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Lectrosonics SSM Micro Body-Pack Transmitter

By: Mark Johnson

Lectrosonics, a company of self-described “audio fanatics,” has a reputation of introducing a new “product” every year on April 1, by way of a press release. The “product” announcements usually include descriptions that have an element of believability, and given the speed with which technology advances, well, some of these “announcements” could conceivably be products. The releases are typically very entertaining and anticipated each year by many in the audio industry. It’s fun to see which publications actually wind up running the releases.

So imagine the collective surprise when the product announced this year on April 1 turned out to be the real thing. It’s easy to see why some might think the Lectrosonics SSM (Super Slight Micro) body-pack transmitter might be an imaginary product. The transmitter measures a scant 2 1/4" x 1 1/2" x 5/8". That’s smaller than many battery packs. The included 3.7V rechargeable lithium-ion flat pack battery does account for slightly more than one-third of the size of the SSM transmitter. Actually, the charger for the battery is about the size of most wireless body pack transmitters. This thing is downright tiny!

The SSM features Lectrosonics’ familiar utilitarian design. It’s meant for business. It has a machined aluminum case,

which is finished with a hard, black electroless nickel finish that the company uses on other products in its line. The process of electroless nickel plating produces a conductive coating that is hard, and wear- and corrosion resistant. The entire front surface is taken up with the controls for the transmitter. There are two input level indicator LEDs (-20 and -10) that are green under normal operating conditions and red when the threshold is exceeded; a small LCD screen for status display; an LED indicator for battery condition; and five membrane switches: Audio, Freq, Power, and Up and Down arrows for menu navigation and parameter adjustment. A LEMO 00 Series three-pin connector, an IR (infrared) port, and the permanently attached galvanized steel wire whip antenna are situated on the top of the transmitter. The IR port can be used to sync the transmitter to select Lectrosonics receivers. The bottom is fitted with latches for the stainless-steel hinged battery cover and a USB port (with a rubber cover), which enables firmware updates to be made to the transmitter. The transmitter weighs in at 2.3oz with the rechargeable battery pack installed. The SSM also comes with a removable belt clip that attaches to the battery door. Battery life in typical application is up to six hours.



The SSM Micro transmitter and storage pouch.



The SSM Micro transmitter with a DPA 4061 mic and battery pack charger unit. The quarter is in the picture for size reference.

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**Small package, high performance,
built like a tank**

Lectrosonics became known as the de facto standard wireless system for television and film production, and the SSM will help to continue to promote its good name in that industry. However, this product is perfect for the theatre market. Its small form factor and light weight makes it ideal for hiding in hats, hairpieces, or costumes. As for the durability, well, that's yet to be proven, but, given the reputation of other products manufactured by Lectrosonics, the SSM should be able to take a licking and keep on ticking.

Think of SSM as a sports car within the Lectrosonics product line: compact, yet high-performance. Control and adjustment of the SSM is done by using a combination of the membrane buttons on the front of the transmitter. Powering the unit on or off requires holding the power button for a three-count, which the display indicates (1, 2, 3 on power up, and 3, 2, 1 on powering down). If you release the power button before the counter reaches three on power up, the transmitter will enter standby mode: The unit is on but the RF output is turned off.

Driving the SSM

Setup is accomplished by holding the Up or Down arrow buttons while powering up the transmitter. If the Down button is held on power up, pressing the Audio button repeatedly will scroll through the available options, which include "rc" for remote control. In this mode, input gain adjustment, sleep/unsleep, lock/unlock, transmitter power output, and frequency adjustment can all be accomplished remotely via a smartphone (The LectroRM app is available via the Apple App store and Google Play). Once in "rc" mode, the Up and Down buttons enable remote control operation, or not. "PbAc" is auto power back on after battery replacement (Down is 0—stay turned off—and Up, 1, is turn back on). "bL" is back light duration. The default is on, and pressing Up adjusts the back light to stay on for 30 seconds. Pressing Up again will allow the backlight to stay on for five minutes.

After making setting adjustments, there is no way to get out of the menu and keep the unit on, something like an escape key. Once you select your setting, you have to turn it off, and then back on, to operate, or get to the other settings.

