NTi Audio XL2

BY JIMMY DEN-OUDEN

Way back when it had only just been released, we reviewed the XL2 from NTi. Since then a few software revisions have happened, and a range of companion products have been released. It seems an appropriate time to take a look at what the current software and hardware options offer, since it's a lot more than it used to be.

Overview

XL2 is an audio and acoustic analysis tool that can be used with a variety of sources and inputs. It does many things, and there are several accessories available which make it even more powerful.

As an acoustic analyser, the XL2 can provide FFT analysis, make RT60 measurements, determine Polarity and Delay, and optionally provide 1/12 octave analysis as well as pass/fail measurements. Another option is STIPA, which allows the device to make speech intelligibility measurements in PA systems, and this function includes automated averaging and ambient noise correction. As an audio analyser, it can show level RMS, THD+N, Frequency, Scope, 1/3 or 1/1 octave spectrum analysis, and FFT analysis.

Really though, the shining beacon of functionality on the XL2 is its sound level metering functionality. It supports sound level metering to a number of different

international standards, it can display and log various levels with several weighting options, logs data as well as audio to an internal SD card, and can even be Type Approved thus providing evidence admissible in court.

Using the XL2 can be very simple or extremely complicated. The device allows for multiple configurations to be built and stored. Functionality of each configuration is defined, and various elements can be locked out. You can then set the XL2 to ask which configuration is to be used when it starts up, thus offering a simple method of operation for less technical users. In full mode, all options are available.

Navigation of the device is done with a rotary encoder, plus menu, page and escape buttons. Additional buttons allow start/pause and stop of logging, as well as muting of the internal speaker, adjustment and display of SPL limit parameters, and power / backlight. It's very simple to get around, and if you have a good understanding of the various parameters of the measurement functions, you'll have a good time with it.

If you don't understand the parameters, you'll do well to get onto the NTi audio website and check out their excellent range of webinars discussing all things measurement.

Accessories

First up, licensing. Various options are available for the XL2 – Type Approval, Cinema Meter, Extended Acoustics Pack, and STIPA among them. You don't need to buy a new device, or even send yours away to get these functions added – you just need to buy the function from your local distributor, which in turn makes available an activation key for you to download. Plug the XL2 in via USB, copy the key across, and restart the device to access your new function.

STIPA is a measurement system designed to determine speech intelligibility in PA systems. This might not sound like a really exciting function, but for anyone installing EWIS systems it's more relevant. Such systems usually need to achieve specific targets in order to be signed off, and being able to provide nice accurate measurement data makes this a lot easier (which makes getting paid for your installation a lot easier!). STIPA measurements with the XL2 are done using a specific test signal, which you can download from their website and burn to a CD.

The MR-PRO is the pocket sized signal generator that is designed to accompany the XL2. It looks like a smaller version of the same thing, and navigates in the same way. MR-PRO has XLR output and input sockets, and can act as a cable tester too. It can produce a variety of sine and square wave signals at selectable frequency and output levels. In addition to this it offers polarity and delay "chirp" signals, and even has an internal WAV player loaded with several nice identifier signals. You can load your own content too.

