

# real life

A STORY FROM THE FRONT LINES OF POWER PROTECTION

*Clinics expect Lunar MRI Extremity-Auto Scan and bone densitometry systems to run accurate scans. Patients don't like to be kept waiting or be told they need to reschedule due to equipment problems. After trying other UPSs, Lunar Corporation has come to depend on ONEAC power conditioned UPSs to keep its customers systems running.*

## A Tale of Two Systems

Lunar manufactures and distributes a broad range of bone densitometers and diagnostic imaging instruments throughout the U.S. and Puerto Rico. One division distributes MRI Extremity-Auto Scan systems manufactured by Esaote S.P.A. in Italy. Another division manufactures and distributes bone densitometry systems and the Orca Mini C-Arm.

### System 1 MRI Extremity-Auto Scan

Lunar tried other types of UPSs but were faced with a reliability issue. The UPSs did a fine job but very few lasted longer than a year, which happened to be the length of the warranty. The UPSs provided battery backup during power outages but didn't offer lightning protection. There were still transient problems and a module on the MRI systems continued to burn out.

Jeff Raub, MRI Service Manager for Lunar, explained that many times the MRI systems are set up in a small, confined space so the UPS has to be small. The UPSs were also big, bulky and heavy. Sometimes installers complained of back problems with other UPSs.

The other UPSs weighed approximately 134 lbs. versus the ONEAC UPS at 64 lbs. "The ONEAC UPSs are much more back friendly when lifting," Raub emphasized.

“An ONEAC power conditioned UPS is put in place and a miracle has been performed.”

—Mark Skolaski,  
Lunar Service Engineer

Lunar distributes the MRI Extremities-Auto Scan to sports medicine clinics and



orthopedic clinics. A typical clinic environment includes computers for billing and appointments, x-ray systems, physical therapy equipment and ultrasound equipment, all of which can cause electrical surges or disturbances.

The MRI equipment can scan anywhere from two to 10 patients a day. When there is a problem with the equipment, patients have to be rescheduled. This not only causes frustration for patients but a potential revenue loss for the clinic.

About a year ago, an ONEAC distributor asked Lunar to evaluate an ONEAC ON900 UPS. Lunar put the ONEAC UPS to the test by first connect-

ing it to an MRI system and then disconnecting the external power during a patient scan.

With the ONEAC UPS, Lunar was able to finish the scan while running on battery backup. The MRI system was then shutdown properly when the scan was completed.

The MRI unit requires power 24 hours a day, 7 days a week to keep the permanent magnet at a constant temperature. When power is lost, the power regulator, which heats the magnet, fails. The battery backup in the ONEAC UPS is able to supply heat to the magnet and keep it warm until AC power returns.

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**ONEAC** A H I G H E R L E V E L O F C O N F I D E N C E

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Without the ONEAC UPS, Lunar had the cost of replacing at least one part a year and time and travel for the service call.

It can take many hours to stabilize the magnet temperature to then be able to evaluate the problem and replace the failed components. In the event the system exhibits multiple electrical failures, Lunar will monitor incoming power at the clinic to determine if the problem is power related.

The ONEAC ON900 significantly lowers system downtime by cleaning up "dirty" power and supplying battery backup when power fails—greatly reducing the need for service calls.

"After we tell customers the benefits of the ONEAC UPS, an ON900 power conditioned UPS is included in the sale of every MRI system," said Raub.

## **System 2 Bone Densitometry**

The bone densitometer is a diagnostic tool to accurately diagnose osteoporosis by measuring bone mineral density. Lunar has manufactured and sold over 5000

bone densitometry systems to date.

Independent radiology offices or radiology departments use Lunar's bone densitometry systems. Other types of diagnostic tools can also be found in their offices like MRI, CTScan, mammogram and other types of heavy-duty diagnostic equipment, all of which can cause power surges or disturbances.

The bone densitometry equipment can scan a maximum of 18 patients a day. A typical machine will x-ray 10 patients a day, five days a week and can provide an accurate diagnosis for each patient during their scheduled appointment.

If there is a power problem, a bad scan occurs. Patients may have to be rescheduled several times when the equipment is down.

Mark Skolaski, Service Engineer for Lunar, said that a large percentage of all system problems reported are directly related to power. Lunar responds with an ONEAC ON1300 for the customer to evaluate for 90 days. Nearly every time, the customer notices the increased reliability and

purchases the UPS. In the last six months, Lunar had installed about 500 ON1300 UPSs with its DPX model bone densitometry systems.

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meters. It is difficult to determine whether "dirty" power or a broken part is the cause of bone densitometry systems failing to work properly. The symptoms are a loss of high voltage (50,000 volts) to the power supply and x-ray tubehead problems.

There is a correlation between the failure of both of these components and bad power. These two components allow the equipment to generate x-rays. These are also the two most expensive parts in the machine.

The symptoms resemble a couple of different problems, tube head arching or lack of a dedicated power line. Generally, Lunar technicians make multiple visits

before determining the problem is really bad power.

Once Lunar places an ON1300 in the clinics, the power problems are solved. The cost of one ON1300 versus the expense of multiple calls seems to make customers understand the importance of using an ONEAC power conditioned UPS.

"When there have been chronic service calls from a particular site, an ONEAC power conditioned UPS is put in place and a miracle has been performed," Skolaski explained. "Customers really like that solution."

## **No News is Good News!**

"Typically, customers only call when something is wrong. So after the ONEAC UPS has been installed, no more calls. No news is good news," Skolaski said.