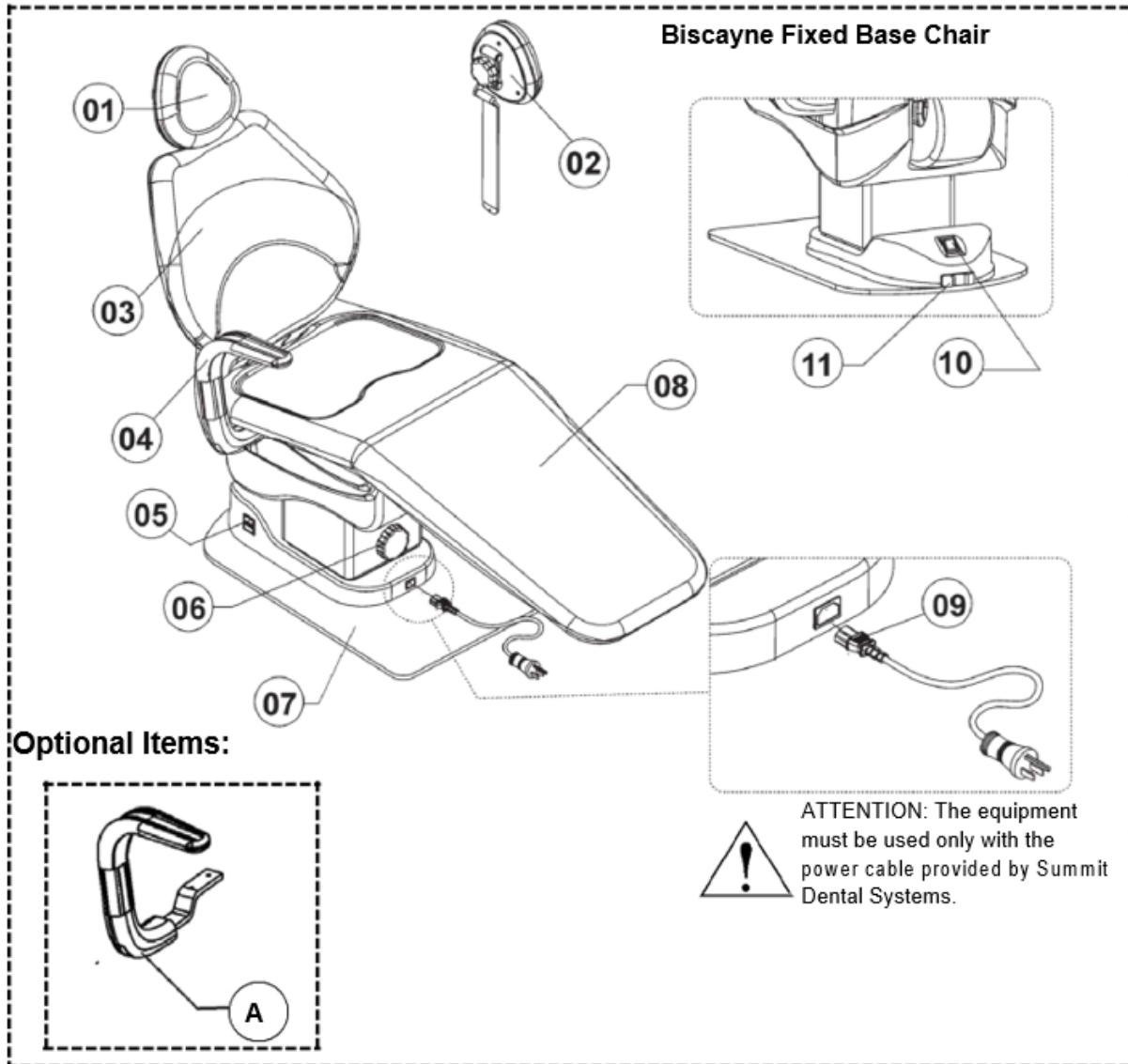
Product Symbols

Symbol	Description	Symbol	Description
	European Authorized Representative		Caution. Failure to follow instructions could result in damage to product or minor injury.
	Manufacturer of equipment.		Type B applied part.
	Date of manufacture.		Electrical and electronic waste. Do not dispose of with domestic waste.
	Serial Number.		Protective earth (ground).
	Model Number (Catalog Number).		Functional earth (ground).
	CE Mark - Conforms to applicable European Directives (refer to Declaration of Conformity).		

