

emPower®

Data Log Reference Manual



Part No. 09-0251

REVISION B

September 05, 2001

Document History

Rev A	ECO xxxxx	6/28/00	BH
Rev B	ECO 15390	9/05/01	BH

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1. INTRODUCTION

This manual describes the use of the *emPower*® drivers. Data log drivers for *emPower*® are implemented using a technology known as Component Object Model (COM). COM technology is widely used in the software industry to make modular, component-based designs.

Microsoft® Word® and Excel® are built upon COM. ActiveX controls (as found in VisualBasic®) are also based on COM. By using COM, a data log driver can be developed, independent of the program that uses it. This enables the easy addition of new data log drivers. NH Research or anyone who follows these requirements can develop data log drivers.

The manual has the following sections:

- Text data log driver
- Printer data log driver
- HTML data log driver

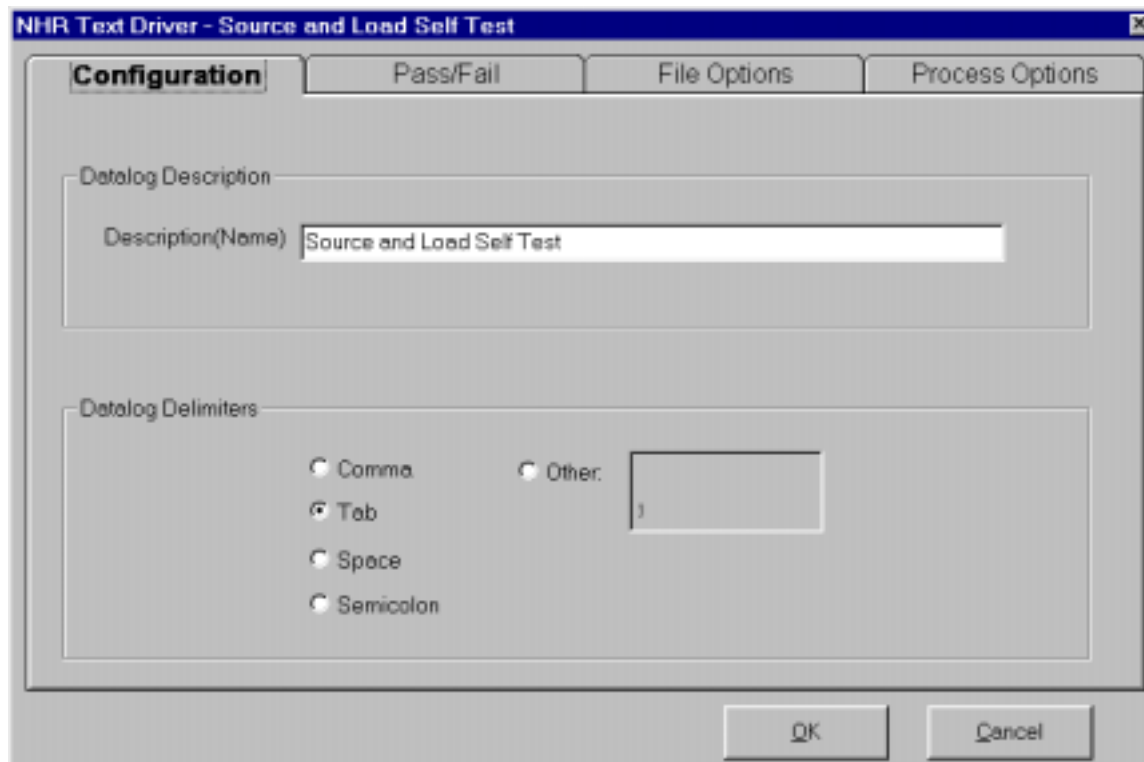
1.1 Method

All NHR data log drivers support two NHR interfaces: INHRDLDriver and INHRDLProgram. These interfaces are used to pass test data to the driver. The driver then formats and writes the data to a text or HTML file or printer.

2. TEXT DATA LOG DRIVER

2.1 Text Driver Properties

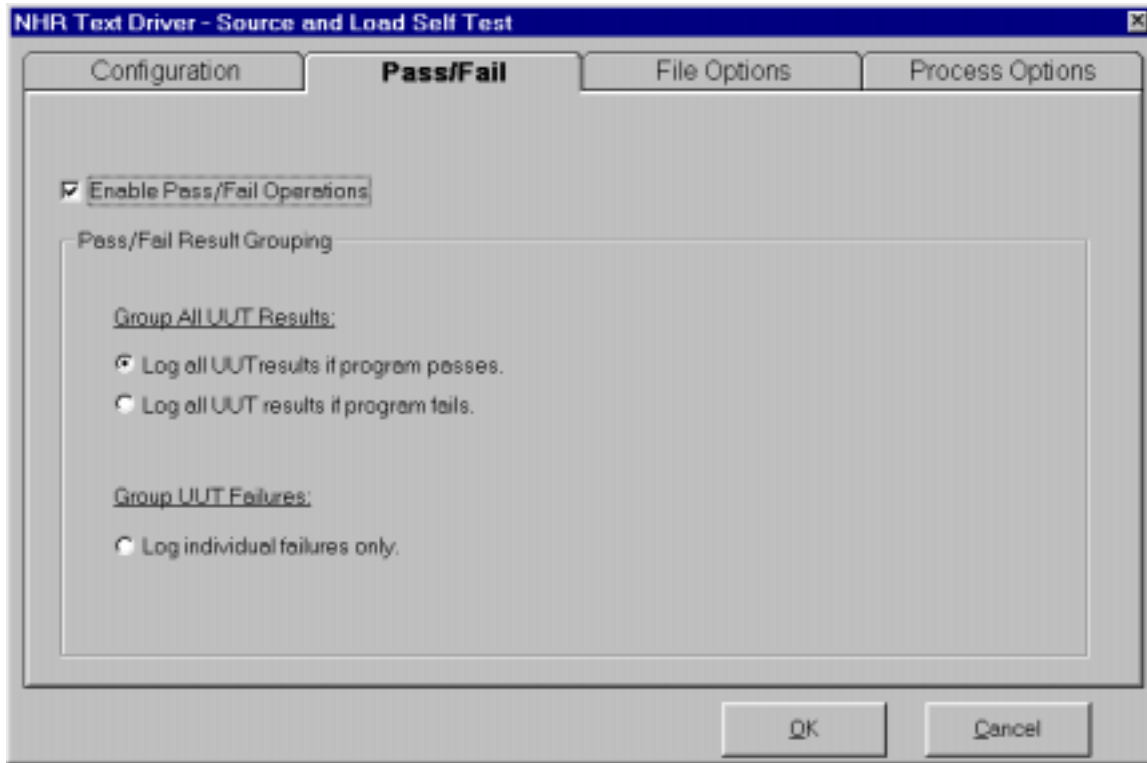
2.1.1 Configuration Tab



- Description(Name) – defines names that best describe the use of this driver.
- Datalog Delimiters – inserts a comma, tab, space, or semi-colon between data that is logged. The default delimiter is the comma.

