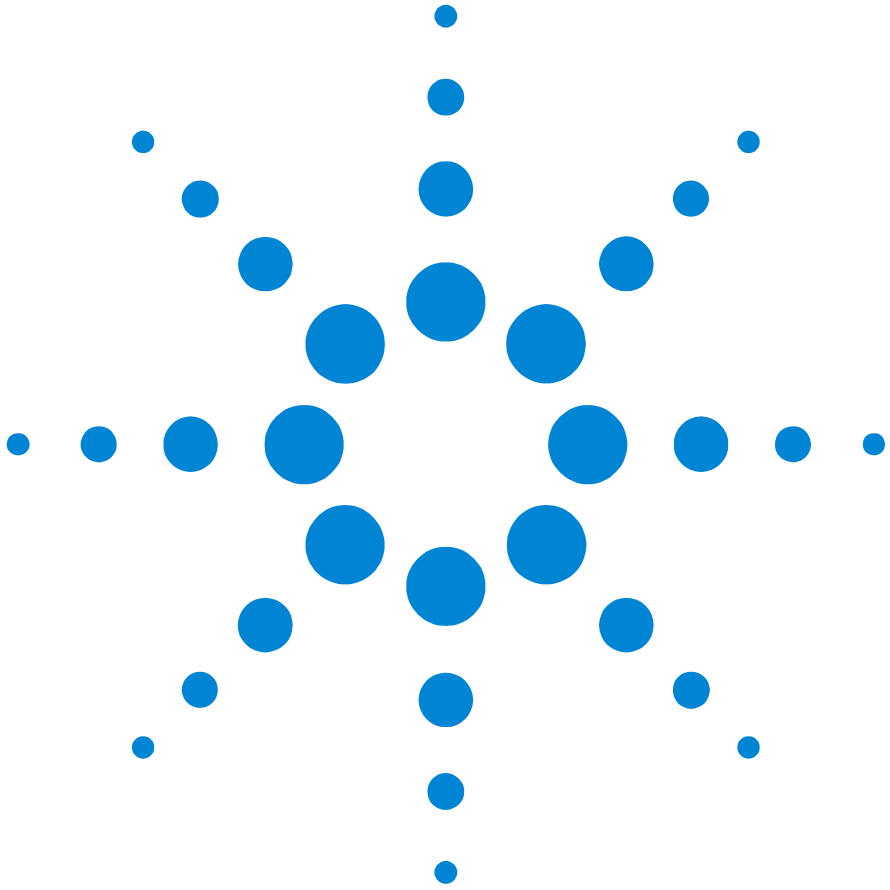

Agilent ParBERT 81250 Measurement Software

Framework User Guide

Agilent Technologies

Important Notice

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Herrenberger Straße 130
D-71034 Böblingen
Germany

Authors: t3 medien GmbH

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Contents

Contents

Introduction to the Measurement User Interface

The Agilent 81250 Parallel Bit Error Ratio Tester Measurement Software is an easy-to-use graphical user interface to support the verification and characterization of digital components and devices.

Electrical / Optical Measurement Capabilities

The Agilent 81250 ParBERT Measurement Software provides the capability of not only measuring electrical inputs and outputs, it can also be used to test optical and optoelectrical devices.

Analysis Capabilities

The ParBERT Measurement Software provides three levels of analysis:

- Fast pass/fail measurements

  You can test against limits and thresholds to get pass/fail results much faster than with any other test method.

- Fast clock out to data out, skew and eye opening results

  You do not have to calculate any values yourself, the ParBERT Measurement Software does it for you.

- Graphical display of the results

  The results are displayed graphically; this allows you to analyze data very easily.

System components

The ParBERT Measurement Software software is structured as follows:

- The frame application of the ParBERT Measurement Software comprises the overall functions to handle individual measurement types.
- The individual measurement types (DUT Output Timing/Jitter Measurement or Eye Opening Measurement, for example) are provided as separate plug-ins (ActiveX controls), that can be installed one-by-one on your system.

- When you install the ParBERT User Software for the first time, a number of systems are installed for demonstration purposes. In most illustrations in the ParBERT Measurement Software documentation, the systems DEMO_A and DEMO_B will be used as an example.

Framework user guide

The user guide gives an overview of the basic information on the features of the Agilent 81250 Parallel Bit Error Ratio Tester Measurement Software and provides basic instructions on how to use it. The *Framework User Guide* gives an overview of the measurement software and how to use it.

It is recommended to read this guide before starting to work with the ParBERT Measurement Software.

Measurement guides

For each measurement type, an additional document will be provided, for example: *DUT Output Timing/Jitter Measurement* or *Eye Opening Measurement*. These documents show the parameters and the definitions of the results for the specific measurement. In addition, an example shows how to set up and use the measurement.

Multi-Media Guided Tour, Tutorial and Getting Started

As an additional source of information, the Multi-Media Guided Tour, Tutorial and Getting Started provide a comprehensive overview of the Agilent 81250 Parallel Bit Error Ratio Tester.

If it has been installed on your system, you will find it in the Windows start menu under *Programs – Agilent 81250 Tutorial.*
If not, you can download it from the web through http://www.agilent.com/find/81250demo

As an alternative, you can start the 81250 Guided Tour, Tutorial and Getting Started from the tutorial CD provided with your system.

Example of a Measurement

To show you the capabilities of the ParBERT Measurement Software, this chapter describes how to set up and make use of a measurement via an example of a DUT Output Timing/Jitter measurement.

This requires the following steps:

1. Set up the system via the *Agilent 81250 User Software*.
   See *"Setting Up the Demo System" on page 8*.
2. Set up a bit error measurement via the *Agilent 81250 User Software*.
   See *"Setting Up the Bit Error Rate Test" on page 9*.
3. In the ParBERT Measurement Software, create a new workspace and measurement for the DUT and run the measurement.
   See *"Setting Up and Running the Measurement" on page 11*.

For this example, we use the following hardware components:

- E4861A 2.7 Gbit/s data generator/analyzer module
- E4862A generator frontend
- E4863A analyzer frontend

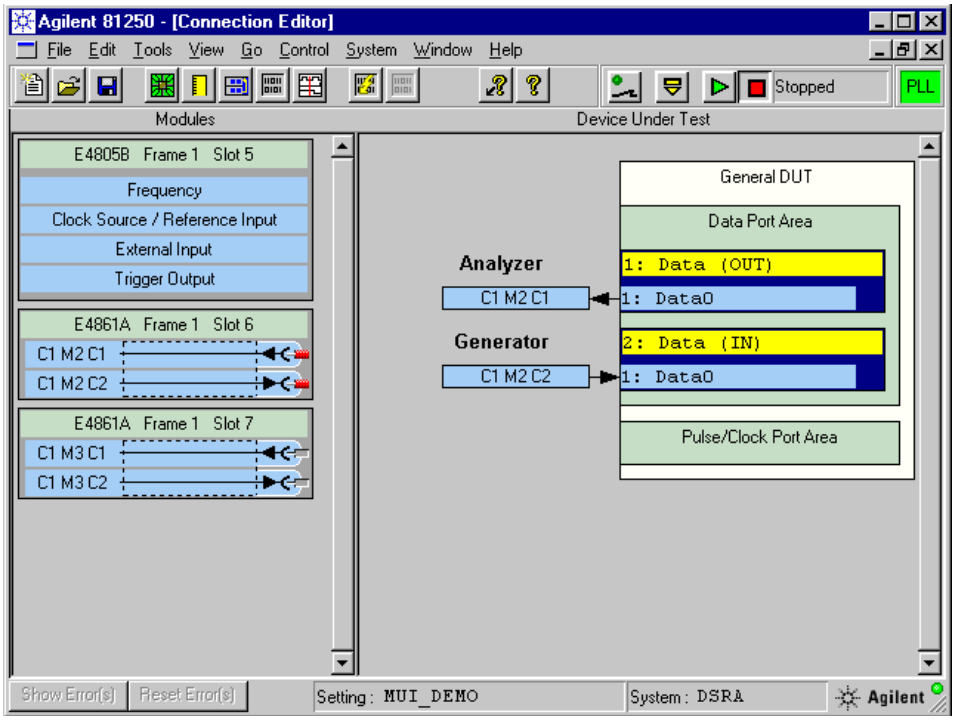
Setting Up the Demo System

Use the *Agilent 81250 User Software* to create a model of the hardware:

1 Create an output port and an input port.

2 Connect the analyzer to the electrical output port and the generator to the electrical input port.

3 Save the setting under the name *MUI_DEMO*.



NOTE The other analyzer and generator modules shown in the figure are not required for this example.