Questions?

Read this manual carefully. If you have any questions, please call Summit Dental Systems Technical Service at 1-800.275.3368 (USA) or (954) 730-3636 (outside USA).

GENERAL DATA



- 01) Headrest
- 02) Headrest Bi-articulated (optional)
- 03) Backrest
- 04) Armrest
- 05) Fuse
- 06) Manual Height Adjustment Knob
- 07) Base
- 08) Seat

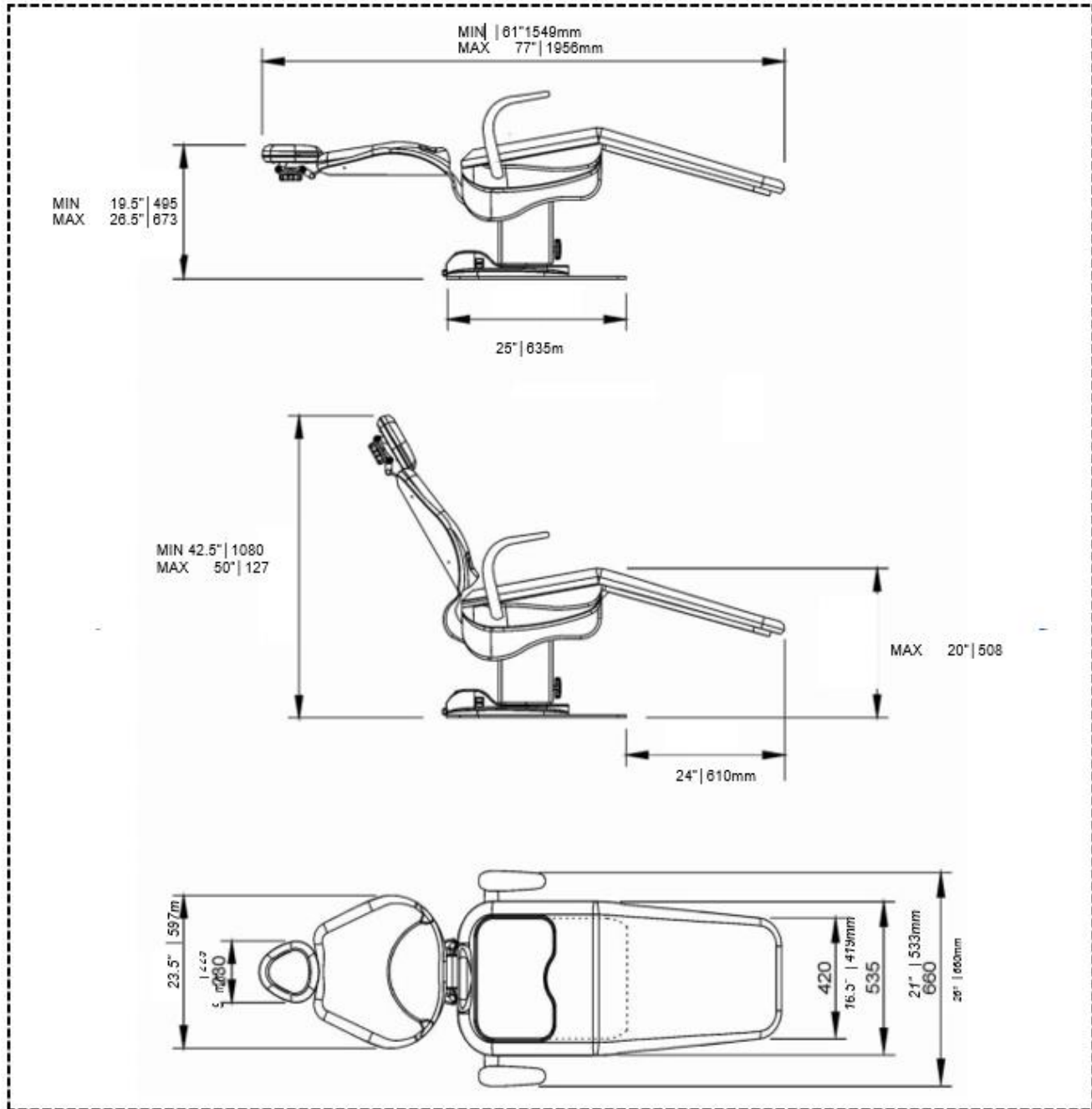
- 09) Power Cable Socket
- 10) On/Off Switch
- 11) Up/Down Button for Backrest

