



# PRODUCT APPLICATION NOTES

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## **507C Sonic Tension Meter Battery Life**

The purpose of this PA Note is to discuss battery life with the Sonic Tension Meter and provide recommendations on how to maximize run time for the device.

### **Recommended Batteries for the 507C Sonic Tension Meter**

The 507C Sonic Tension Meter does not include a connection to plug into an AC power source but is designed to be powered with two AAA size batteries. Although batteries come in a variety of types such as lithium ion (Li-Ion), nickel cadmium (NiCd), and alkaline (alkaline), the run time for the 507C will vary depending on which type of battery is used. The 507C was designed to be used with two AAA alkaline batteries, rated for 1.5 volts each or 3.0 volts combined. The estimated battery life is approximately 10 hours of continuous use with alkaline batteries. If using the device with non alkaline type batteries, reduced run time can be expected.

### **Rechargeable Batteries**

Rechargeable batteries are commonly used with handheld electronics such as digital cameras and portable music players. They come in the same sizes as disposable batteries and include the ability to replenish the stored power for reuse. Unfortunately rechargeable batteries don't always provide the same power characteristics as disposable batteries and in some cases are poor substitutes.

Using rechargeable batteries with the Sonic Tension Meter can result in reduced battery life and is not recommended. Rechargeable batteries are generally rated for 1.2 volts which will give a combined rating of only 2.4 volts. Remember that the recommended alkaline batteries are rated for 1.5 volts each or 3.0 volts combined. Battery voltage drops with discharging, so rechargeable batteries appear partially discharged to the 507C Sonic Tension Meter even when fully charged. As rechargeable batteries are discharged, the voltage falls below the minimum requirements for the 507C Sonic Tension Meter before they are discharged, resulting in reduced run time. In addition to the lower voltage rating, continuous charge and re-charge cycles can decrease the run time further. Self or auto discharge can also be a concern with rechargeable batteries, resulting in power loss when they are not in use.

### **Maximizing Battery Life**

The auto shut off feature helps to maximize battery life by shutting the Sonic Tension Meter down after 5 minutes of inactivity. To maximize Sonic Tension Meter run time, use two disposable AAA alkaline batteries. Make sure to use fresh batteries that haven't been sitting unused for a long period of time.