4 Establish the physical connection between the analyzer and the generator.

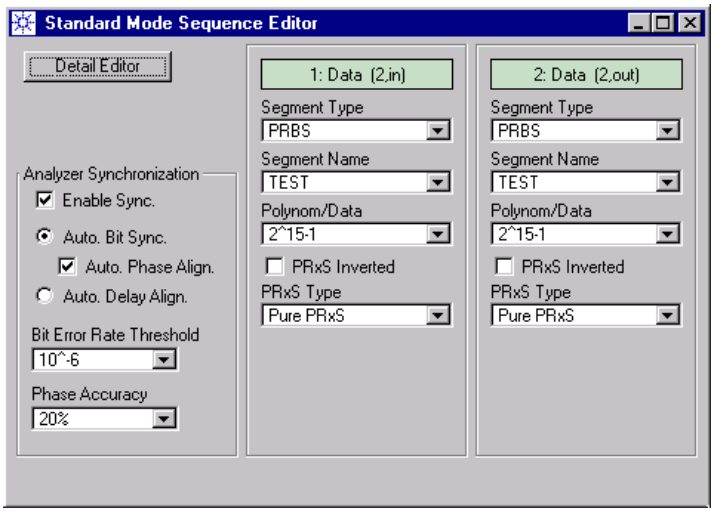
For a detailed description of the *Agilent 81250 User Software*, refer to the *Agilent 81250 ParBERT System User Guide*.

Setting Up the Bit Error Rate Test

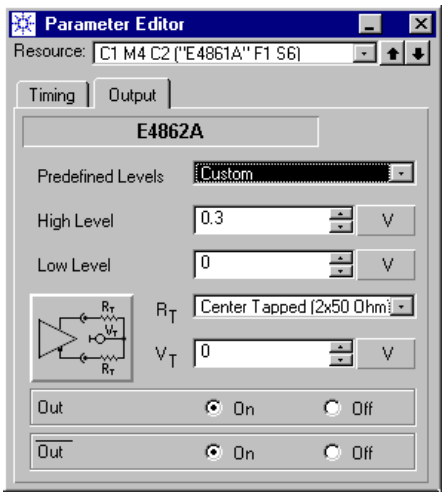
Use the *Agilent 81250 User Software* to set up a Bit Error Rate (BER) test:

1 Create a test sequence via the *Sequence Editor*.

For this example, we use the same PRBS segment for the generator and the analyzer.

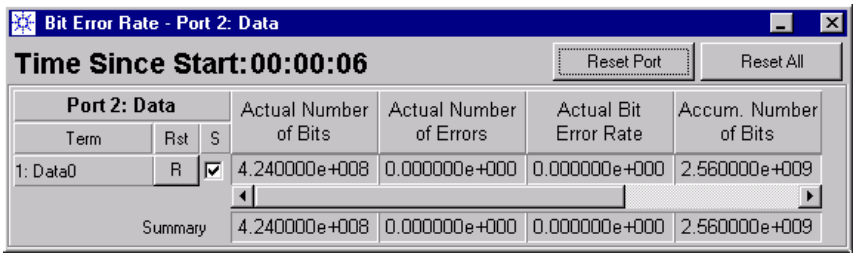


2 Edit the generator and the analyzer properties via the *Parameter Editor*.



3 Open the *Bit Error Rate* window and run the test.

The analyzer is synchronized with the generator and the bit error rate is zero.



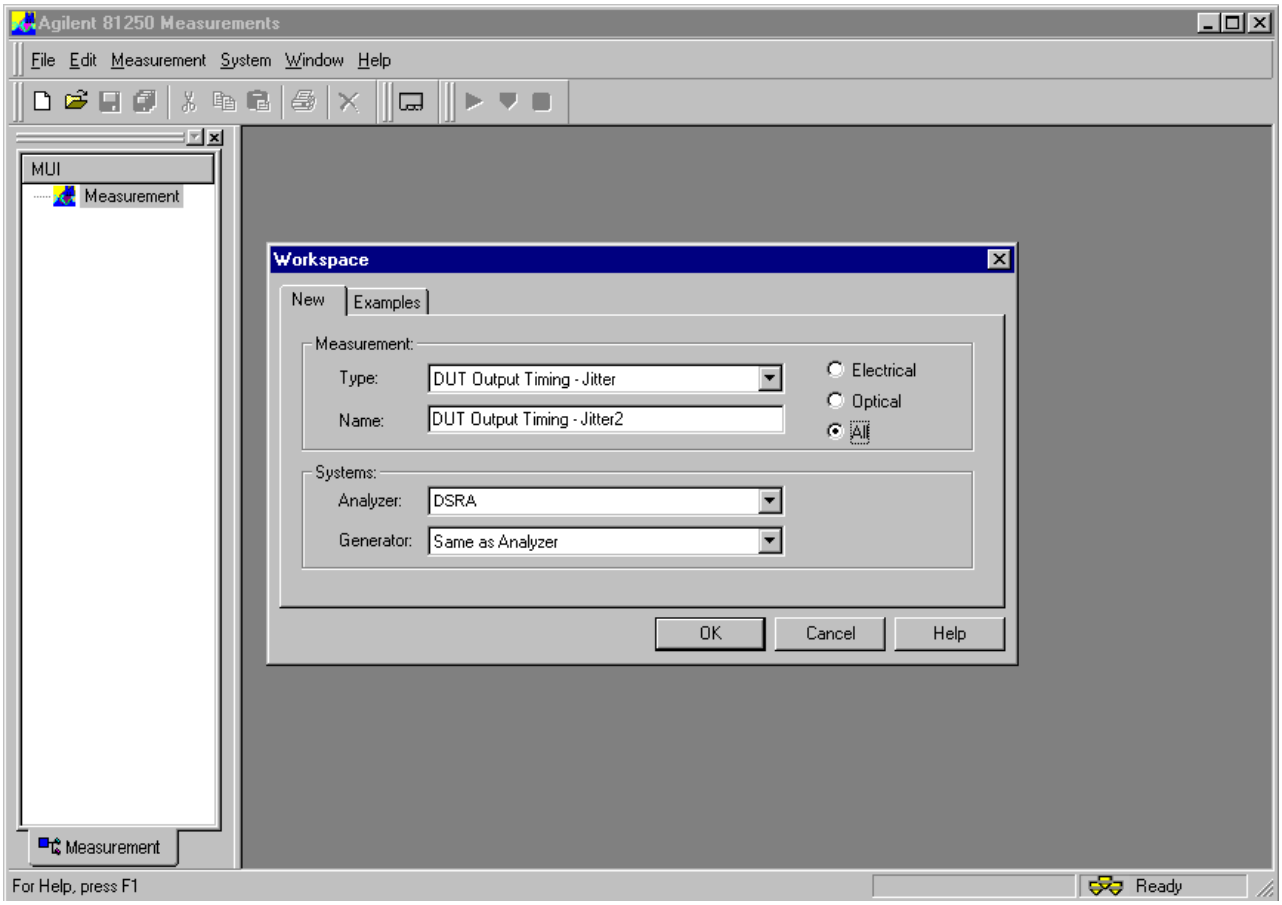
4 Stop the Bit Error Rate (BER) test in the *Agilent 81250 User Software*.

For a detailed description of the *Agilent 81250 User Software*, refer to the Agilent 81250 ParBERT *System User Guide*.