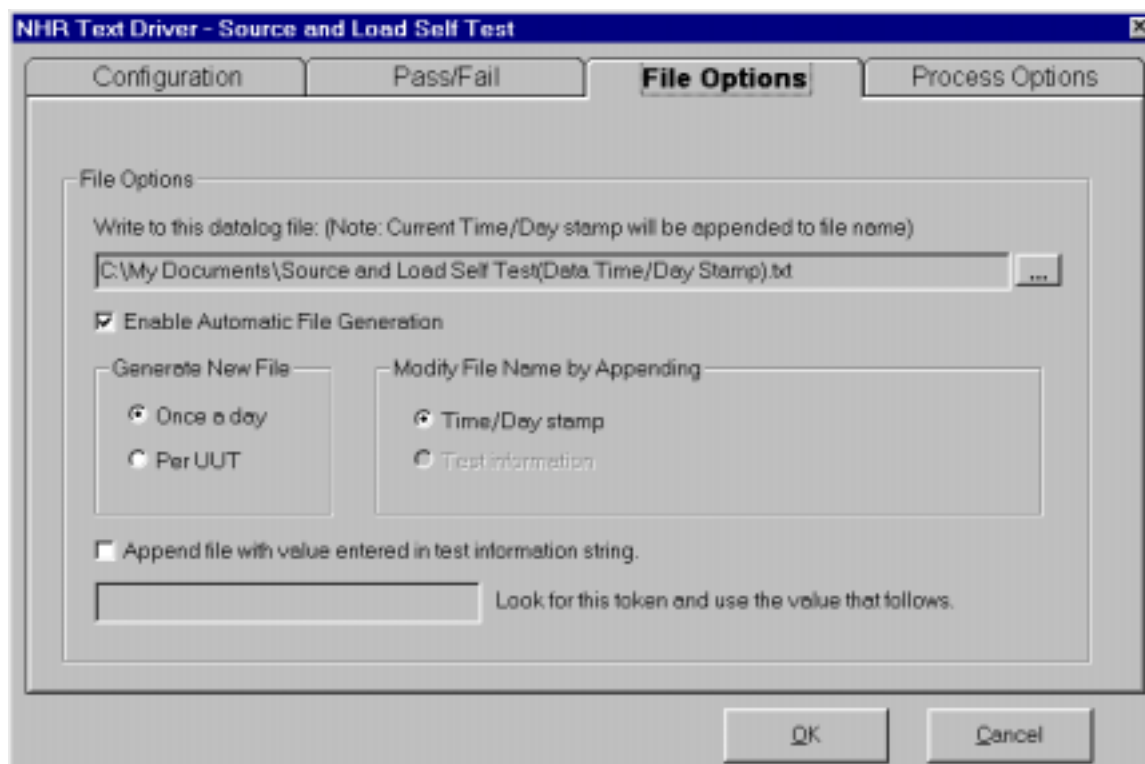
2.1.2 Pass/Fail Tab

When Pass/Fail Operations is enabled the data sent to the driver is selectively written to the data file based on the selections in the Pass/Fail Result Grouping.



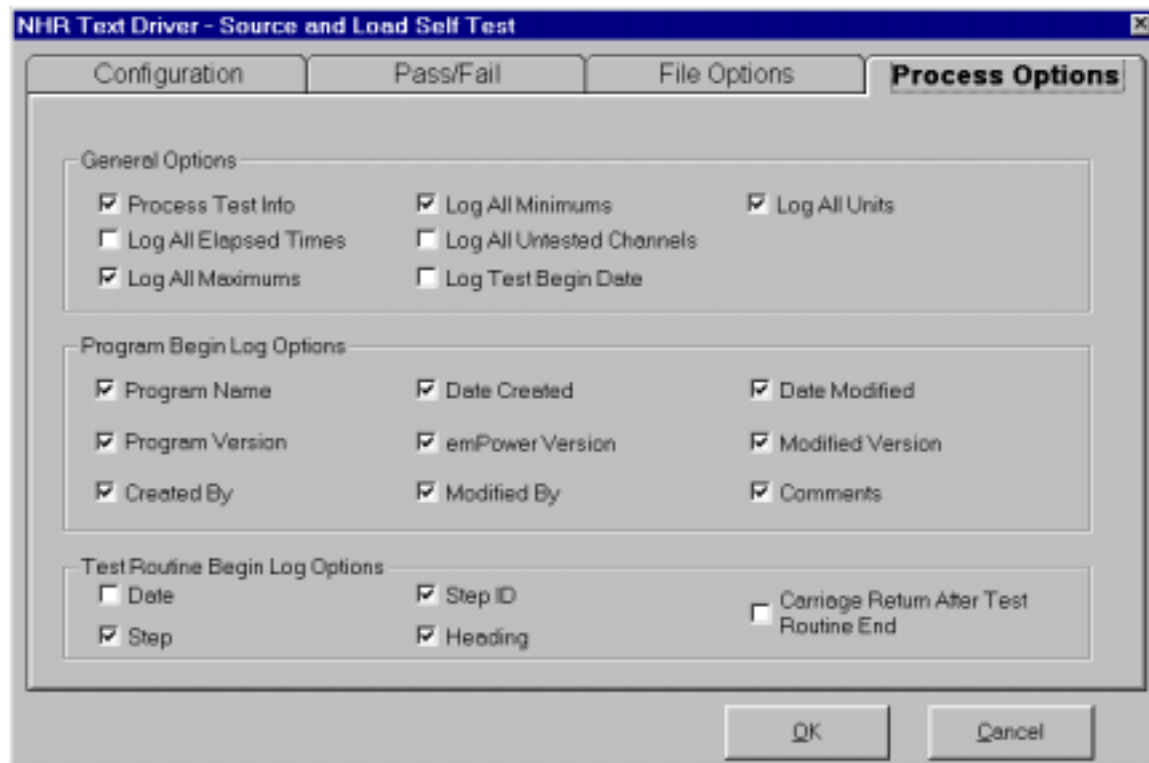
- Enable Pass/Fail Operations – enables Pass/Fail operations.
- Log all UUT results if test passes – logs all UUT results for the entire test program to the data file if the run passes.
- Log all UUT results if test fails – logs all UUT results for the entire test program to the data file if any part of the run fails.
- Log UUT Failures only – logs only the individual test failures to the data file without the context of the previous or subsequent test results.

2.1.3 File Options Tab



- Write to this datalog file – displays the full path of the data file.
- Enable Automatic File Generation – enables the driver to automatically generate a modification to the file name based on subsequent options.
- Generate New File – controls when a file name is modified.
 - Once a day – generates a data file once per day.
 - Per UUT – generates a file once per UUT test run.
- Modify File Name by Appending – defines what information modifies the file name.
 - Time/Day stamp – appends a time stamp to the data file.
 - Test Information – appends the test information entered at the beginning of the test run (i.e. serial number, lot code, etc.).
- Append file with value entered in the test information string – finds a token string in the test information (i.e. serial number, lot code, etc.) to use as the subsequent token to modify the file name. This enables file generation based on a specific piece of data entered at test time.

