

## **Understanding the REM™ Alarm/Light on Valleylab Force 2™ and Force FX™ Generators with Patient Return Electrodes**

The REM system on Valleylab generators is a contact quality monitoring system that senses contact between the patient return electrode and the patient. It requires a “split plate” pad with a protruding center pin on the generator connector end. The center pin on the connector activates the REM circuitry within the generator. When the REM system is activated an interrogation current is sent to one side of the “split plate” pad and the amount of current that passes from that plate, through the patient, and to the other side of the pad is monitored. If adequate current flow occurs the REM system is satisfied and the generator functions. If too little current is received back by the generator, the REM system sounds an alarm and shuts the generator down.

A non-monitoring, single plate pad does not have a center pin on the generator connector end and does not use the REM circuitry. Poor pad contact with the patient with a single plate gel pad can create the potential for a pad site burn.

When a return electrode is not plugged in to the Force 2 or FX, the REM light is illuminated red. When a standard pad (single plate, non-REM) is plugged in, the REM light is extinguished. Plugging a monitoring pad in that is properly applied to the patient will extinguish the REM light on the Force 2 and turn it to green on the FX. If the monitoring pad does not have sufficient contact the REM alarm will sound, the light will be illuminated red, and the generator will not operate. When either pad is unplugged, a cord is severed, or is completely detached from the patient the REM alarm will sound and will be illuminated red.

The MEGA 2000® System does not rely on REM, or any other manufacturers’ monitoring circuitry to provide patient safety. The MEGA 2000 System relies on the concept of “bulk resitivity” to be as safe as any contact quality monitoring system available.