Setting Up and Running the Measurement

Use the Agilent 81250 Measurement User Interface to set up a DUT Output Timing/Jitter Measurement:

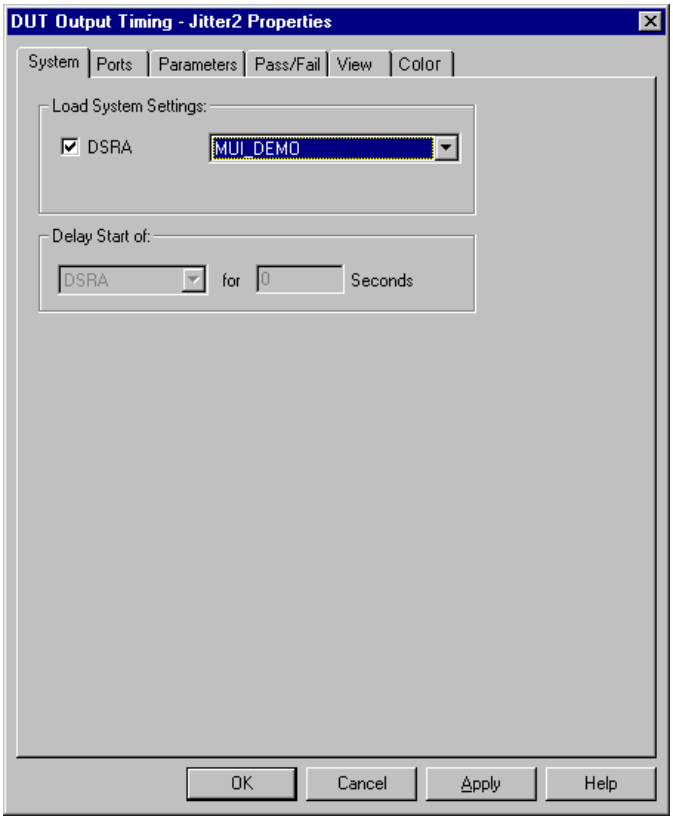
1 Start the ParBERT Measurement Software to create a new workspace with a new DUT Output Timing/Jitter Measurement for the system DSRA.



NOTE Each time you open the Workspace dialog box, the dialog box will display your last settings.

2 Select the saved setting *MUI_DEMO* for the measurement.

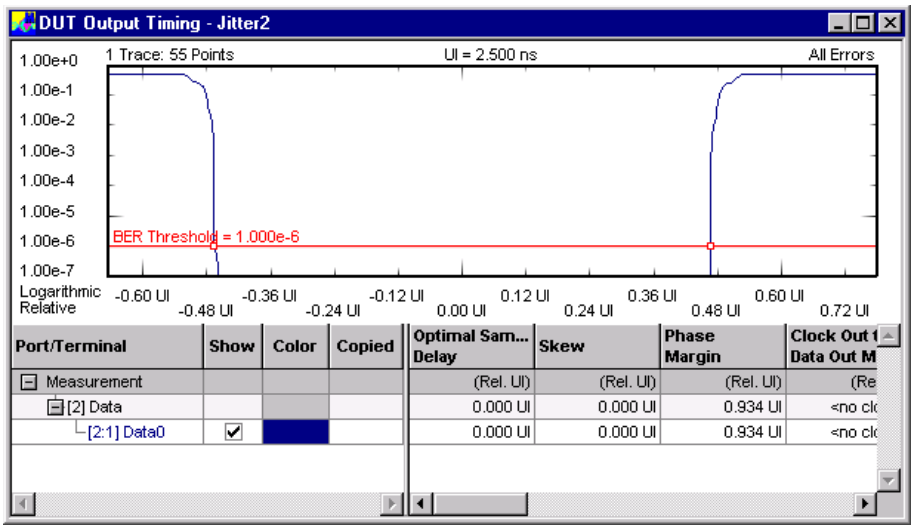
For the moment, there is no need to change the other parameters and options.



3 In the *Properties* dialog, click *OK*.

4 In the tool bar, click the *Run* button to load the parameters to the firmware server and execute the measurement.

The ParBERT Measurement Software runs the measurement and displays the results. The following illustration shows the bathtub curve of the measured bit error rate and—in the tabular view—the calculated results for the *Optimal Sampling Delay*, the *Skew* and the *Phase Margin*.



On this screen, you can modify the graphical display of the results to improve result evaluation.

General Information on the ParBERT Measurement Software

Before you start to work with the Agilent 81250 Parallel Bit Error Ratio Tester Measurement Software you should consider the following information:

- *"Prerequisites" on page 16* lists the prerequisites for running measurements.
- *"How to Start and Stop the ParBERT Measurement Software" on page 17* explains how to start and stop the application.
- *"Elements of the ParBERT Measurement Software" on page 20* gives information on the elements of the user interface and some basic definitions. The ParBERT Measurement Software uses *workspaces* to manage one or more *measurements* and their results.
- *"How to Set User Preferences" on page 23* allows you to set some preferences.
- *"Using Edit Functions" on page 24* explains how to modify the elements of a workspace.
- *"How to Change the Server Connection" on page 26* shows how to change the connection to the firmware server, for example, if the firmware server runs on another PC.
- *"How to Modify the Elements of the ParBERT Measurement Software" on page 49* shows how to modify the ParBERT Measurement Software according to your needs.

Prerequisites

To work with the Measurement Software, some prerequisites must be met. The following issues are common to all measurements.

NOTE There might be additional prerequisites for some measurement types (for example, eye opening measurement).

- The ParBERT 81250 hardware and software has to be installed and tested.
- The 81250 systems have to be set up appropriately. In case of asynchronous testing (two clock modules), all analyzers have to be set up within one system.
- To control the hardware from a remote PC, the firmware server must be up and running.

  The ParBERT User Software activates the firmware server on startup. When the ParBERT Measurement Software starts, it looks for a running firmware server and then connects to it.
- Generator and analyzer setting(s) must match your DUT. Use the 81250 User Software to load or create a setting as you would do for a simple BER test (ports and terminals, system frequency, generator levels, analyzer input range/mode, etc.). Some restrictions apply to the data sequence:
  - the sequence must run in an infinite loop (leading sync or pause blocks are allowed)
  - the sequence must not specify any events
- Save the setting for later reuse.

NOTE The measurement software will lock the firmware server (and thus all other clients connected to it) while a measurement is running. However, if no measurement is running, you may change your settings using the 81250 user interface. The measurement software will detect incompatible changes (for example, deleted ports) on the next Prepare or Run command and prompt you for action.

How to Start and Stop the ParBERT Measurement Software

By default, the installation of the Agilent 81250 ParBERT software package installs the Agilent 81250 Parallel Bit Error Ratio Tester Measurement Software together with the *Agilent 81250 - Firmware Server*, the *Agilent 81250 Configuration Tool*, and the *Agilent 81250 User Software*.

How to Start the ParBERT Measurement Software

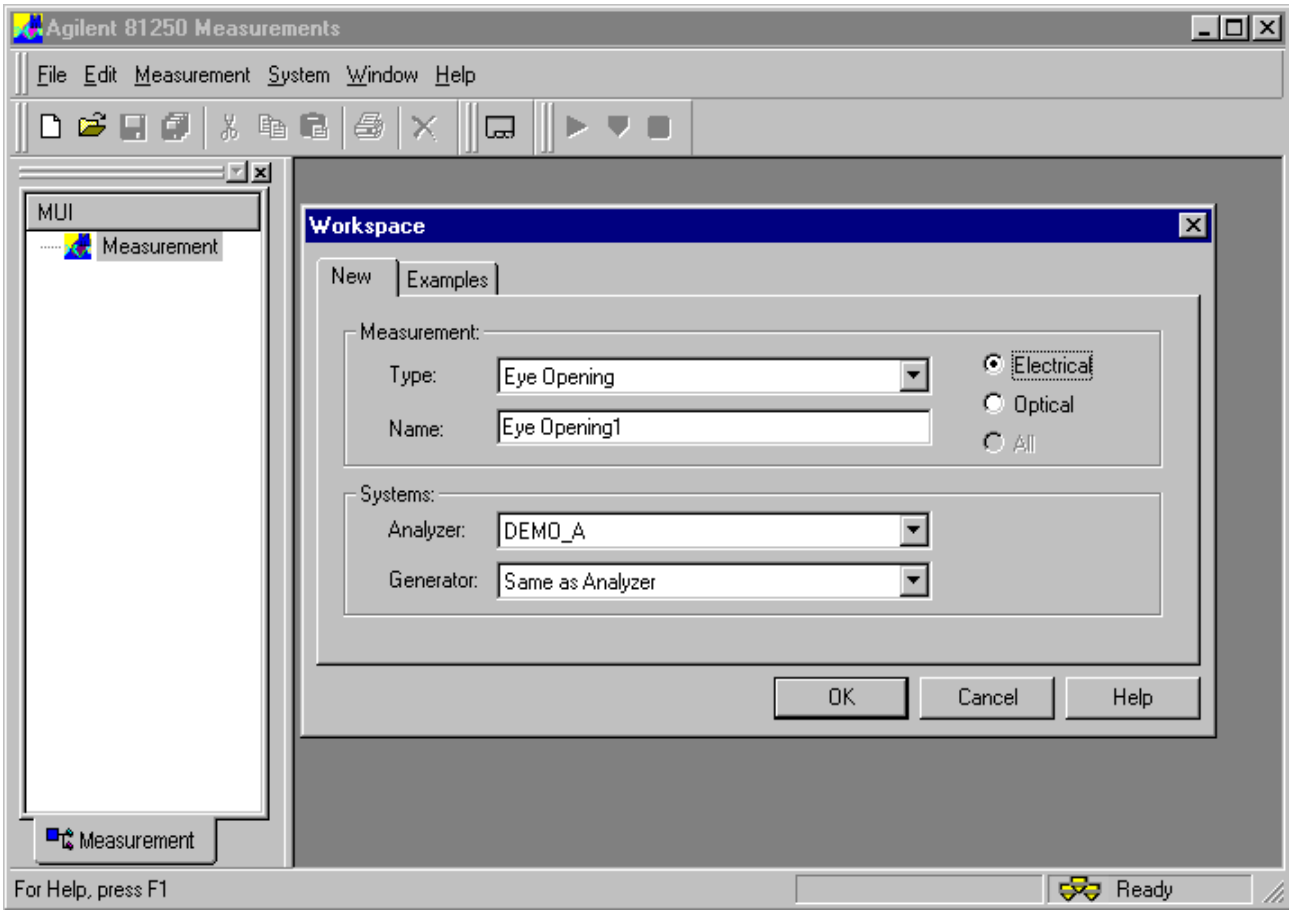
- From the Windows *Start* menu, choose *Programs – Agilent Verification Tools – Measurements*.