2.1.4 Process Options Tab

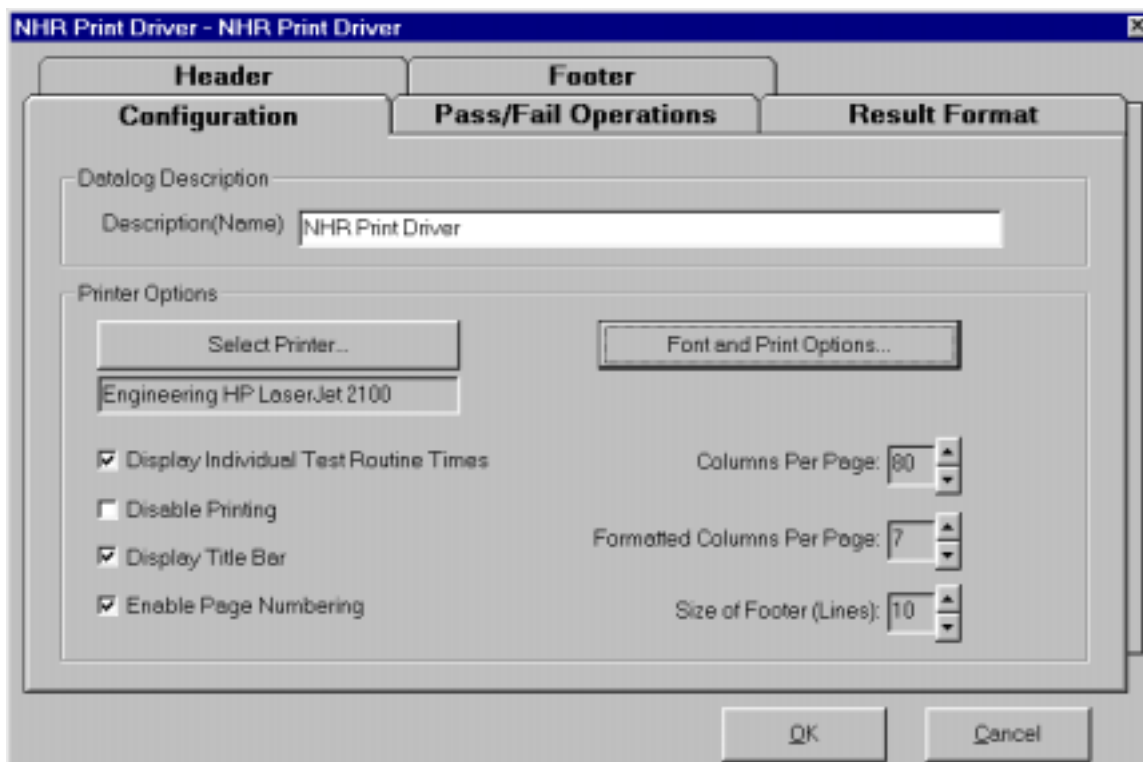


- General Options
 - Process Test Info – logs all entered information in the test information prompt at the beginning of a test.
 - Log All Elapsed Times – logs total elapsed test times and individual test routine times.
 - Log All Maximums – logs the upper limit for all test results.
 - Log All Minimums – logs the lower limit for all test results.
 - Log All Untested Channels – logs all untested channel data.
 - Log Test Begin Date – logs when the test began.
 - Log All Units – logs all test units.
- Program Begin Log Options – checks off the information to log to the file.
- Test Routine Begin Log Options
 - Date – test routine time/day stamp.
 - Step – program test step.
 - Step ID – actual program test step number as it appears in PowerEDIT.
 - Heading – program test step label.

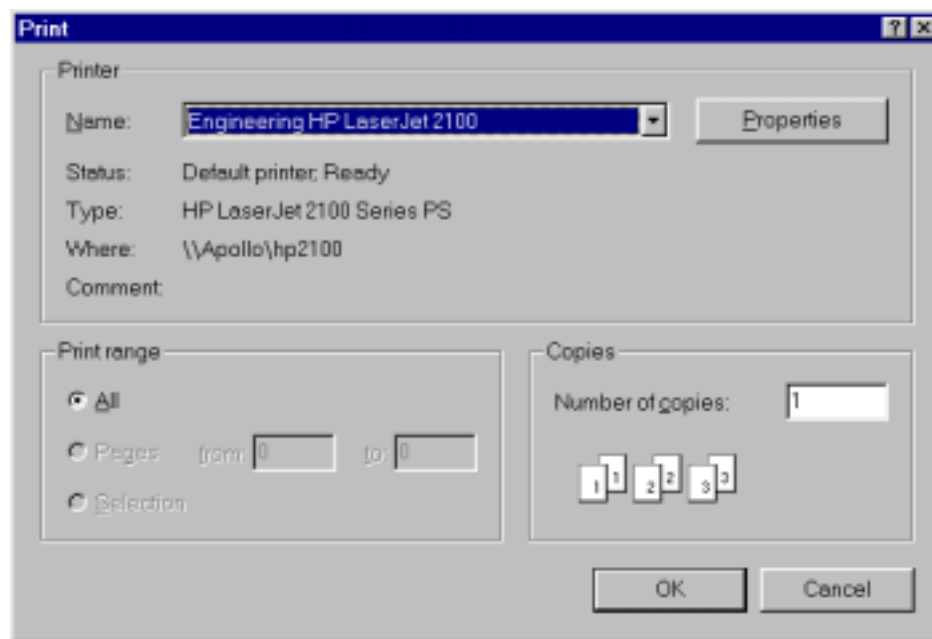
3. PRINTER DATA LOG DRIVER

3.1 Printer Driver Properties

3.1.1 Configuration Tab



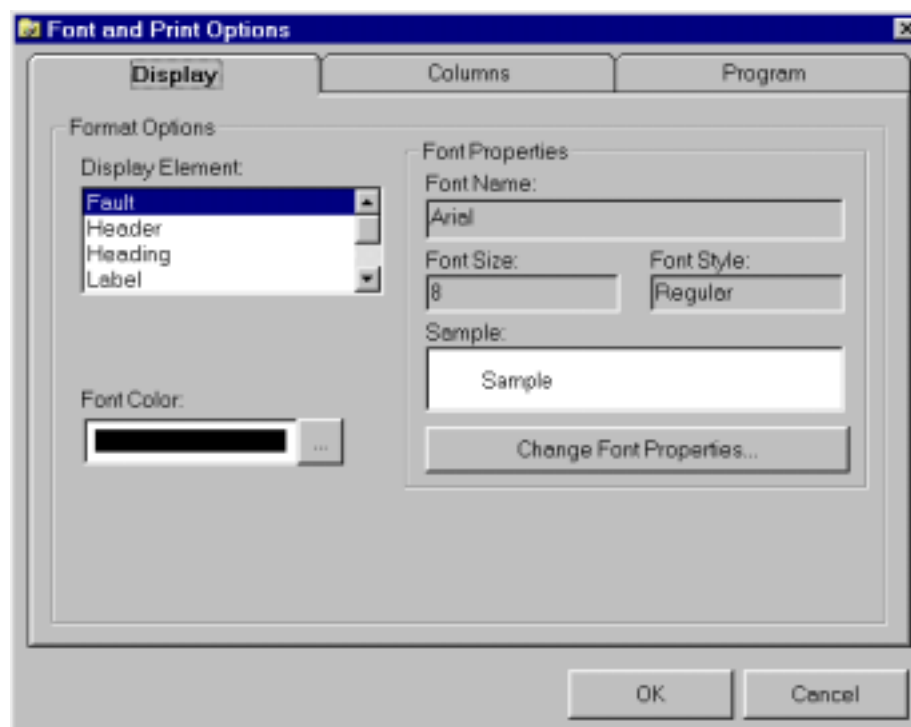
- Description(Name) – defines a name for the driver (use one that best describes the driver).
- Select Printer – displays the print dialog (on the following page).



