LASER/GAUGE® PRODUCTS

# *LGWorks Software*

Overview

LGWorks enables users to develop multi-point inspection routines to run on the LG1102 (graphical) and LG4003 (text) controllers. The routines guide operators through each measurement point using graphic and/or text instructions. Calculations using the measured values can be incorporated into the routine and the user can establish the format for the data stored in files on the LaserGauge®.
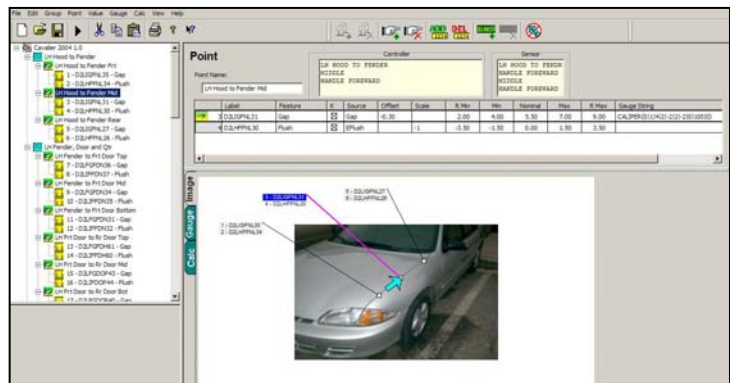
Develop Routines

Organize Routines - Routines are built in a tree-view hierarchy so that points and groups of points can easily be cut, copied and pasted or moved using drag and drop functionality.

More than one measurement may be needed at each inspection point, such as gap and flush. Routine commands tell the LaserGauge what methodology to use to make the measurements and to make both measurements with one pull of the trigger.

Operator Instructions - Photos or images of the part being inspected can be copied into LGWorks and the individual measurement points marked by drawing an arrow on the image at the exact location. The images are sent to the LG1102 with the routine and appear on the controller display with the arrows advancing automatically as each measurement is taken.

Text instructions input into LGWorks are displayed in a message window on either model controller and separate instructions can be input for display on the sensor LCD during the running of a routine.

Measured Points and Calculations - Formulas that use the results from measured points can be added to the routine for calculations such as A/V gaps, parallelism, max gap, range of flush on a panel, etc.

Spec Limits - Specification limits can be entered in the routine and used by the LaserGauge to flag out-of-spec conditions. A second set of limits, called reasonable limits, can also be entered to help screen errant measurements and measurements at the wrong location.

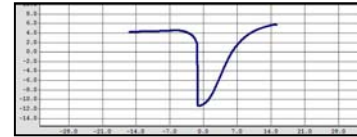LMI Corporation – www.lmicorporation.com

Test Gauges on Saved Scans

The LaserGauge controller can be used to capture raw scans, 500 x,y points, of a surface feature, such as a gap or weld. Retrieved to the PC, the scan can be used in LGWorks to test virtual gauge settings to determine the preferred measurement methodology. Selected gauge settings are then built into the routine and become transparent to the operators taking the measurements.

Raw Scan Saved from LaserGauge®

Plotted Scans - Plots showing virtual gauge tests on scans can be saved as graphic images, jpeg, gif, bmp, for subsequent use in reports to document the measurement methodology used.

Scan Tested with Virtual Gauge in LGWorks

On-screen Measurements - Measurements can also be made on-screen in LGWorks using point and click tools to return delta x and delta y results.
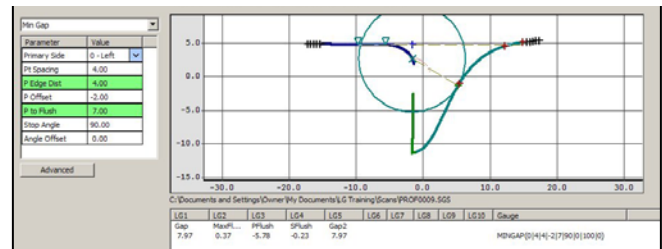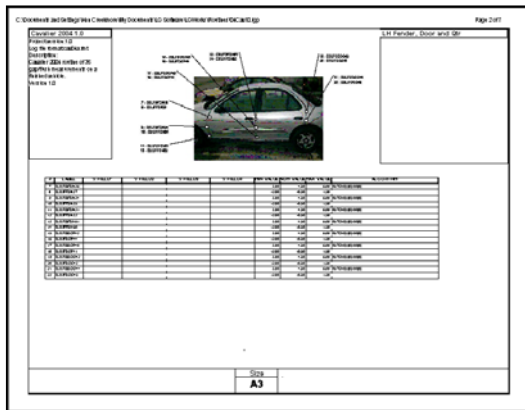
Data and Documentation

Roadmap - Each routine is documented with a printable roadmap showing each measurement point on the vehicle image and user-selectable information specific to the points in a table below.

Data Files - Data files are formatted by the user and can vary between routines. The user has a choice of delimiters and the file can include information contained in the routine or found on the controller. Operator input fields and LaserGauge generated information can also be included in the data file, such as date, time, shift, operator, VIN, feature label, description, etc.

Specifications

Functions	Used to develop inspection routines, define data file formats, view scans, test gauge settings
Controller Compatibility	LG1102, LG4003
Communication to LaserGauge	Null modem serial cable
Operating Systems	Windows™ 2000/XP
Requirements	16MB hard disk space, 128MB RAM

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Linear Measurement Instruments, Corp.

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LASER RADIATION -
DO NOT STARE INTO BEAM
VISIBLE LASER DIODE
3.2 MILLIWATT MAXIMUM OUTPUT
WAVELENGTH - 670 nm
CLASS II LASER PRODUCT