  As an alternative, you can double-click the *Agilent 81250 Measurements* icon.

The system connects to the firmware server and sets the windows, preferences and menus to your settings.

NOTE There is no connection to the ParBERT hardware required. This allows you to view stored measurements on your PC.

The start up dialog box allows you to select one of the measurement types installed on your PC.



In this dialog box, you can select:

- The systems for the analyzer and the generator frontends.
- The measurement to be included in the workspace:

  Eye opening, DUT Output Timing/Jitter, Output Level, Bit Error Rate, or Fast Eye Mask measurement.
- Which ports are used for the measurement: Electrical, optical or all ports.
  - Electrical

    Only electrical ports can be used for the measurement. The threshold will be given in Volts.
  - Optical

    Only optical ports can be used for the measurement. The threshold will be given in W, or dBm.

– All

Both electrical and optical ports can be used for the measurement.

NOTE Only the DUT Output Timing /Jitter and the Bit Error Rate measurements can use both types of ports simultaneously. The Eye Opening, the Fast Eye and the Output Level measurements can use either optical or electrical ports simultaneously, because of their reference to the threshold. The following table gives an overview:

Measurement	Optical Ports	Electrical Ports	All Ports
DUT Output Timing/Jitter	Yes	Yes	Yes
Bit Error Rate	Yes	Yes	Yes
Eye Opening	Yes	Yes	not available
Fast Eye Mask	Yes	Yes	not available
Output Level	Yes	Yes	not available

When you have created the measurement, you can immediately run it (see *"How to Run a Measurement" on page 40*) with the default parameter values—this will work in most cases. Later on, you can modify the parameters if required (see *"How to Set Up a Measurement" on page 38*).

NOTE Each time you open the Measurement dialog box, the dialog box will display your last settings.

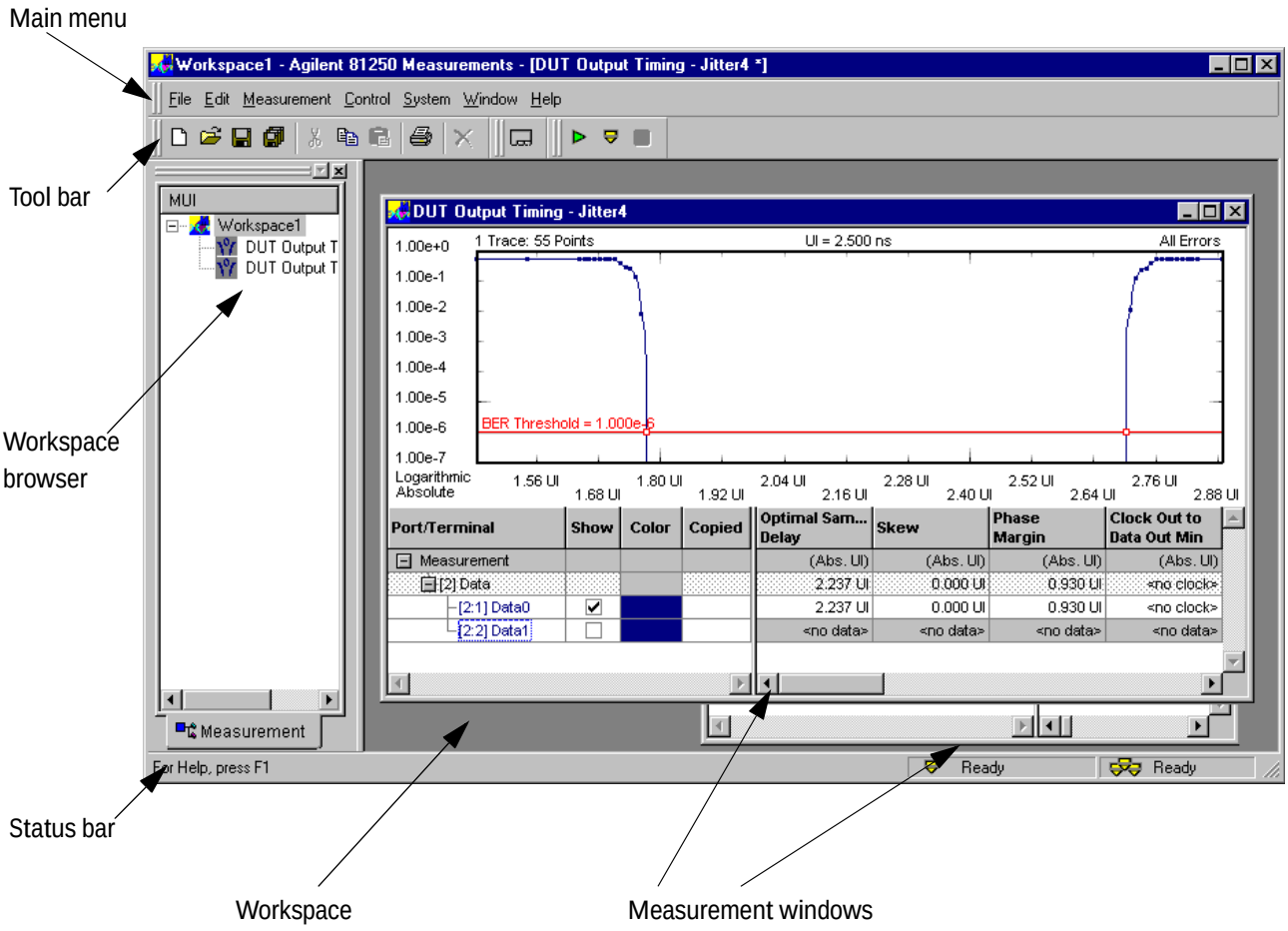
How to Close the ParBERT Measurement Software

♦ From the main menu, choose *File – Exit*.

If you did not save the changes you made, you will be prompted to do this.

