

AUXIE ELECTROPOLISHERS

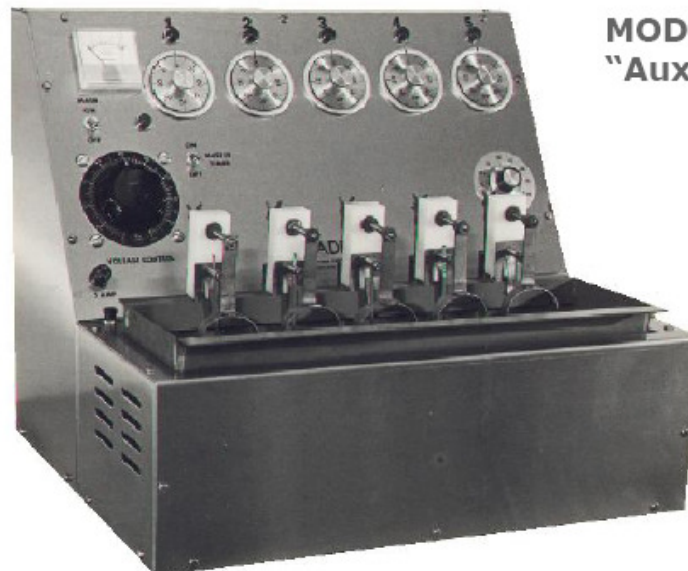
Tabletop Electropolishing Equipment



MODEL E678-1
"Auxie-1"



MODEL E678-3
"Auxie-3"



MODEL E678-5
"Auxie-5"



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ESMA

Manufacturers of
* Ultrasonic Cleaning Systems
* Electropolishing Equipment
and Electrolytes

ESMA, INC.

FOUNDED 1972

FEATURES & SPECS

For nearly 30 years **Auxie Electropolishers** have been the *workhorse* of the partial department. As a long-term investment with a short-term payback, Auxie units consistently elicit comments such as:

Maryland lab owner-*"Its like having another person. In the time it took to finish 5 eccases I now do 11."*

Ontario Lab-*"Best investment I made in years."*

THE "AUXIES" WHEN COMBINED WITH ESMA-BRITE ELECTROPOLISHING SOLUTION RESULT IN SUPERIOR SHINE AND MAXIMUM LABOR SAVINGS.

- ◆ **Unprecedented luster**
- ◆ **50% of the current is directed inside the deep palate. *Never a "burned" clasp***
- ◆ **Eliminate 80% of manual polishing**

Built to last Auxie units feature:

- ◆ **Stainless steel cabinets**
- ◆ **Non-corroding electrodes**
- ◆ **Circuit breaker protection-No damage to partial if shorting occurs**
- ◆ **Independent operation of each station**
- ◆ **Temperature controlled heating and fan cooling-Increases life of polishing solution**
- ◆ **1 year unconditional guarantee**

Model:	Size:	Work stations:	Daily capacity:
E678-1	17"x11"x10"	1	1-10 partials
E678-3	14"x18"x17"	3	10-20 partials
E678-5	20"x18"x17"	5	20-40+ partials

√ UNPRECEDENTED WARRANTY

√ SINGLE PUSH-BUTTON ACTIVATION

√ OVER 30 YEARS OF SUCCESSFUL
IN-FIELD HISTORY

√ ALL STAINLESS STEEL
CONSTRUCTION



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INSTRUCTIONS FOR AUXIE ELECTROPOLISHING UNITS

INTRODUCTION

The new AUXIE automated electropolishing units represent our third generation of electropolishers. These units are built to give you years of reliable, trouble-free operation. The unit, tank and holding devices are built of non-corroding alloys. Close temperature control is achieved by a quick response system using sensors, heater and cooling fan, resulting in high luster, reproducible results and long life of solution.

The AUXIE units have INDEPENDENT STATIONS enabling the individual finisher to polish at the time of his convenience without having to wait or interfere with other finishers.