3.1.2 Font and Print Options Tab

Select the "Font and Print Options..." button to display the Font and Print Options tabbed dialog.

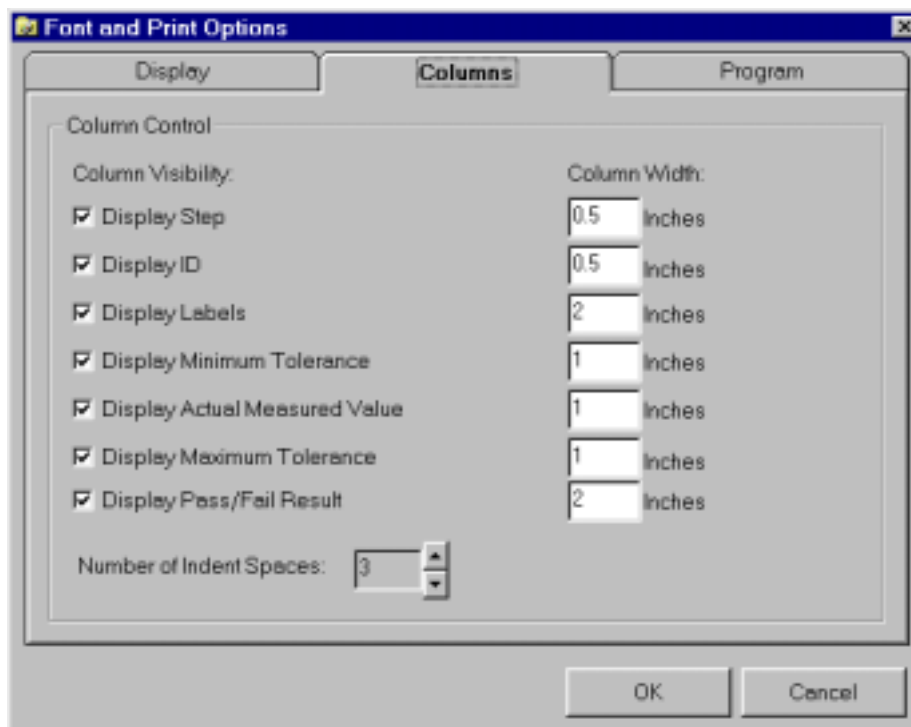
3.1.3 Display Tab



- Display Element –modifies the selected element:
 - Fault – All faults sent to the data log driver.
 - Header – All column headers (Min, Max, Actual, etc.).

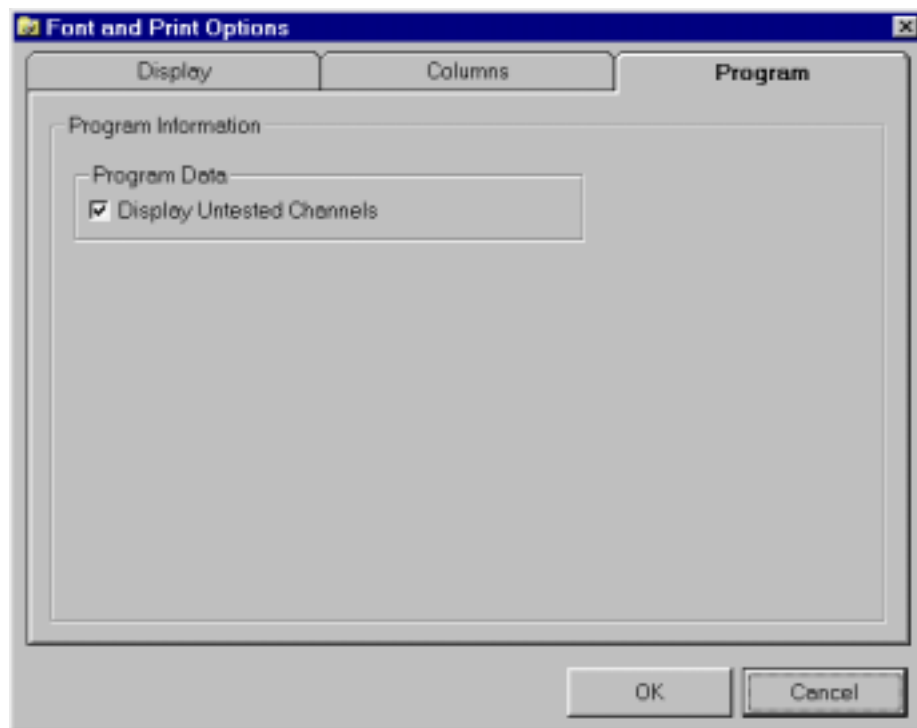
- Heading – Program test step labels, step and step ID.
- Label – Test routine generated labels.
- Result – Result column font properties.
- Result Base – Min, Max, Actual values font properties.
- Title – Passed/Failed title font properties.
- Font Properties – selects the font properties for the element.

3.1.4 Columns Tab



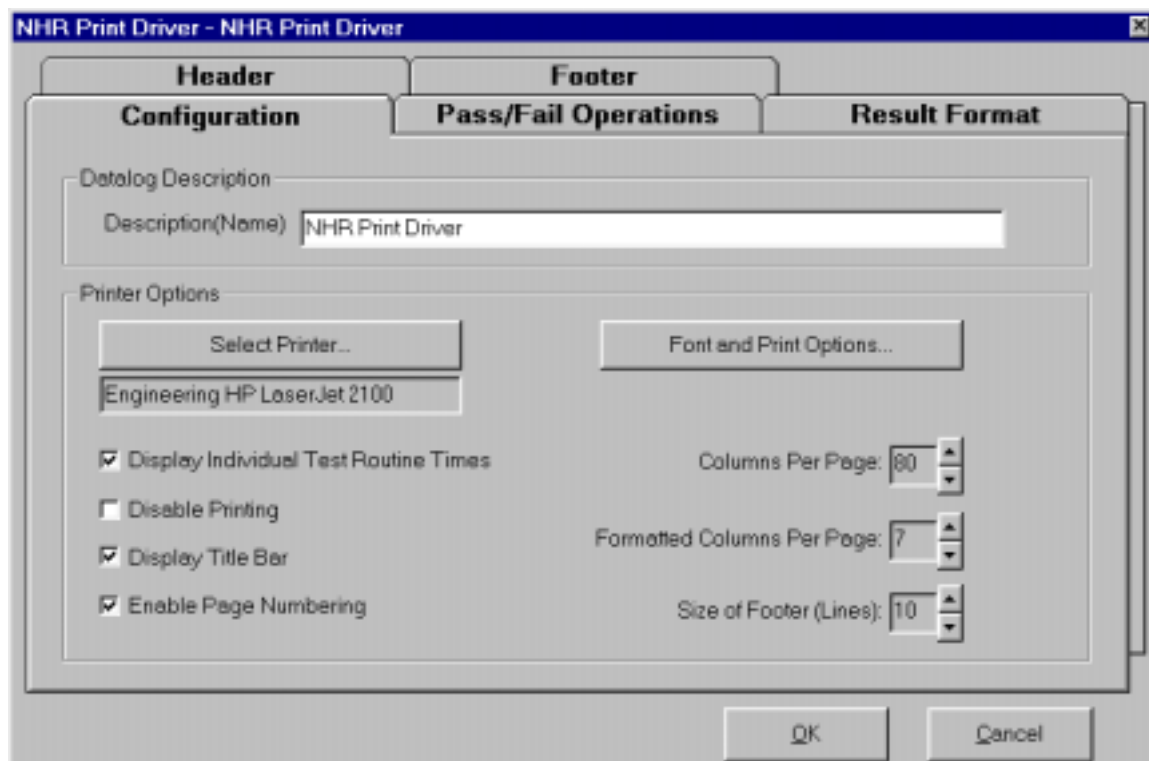
- Column Visibility – displays the required columns.
- Column Width – sets the required column width for each column.
- Number of Indent Spaces – selects the left margin in increments of spaces based on the label font properties.

