

OPERATION AND MAINTENANCE INSTRUCTION MANUAL

AEU-707A & AEU-707AV2 Implant/Surgery Systems



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SPECIFICATIONS:

Console Size:	8.125" x 7.25" x 3.25" (20.6375 cm x 18.415 cm x 8.255 cm)
Console Weight:	3.75 lbs (1.6875 kg)
Power Source:	110V/120V 60Hz or 220V/250V 50Hz
Fuses:	1A/110V 0.5A/220V Slo Blo Type

CLASSIFICATIONS:

- Internally Powered Equipment
- Type B Equipment
- Ordinary Equipment - degree of protection against ingress of water
- Not suitable for use in the presence of a flammable anesthetic mixture with air or with oxygen or nitrous oxide.



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To prevent injury to people and damage to property, please heed relevant warnings and remarks. They are marked as follows:

WARNING: Serious injury or death may result if ignored.

CAUTION: Damage to property or the environment may result if ignored.

NOTE: Important additional information and hints.



LISTED
MEDICAL EQUIPMENT
5T01
RISK CLASS 2G
CSA22.2 No.125



EU Authorized Representative:
Advena Ltd., Hereford, HR4 9DQ, UK

WARNING: This device has been tested and found to comply with the emissions requirements of IEC 60601-1-2:2001-09. These requirements provide reasonable protection against harmful electromagnetic interference in a typical medical installation. However, high levels of radio-frequency (RF) emissions from electrical devices, such as cellular phones, may disrupt the performance of this device. To mitigate disruptive electromagnetic interference, position this device away from RF transmitters and other sources of electromagnetic energy.

Your new Aseptico AEU-707A or AEU-707AV2 Implant/Surgery System is one of the finest units available to the medical profession. The system features a high torque brushless motor with digital RPM readout and self-contained irrigation pump. These features combine to make the perfect surgical motor and irrigation system for implant and other bone surgeries.

Congratulations

This system is engineered to provide many years of reliable service. Please read the instructions provided in this manual to receive the best and longest service from your Aseptico equipment.

Separate manuals may be provided to cover the operation and maintenance of hand-held pieces or other accessories for your unit.

PACKAGE CONTENTS:

- Electronic Control Console
- AE-4B-30 Autoclavable Brushless Micro Motor
- Autoclavable Motor Holder
- AE-7P On/Off Foot Control (Optional AE-18A variable speed foot control available)
- AE-20 Autoclavable Irrigation Tubing Set
- 1/16 (AEU-707A) or 1/20 (AEU-707AV2) Reduction Contra Angle Handpiece(s) (purchased separately)
- Irrigation Bag Hanger Rod
- Remote Power Cord

SETTING UP THE UNIT:

1. Unpack the console and check that the voltage selector switch on the back is in the proper position. Use the 110V position for 110-120V 60Hz voltages, and the 220V position for the 220-250V 50Hz voltages. For alternative voltages (220V-250V), confirm that the type of plug cap is correct for the country of usage and carries the proper certification markings. Correct cord is shipped with the console.
2. Attach the remote power cord to the back of the console and plug into a grounded electrical receptacle.
3. Connect the motor to the receptacle on the lower front panel of the console.
4. Attach the appropriate "E-Type" handpiece to the motor as shown in Figure 3.
5. Insert bag hanger rod into holder on the top of the unit. Thread into place.
6. Attach the supplied foot control to the connector on the back of the unit marked "Footswitch". An On/Off type or a variable speed type foot control may be used.



7. Install irrigation tubing set in pump.

CAUTION: Never connect or disconnect the bag spike to the irrigation bag over the console. Waste spilled onto the console can damage the unit.

a. Thread tubing through pump following the diagram in Figure 4. First remove the clear pump cover by unscrewing the thumbscrew on top.

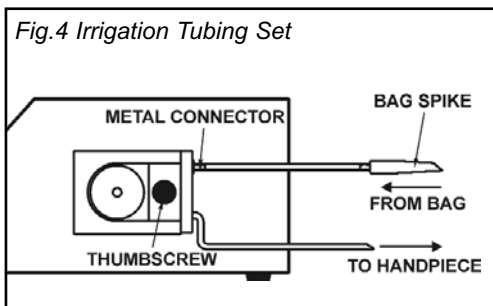
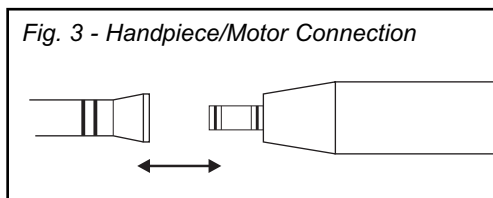
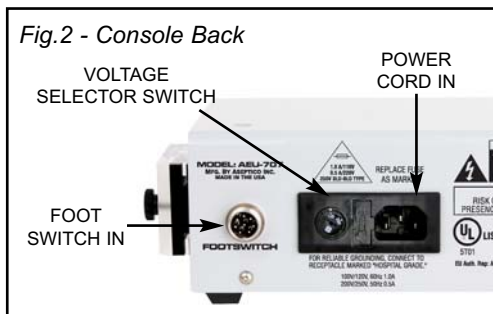
b. Grasp the metal connector and tubing, stretching the tubing slightly. Insert into the slot on the top of the pump block, making sure to position the metal connector on the outside edge of the block as shown.