Careful FINE-STONING of the partial followed by sandblasting, will eliminate most (or even all) manual rubber-wheeling and high shining

In the AUXIE units approximately 50% of the current ("juice") is directed into the deep palate, resulting in uniform shine and substantially reduced attack on the clasps. Even the deepest palate of the largest "horseshoes" will attain a high uniform luster.

FOR BEST RESULTS, FINE-STONING, FOLLOWED BY SANDBLASTING IS ABSOLUTELY NECESSARY.

HOW IT WORKS

Partial, clean of investment, moisture, oils and foreign matter, is attached to holding device, with the auxiliary (additional) cathode position $\frac{1}{2}$ " to $\frac{1}{4}$ " from the point of deepest recess of the partial's palate. Device with partial is then mounted and treated for 30 minutes (followed by rinsing).

SAFETY PRECAUTIONS

The solution, although without volatile corrosive components is acidic and presents hazards:

- Avoid contact with skin; if contacted-rinse off with plenty of water.
- Avoid contact with eyes: wear safety goggles when pouring or removing tank; if contacted-rinse with plenty of water, seek medical attention.
- Solution will damage cloth and carpeting.
- A small amount of solution is emitted during polishing as mist: avoid inhaling, install near draft, exhaust or ventilated area.

No corrosion will occur if ESMA-BRITE solution is used: corrosive damage will occur with many other solutions.

INSTALLATION

Install near sink and ventilated area. Place tank into recess of cabinet and connect black wire on tank to black binding post of cabinet. Pour ESMA-BRITE solution into tank to 1" below the top of tank. Solution must not touch tank support (4).

Avoid spilling solution on cabinet and connecting posts 13M. If solution is present at the base of connecting posts, the circuit to that partial will be shorted to the cabinet and the circuit breaker of that station will blow.

- Connect cord of unit to properly grounded 3-prong 120V outlet.

OPERATION

- Set temperature control at 120° F.
- Turn main switch ON.

In approximately 30 minutes the solution will attain the working temperature to be maintained automatically during operation.

AUXIE-1 unit will heat up only when timer is OFF.

NOTE: If during heat up you notice an odor, it is possible that solution was spilled on the heating platform; shut off unit, remove tank and after heating platform has cooled, wipe off any solution present on platform and tank (wipe off remnants of solution with clean wet (water) cloth). If odor persists-repeat the procedure and if no improvement, tank may be leaking (contact manufacturer).

- Attach partial to holder 13N with lingual side facing auxiliary cathode 35L. Cathode 35L should be positioned ¼" to ½" from the deepest recess of partial; the vertical position of auxiliary cathode is fixed by adjusting wing nut 23F.

For the polishing of small attachments, clasps, etc., a clip (part 30D) with a welded extension wire is supplied with unit. This clip with wire is made of a special alloy.

Loosen wing nut 23E that secures partial to holder, and attach clip with wire to it. There is no need to remove the partial holder. Retighten the wing nut, making sure that the clip DOES NOT TOUCH the auxiliary cathode. Do not change voltage but reduce the polishing time to 10-15 minutes, depending on the size of item to be polished.

AUXILIARY CATHODE MUST NOT TOUCH THE PARTIAL (SHORT-CIRCUIT!)

- Mount holding device with partial as shown in diagram: Clip 13K slides on plate (4) of tank while the threaded rod (34C clamp) clamps down into clip 13M.

ONLY ESMA-BRITE ELECTROPOLISHING SOLUTION SHOULD BE USED. WE CANNOT APPLY THE GUARANTEE IF OTHER SOLUTIONS, MOST OF THEM CORROSIVE, ARE USED. HEAVY DAMAGE TO UNIT AND ELECTRONICS MAY OCCUR.

AUXIE-3 and AUXIE-5 units have independent polishing stations, controlled by individual timers. There is also an option of simultaneous polish on all stations. The MASTER TIMERS'S switch position determines the type of operation.

- * In OFF position you polish on independent stations.
- * In ON position simultaneous polish on all stations is possible (in this case only the MASTER TIMER (station 1) should be used).
- * Set timer for desired polishing time (activates the polishing).
- * Adjust voltmeter to desired voltage.