Optional Items:

- A) Fixed Armrests

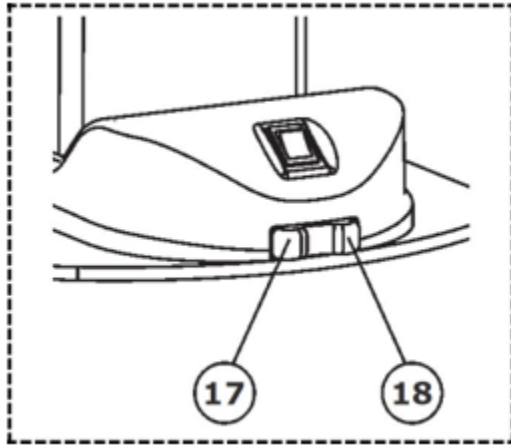
DIMENSIONS

Biscayne E.L. Fixed Base Dental Chair



OPERATION

Operation of the Backrest

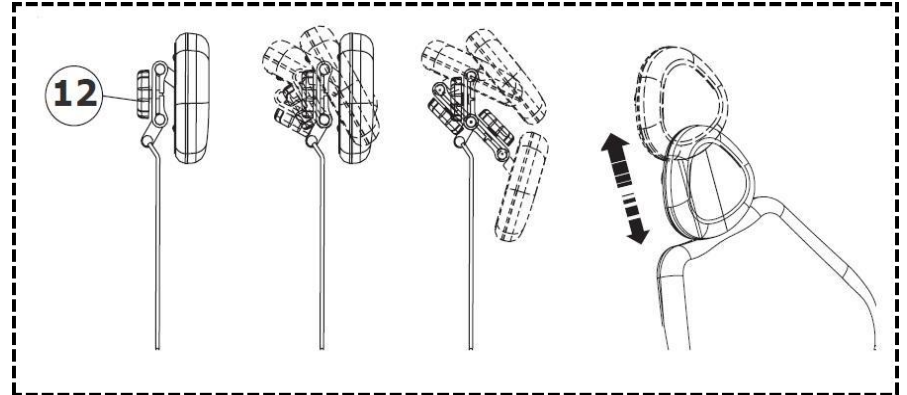


- 17 - Raise backrest
- 18 - Lower backrest

Double Articulated Headrest

To move the headrest, turn knob (12) counterclockwise until headrest is loose. Adjust the headrest to the desired position and then tighten the knob back by turning it clockwise.

To adjust height, just move it vertically.



Overcurrent Protection

This chair is equipped with a safety device for overcurrent through two 5 amp fuses and internal overcurrent protection for the equipment mounted to the chair.

MAINTENANCE

Recommendations for the Dental Equipment Maintenance and Operation

Your Summit Dental Systems equipment has been designed and developed according to the standards of modern technology. Similar to other kinds of equipment, it requires special care, which is many times neglected due to several reasons and circumstances.

Therefore, here are some important reminders for your daily routine. Try to follow these simple rules, which will save you a lot of time and will avoid unnecessary expenses once they become a part of your working procedures.

- The equipment should only be operated by properly qualified and trained technicians and dental professionals.
- If the need of maintenance occurs, use only the service of a Summit Dental Systems authorized dealer/technician.
- Do not expose plastic components into contact with chemical used in routine dental treatment such as: acids, mercury, acrylic liquids, amalgams, etc.
- Switch off the equipment when not in use for a prolonged amount of time.
- Always keep the equipment clean before next the procedure.
- Do not modify any part of the equipment. Do not disconnect the cable or any other connections without necessity.

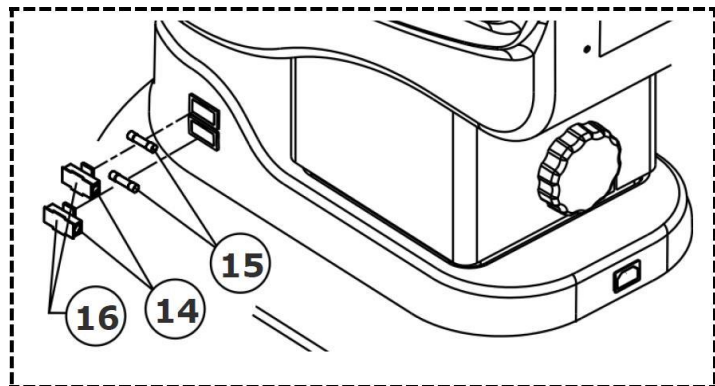
Summit Dental Systems will not be responsible for:

- Use of the equipment other than that for which it is intended.
- Damage caused to equipment, professional, or patients due to improper installation procedures, faulty maintenance, and incorrect operation that is contrary

Replacing the Fuse

With the aid of a screwdriver, loosen the fuse holder cover (16) and then replace the fuse (14) with the spare fuse (15).

