IF YOU NEED a class compliant sound pressure level (SPL) monitoring and logging system or just want a great way to keep track of SPL at gigs – keep reading. SG Audio of Denmark has developed an SPL measurement system called 10EaZy, and the folks at their exclusive U.S. distributor, Rational Acoustics, were “Smaart” enough (see what I did there) to send me a system for review.

SG Audio offers measurement systems designed to meet the needs of those who require IEC/ANSI Class 1 or Class 2 compliance, as well as a basic system for those that do not require compliance but still want a full-featured logging SPL rig.

This is a particularly timely series of new products because, increasingly, venues and municipalities are establishing SPL limits for concerts, events, and businesses (think manufacturing). Handheld portable meters, laptops with measurement software, and certain smart phone apps can do basic SPL measurements, but they may not be entirely accurate. Also, most of these options don’t offer a means to log the data over time or offer the user an easy way to archive any data. To get reliable results, especially if you need to be compliant with local codes or laws, higher quality equipment is required, and further, the entire measurement chain should be properly calibrated.

10EaZy offers a turnkey solution by providing tamperproof hardware and a measurement microphone that are calibrated as IEC/ANSI compliant, combined with easy-to-use software that offers a host of features. Systems are available in four versions: Class 1 compliant, Class 2 compliant, RT (Class 2 compliant with a reduced feature set), and SW (a software- and dongle-only system that requires users to provide their own quality measurement microphone, I-O, and calibrator).

The differences are as follows. Class 1 and Class 2 systems offer all the same software features but are tailored to the different classification of measurement specifications. RT and SW, the reduced feature-set versions, do not offer a running order, an event log, or a minute-by-minute resolution log file for post processing of measurement results. However, they do provide a file, listing a compilation of key measurement results. And given the variability of the hardware that can be used with the SW dongle, measurements made using the SW version cannot be guaranteed IEC/ANSI compliant by the manufacturer.

GETTING STARTED

Specifically, Rational Acoustics supplied me with a 10EaZy Class 2 system. It consists of a small (approximately 4.2 x .5 inches) measurement mic that comes with a nice, compact aluminum storage case, a 15-foot BNC-to-BNC mic cable, a tamper-proof plastic interface box (compact at approximately 5 x 3 x 1 inches), a 6-foot USB cable, and the software.

I noticed that the measurement mic wouldn’t fit any mic stand I owned, but I took another look in the box and discovered an Audix McMicro clip with a 3/8 - 5/8 threaded adaptor. Rational Acoustics also offers an upgrade kit for the Class 2 & RT systems which includes a sturdier mic clip with a 3/8 - 5/8 thread adaptor, a special 1/2-inch bushing to securely hold the 10EaZy mic, and a windscreen.

The next thing that caught my eye was that the mic sported a BNC connector instead of XLR connectors that I usually deal with. The cable that ships with the unit is 75 ohms, high-resolution/low-loss, and of very high quality. At 15 feet long it may be a little short for some uses but in my shop and at the gigs where I used 10EaZy, I was within feet of my laptop, so it wasn’t an issue. Per the manufacturer, a cable length up to about 250 feet can be used without a problem, if properly isolated.

Right out of the box, installation is straightforward. A CD is provided that will work with Windows systems XP and above, and with just a few clicks, the software is installed. The software then prompted me to plug in the hardware, and the system was all set.

To begin measuring, I simply set a destination for the log file and gave it a name. If you have a known target Leq limit and time period for the session
(for example, 103 dBA for 3 hours), you can enter this upon start up. The software is very intuitive and easy to use. Within a few minutes I was confident that the system was working correctly and started to do some testing, comparing 10EaZy's readings to my usual handheld SPL meters (a mid-priced professional measurement unit) as well as a few SPL apps on my iPhone.

Using a steady 1 kHz tone, I compared my trusty meter to the readings of 10EaZy, and was pleased to find that it was within .5 dB of the laptop display. My iPad apps didn't fare as well. One was off by 1 dB, while another was off by about 2.5 dB (To be fair, that's still pretty good for a free app using a built-in mic on a mobile phone).

**PLENTIFUL FEATURES**

Next, I used 10EaZy to help check out some new powered loudspeakers that were just shipped to our shop. I ran a variety of tones through my signal generator into a Mackie 1604VLZ4 mixer and then into the loudspeakers, checking to see if any unit varied widely from the others. Happily, all were in proper working order, so it was time to crank up the music and see what the loudspeakers, as well as 10EaZy, could do.

The display is very easy to read, large green letters against a black background. There are four buttons on the screen: Event Log allows you to add a time stamp with a simple click to the log; Running Order lets you add band names, playing times and duration to the log; History shows what's been happening since the measurement session started, and it also allows you to change the plot and look to a variety of styles and colors; and finally, Full Screen toggles between normal and full screen views.

The MaM (Maximum Average Manager) is particularly interesting. This display shows you how much above or below you are from your target SPL over time, in 1 dB increments. What this means for a festival, for example, is that if one band engineer runs their entire set 4 dB above the target level, they effectively use up available loudness for the duration of the Leq. Other acts would have to run lower in level to even out the Leq and get back to your target level.

I took the system out to several gigs and basically used it the same way every time, setting up the mic and laptop at FOH and then using 10EaZy as a reference for the overall show volume. I found I could also run the program in the background and it would still log what was happening, and I could also run a music playback program at the same time. Nice.

The 10EaZy feature set is plentiful. Right now, with much of my present work focused on corporate shows/events, I’m rarely encountering (at least as of yet) the need for sophisticated SPL metering or logging, but for those working in the touring and festival sector (where they’ll be encountering increasing SPL restrictions), this is a great system to have in the toolbox. It’s also perfect for venues needing to comply with local noise ordinances.

The display is easy to read, and the logging will come in handy when a neighbor complains about the noise level. And because it’s a calibrated system, the data will stand up to governmental and organizational scrutiny. For more information about 10EaZy, including in-depth descriptions of class compliance and the various 10EaZy systems, check out the U.S. 10EaZy website at 10eazy.us.

U.S. MSRP: 10 EaZy Class 1 system – $2,793; Class 2 system – $2,360; RT system – $1,742; SW software dongle – $299; Class 1/RT system clamp & windscreen upgrade kit – $50.

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