VOLTAGE SELECTION

We recommend 8-9V for 30 minutes at 120 degrees F for medium size "horseshoes". At the same voltage less time is required for lingual bars. However, with individual timers you can simply leave the voltage constant and, for example, polish horseshoes for 30 minutes and lingual bars for 20 minutes, with each being individually controlled by their timer.

(The operator may find different settings of voltage and time suitable to his individual preferences and requirements).

Do not decrease polishing time; with AUXIE units the clasps are not attacked. Some users polish for 45 minutes (at somewhat lower voltages) with excellent results.

Because 50% of the current is directed into the palate, there is no danger of clasp damage. The low currents at the 20 to 45 minutes treatment will not endanger the clasps.

FINE STONING

To get the maximum shine on your partials, it is necessary to fine-stone the partial prior to electropolishing. Only if you fine-stone and sandblast the partial, will you eliminate most of the manual rubber wheeling and high-shining. Several labs who have our AUXIE units report good results when stones manufactured by BRASSLER USA, INC. were used. The recommended stones are: Large Barrel 731-330, Taper Barrel 733-330 and Inverted Cone 735-330.

CAREFUL FINE-STONING IS THE KEY TO LABOR SAVING.

SETTING VOLTAGE

After partial(s) have been placed in the solution, set timer(s) and adjust voltage with voltage control knob. Indicator lights for each station are ON during polishing. When using the stations independently and one station terminates (polishing completed), the voltage reading on panel meter will increase. **DO NOT READJUST THE VOLTAGE**, because the voltage is automatically compensated in other stations. Only readjust the voltage (if necessary) when you add a partial to a station.

END OF TREATMENT

End of treatment comes with the lapse of time on timer. The light then is OFF. A partial can be left for some time in the solution after completion of polishing with no danger of damage. If another station is active, the auxiliary cathode 36L of the idle station will be active and emit bubbles; however, no polishing action takes place on the partial of finished station after the expiration of time.

CIRCUIT BREAKER POSITION

Each polishing station of the AUXIE-3 and AUXIE-5 units has circuit breakers, which protect the current distribution system of the unit. The circuit breakers are located on the instrument panel **IN THE SAME SEQUENCE** as the polishing stations. These circuit breakers will trip (exposing a red band on the reset button) if:

1. Partial is shorted to the auxiliary cathode, or
2. Solution is accidentally spilled and allowed to stand on base of the connecting post, on the cabinet (part 13M).

Before resetting the circuit breaker, determine the cause of the shorting. Corrective measures are given in the trouble-shooting section of the instructions. Push in the reset button of circuit breaker and continue operation.

MAINTENANCE

According to reports from dental labs, it is possible to get 100-125 quality polished partials with one gallons of ESMA-BRITE (results vary from lab to lab and this figure should not be considered as binding on us in any way).

- Shut off unit and unplug power cord from outlet.
- Discount black wire on tank from black binding post on cabinet.
- Dispose of solution (dispose properly, according to local regulations): rinse tank thoroughly with water, remove any film or build-up from inside, and wipe tank walls with soft towel or sponge. **THE TANK IS COATED, SO DO NOT USE ANY ABRASIVE MATERIAL** while cleaning inside the tank. Dry tank with towel; do not pour solution into wet tank.

When blotchy areas start appearing on polished partials, it is time to replace

solution. Replacement of solution is an individual decision and the trade-off between solution cost and labor savings should be the main consideration.

- Place dry tank into cabinet and refill with ESMA-BRITE.

The cabinet is made of Stainless Steel. The finish can be restored by using a commercially available cleaner for kitchen appliances.

CLEAN-UP OF EXPOSED BAR – Once a month clean with moist abrasive pad to remove all accumulations (part 4). Reason: maintaining of proper electric contact between holding assembly and bar 4.

CLEAN-UP OF TANK – Once in two months or on each exchange (whatever comes first) remove the sludge with a moist soft sponge.

HUMID ENVIRONMENTS – When humid conditions exist – leave unit ON (main switch on AUXIE-3 and AUXIE-5) to prevent moisture pickup by solution.

