Technical Note

Product: Jade 2.2

What is new in Jade 2.2?

Introduction

Jade 2.2 is an updated version of Jade 2.01 that provides additional statistical calculations. This allows users to see exposure type statistics (such as Losha, Ldod, Ldn, CNEL, Lep,d, TWA, etc) as well as the Leq, Lpk and Lns statistics currently provided by Jade 2.01.

This document describes the changes to Jade 2.2 from Jade 2.01 as a result of these new calculations.

Statistics Sets

Jade 2.2 takes a more flexible approach to the choice of statistics than Jade 2.01. In Jade 2.01 the same set of statistics was used for both data capture and viewing; in Jade 2.2 there are two separate sets of statistics:

♦ Data capture statistics. Users can choose up to 8 statistics for use as running statistics during data capture.

♦ Chart viewing statistics. Users can choose up to 15 statistics for use as global statistics when viewing charts.

Each set can contain any combination of Ln or exposure statistics (see below). A comprehensive list of exposure statistics will be provided from which the users can choose the statistics they wish to use (note that Leq is now included as one of the exposure type statistics). In addition, the user can set up any number of Lns using the same method as in Jade 2.01 (that is, choosing check boxes).

Jade 2.2 also calculates an additional Lpk statistic for each set of statistics, thus making a total of 9 or 16 statistics for each set.

Note that each set must contain at least one Ln value (for example, Lmax), but users do not need to choose any exposure statistics if they do not wish to. The minimum set is therefore Lpk plus one Ln.

Exposure Statistics

Jade 2.2 includes exposure statistics based on several parameters: data source type (Leq or Lp/SPL), exchange rate (3, 4, 5 or 6), criterion time, criterion level, lower and upper thresholds and result unit type (dB, percentage, Pa2, Pa2h or Pa2S). Projected statistics can also be used.

In addition, some statistics make use of a list of time modifiers so that data can either be ignored at certain times of day or have a fixed dB value added or subtracted. This is useful for community noise type statistics.

A comprehensive list of exposure statistics will be provided from which the users can choose which statistics they wish to use. If further statistics are needed, it will be possible for users to set up their own, specifying the parameters and time modifiers as appropriate.

Ln Statistics

The limit of five Lns in Jade 2.01 has been removed from Jade 2.2. The number of Ln statistics is limited only by the number of check boxes and text boxes in the Statistics Options dialog. However, users must still have at least one Ln.

The choice of Ln percentages has been enhanced for Jade 2.2 and users are now allowed two "other" Ln percentages (that is, two non-standard or fractional Ln percentages).

Statistics Options Dialog

The Statistics Options dialog has been considerably enhanced for Jade 2.2 to allow users to set up the sets of statistics. The changes to this dialog are as follows:

♦ Two option buttons have been added (**Statistics For Data Capture** and **Statistics For Viewing Data**). These let users choose which set of statistics they wish to set up.

♦ There are two list boxes (**Available Statistics** and **Chosen Statistics For...**). These allow users to choose the statistics they wish to use. Users use the **Add >>** and **<< Remove** buttons to move statistics between the two list boxes. They can also use the **Up** and **Down** buttons to rearrange the list of chosen statistics (Jade uses the chosen statistics in the order they appear in the **Chosen Statistics For...** list box).

♦ An extra button (**Setup Statistics**) has been added to allow users to add further statistics to the list of available statistics (for example, if national noise standards change).

♦ The **Chosen Ln Values...** check boxes work in the same way as in Jade 2.01. There is now an additional **Other Ln** text box so that users can set up two non-standard or fractional Ln percentages.

Users can choose a maximum of 8 statistics for data capture and a maximum of 15 statistics for viewing charts. Once the maximum number of statistics allowed has been chosen, the **Add >>** button and the unused **Chosen Ln Values...** check boxes are disabled, and the empty **Other Lns** text boxes (if any) disappear.

Data Capture Window

There are some changes to the data capture window so that the new exposure statistics can be displayed. In particular, both the statistics window and the large numeric display need to cope with non-dB results, which can be much wider and take up more room on the screen. As a result, the statistics window can now also be hidden in addition to the event bar and the large numeric display – giving even more room to the chart than before.

Large Numeric Display

Because the new non-dB statistics require more room on the screen, the numeric display will not show the current data sample if the user has chosen two statistics for the numeric display and one of them generates non-dB results. In this case, the user will only see the two statistics. The current data sample is shown only if the user has chosen only one running statistic or, if there are two running statistics, both statistics generate dB results. Note that the unit is assumed to be dB, unless specified otherwise.

Statistics Window

The statistics window is displayed in either a wide or narrow form as appropriate. If all the chosen data capture statistics produce dB results, the narrow form is used. If any of the chosen data capture statistics produce non-dB results, the wide form is used. Note that the unit is assumed to be dB, unless specified otherwise.

Menu Options and Speed Bar Buttons

Jade 2.2 has two new menu options and speed bar buttons:

- ♦ The View|Show/Hide Statistics Window menu option (or the [icon] button) shows or hides the statistics window.

- ♦ The Statistics|Reset Dose Statistics (or the [icon] button) resets the exposure (dose) statistics (excluding any Leq statistic). Note that the Reset Leq menu option and its speed bar button have been retained and will reset any Leq statistic present.

Chart Windows

As with the statistics window for data capture, the statistics window in a chart window is displayed in either a wide or narrow form as appropriate. If all the chosen data capture statistics produce dB results, the narrow form is used. If any of the chosen data capture statistics produce non-dB results, the wide form is used. Note that the unit is assumed to be dB, unless specified otherwise.

Jade 2.2 also has another enhancement over Jade 2.01: if the chart shows the entire measurement period, the chart statistics disappear and only the period statistics are the shown (note that the two sets of statistics are identical and so only one set need be shown).

This corrects a problem with Jade 2.01. Under certain conditions, the chart would show nearly all the period but with a few data samples at the end of the period missing, although this was not necessarily obvious to the user. Some users did not realize that the chart did not show the entire period therefore misinterpreted the fact that the chart and period statistics were different as an error, thinking that the two should be the same. Jade was, however, correctly giving slightly different results. With Jade 2.2, users should be able to identify when the chart does show the entire period and when it does not by the absence or presence of the chart statistics.

Exporting Statistics

Jade 2.2 exports the set of chart viewing statistics. Unlike Jade 2.01, Jade 2.2 provides both summary and detailed export formats for exporting statistics.

Viewing-Only Version

Jade 2.2 allows users to register their copy of Jade as a viewing-only version. This is the same as the full version, but without data capture. This means that users can purchase a low-cost "viewer" for a second computer (e.g. a desktop computer).