3.1.5 Program Tab



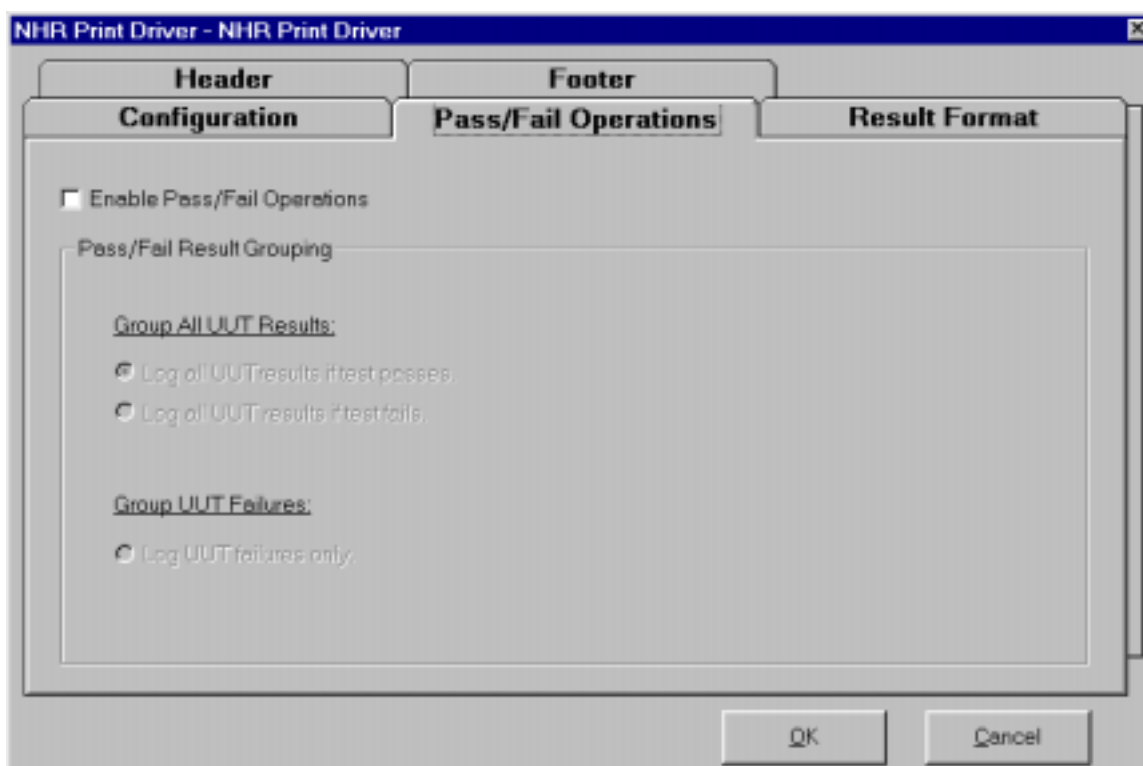
- Display Untested Channels – prints untested channel data.

3.1.6 Return to the Configuration Tab



- Display Individual Test Routine Times – sends test routine times to the printer.
- Disable Printing – disables all printing.
- Display Title Bar – prints passed/failed title on each page.
- Enable Page Numbering – numbers the pages.
- Columns Per Page – selects the width of the printable area in number of characters.
- Formatted Columns Per Page – selects the number of columns.
- Size of Footer (Lines) – reserves a number of lines based on the label font size at the bottom of each page. This space should be large enough to contain all footer data.

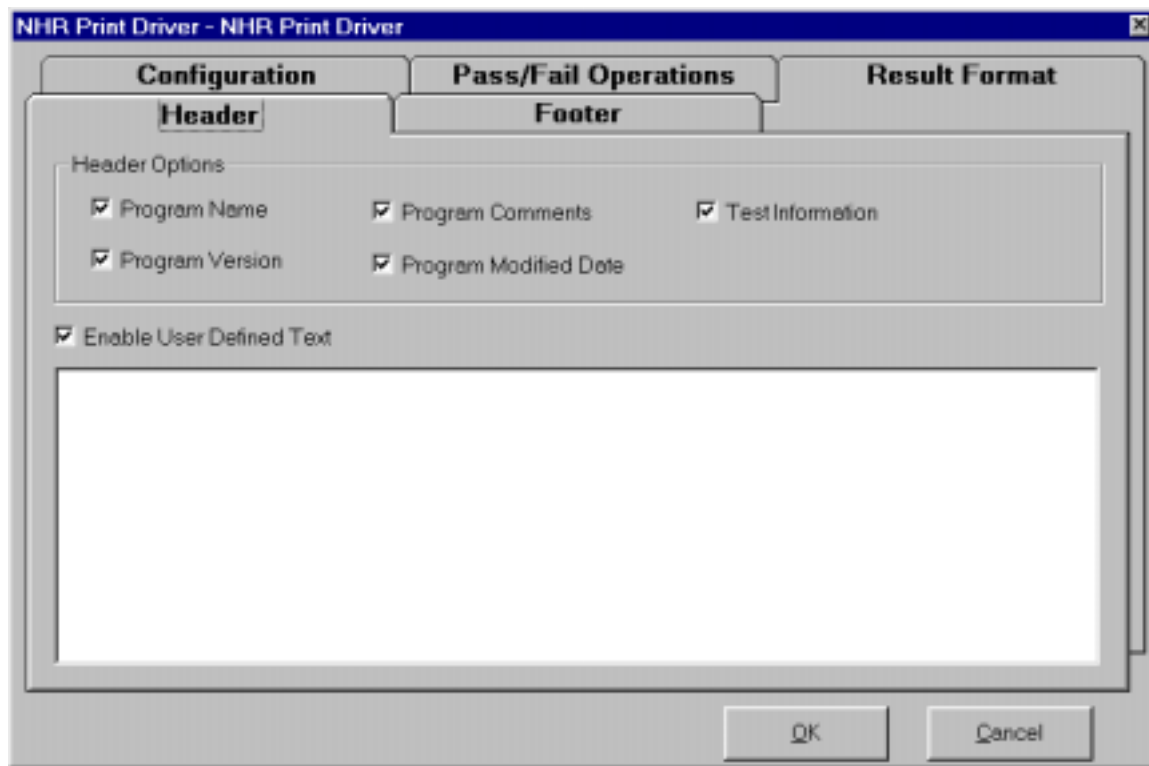
3.1.7 Pass/Fail Operations Tab



When Pass/Fail Operations is enabled the data sent to the driver is selectively written to a file based on the selections in the Pass/Fail Result Grouping.

