

NEW TECHNOLOGY ISSUES

(Provided by Manufacturers)

Lafayette Tech Talk

by Raymond Nelson

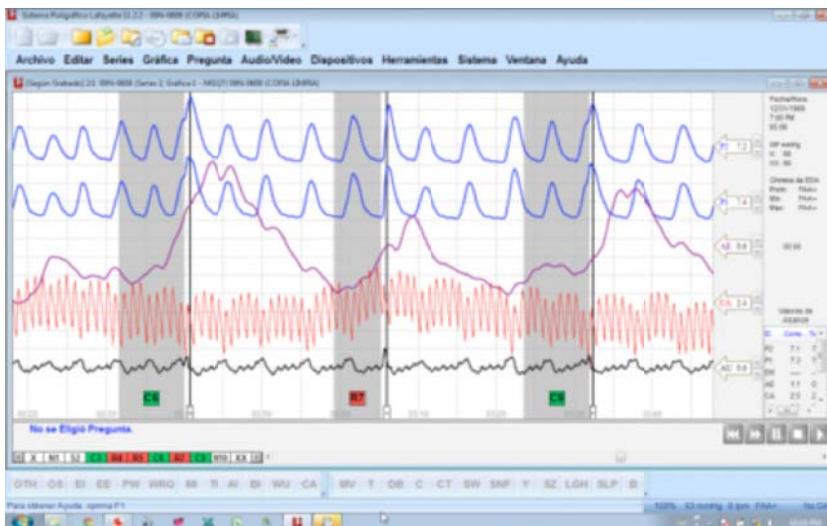
SAVED CHART VIEWS

Among the many useful features of LXSoftware 11.2.2 and the computerized polygraph instrument in general, is the ability to adjust the data for maximum interpretable value after data acquisition. This capability provides an important advantage to both field examiners responsible for scoring and interpreting the test data, and to quality control reviewers, court officials, and trainers who may view the data on computer screens of different dimensions than the one the data were initially recorded on.

Upon completion of data acquisition recorded data are displayed on screen, at which time the examiner has an opportunity to review the data from start to finish and then *dress* the data to his or her satisfaction before saving the data for the first time. Data will be saved *As Recorded* when closing a recorded chart for the first time by clicking the close (X) button, at the upper right of the chart window.

LXSoftware 11.2.2 permits an examiner to make adjustments to the displayed data at a later time. Adjustments to the data at the time of data acquisition or any other time do not change the recorded physiological data, but only the size of the data as it is displayed on the computer screen. Raw data are always saved in the originally recorded form, and the LXSoftware always retains and makes use of the original recorded raw data regardless of adjustments to the way it is displayed.

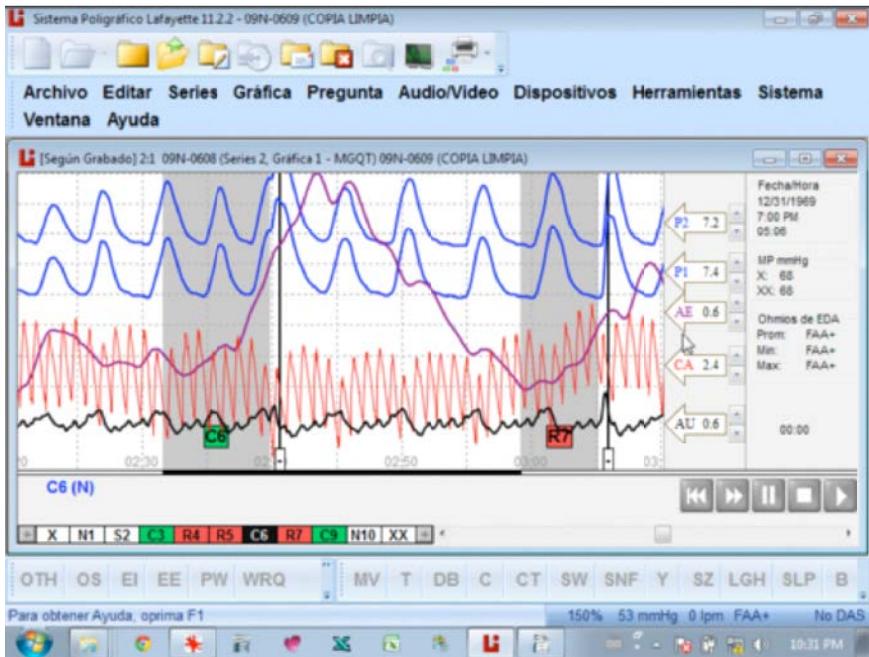
Figure 1: An examination chart displayed in a full-screen window.