CLEAN-UP OF TANK CATHODE CONNECTIONS – Once in two months unscrew bolt holding cathode to tank, clean up all connecting parts and contacts. Reassemble.

EXCHANGE OF ESMA-BRITE SOLUTION

Dental labs realize outstanding savings of skilled labor with our AUXIE electropolishers for Chrome Partials.

The savings can be achieved only with our ESMA-BRITE solution.

Other solutions, some containing volatile corrosive components, may damage the unit but most important, not produce the superior results that warranted the purchase of the AUXIE in the first place.

ONE GALLON OF ESMA-BRITE SHOULD BE USED FOR NO MORE THAN 100 TO 125 PARTIALS.

The schedule indicates the frequency of exchange of ESMA-BRITE.

Average Production		Frequency of ESMABRITE Exchange				Annual
Day	Week	Month	AUXIE-1	AUXIE-3	AUXIE-5	Need (gals)
2	10	42	6-7 weeks			4
4	20	84	3-4 weeks			8
6	30	125	2 weeks			12
8	40	168	9 work days	3 weeks	5 weeks	17
10	50	210	6 work days	2½ weeks	4 weeks	21
12	60	250		2 weeks	3-4 weeks	25
15	75	315		8 work days	3 weeks	31
18	90	378		7 work days	2.5 weeks	38
20	100	420		6 work days	2 weeks	42
25	125	525		weekly	1½ -2 weeks	52
30	150	630		4 work days	7 work days	63
35	175	735		3-4 work days	6 work days	74
40	200	840		3 work days	weekly	84
50	250	1050			4 work days	104

CLEANING OF HOLDING ASSEMBLIES

During the electropolishing, the evolving gases carry a mist of ESMA-BRITE solution, which precipitates on various parts of the holding assembly.

Periodic cleaning – once in 1-2 months, or depending on the volume of work, is necessary. Procedure: rinse with hot running water, use mild detergent and brush carefully, especially at joints and connections. Allow air-drying.

TROUBLE-SHOOTING		
<i>Problem</i>	<i>Possible Cause</i>	Corrective Measures
Blowing circuit breakers (fuse in Auxie-1 unit)	<ul style="list-style-type: none"> • Auxiliary cathode touching partial • Solution spilled on cabinet and wetting the base of the connecting post • None of above 	<ul style="list-style-type: none"> • Readjust partial and auxiliary cathode • Remove tank, loosen screw under post, rinse and dry all parts; reassemble making sure insulating washers are in place • Contact Manufacturer
Odor emitted during heat-up	<ul style="list-style-type: none"> • Solution present on heating plate • Leakage of tank 	<ul style="list-style-type: none"> • Shut off unit, remove tank and clean up any solution on heating platform • If repeated clean-ups do not eliminate odor, tank may be leaking
Finished partial is shiny but pitted or streaked	<ul style="list-style-type: none"> • Voltage setting too high • Solution too warm 	<ul style="list-style-type: none"> • Lower voltage and see if results improve • Lower temperature
Partial shiny but shows scratches	<ul style="list-style-type: none"> • Deep scratches not removed before electropolishing 	<ul style="list-style-type: none"> • Fine-stone carefully and sandblast before electropolishing
Finished partial does not have normal shine	<ul style="list-style-type: none"> • Poor electrical contact of holding assemblies and cathode • Solution picks up water during humid weather conditions • None of the above 	<ul style="list-style-type: none"> • Clean-up holding assemblies, tank cathode, tank connections and support-bar as described in instructions • Start with new solution and leave tank heater on at night • Contact manufacturer