Note: The spare fuse (15) comes with the equipment. After making the first change, it is advisable that there always be a spare fuse (5) (see page 08).



Cleaning and Disinfection

Equipment surfaces and upholstery discoloration, cracking, sloughing and drying from the use of surface disinfectants is probably the most discussed area of equipment problems today. The very nature of equipment surfaces and upholstery materials is contrary to the application of harsh chemicals.

Barrier Technique

The first choice in the protection of dental equipment should be the use of disposable barrier products. The repeat use of disinfectant on equipment surfaces without the constant removal of the solution residue will eventually cause some damage to equipment surfaces.

Chemical Disinfecting

Because there are hundreds of cleaners, conditioners and disinfectants available, it is impossible for manufacturers to test them all. The manufacturer of the cleaner or disinfectant to be used should be contacted for them to state whether or not the disinfectant will damage equipment surfaces including upholstery.

A solution of mild non-ionic detergent and water is recommended for routine surface cleaning. Never use abrasives.

Unacceptable Disinfectants

The following chemicals may damage equipment and upholstery:

- Alcohol based solutions
- Acetone
- Bleach
- Phenol
- Foam spray products

The Summit Dental Systems warranty does not cover damage to equipment and upholstery caused by cleaning and disinfectant solutions.

TROUBLESHOOTING

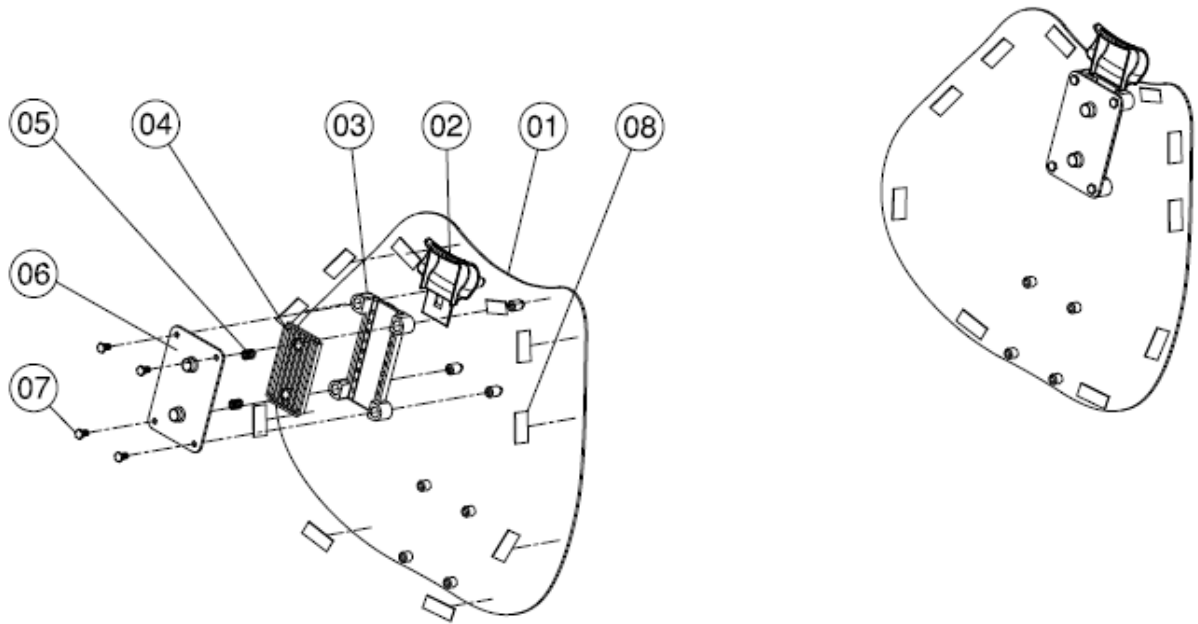
In case of an abnormality, check to see if the problem is related to any of the items listed in Troubleshooting. If you cannot solve the problem, disconnect the power cord from the power outlet and contact your Summit Dental Systems authorized dealer/technician.