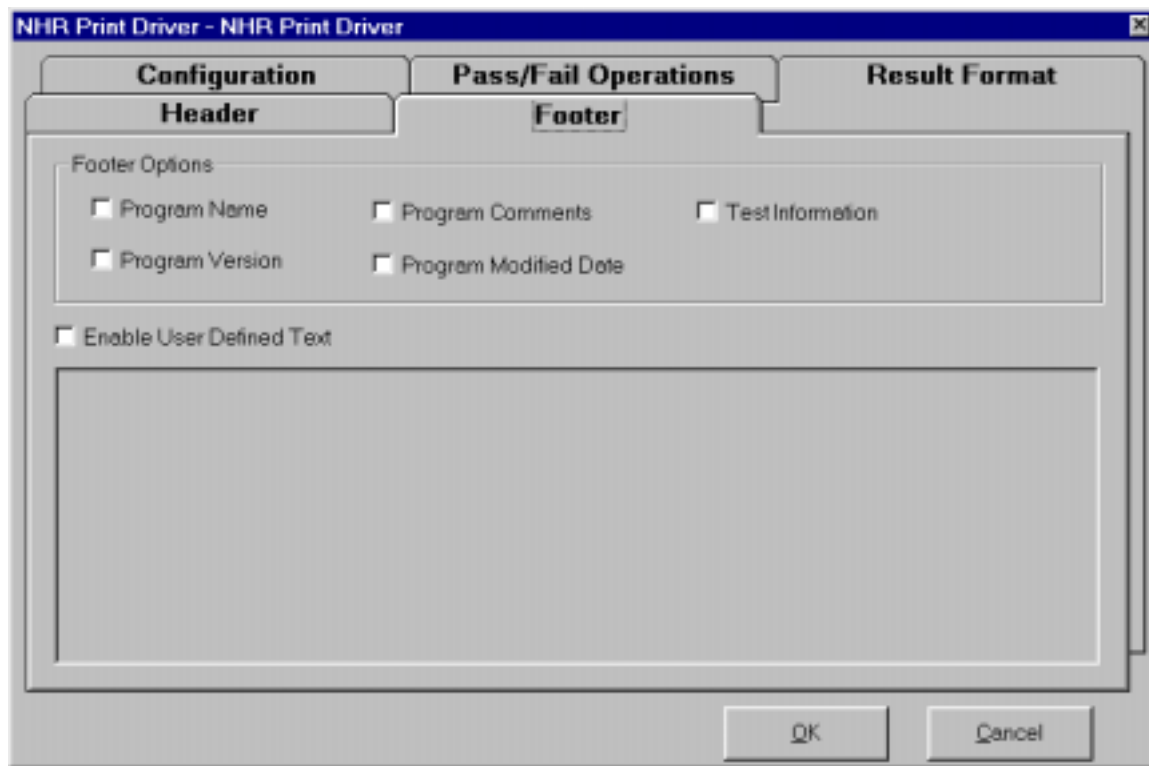
- Enable Pass/Fail Operations – enables the Pass/Fail operations.
- Log all UUT results if test passes – logs all UUT results for the entire test program run to the data file if the entire run has passed.
- Log all UUT results if test fails – logs all UUT results for the entire test program run to the data file if any part of the run failed.
- Log UUT Failures only – logs only the individual test failures to the data file without the context of the previous or subsequent test results.

3.1.8 Header Tab



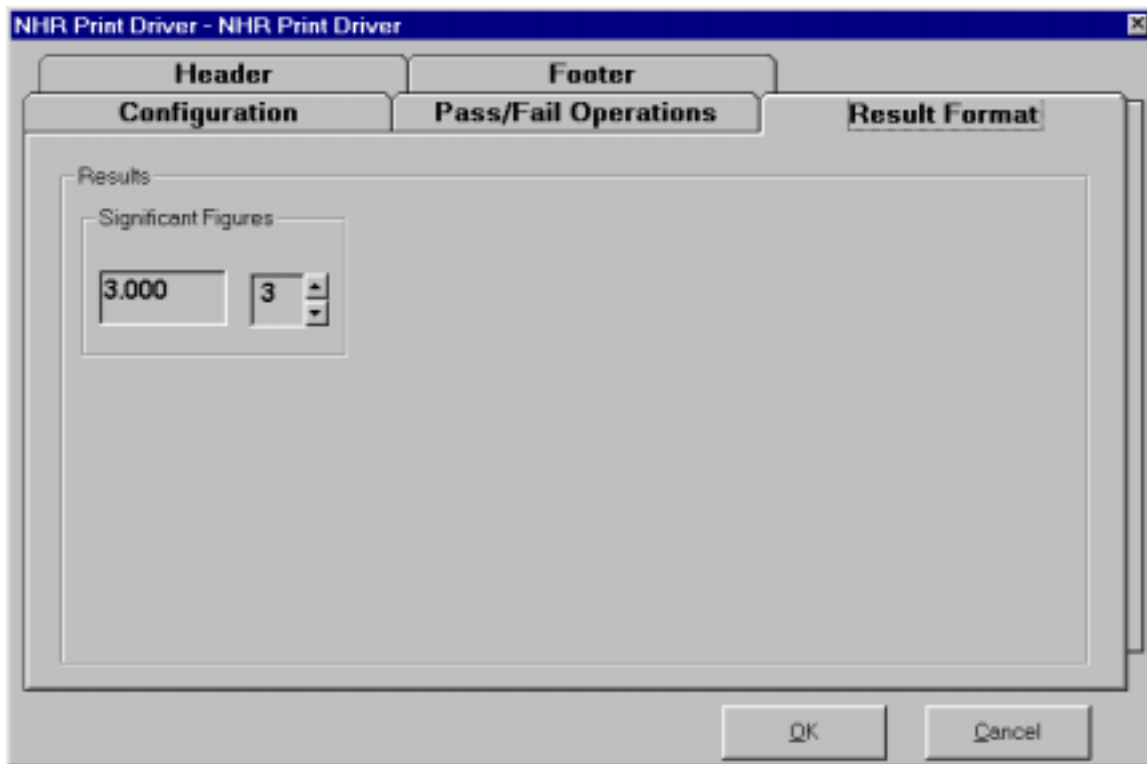
- Header Options – displays the required information in the header of each test run.
- Enable User Defined Text – adds text to the header.

3.1.9 Footer Tab



- Footer Options – displays the required information in the footer of each test run.
- Enable User Defined Text – adds text to the footer.