All recorded data in Figure 1 can be easily evaluated. Pneumograph data are easily evaluated for breathing rate, along with the baseline and respiratory amplitude of rate of both thoracic and abdominal respiration data. Cardiograph data are also easily evaluated in a screen location that is distinct from the activity sensor data which does not interview with reading the question labels. Electrodermal data, as with the analogue polygraph instruments of the past, is adjusted to a larger tracing size that is permitted to enter the

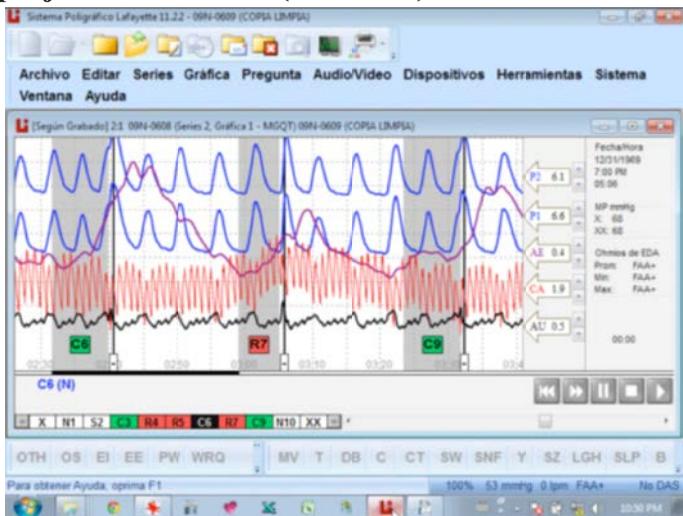
recorded chart space occupied by the data from the other sensors but does not interfere with the visual interpretation of the other data.

Figure 2: The same segment of data as Figure 1 except that the display is being projected at a lower resolution than the computer on which the exam was recorded.



Because projectors with a resolution of 800 x 600 pixels are still commonly found in many training locations, displaying recorded data for optimal viewing and interpretation on computer screens of different dimensions can be a challenge. As seen in Figure 2, the data from the two pneumograph sensors are now becoming crowded into a shared location on the available computer screen space, while the cardiograph data are beginning to interfere with the readability of the question labels. Electrodermal data are at risk of becoming un-viewable if a large reaction were to go off the screen at the top of the available screen space.

Figure 3: The same data as Figure 2 adjusted for more optimal display at a lower projected resolution (800 x 600).



Minor adjustments to the displayed data can greatly improve the viewing experience and make interpreting the data easier. In Figure 3, the pneumograph data from both thoracic and abdominal sensors can be more clearly evaluated for the baseline average and respiration amplitude along with the breathing rate. Electrodermal data will more reliably remain on-screen for the entire examination, and neither the cardiograph data nor activity sensor data is interfering with the readability of the question labels.

Adjustments to the data display may become necessary if the data are displayed on a computer screen with dimensions different than that used to record the data. In this example, the data are displayed at a resolution lower than that recorded. Alternatively, display of the data on a high resolution screen may permit amplification of response features to review more visual detail. Adjustments to the screen may also become necessary if the examiner did not dress the data for optimal display before saving the recording for the first time. Again, raw data are never changed. Adjustments affect only the display of the data, and the software will always retain and make use of the raw data.

Part of the process of reviewing test data may involve opening, adjusting, displaying and closing a chart, and then subsequently reopening and redisplaying the data after viewing data from a different recorded chart. A useful advantage of LXSoftware 11.2.2 is the ability to save the display after dressing the data for display while also saving the data *As Recorded*. To access the *Save Current View* menu item simply right-click anywhere on the chart to show the context-menu.

Figure 4: The context-menu.



Figure 5: The result when you click on the *Save Current View* menu item.



A dialog box will be presented that allows you to select which profile to save the current view to. Options include *Examiner*, *Reviewer* and *2nd Reviewer*. Select the desired profile and click *OK*. You can cancel the operation by clicking *Cancel*. You will also see this dialog when closing a chart after making changes to the display setting. Display changes will not be saved if you click *Cancel*, and the raw data are never changed regardless of any saved display changes.

Figure 6: At any time, you can instantly change the display to any saved view or to display the data as recorded.



To display data as recorded right-click anywhere on the chart to reveal the context-menu, then move your cursor over *Switch View*, and finally select *As Recorded*. Clicking on the desired view or anywhere on the examination chart will hide the context-menu. Of course, raw data is always retained and available to view as recorded by the examiner.

Examiners who do not wish to work with saved views can turn off this feature by clicking the *Tools* menu and selecting the *Preferences* item. The Administrator section includes a

check box item to *Allow custom chart views to be saved*. Simply uncheck this feature and click *OK*; doing so will turn off the capability to save the view after dressing the data for optimal viewing, display, or interpretation.

LXSoftware 11.2.2 is the most powerful computerized polygraph software ever created and includes the most complete set of options to satisfy the needs of any examiner, program or reviewer with recorded physiological data of the highest quality and integrity, along with features and options to expedite the workflow of professional examiners and quality assurance reviewers. As with other technologies, some of the features and conveniences available in computerized polygraph instruments today could not have been accomplished by earlier analog instruments. All of these features can be used with both the LX4000 and LX5000 data acquisition systems.

While these features may not have a direct effect on the criterion accuracy of a test, the convenience they offer can improve the user experience by reducing the fatigue associated with attending to repetitive tasks, making more attention available to the important aspects of the examination itself.

For more information, please contact Lafayette Instrument Company directly at (765) 423-1505.

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