Elements of the ParBERT Measurement Software

The ParBERT Measurement Software consist of the following areas:

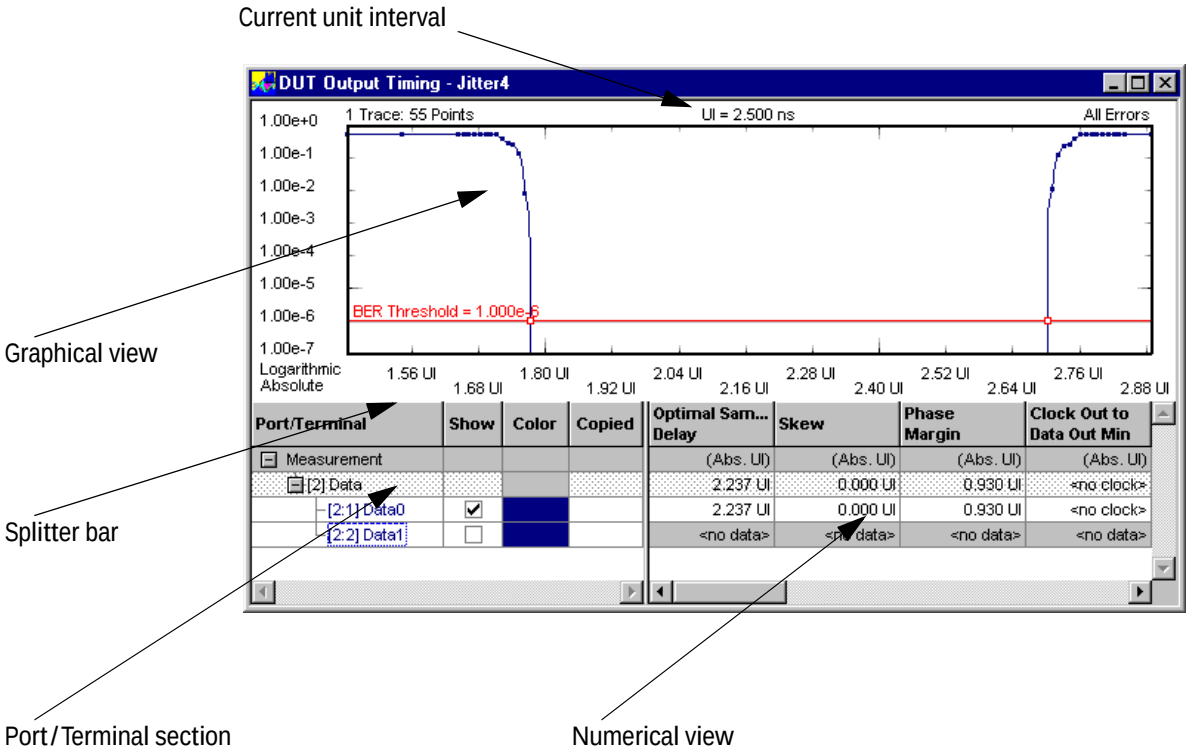


- Workspace

  A workspace comprises one or more Measurements and the parameters related to these Measurements. This feature allows you to save and load complex test scenarios and the results in only one step.

- Measurement window

  The contents of a measurement window is always related to one measurement. It displays the results in a graphical and/or a numerical view.



For the displayed parameters, refer to *Definitions* in the User Guide of the particular Measurement.

The order of the parameters displayed in the numerical view can be changed via drag and drop operations.

- Main menu

  The main menu provides access to the commands for handling workspaces and measurements.

  Some commands are available via context menus. For example, the settings of the graphical measurement display are provided by a context menu.

  If possible, we use for the procedures in the measurement guides the access via the main menu. If there is no other access to a function, we use the access via the context menu instead.

- Port/Terminal section

  In this area you can select the ports and terminals of a measurement. This allows you to, for example, to copy results, to set the colors or to select the signals to be displayed:

  – The *Copied* flag will be set (X) when the data is not actually measured but copied from another measurement or port/terminal.

  – The *Color* field allows to set the color of the individual graph.

  – The *Show* option allows you to switch individual graphs on or off.

- Tool bars

  The tool bars allow you to access important commands with only one mouse click. It is possible to customize tool bars (refer to *"How to Modify the Elements of the ParBERT Measurement Software" on page 49*).

- Splitter bar

  The splitter bar between the graphical and the numerical view allows you to modify the size of the two areas.

- Status bar

  The status bar displays information on the status of the ParBERT Measurement Software, for example, if a measurement is currently running.

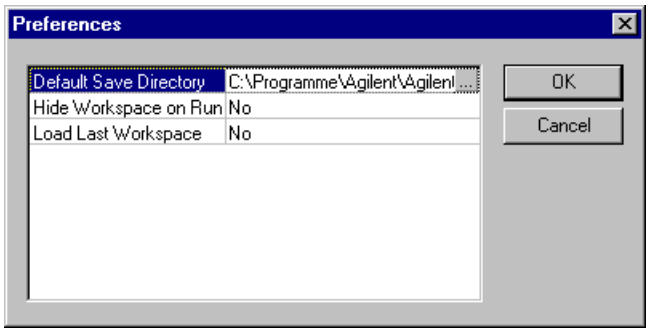
How to Set User Preferences

You can set the following defaults via the *Preferences* dialog:

Item	Value	Description
Default Save Directory	Any directory	The default directory to save workspaces and measurements. If you set this directory, you do not have to browse the file system, when saving the data.
Hide Workspace on Run	Yes/No	While running a measurement the workspace will be hidden (or not).
Load Last Workspace	Yes/No	When starting the ParBERT Measurement Software, the most recently used workspace will be loaded automatically (or not). This allows you to open your current environment automatically, when starting the ParBERT Measurement Software.

How to Set User Preferences

1 From the menu bar, choose *Edit – Preferences*.



2 In the *Preferences* dialog, click the item to be modified in the left column.

3 Use the drop down list to select the values *Yes* or *No* for *Hide Workspace on Run* and *Load Last Workspace*.

4 Click the *Browse* button to select the *Default Save Directory* in the *Search Directory* dialog.

5 Click *OK* to save your changes.

Using Edit Functions

The *Edit* menu gives you a quick access to the following functions:

Item	Purpose
Cut	To remove the selected measurement from the workspace.
Copy	To copy the selected measurement or measurement results.
Paste	To insert a measurement or measurement results previously copied.
Delete	To remove the selected measurement from the workspace.
Rename	To change the name of the selected measurement.
Properties	To start the *Properties* dialog for the selected measurement.

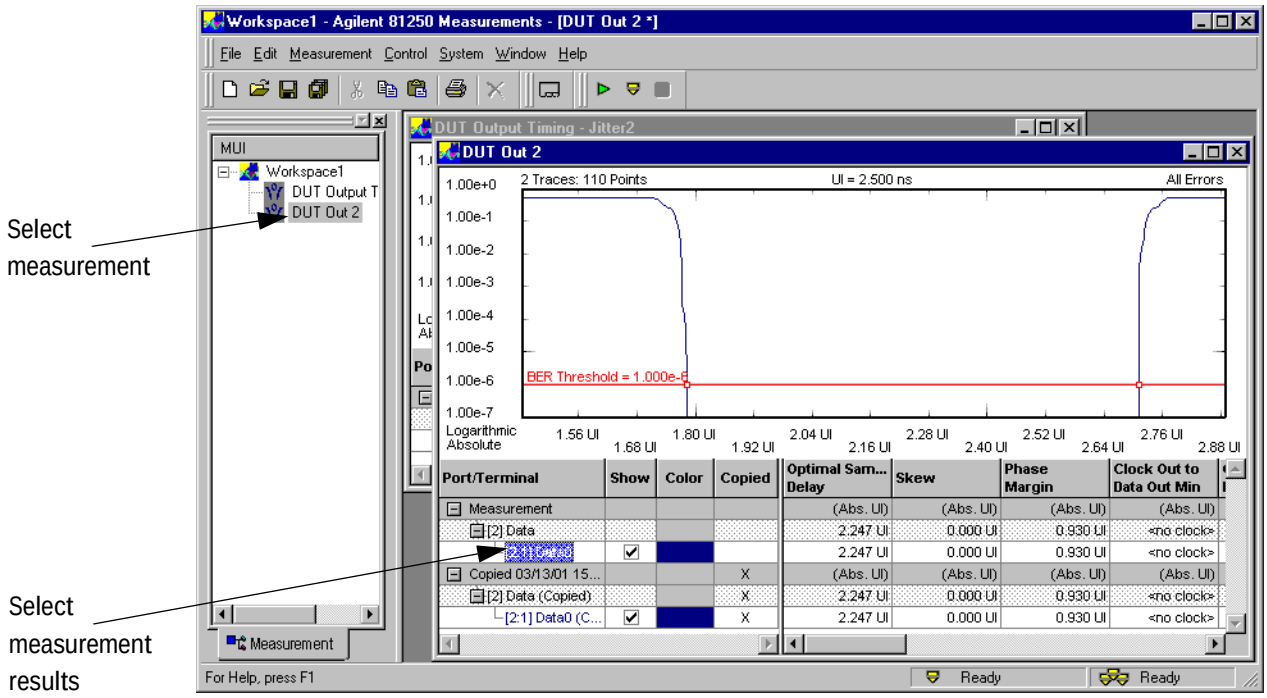
Copy / Paste

The ParBERT Measurement Software allows you to copy measurement results:

- You can copy and paste whole measurements including all results and parameter settings. This is useful if you want to run a measurement again and change only one parameter, without losing the results of the first run.
- You can copy/paste the measurement results of ports and terminals, even between measurements. This is useful if you want to compare an actual DUT against a golden device–just load the measurement of the golden device, copy the results (port or terminal) and paste it into the measurement performed with the actual DUT.
- Copied data can be erased at any time. Open the context menu of the port/terminal section, choose *Clear/Clear Copied Data*.

