



1815 W. 205<sup>th</sup> Street, Suite 103, Torrance, CA 90501  
phone: 310-618-9619 fax: 310-618-9620  
www.soundprojections.com

Rev 061625

## Getting the most from your sound system battery

The question we get most often at Sound Projections is “How long will my system run on the battery”? Unfortunately, like an automobile’s gas mileage, there is no single number. Stop and Go traffic, lead-footing, speed, and towing all affect gas mileage. Likewise, the way you operate your sound system affects battery life. Operating your sound system beyond full output (gross clipping), Low EQ control full clockwise, and an unpowered companion speaker plugged in is like pulling a trailer up Pikes Peak to your car. Your battery life, or gas mileage, will drop dramatically. The SM-5, with the standard 12 Volt 10 AmpHour Lithium Iron Phosphate (LFP) battery, is rated for 4-8 hours used under “typical” conditions. This means that a mixture of music and voice with peak levels about 2/3 power. With Volume and Bass cranked to the max the usage time can drop dramatically.

The following guide will help you get the longest operating time from your battery-operated sound system.

1. **Sound Machine SM-5 (LFP battery):** Recharge after normal use. Recharge before placing in storage for 2 months or more. It is not necessary to leave the system plugged in during storage (although leaving plugged in will not damage the system). For extended storage of periods over 6 months, recharge every 3-4 months.
2. When speaking to large crowds, especially outdoors (marching bands), **Set the “Voice Switch” to the “loud” position.** This increases the db level of the Horn and allows you to turn down the volume control (wireless mic, mic, line, etc.) and still be heard clearly. This reduces current drain and can easily double battery life versus the “normal” setting.
3. **Keep the sound clean! Do not use more volume than necessary.** Some users love to crank these systems up. When operated beyond its limits the system begins sounding harsh (clipping) and battery life is sharply reduced. Your battery operating time will increase and your audiences will thank you if you set your volume to a level sufficient to be heard clearly, and no more.  
**A small reduction in volume means a big improvement in battery life.**
4. **Easy on the Bass.** Low frequencies in voice and music take more power from the battery than Mid and High frequencies, but they contribute nothing to voice clarity. When operating your system at high levels, especially for speech outdoors, set your “Low” equalizer control between 7:00 (full CCW) and 9:00.
5. **Pay attention to the Audio Light on the wireless receiver.** Overdriving the wireless transmitter (handheld or belt pack) with audio will cause the audio light to flash yellow or sometimes even RED. If you are using a belt pack transmitter and the audio light is flashing RED, turn down the trim (gain control) on the belt pack itself until the audio light on the receiver flashes green. You will have to turn up the volume on the speaker, but since it is now a clean (not distorted) signal, the system will not use as much energy and will extend the life of the battery.