3.1.10 Result Format Tab



- Significant Figures – defines the number of significant figures displayed for all number in the test data.

4. HTML DATA LOG DRIVER

4.1 HTML Driver Properties

4.1.1 Configuration Tab

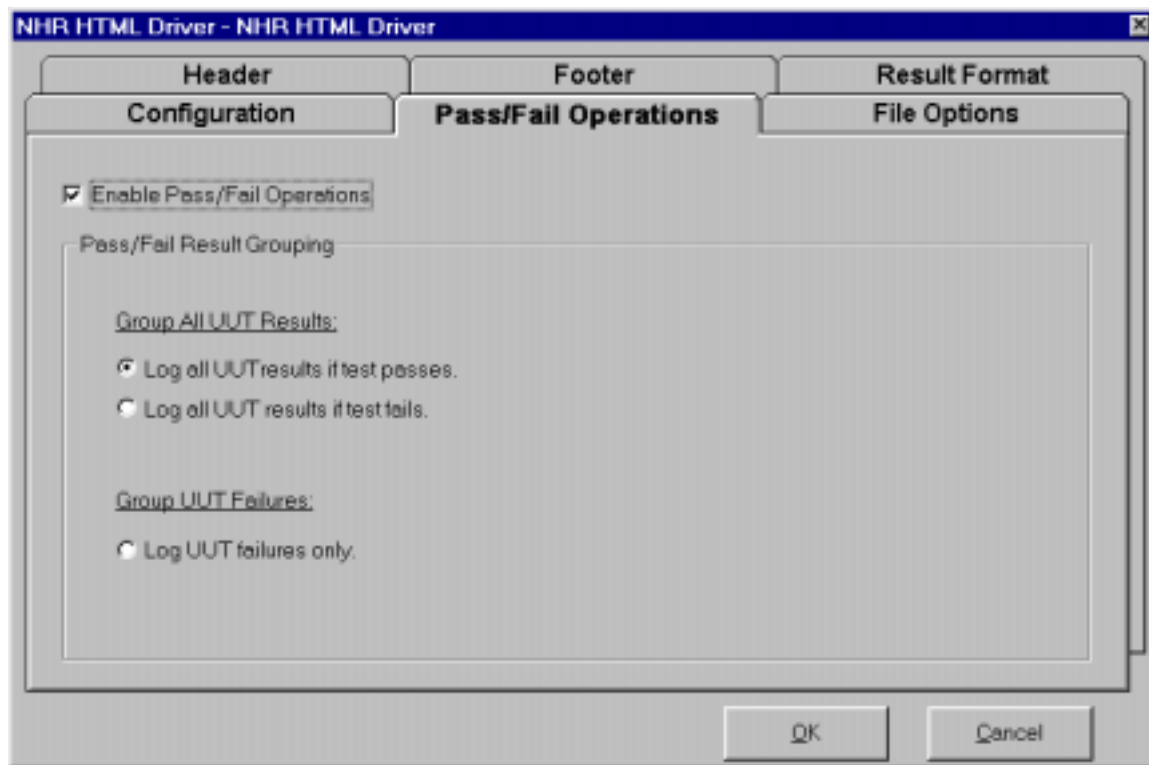
The screenshot shows a dialog box titled "NHR HTML Driver - NHR HTML Driver". It has three tabs: "Header", "Footer", and "Result Format". The "Configuration" tab is selected. Inside the "Configuration" tab, there are three sub-tabs: "Configuration", "Pass/Fail Operations", and "File Options". The "Configuration" sub-tab is active. It contains the following fields:

- Datalog Description:** A text box labeled "Description(Name)" containing the text "NHR HTML Driver".
- Datalog HTML Format:** A group box containing:
 - Column Header:** A dropdown menu for "Font Size" set to "6 (24 pt)".
 - Results:** A dropdown menu for "Font Size" set to "5 (18 pt)".
 - Table Properties:** A group box containing:
 - Minimum Table Width:** A spinner box set to "100".
 - Table Alignment:** A dropdown menu set to "Center".

At the bottom right of the dialog box are "OK" and "Cancel" buttons.

- Description(Name) – defines a name of the driver (use one that best describes the driver).
- Column Header – defines the font size used for the column header.
- Results – defines the font size used for all of the data written to the file.
- Minimum Table Width – defines the width of the data in percent of the screen.
- Table Alignment – defines the alignment of the data on the screen.

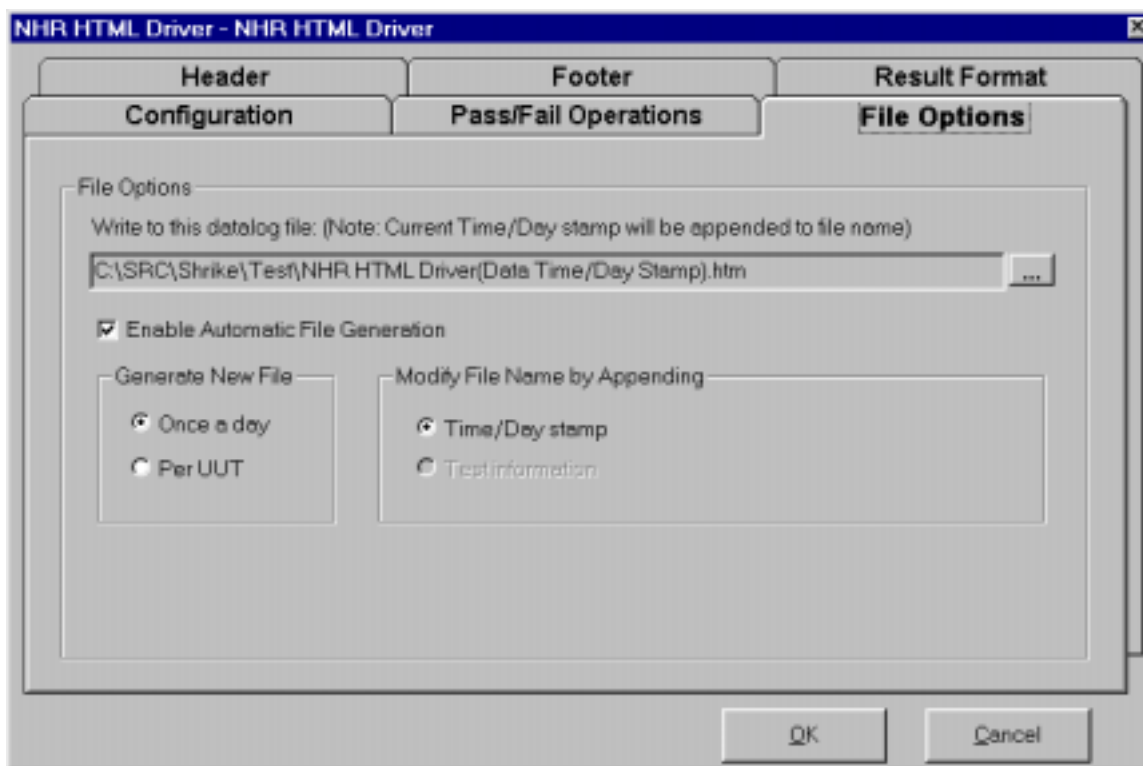
4.1.2 Pass/Fail Operations Tab



When Pass/Fail Operations is enabled, the data sent to the driver is selectively written to a file based on the selections in the Pass/Fail Result Grouping.