Selecting the data to be copied

The most comfortable way to select a measurement is to click the entry in the workspace browser. To select measurement results you simply click the appropriate row in the *Port/Terminal* area of the numerical view.



To Copy a Measurement

1 In the *Workspace* browser, select the measurement.

2 From the main menu, choose *Edit* – *Copy*.

3 From the main menu, choose *Edit* – *Paste* to insert a copy of the measurement into the same workspace or into another one.

To Copy Measurement Results

1 In the *Port/Terminal* area, select the measurement, the port or the terminal.

2 From the main menu, choose *Edit* – *Copy*.

3 From the main menu, choose *Edit* – *Paste* to insert a copy of the results within the same measurement.

How to Change the Server Connection

The *Agilent 81250 - Firmware Server* may either run on your local PC or on a remote computer. When you execute a measurement, you first have to connect your machine to the firmware server on the remote machine.

- If you are starting a measurement, you must first connect to the firmware server.
- If you load a saved measurement that you ran on another machine, you have to change the firmware server.

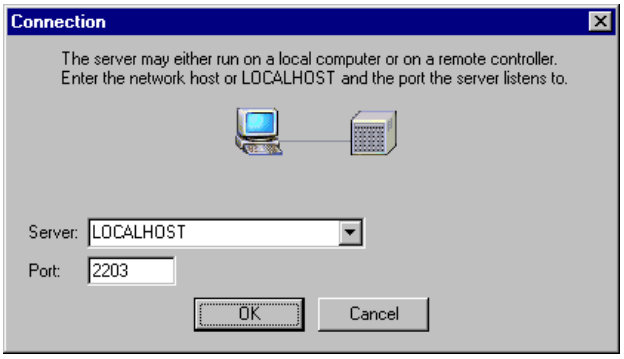
The necessary steps are described below.

How to Set the Connection to the Firmware Server

To connect to the firmware server at the start of a measurement:

1 From the menu bar, choose *System – Server Connection*.

This opens the *Connection* dialog box.



2 In the *Connection* dialog box, select the firmware server and enter the port number.

The measurement software scans the network and provides a list of all found firmware servers. You can also enter a server not found by the measurement software.

Contact your system administrator for the information, if necessary.

3 Click *OK* to connect to the firmware server.

How to Change the Firmware Server for a Measurement

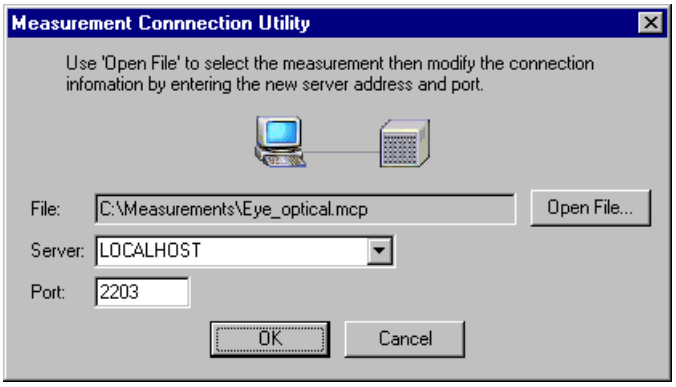
When a measurement is saved, the connection information to the firmware server is saved with the measurement. If you want to load the measurement onto another firmware server, you have to assign the other firmware server to the measurement by changing the connection information (server IP address and port).

To assign another firmware server to a measurement:

1 From the menu bar, choose *Measurement – Measurement Connection...*.

2 Open the desired measurement file (mcp-file).

This opens the Measurement Connection Utility dialog box.



3 Select the new firmware server and port number.

4 Click *OK* to connect the measurement to the new firmware server.

For further information on possible configurations of the ParBERT and the firmware server, refer to the *Agilent 81250 Parallel Bit Error Ratio Tester Installation Guide*.

Working with a Workspace

The workspace is the basic environment of the Agilent 81250 Parallel Bit Error Ratio Tester Measurement Software and comprises all files belonging to a ParBERT Measurement Software session:

- Workspace management data, including the measurements related to the workspace.

  For workspace management files, ParBERT Measurement Software uses the extension MWS.

- All files related to a measurement: measurement; these contain the definitions and results. These files can be added to or removed from a workspace one by one.

  For measurement files, ParBERT Measurement Software uses the extension MCP.

Workspaces can be used to load and save all data concerning the measurement input parameters and the results with a single mouse click.

NOTE Although a workspace may comprise several measurements, you can only run one of the measurements at a time.

However, it is possible to investigate the results of one measurement while another one is running.

How to Work with a Workspace

A workspace allows you to load and save all data concerning a measurement, the parameters and the results with a single mouse click.

NOTE A workspace comprises one or more measurements, but it is not possible to open more than one workspace at a time.

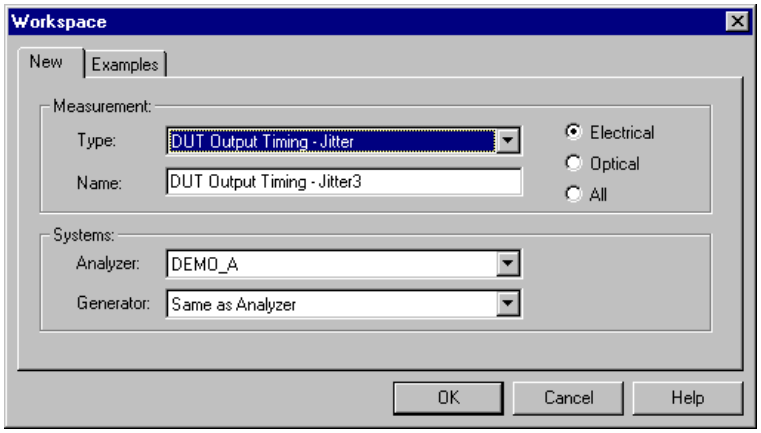
The ParBERT Measurement Software provides several possibilities to create a new workspace:

- When starting the ParBERT Measurement Software, the *Workspace* dialog will be opened to create a new workspace. If you click *Cancel* in the *Workspace* dialog, no workspace will be created and you can open an existing one.
- If you set the option *Load Last Workspace* to *On*, the most recently used workspace will be opened automatically (refer to *"How to Set User Preferences" on page 23*) when the ParBERT Measurement Software is started.
- If the ParBERT Measurement Software is already running, you can choose *File – New Workspace* to create a new workspace.

How to Create a New Workspace

The ParBERT Measurement Software must already be running.

1 From the main menu, choose *File – New Workspace*.



2 On the *New* tab of the *Workspace* dialog box:

- Select the measurement type to be added to the new workspace.
- Change the measurement name if desired.
- Select which ports are used: electrical, optical or all ports.
- Select the analyzer system.
- Select the generator system.