c. Guide the tubing around the rollers with slight tension and insert into bottom slot on the pump block.

d. While maintaining tension on the tubing, check that tubing is centered on the rollers and is completely tucked into slots on pump block. Then replace clear pump cover by sliding into position from front to back and securing with the thumbscrew.

e. Route the remaining length of tubing to the handpiece and connect to the irrigation clip. Secure the tubing to the motor cord with clip set provided.

f. Remove the protective cover from the irrigation bag and insert the bag spike into the I.V. port. Hang the bag from the bag hanger rod.



OPERATION FUNCTIONS:

- 1. Power Switch** - Controls power On/Off to console. When turned on, console should light up.
- 2. Pump On/Off** - Activates irrigation pump. When turned on, the flow display will light and the pump will activate when either motor A or B is turned on.
- 3. Pump Flow** - Increases or decreases the irrigation flow. Push the Up/Down arrow to increase flow or decrease flow. A visual display shows the approximate volume level.
- 4. RPM** - Controls speed of motor and hand-piece. Push the Up arrow to increase speed and the Down arrow to decrease speed. A visual display shows actual RPM. Ratio selector must match exactly the ratio of the hand piece being used for complete accuracy.
- 5. Forward/Reverse** - Determines the rotation of the motor and handpiece. A red LED light displays the reverse rotation.
- 6. Ratio Selector** - Calibrates the RPM display to read accurately for up to four different handpiece ratios. Push the ratio Up/Down arrow until the indicator lights match the handpiece ratio you are using. Different handpiece ratios are required to obtain high torque, low speeds used in surgery. The speed ranges with a 30K motor are shown in Figures 5a (AEU-707A) and 5b (AEU-707AV2).

Fig. 5a - AEU-707A Speed Ranges

SPEED RANGES		
1/1	4,000 - 30,000	RPM
1/16	300 - 1,900	RPM
1/64	50 - 470	RPM
1/256	10 - 120	RPM

Fig. 5b - AEU-707AV2 Speed Ranges

SPEED RANGES		
1/1	4,000 - 30,000	RPM
1/16	300 - 1,900	RPM
1/20	200 - 1,500	RPM
1/256	10 - 120	RPM

OPERATION:

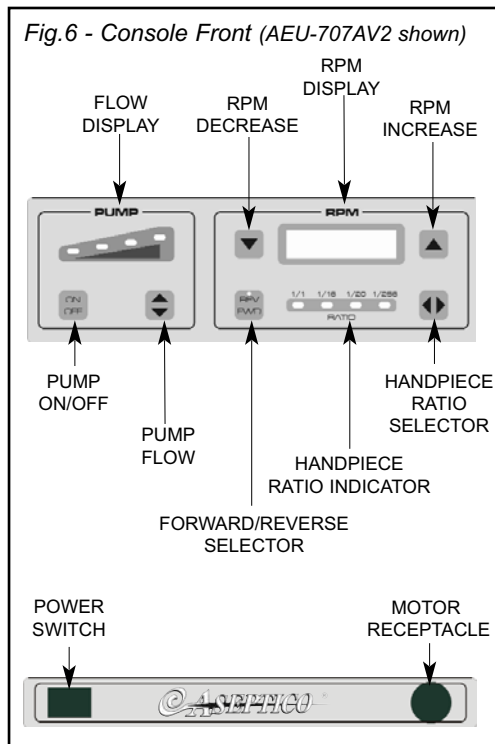
After the unit has been set up and you have made yourself familiar with the operation functions, you are ready for operation as follows:

1. Turn the power switch on the lower left front of the console to the 'ON' position. The front panel display will light.
2. Attach a sterile handpiece to the motor and set the Ratio Selector to match the gear ratio of the hand piece being used (i.e. 1/16 for a 1:16 handpiece, or 1/20 for a 1:20 handpiece).
3. Adjust the Up/Down arrows on the RPM display to the desired operating speed on the RPM readout.
4. Switch the pump to the "ON" position. The

NOTE: The RPM display indicates true bur speed when the Ratio Selector is in the appropriate position. Make sure the Ratio Selector Matches the hand-piece ratio for display accuracy.

display will light. Set the flow to the desired level.

Thorough cleaning and lubrication of handpieces after each use and before sterilization is very important to ensure proper operation and service life of the handpiece. Follow the instructions provided with the handpiece purchased for complete maintenance instructions.