Problem	Probable Cause	Solution
- Chair is not working	- Plug is disconnected from socket - Power is cut - Main switch is off - Burned fuse(s)	- Connect plug to socket - Wait until power is back - Switch the main switch on - Replace fuse(s)

ATTENTION: Any other problem that could happen with this equipment should only be repaired by a Summit Dental Systems authorized technician. Any misuse, negligence or maintenance not performed by a Summit Dental Systems authorized technician will result in the loss of the warranty.

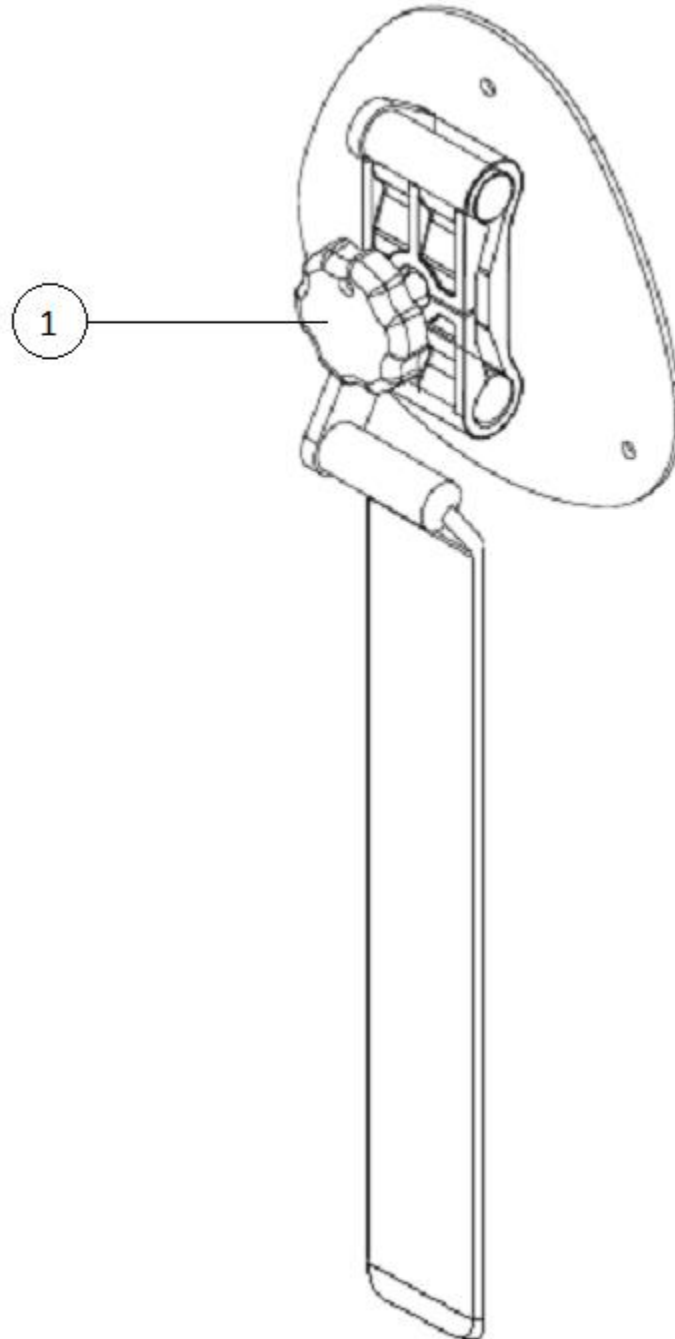
PARTS LIST

BACKREST BISCAYNE E.L.



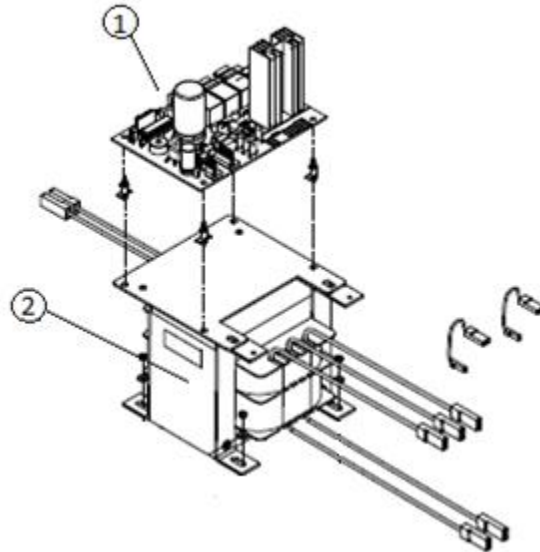
Item	Part #	Description
1	2-010-0295	Frame Backrest E.L.
2	2-010-0810	Headrest Guide E.L.
3	2-010-0051	Pressure Plate Headrest
4	2-010-0058	Support Headrest Pressure
5	2-010-0053	Spring Pressure Plate
6	2-010-0047	Plate Pressure
8	9-010-0042	Velcro Dual Lock 3M