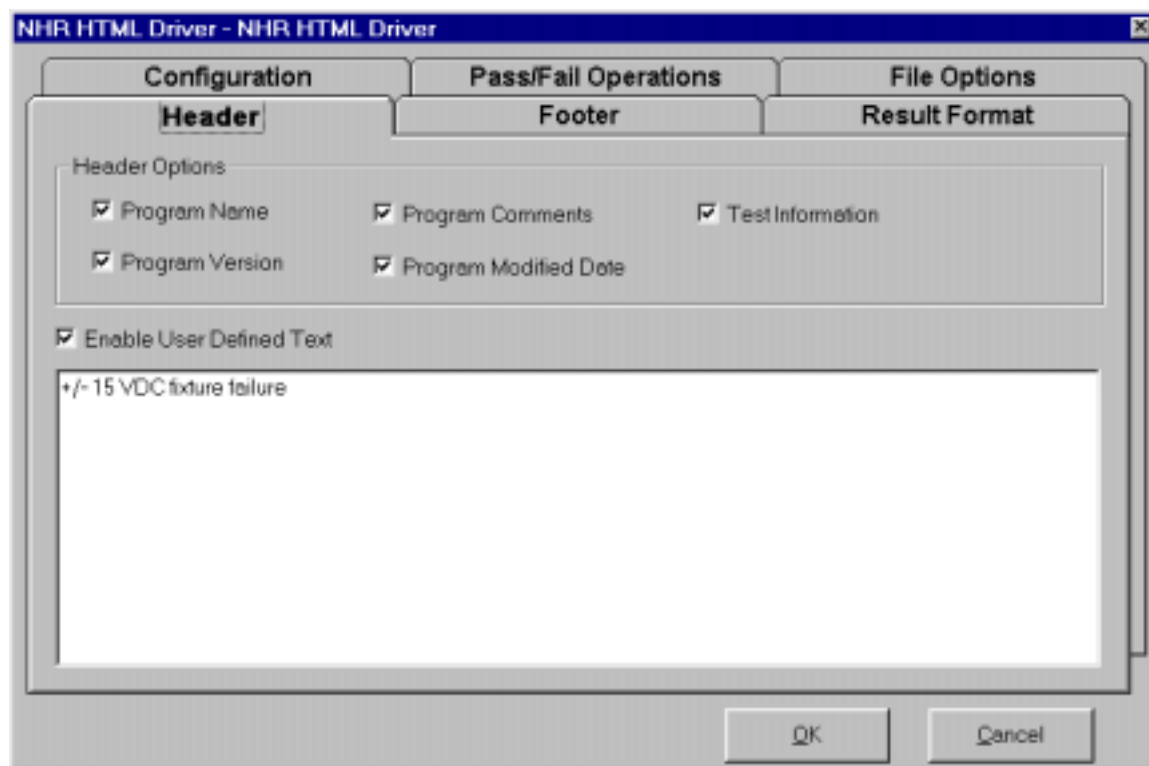
- Enable Pass/Fail Operations – enables the Pass/Fail operations.
- Log all UUT results if test passes – logs all UUT results for the entire test program to the data file if the entire run has passed.
- Log all UUT results if test fails – logs all UUT results for the entire test program to the data file if any part of the run failed.
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4.1.3 File Options Tab



- Write to this datalog file – displays the full path of the data file.
- Enable Automatic File Generation – enables the driver to auto generate a modification to the file name based on subsequent options.
- Generate New File – controls when a the file name will be modified.
 - Once a day – generates a data file once per day.
 - Per UUT – generates a file once per UUT test run.
- Modify File Name by Appending – defines what information will be used to modify the file name:
 - Time/Day stamp – appends a time stamp to the data file.
 - Test Information – appends the test information entered at the beginning of the test run (serial number, lot code, etc.).

Header Tab

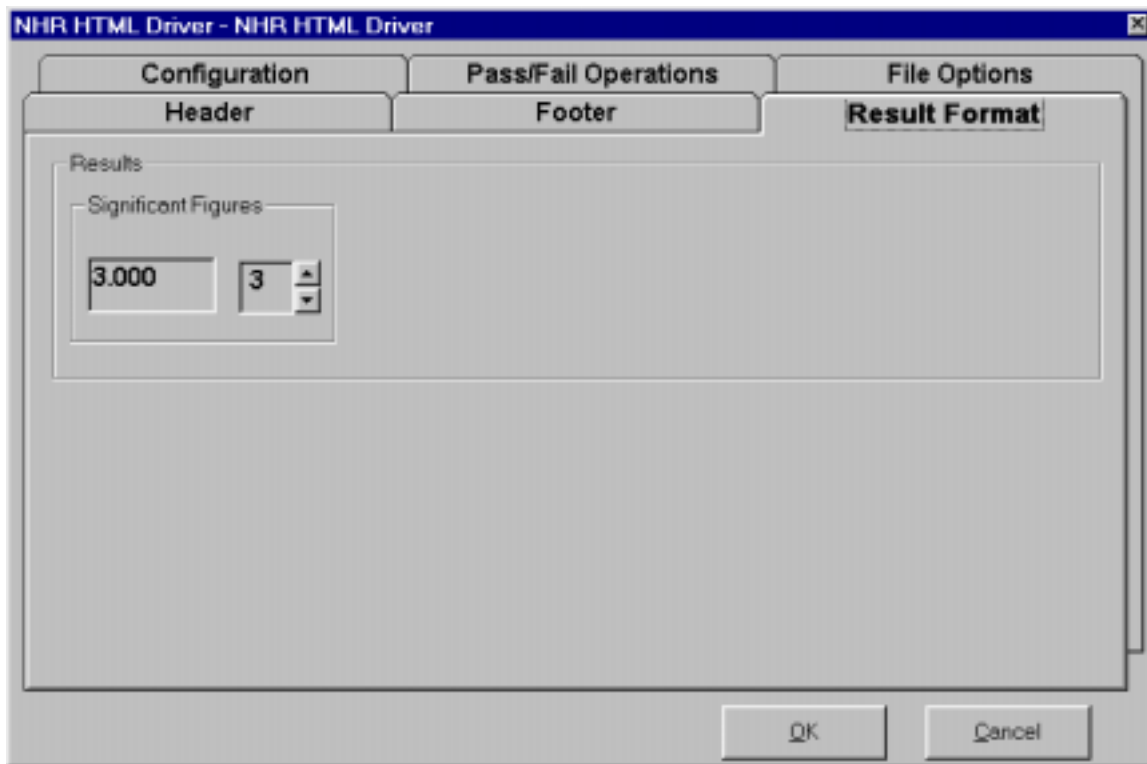


- Header Options – displays the required format in the header of each test run.
- Enable User Defined Text – adds text to the header.

4.1.4 Footer Tab

- Footer Options – displays the required format in the footer of each test run.
- Enable User Defined Text – adds text to the footer.

4.1.5 Result Format Tab



- Significant Figures – defines the number of significant figures displayed for all number in the test data.