NTi Audio offers a number of different reference mic choices depending on your requirements. The main choices are between type or class approval classification and SPL handling capability. There's even a ruggedised mic for outdoor measurement. A level calibrator is available which allows the user to make sure
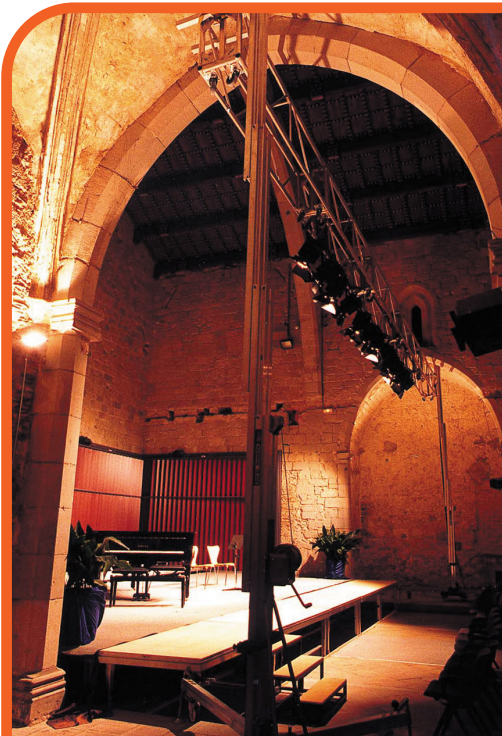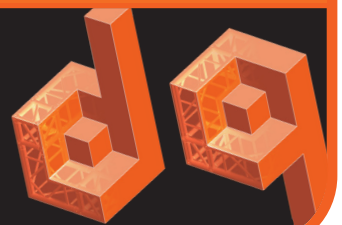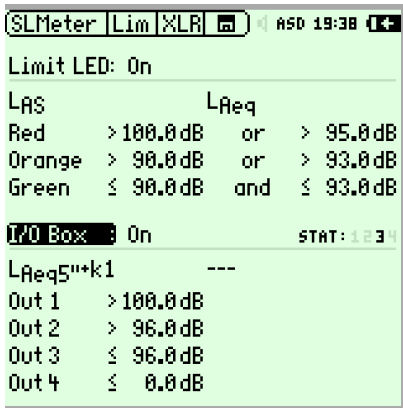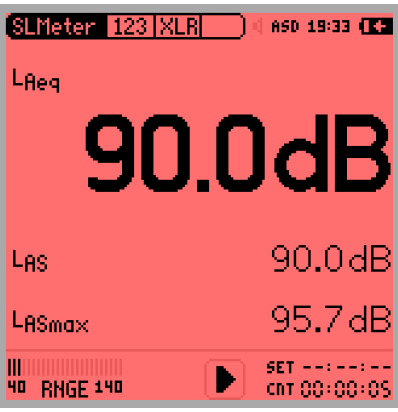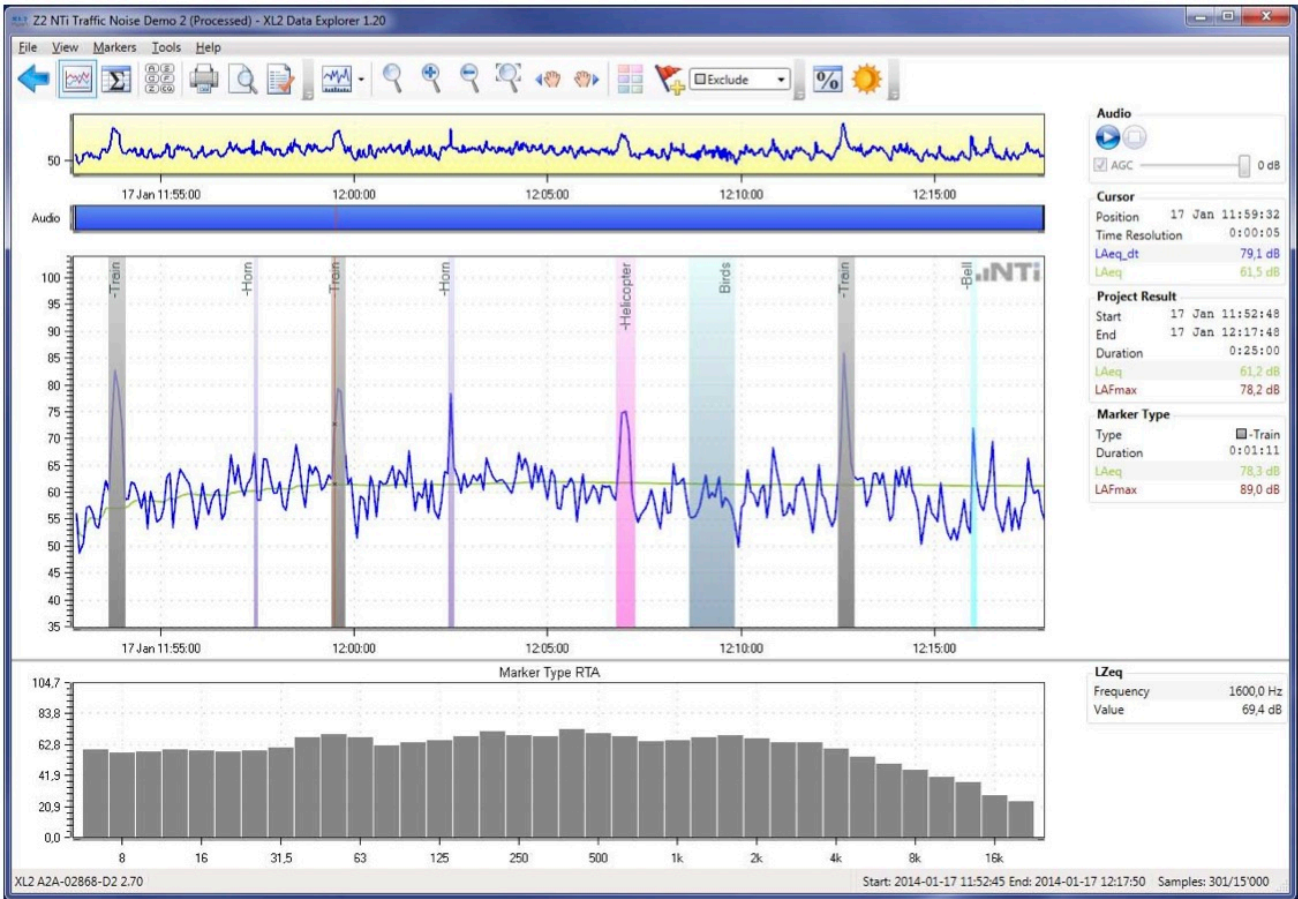
accurate measurements are made regardless of environmental and atmospheric conditions.