STERILIZATION & MAINTENANCE:

HANDPIECES - Clean and lubricate handpieces with a cleaner/lubricant after each use and before autoclaving. This will ensure proper operation and a long service life for your handpiece. Do not use a cleaner/lubricant after autoclaving, only use before sterilization. Follow the instructions provided with the handpiece purchased for complete maintenance instructions.

MOTORS - The entire motor and cord assembly supplied with your unit must be surface sterilized by autoclave. Prevacuum sterilize at 132° C (270° F) for 3 minutes.

Before autoclaving the motor and cord assembly, always install the autoclaving plug into the motor and motor connector. A plug with sealing O-ring is supplied with the motor. Remove the handpiece from the motor and install plug as shown in Figure 7.

The included motor/handpiece holding cradle is also fully autoclavable.

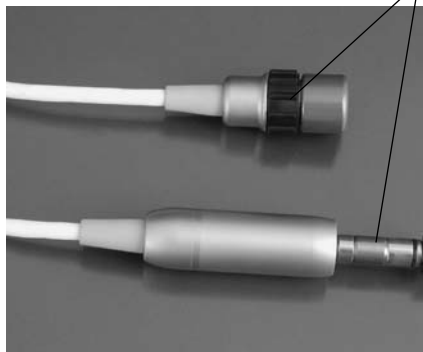
IRRIGATION TUBING SETS - Irrigation tubing sets can be removed from the pump and may be sterilized by autoclave, chemclave, or ethylene oxide gas processes. Follow the manufacturer's recommended procedure.

NEVER store the tubing sets in the pump for extended periods of time. The tubing may collapse and stick to itself creating a blockage for future uses.

CONSOLE - The exterior of the console may be cleaned with mild detergent or a disinfecting solution.

Fig. 7 - Motor Plug

- Always install the red autoclaving plugs into motor and motor connector before autoclaving.



- If the autoclaving plug for the motor becomes difficult to remove or install, apply silicone grease or similar lubricant to the o-rings.
- Loosely coil the motor cord when autoclaving. Avoid crowding the motor when autoclaving.



WARNING

- Do not attempt to disassemble the motor or motor connector.
- Do not oil or lubricate the motor.
- Do not attach a handpiece to the motor while the motor is running.
- Do not bend motor cord sharply.

Failure to comply with any of the above instructions may void your warranty



CAUTION FOR ALL STERILIZATION:

- Do not exceed 135° C or 275° F
- Do not submerge in any solutions
- Do not use ultrasonic cleaners

TROUBLESHOOTING:

Problem:	Correction:
Console does not light when turned on:	<ul style="list-style-type: none"> • Check console to power connection. • Check that Voltage Selector is set for the proper voltage. • Check fuse. If blown, replace with 1A/250V slo-blo fuse for 110 volts, & 0.5A/250V slo-blo fuse for 220 volts.
Console lights when turned on, but handpiece does not turn:	<ul style="list-style-type: none"> • Check motor plug connection. • Check foot switch connection. • Depress foot switch. • Increase RPM. • Check that bur is properly seated in the handpiece and the collet is closed.
No Water flow from pump to handpiece:	<ul style="list-style-type: none"> • Check that pump is on and flow level is sufficient. • Check that water container seal is completely punctured. • Make sure the irrigation tubing is properly installed in pump and is in the correct direction.

SYMBOL DEFINITIONS:



Type B
Equipment



Dangerous
Voltage



Attention - Consult
Accompanying
Documents

The UL 2601 Standard Duty Cycle for Intermittent Use is 1 min. on / 5 min. off.

WARRANTY

Aseptico warrants its products against defects in material or workmanship for a period of one (1) year, from date of original invoice. Some handpieces are warranted for one year under the same conditions. Other handpieces and expendable components, such as air turbines and light bulbs, are covered by shorter warranty periods, or have no warranty. Aseptico's sole obligation under product warranty is (at its sole option and discretion) to repair or replace any defective component or product in part or whole. Aseptico shall be the sole arbiter of such action.

In the event of alleged defect under warranty, the purchaser is to notify Aseptico's Customer Service Department promptly. Customer Service will provide instructions, usually directing that the product be returned for service. Shipment to Aseptico and the cost thereof is always the responsibility of the purchaser.

Accidental misuse, inappropriate installation, or failure to perform directed maintenance voids the warranty.

Aseptico does not assume, under this warranty, any risks or liabilities arising from the clinical use of its products, whether or not such use involves coincidental utilization of products manufactured by others.

NOTE: In the interest of serving our customers more efficiently, customers receiving service on non-warranted repairs are expected to accept charges that are less than \$250.00 without further notification.

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Software 880082-01 (AEU-707A)
Software 880082-18 (AEU-707AV2)
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