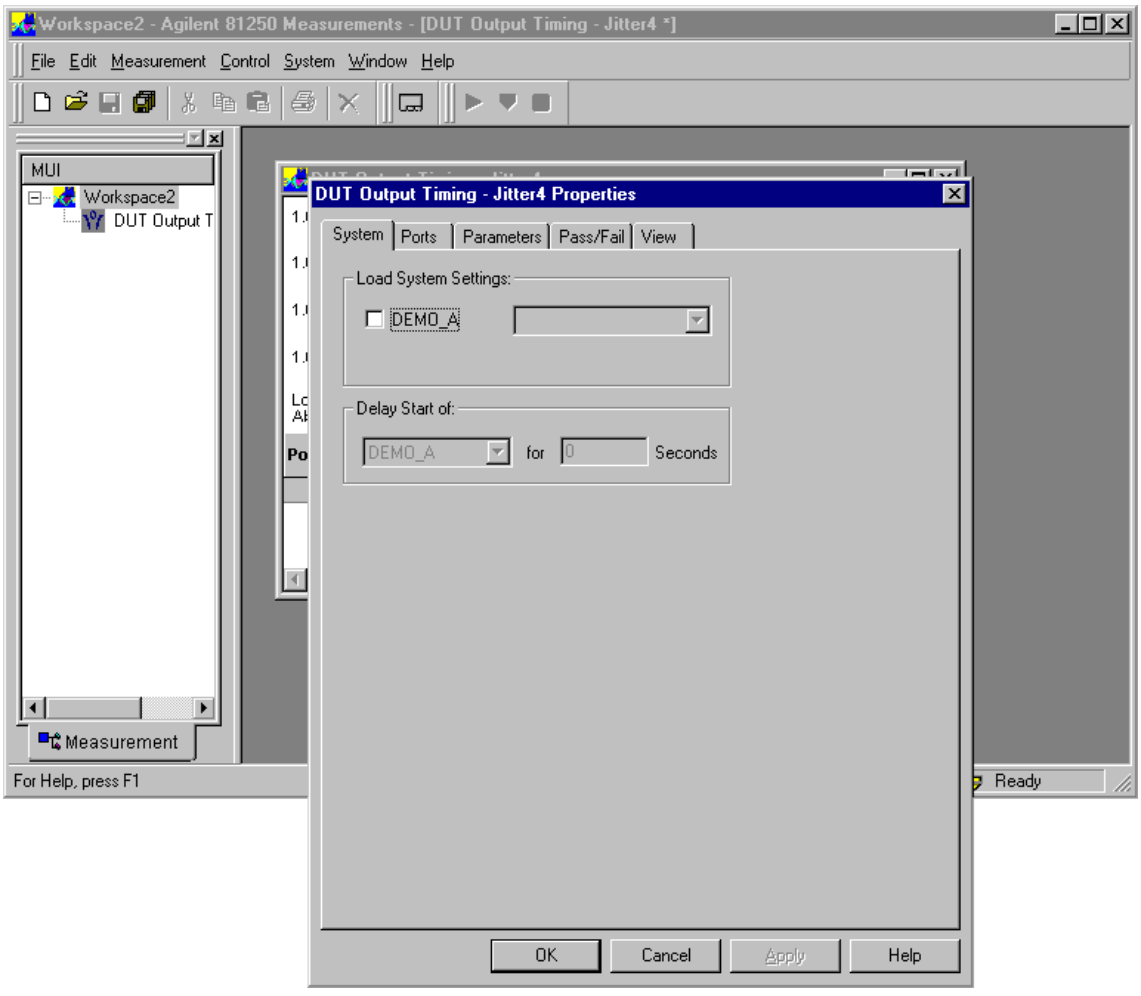
  For information on how to create the systems and system settings, refer to the *81250 User Guide*.

If a system setting is open in the *Agilent 81250 User Software*, this setting will be displayed as default.

You can only create one measurement at a time.

3 In the *New* tab of the *Workspace* dialog, click *OK*.

The new measurement will be added to the workspace tree and opened together with the *Properties* dialog.



4 Click *OK* to close the *Properties* dialog. Now, you can run the measurement (see *"How to Run a Measurement" on page 40*) with the default parameter values that will work in most cases.

Later on, you can modify the parameters if required (see *"How to Set Up a Measurement" on page 38*).

For information on the parameters, refer to *"How to Set Up a Measurement" on page 38* and to the guide related to the selected measurement.

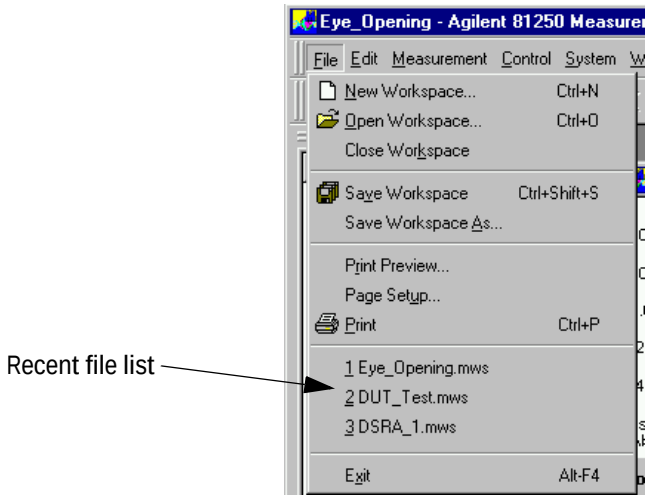
How to Open a Workspace

1 From the Main menu, choose *File – Open Workspace*.

If there is an open workspace with unsaved elements, you will be prompted to save your changes.

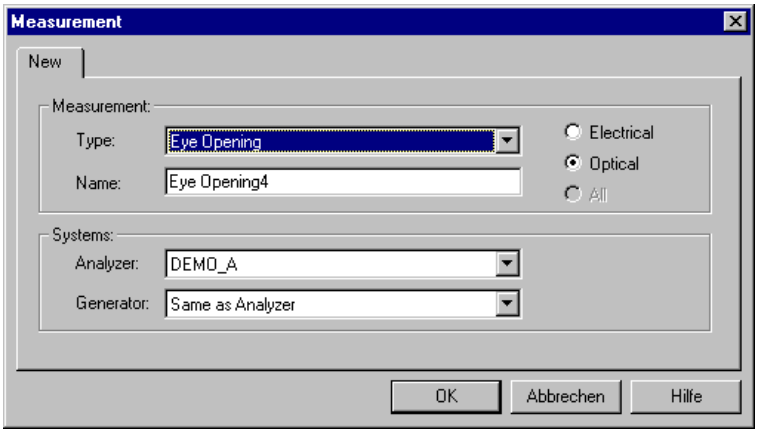
2 In the *Open Workspace* dialog box, select the workspace to be loaded and click *OK*.

TIP To open one of the most recently used workspaces, select the workspace from the recent files list in the *File* menu.



How to Add a Measurement to a Workspace

1 From the Main menu, choose *Measurement – New Measurement*.



2 In the *New* tab of the *Measurement* dialog:

- Select the measurement type to be added to the new workspace.
- Change the measurement name if desired.
- Select which ports are used: electrical, optical or all ports.
- Define which ports are used for the measurement: Electrical, optical or all ports.

  For more information about these ports, refer to *"How to Start the ParBERT Measurement Software" on page 17*.
- Select the analyzer system.
- Select the generator system.

  For information on how to create the systems and system settings, refer to the *81250 User Guide*.

If a system setting is open in the *Agilent 81250 User Software*, this setting will be displayed as default.

3 In the *New* tab of the *Measurement* dialog, click *OK*.

The new measurement will be added to the workspace tree and opened together with the *Properties* dialog.

How to Save a Workspace

1 From the Main menu, choose *File – Save Workspace*.

2 If you want to save the workspace with a different name, choose *File – Save Workspace As* and enter the name in the *Save Workspace* dialog.

How to Close a Workspace

♦ From the Main menu, choose *File – Close Workspace*.

If you did not save the changes you made, you will be prompted to do this.

How to Modify the Measurements within a Workspace

1 Open the workspace.

2 Select the measurement to be modified.

3 From the context menu, choose the appropriate function:

Item	Purpose
Open	To open the selected measurement.
Close	To close the selected measurement.
Save	To save the selected measurement.
Cut	To remove the selected measurement from the workspace and copy it to the clipboard.
Copy	To copy the selected measurement to the clipboard.
Paste	To insert a measurement previously copied to the clipboard.
Delete	To remove the selected measurement from the workspace.
Rename	To change the name of the selected measurement.
Properties	To start the Properties dialog for the selected measurement.

How to Work with a Measurement

The ParBERT Software provides a powerful set of functions to create, save, rename and close the measurements. It is possible to rename the measurements and to copy a measurement (including all the parameter settings) within the same workspace or to another one.

How to Create a New Measurement

1 Open an already existing workspace.

2 From the main menu, choose *Measurement – New Measurement*.

When creating a new Workspace the ParBERT Measurement Software prompts you to add a measurement automatically.

3 In the *New* tab of the *Measurement* dialog:

- Select the measurement type to be added to the new workspace.
- Change the measurement name if desired.
- Select which ports are used: electrical, optical or all ports.
- Select the analyzer system.
- Select the generator system.

If a system setting is open in the *Agilent 81250 User Software*, this setting will be displayed as default.

4 You can enter a name for the measurement in the *Name* field.

5 In the *New* tab of the *Measurement* dialog box, click *OK*.

The new measurement will be added to the workspace tree and opened together with the *Properties* dialog where you have to set the parameters for the new measurement.

