

OPERATION AND MAINTENANCE INSTRUCTION MANUAL

AP-TCM6000 Micromotor Dermabrader Implant / Surgery System



api
anthony products, inc.

TABLE OF CONTENTS:

Specifications i
 Introduction 1
 Package Contents 1
 Setting Up the Unit 2
 Operation Functions 3
 Symbol Definitions 3
 Operation 4
 Speed Ranges 4
 Troubleshooting 4
 Sterilization and Maintenance 5
 Warranty Back Cover

SPECIFICATIONS:

Console Size: 5.80" x 7.21" x 3.03"
 (14.73 cm x 18.31 cm
 x 7.70 cm)

Console Weight: 3.0 lbs (1.67 kg)

Power Source: 110V/120V 60Hz or
 220V/250V 50Hz

Fuses: 1A/110V
 0.5A/220V
 Slo Blo Type

CLASSIFICATIONS:

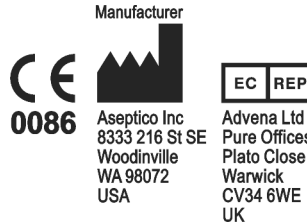
- Internally Powered Equipment
- Type B Equipment
- Ordinary Equipment - degree of protection against ingress of water
- Not suitable for use in the presence of a flammable anesthetic mixture with air or with oxygen or nitrous oxide.



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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.



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

WARNING: This device has been tested and found to comply with the emissions requirements of EN 55011:1991. 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 Anthony Products AP-TCM6000 Micromotor Dermabrader 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 for precise speed control. These features combine to make the perfect surgical motor for endodontic and other medical 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 Anthony Products equipment.

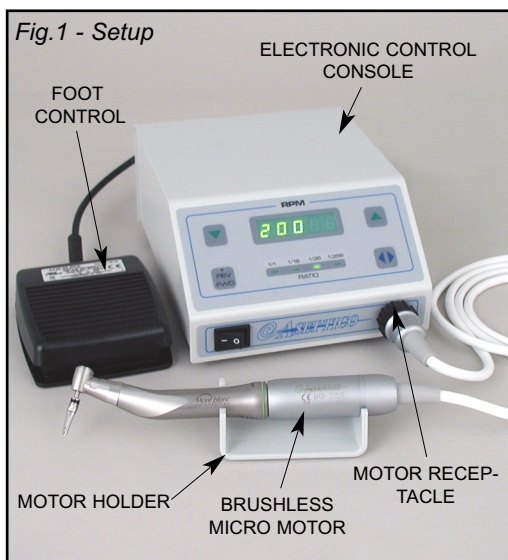
Separate manuals may be provided to cover the operation and maintenance of handpieces or other accessories for your unit.

PACKAGE CONTENTS:

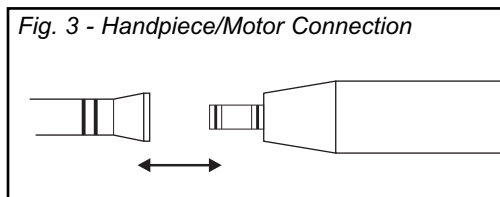
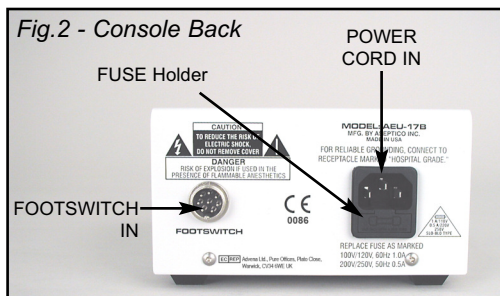
- Electronic Control Console
- AE-4B-30 Autoclavable Brushless Micro Motor
- Autoclavable Motor Holder
- AE-7P On/Off Foot Control
- 1/16 (AEU-17B) or 1/20 (AEU-17BV2) Reduction Contra Angle Handpiece(s) purchased separately
- Remote Power Cord

SETTING UP THE UNIT:

1. Unpack the console and check that the voltage is proper. Use 110V for 110-120V 60Hz voltages, and 220V for 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. The 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 (see Figure 2).
3. Connect the motor to the receptacle on the lower front panel of the console (Figure 1).
4. Attach the appropriate "E-Type" handpiece to the motor as shown in Figure 3.
5. Attach the supplied foot control to the connector on the back of the unit marked "Footswitch" (Figure 2). An on/off type or variable-speed type foot control may be used.