If the Up button is held while powering up, using the Audio button to scroll reveals the following menu items: "CP" (compatibility mode, which allows for compatibility with other Lectrosonics receivers as well as receivers from other manufacturers); "Pr" (RF power output, selectable between 25mW and 50mW); "In" (input configurations—there are a variety of settings available to accommodate microphones from different manufacturers, as well as hi-Z for line level inputs). There's also a sub menu for manual setup that allows selection of the bias voltage (0V, 2V, or



Transmitter with hinged door and battery pack removed.



Transmitter with hinged battery cover door and battery.



Transmitter with accessory belt clip.

4V), input impedance (0, low, or high), and audio polarity. "StP" facilitates frequency tuning step size in kHz, either 25kHz or 100kHz).

Once the SSM is powered on, the Up arrow button turns on the LED battery indicator and the Down arrow button

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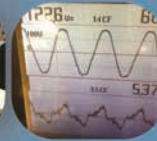
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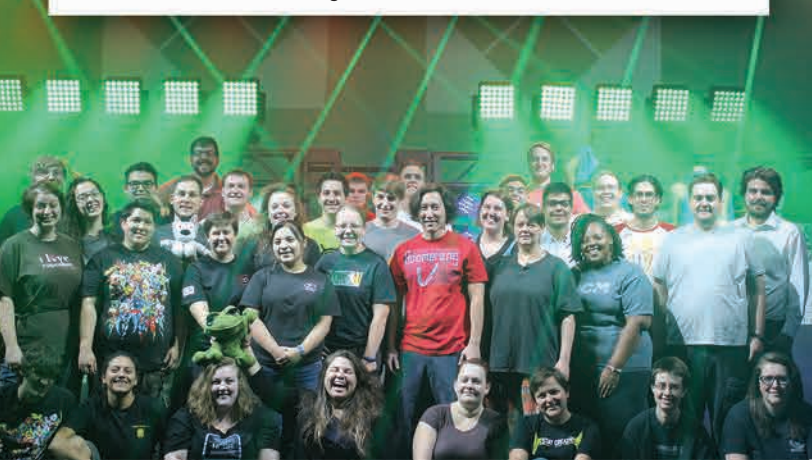
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turns it off. The control panel on the SSM can be locked to prevent accidental adjustments once the transmitter has been set up.

When reviewing a wireless system, the transmitter is only half of the story. The other half is the receiver. There's no chicken-or-egg question here; in this case, the receivers all came first. The SSM will work with multiple receivers from Lectrosonics' lineup, in addition to receivers of other manufacture. For this review, Lectrosonics provided a Venue Receiver with Digital Hybrid Wireless technology. This was covered in a previous review, when we looked at the HH handheld wireless microphone, so I won't get into the details here. Basically, it is designed for installation in a standard 19" rack and comprises a master host assembly that can hold up to six receiver modules. In addition to playing nice with receivers from other manufacturers, the SSM will function with the 100, 200, 400 and IFB Series receivers from Lectrosonics.

Going to the theatre

Lectrosonics had its eye squarely fixed on the theatre market during the development of the SSM transmitter, as demonstrated by the choice of the LEMO connector, which has been used extensively throughout wireless systems for theatre, and the ability to adjust the transmitter for use with various microphones such as Sanken, Countryman, and DPA lavalier and earset models. Lectrosonics also has an accessory adapter cable with the LEMO connector on one end, and a TA5F connector on the other for lav mics that come outfitted with the TA5F. Of course, video and film production can also benefit from an extremely small, high - quality wireless transmitter.

During the time I had to review the transmitter, I didn't have a theatrical production handy so I used the system to record audio (voice) for a video announcement. It was basically a talking head situation. I have to say it was almost comical when I handed the transmitter to the talent. It was just so small, and I'm sure he was expecting a larger transmitter. As expected, everything went well, and the end result sounded great. In critical applications where you might want a backup, it is interesting to note that even two SSMs are still smaller than many currently available transmitters. Maybe Lectrosonics will devise an accessory that holds two transmitters, so you can clip the whole assembly to your belt, for redundant or dual-transmitter applications.

Given its size, for use in live music production, the SSM will also be a natural. The transmitter can attach to a guitar strap with ease, or even mount directly on an instrument, say for example, a saxophone, without adding significant weight. The manufacturers' suggested retail price for the SSM is \$1,998.

There is definitely no joking around here. Despite its miniscule size, this transmitter is a boss! The Lectrosonics SSM Micro body-pack transmitter is a full-featured piece of gear that does not compromise on performance or capabilities. 