The Digital IO box and companion stack light product are used for quick and obvious visual indication of SPL monitoring levels. The XL2 has a tri-colour LED on its front panel which responds according to user defined SPL parameters. The DIO box and stack light can be programmed in the same way but with unique level parameters. The XL2 can respond to any measurement parameter – not just slow or fast A weighted SPL. This means it can be used for applications where measurements like time weighted averages are important – it can even handle gliding window measurements.

If you need to tie SPL limiting into the PA system to satisfy council requirements or similar, the Digital IO PCB gives you programmable outputs, which you can in turn interface to your system processing to engage attenuators or mute outputs.

Software

Since muting the whole system isn't always (or ever) an ideal solution, NTi has developed a level predictor software program. It runs on an external PC and connects to the XL2 via USB, and gives the user a clear indication of level history as well as prediction of future levels. When SPL trends toward exceeding the preset limits, the software shows the words "REDUCE LEVEL" in big red text on the screen. Everyone can understand that!
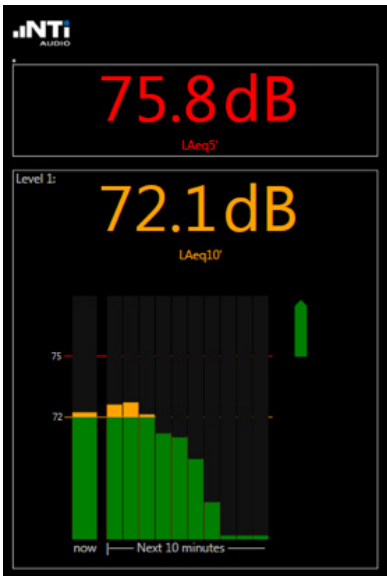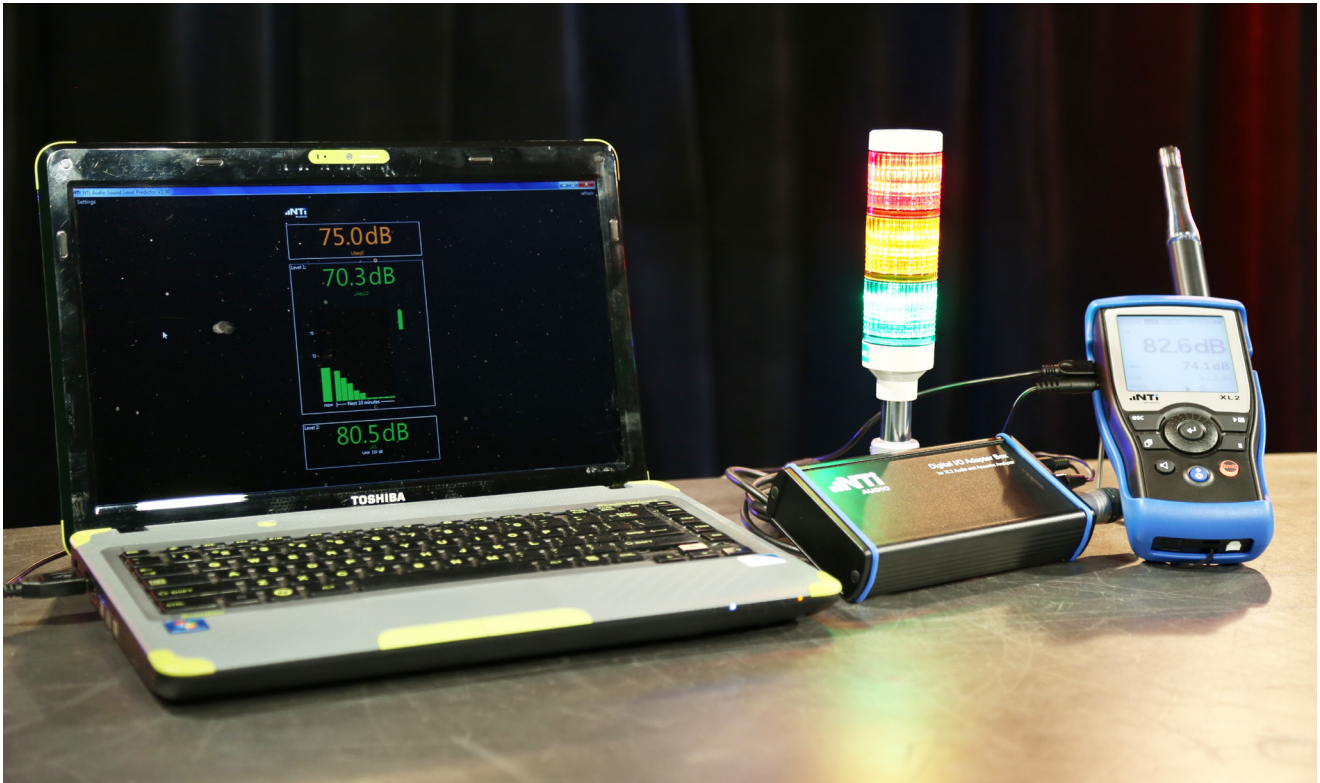
The XL2 Projector application shows a large version of the XL2 screen and allows you to operate the device in realtime on an attached PC. It works very well and is largely plug and play. When an SPL limit is exceeded, the on screen "backlight" of the app changes colour to yellow or red depending on the level.

The XL2 supports very advanced data and also audio logging. You can define the interval at which data is captured (at up to 100mS frequency), as well as which values are recorded. Spectra can also be logged, and you can even record audio on the SD card automatically. All this data can then be copied into a computer and analysed using the Data Explorer software.

Data Explorer gives a visual representation of recorded sound levels over the duration of an event. Spurious peaks can be quickly identified, zoomed in on, and the associated audio called up and played easily. Anomalies such as traffic or aircraft noise can be excluded from logged values, better allowing event organisers to accurately show compliance to relevant authorities.

Conclusion

We liked the XL2 last time we looked at it, but we like it even more now. Whether measuring a room acoustic prior to specifying a sound system or SPL logging at a festival to prove noise compliance to a local council, accurate data is often worth a lot more than the cost of acquiring it. The true value in this product is to be found not by looking at the shiny blue and silver hardware, but at the information that comes out of it.

Brand: NTi Audio
Model: XL2, IO box, stack light
RRP: XL2 with Class 2 mic - $2720.00 inc GST.
DIO Box - $999.00 inc GST.
Stacklight - $480.00 inc GST.
Product Info:
www.nti-audio.com
Distributor:
www.ambertech.com.au