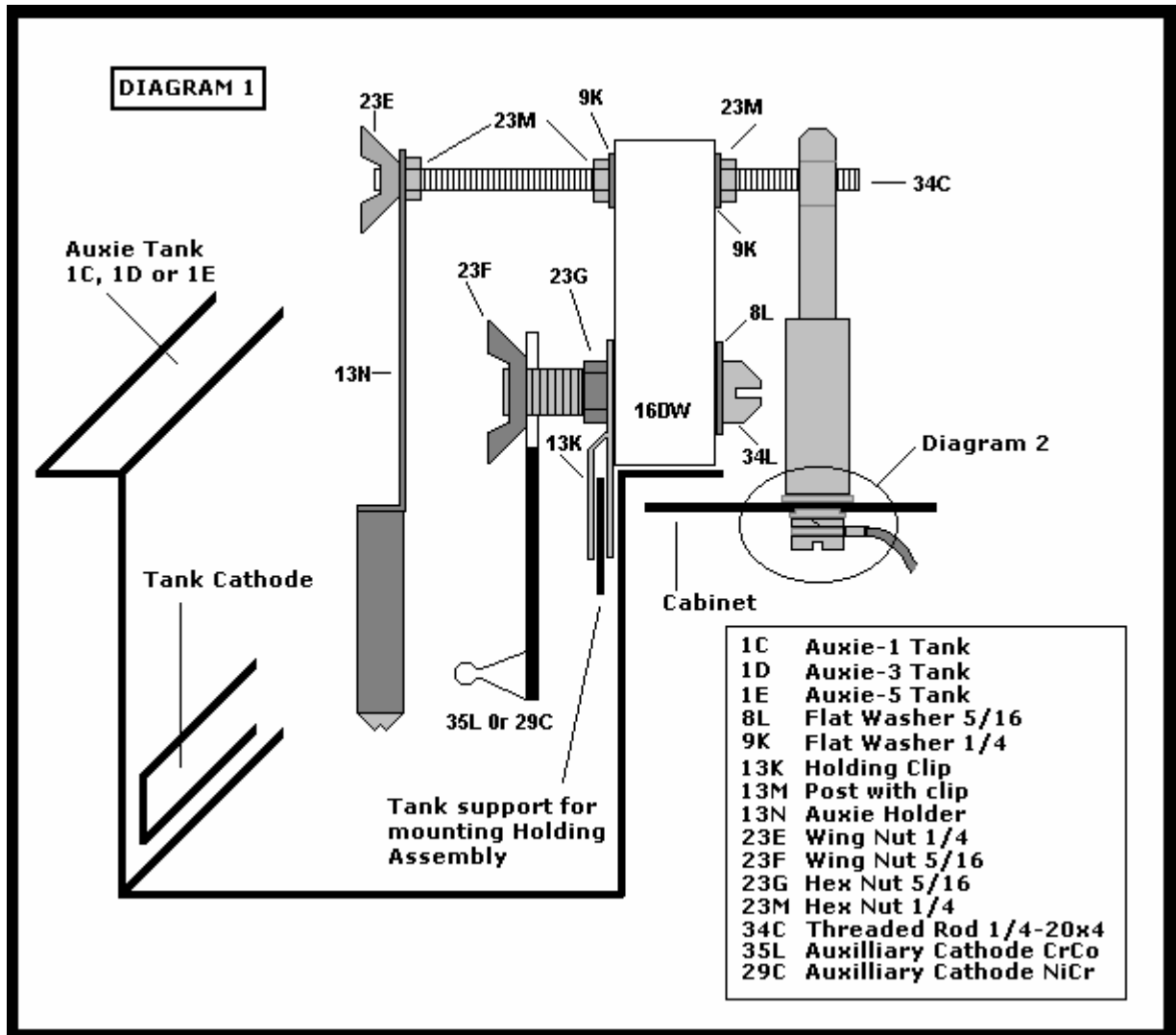


DIAGRAM 2

AUXIE POST WASHERS

- 13M - Post
- 12K - 1/4-20x1/2 Pan Head MS SS
- 9M - 5/8 OD PVC Flat Washer
- 9L - 1/4x1/2 PVC Shoulder Washer
- 9D - 1/4 Lock Washer SS
- 2K - Insulated Ring Terminal 2RC10-14

USE TWO-PART EPOXY
AT BASE OF POST TO
FORM A SEAL AND INCREASE
THE LIFE OF THE
INSULATING WASHERS