HEADREST BISCAVAYNE E.L. DOUBLE ARTICULATION 3-010-9131



Item	Part #	Description
1	2-010-0807	Gray Knob

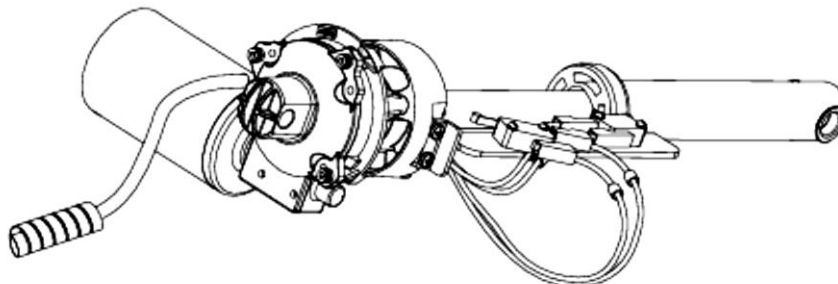
BISCAYNE E.L. BOARD



Item	Part #	Description
1	3-010-0206	PC. Board Biscayne E.L.
2	7-040-0049	Transformer 115v. Biscayne E.L.

BISCAYNE BACK MOTOR 3-010-0208

Wire Harness for back motor 3-010-0203



WARRANTY

Summit Dental Systems (SDS) warrants its products against defects in materials or workmanship from the date of shipment to the Buyer as follows:

Summit Dental Systems (SDS) Equipment:

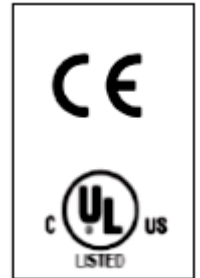
Chairs, Delivery Units, Cuspidors, Lights
 Control Block Diaphragm (part of Delivery Unit)
 All Upholstery, Stools, All Plastic Covers, and Cabinets

Warranty Period:

5 Years
 Lifetime
 1 Year

Summit Dental Systems' sole obligation under the warranty is to provide parts for repair, or at its option, to provide a replacement product (excluding all labor and shipping fees). "In any action, BUYER'S remedies are limited to the warranty described above. BUYER shall not be permitted to claim lost profits, reliance, special, incidental, or consequential damages in any proceedings." The warranty does not cover damage from improper installation or maintenance, accident or misuse. The warranty does not cover damage resulting from the use of cleaning disinfecting or sterilization chemicals and processes. Failure to follow instructions provided in Summit Dental Systems' Operation and Installation Manuals (Owner's Guides) may void the warranty. In the event Warranty service must be performed to correct any defect, only an authorized Summit Dental System dealer may perform any and all warranty repairs. Any repairs by unauthorized dealers, technicians, or repairmen may void the warranty.

- In the case of a defective warranty item, a copy of the replacement invoice, model and serial number of the product under which it was replaced, and a description of symptoms of the defect must be returned with the part within 30 days of the replacement invoice date to Summit Dental Systems, 1280 SW 27th Ave Pompano Beach, FL 33069, USA, in order to receive credit. Any and all expenses for freight, labor to perform warranty service, and purchase of spare parts are the responsibility of the buyer. Any fraudulent claims made may void the warranty. Any additional warranty that may be provided by an authorized Summit Dental Systems dealer is the sole responsibility of said dealer.
- SDS reserves the right to make changes or improvements on any products without being required to modify existing equipment in a like manner



Please complete and retain for your records the following Information

In case of warranty part replacement/repair or when ordering a part, please call your authorized Summit Dental Systems dealer and have the following information available:

Owners' Name:	Phone #:
Model #:	SDS Serial #:
Dealer:	Phone:
	Purchase Date:



1280 SW 27th Ave - Pompano Beach - FL 33069

Toll Free: (800) 275-3368

www.summitdental.com