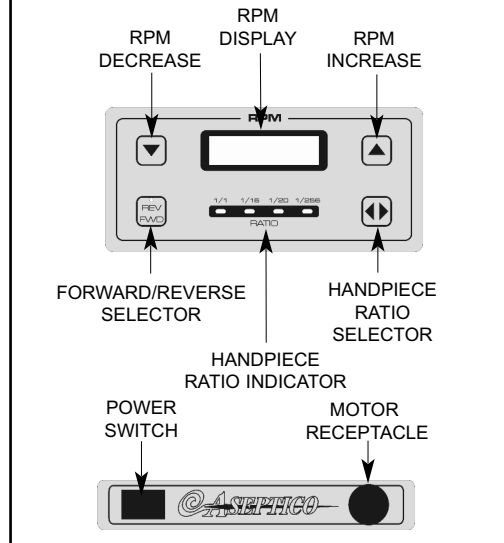


OPERATION FUNCTIONS:

Refer to Figure 4

- 1. Power Switch** - Controls power on/off to console. When turned On (-), console should light up.
- 2. RPM** - Controls speed of motor and handpiece. 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 handpiece being used for complete accuracy.
- 3. Forward/Reverse** - Determines the rotation of the motor and handpiece. A red LED and audible beeper indicate reverse rotation.
- 4. 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-17B) and 5b (AEU-17BV2), page 4.

Fig.4 - Console Front (AEU-17BV2 shown)



SYMBOL DEFINITIONS:



Type B
Equipment



Dangerous
Voltage



Attention - Consult
Accompanying
Documents

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 handpiece being used (i.e. 1/16 for a 1:16 handpiece, or 1/20 for a 1:20 handpiece). See Figures 5a & 5b.
3. Adjust the Up/Down arrows on the RPM display to the desired operating speed on the RPM readout.

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

Fig. 5a - AEU-17B 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-17BV2 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

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. Refer to page 5.

TROUBLESHOOTING:

Problem:	Correction:
Console does not light when turned on:	<ul style="list-style-type: none"> • Check console to power connection. • Check for proper voltage to the unit. • Check fuse. If blown, replace with 1A/250V slo-blo fuse for 110 volts, and 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 footswitch connection. • Depress footswitch. • Increase RPM. • Check that bur is properly seated in the handpiece and the collet is closed.
Improper display	<ul style="list-style-type: none"> • Turn power switch off, wait 5 seconds, then turn back on to reset.

STERILIZATION:



WARNING - Sterilize the motor between each patient use.

WARNING - Use of a sterilization method or temperatures other than what are prescribed may damage the motor or present a risk of cross-contamination between patients.

CAUTION - Do not soak or submerge the motor in any liquid.

STERILIZATION PROCEDURE:

Pre-clean

- 1) Thoroughly brush off any visible signs of debris from the motor and cord.
- 2) Thoroughly clean the device with a moist cloth or towel to remove any remaining signs of debris.

Sterilize

- 3) Select one of the three following sterilization methods (A. B. or C.):

Wrapped Sterilization – Place in an appropriately sized sterilization pouch and seal it.

A. Gravity Wrapped:

- **Minimum Temperature:** 132° C (270° F)
- **Full Cycle Time:** 20 minutes
- **Minimum Dry time:** 30 minutes

B. Prevacuum Wrapped:

- **Preconditioning Pulses:** 3
- **Minimum Temperature:** 132° C (270° F)
- **Full Cycle Time:** 4 minutes
- **Minimum Dry time:** 40 minutes

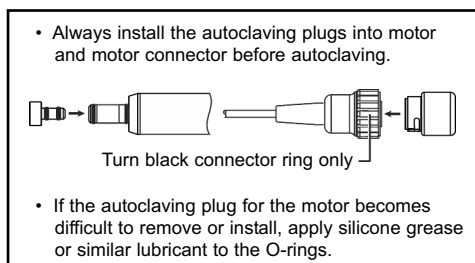
Flash Sterilization – For immediate use only.

C. Gravity Unwrapped:

- **Minimum Temperature:** 132° C (270° F)
 - **Full Cycle Time:** 10 minutes
- No dry time is required for flash sterilization.

MOTOR & CORD ASSEMBLY:

- The entire motor and cord assembly is fully autoclavable. Before autoclaving the assembly, remove any handpiece from motor and install autoclaving plugs into the end of the motor and motor cord connector as shown below. The plugs are supplied with the motor and cord.
- Loosely coil the motor cord when autoclaving. Avoid sharply bending the cord when autoclaving.



NOTE: Call Anthony Products, Inc. at 1-800-428-1610 for any questions or clarifications on this sterilization procedure.

MAINTENANCE & CLEANING:

HANDPIECES - 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.



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 motor is running.
- Do not bend motor cord sharply.

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

CONSOLE MAINTENANCE - The exterior of the console may be cleaned by wiping with a soft cloth moistened with mild detergent or disinfecting solution.

WARRANTY

Anthony Products warrants its products against defects in material or workmanship for a period of two (2) years, 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. Anthony Products' 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. Anthony Products shall be the sole arbiter of such action.

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

Accidental misuse, inappropriate installation, or failure to perform directed maintenance voids the warranty. Deliberately defacing, modifying, or removing the serial number voids the warranty.

Anthony Products 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.



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P/N: 420212 (Anthonys Products)
Rev. D, ECO 13346
Software 880082-10 (AEU-17B)
Software 880082-19 (AEU-17BV2)
09/2014

PRINTED IN THE USA