

Section: Division of Nursing

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\* **PROCEDURE** \*  
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**HACKETTSTOWN REGIONAL MEDICAL CENTER**

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OR  
(Scope)

**TITLE: USE OF DYONICS SHAVER SYSTEM**

**PURPOSE:** To outline procedure for proper use of Dyonics Power Shaver System

**SUPPORTIVE**

**DATA:** Smith & Nephew Dyonics Power Shaver System Operation Manual

- EQUIPMENT:**
1. Foot switch – the shaver footswitch allows you to select forward, reverse and oscillate mode
  2. Dyonics Power control unit – the shaver system control unit provides for variable speed operation of cutting tools and displays user prompts.

**CONTENT:**  
Setting up the Shaver System for use in a Surgical Procedure

- PROCEDURE:**
1. Place the control unit on the instrument cart and plug the unit power cord into the rear panel connector and a grounded AC power source.

The control unit power supply automatically detects the local power standard and sets the unit to convert the supplied voltage.

**▲WARNING – DANGER: RISK OF EXPLOSION IF USED IN THE PRESENCE OF FLAMMABLE ANESTHETICS**

2. Push the power switch to the ON position.  
  
The control unit performs a status check and then displays a welcome message including the software version. The footswitch and handpiece connector lights blink, prompting connection of the system components.
3. Connect the shaver handpiece cable to the channel A or channel B front panel socket.

**Push-on:** The shaver handpiece cable connector has a locking sleeve which holds a protective cap. Pull the sleeve back to remove the cap. Orient the handpiece cable plug by aligning the red dots on the plug and the panel. Push the plug into the socket and release the locking sleeve. The handpiece cable is fully engaged when the red dots are almost touching.

The system automatically selects channel A upon power up. If a handpiece is connected to channel B, you must press the channel B button to select it. If handpieces are connected to both channels, press the channel A or channel B button to select a handpiece.

If the connected handpiece is the Hand Control Shaver Handpiece, the footswitch indicator light stops blinking. However, you can still connect the footswitch and control the shaver by foot.

4. Plug the footswitch cable into the connector on the left side of the control unit front panel using the same insertion method as the handpiece connection.
5. Check the control unit display. When there is no blade on the connected handpiece, the control unit displays the speed range for a standard straight blade (100 rpm to 5000 rpm). The default set speed is 2000 rpm and the directional arrows indicate that the handpiece motor is stopped (><).
6. The control unit bar graph will show the motor accelerating to 2000 rpm, while the directional arrows will indicate forward rotation (>>). The handpiece motor action can be observed by looking inside the distal end of the handpiece.

### Display and Control Switches

The control unit displays Minimum, Maximum and Set speeds, blade direction (forward, reverse or oscillate) and diagnostic codes. On the first line of the display, Forward (>>) and Reverse (<<) arrows indicate the blade direction. A Horizontal bar graph in between the direction symbols indicates the speed of the blade relative to the range for the blade type. On the second line, from left to right, the shaver system displays minimum speed, the currently set speed and the maximum speed. The shaver system senses the type of blade installed in the connected handpiece and sets the minimum and maximum speeds accordingly (blade types are not recognized by the Ultra Light Handpiece). Set the actual blade speed using the Slower and Faster push buttons below the display.

Figures 2,3, and 4 provide examples of how the screen displays speed and direction.



Figure 2. Forward Rotation

The (>>) symbols show the blade direction is Forward (rotating clockwise), while the bar graph indicates the blade is rotating at 2700 rpm. The minimum and maximum speeds for the blade in use are 100 rpm and 5000 rpm, respectively.

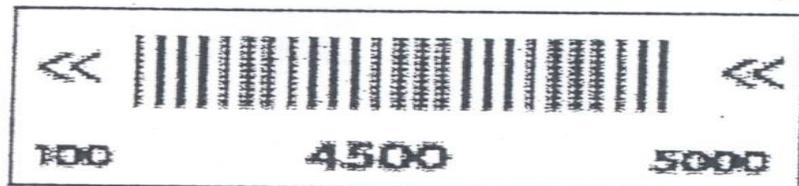


Figure 3. Reverse Rotation

The blade is rotating in Reverse (<<) at its set speed of 4500 rpm. The minimum and maximum speeds for the blade in use are 100 rpm and 5000 rpm., respectively.

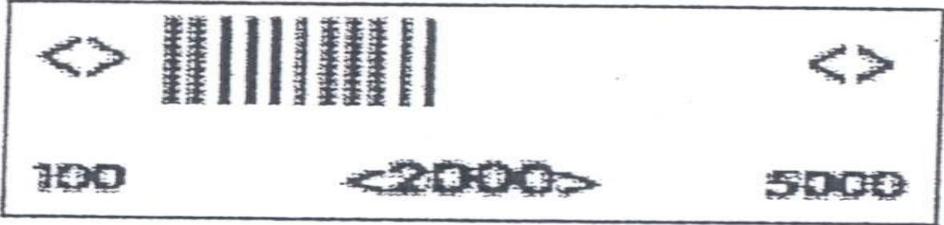


Figure 4. Oscillate Mode

The blade is oscillating (<>) between 2000 rpm Forward and 2000 rpm Reverse. The blade rotates in one direction until it reaches the set speed. It then stops, changes direction and accelerates to the set speed, at which point it will stop and reverse direction again.