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## Getting the most from your sound system battery

The question we get the 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 a 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-3<sub>neo</sub> and Freedom FR-2 are rated for 4-8 hours use under “typical” conditions. This means a mixture of music and voice with peak levels about 2/3 power. With Volume & Bass cranked to the max and compressed program material this number can drop dramatically. The following guide will help you get the longest operating time from your battery operated sound system.

1. **Sound Machine SM-3neo (NI-MH battery):** Recharge after normal use. Recharge before placing into storage for 2 months or more. It is not necessary to leave this system plugged in during storage. For extended storage of periods over 6 months recharge every 3-4 months.
2. **Freedom FR-2, Sound Machine SM-2: (Sealed Lead Acid Battery)** Always charge your battery after every use, no matter how brief, by plugging the system into an AC outlet. This will prolong the life of your battery. The Freedom will not overcharge the battery and there is no memory effect with the battery chemistry used in Sound Projections products. When put into storage for more than 30 days leave the unit plugged in (power switch off) so the charging circuit will maintain the battery in top condition.
3. When speaking to large crowds, especially outdoors, **Set the voice switch to the “loud” position.** This increases the 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.
4. **Keep the sound clean! Do not use more volume than necessary.** Some users love to crank these systems. 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.**
5. **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.