How to Save a Measurement

1 Select the measurement in the *Workspace* tree.

2 From the main menu, choose *Measurement – Save Measurement*.

3 If you want to save the measurement with a different name, choose *Measurement – Save Measurement As* and enter the name in the *Save Measurement* dialog.

How to Open a Measurement

1 Select the measurement in the *Workspace* tree.

2 From the Main menu, choose *Measurement – Open Measurement*.

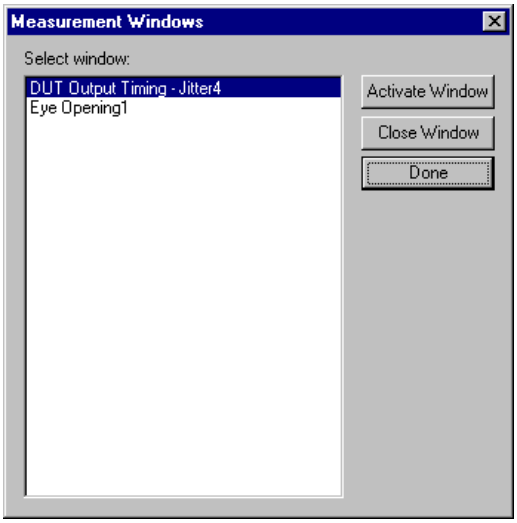
TIP To open one of the most recently used measurements, choose the file from the recent files list in the *Measurement* menu.

How to Close a Measurement

♦ Select the measurement and choose *Measurement – Close Measurement* from the menu bar.

How to Display a List of the Open Measurement Windows

1 From the Main menu, choose *Window – Measurements*.



2 In the *Measurement Windows* dialog, select the desired measurement and

– click *Activate Window* to set the focus on the selected measurement,

– click *Close Window* to close the selected measurement,

or

– click *Done* to close the *Measurement Windows* dialog.

How to Copy a Measurement

1 In the *Workspace* tree, select the measurement.

2 From the context menu, choose *Copy*.

3 From the context menu, choose *Paste* to insert the copy.

This allows you to copy a measurement and the complete set of parameters within the same workspace and also from one workspace to another.

How to Rename a Measurement

1 In the *Workspace* tree, select the measurement.

2 From the context menu, choose *Rename* and enter the new name.

How to Remove a Measurement

1 In the *Workspace* tree, select the measurement.

2 From the context menu, choose *Cut*.

This copies the measurement to the clipboard and you can insert the measurement again later on within the same or to another workspace.

or

3 From the context menu, choose *Delete*.

This removes the measurement from the workspace.

How to Set Up a Measurement

Each measurement has a set of parameters that defines the system on which the measurement is run, how the data is collected, and how the results are calculated, evaluated, and displayed. The *Properties* dialog allows you to define these parameters.

When you create a new measurement, the *Properties* dialog is automatically displayed. It can also be opened up at any time by right-clicking within the measurement. It is structured into tabs, each of which covers a different aspect to running a measurement.

Data Collection

The following tabs in the *Properties* dialog define how data is collected:

- *System*

  The *System* tab allows you to select the already configured ParBERT systems to be used for the measurement.

- *Ports*

  The *Ports* tab allows you to define which ports are to be part of the measurement.

- *Parameters*

  The items in the *Parameters* tab affect how the data is collected (for example, the number of bits to be tested at each data point, or the maximum number of errors to be collected at one data point).

NOTE Any changes on the *Parameters*, *System* or *Ports* tabs only take effect after the next measurement.

Data Evaluation and Display

The following tabs in the *Properties* dialog define how the results are calculated and the data is displayed:

- *Pass/Fail*

  The items in the *Pass/Fail* tab allow you to define the pass/fail criteria for a measurement. Results that do not fulfill the enabled pass/fail criteria are marked accordingly in the results table.

- *View*

  The items in the *View* tab affect how results are calculated from collected data (for example, linear or logarithmic) and how the results are shown.

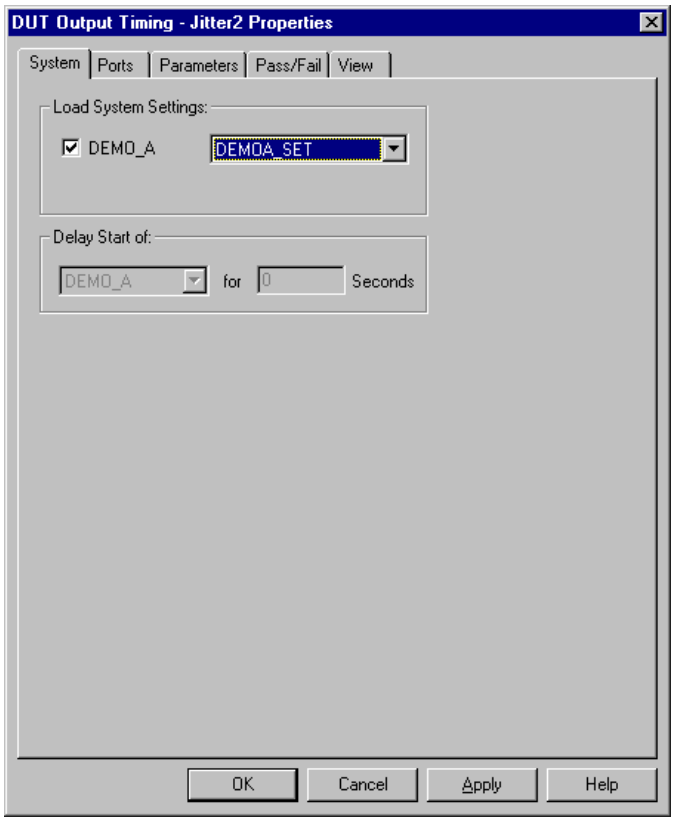
Any changes to these items immediately affect the data display.

See the appropriate *Measurement User Guide* for details about the items on the tabs.

How to Set Up a Measurement

The system has been configured to run the measurement and the ParBERT Measurement Software has been started.

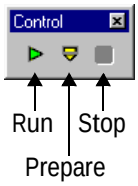
♦ In the *Properties* dialog, specify the system and the ports to be tested, the measurement-specific parameters, pass/fail criteria and the options for the graphical view.



For detailed information on the parameters, see the reference of the related measurement type: for example, DUT Output Timing/Jitter Measurement or Eye Opening Measurement

How to Run a Measurement

After you have configured a measurement and its parameters completely, the ParBERT Measurement Software is ready to execute the measurement. The execution can be controlled via the buttons of the *Control* tool bar:



NOTE To run a measurement you have to establish the physical connection to the Agilent 81250 Parallel Bit Error Ratio Tester.

How to Execute a Measurement

1 In the *Workspace* tree, select the measurement to be executed.

2 In the tool bar, click the *Prepare* button to download the settings to the firmware server.

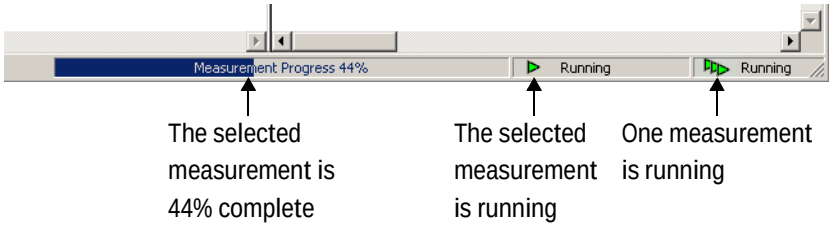
This ensures that data is already loaded to the hardware. Thus, subsequent measurements will always start with the same initial delay and deliver comparable results.

If the ParBERT Measurement Software can not complete the download, it will display a message to inform you about the problem.

3 In the *Control* tool bar, click the *Run* button to execute the measurement on the hardware.

If the ParBERT Measurement Software detects a problem with the current measurement settings, it will display a message to inform you about the problem.

After a successful start of the measurement, the status bar displays the measurement status.



When the measurement is complete, the results are displayed.

TIP You can click the *Run* button in the *Control* tool bar, to perform the download and the run operation in one step.

How to Stop a Running Measurement

To stop a running measurement:

♦ Click the Stop button.

The ParBERT Measurement Software stops the measurement. Any measurement results available will be displayed in the measurement window.

How to Change Measurement Properties after Running

You have various possibilities for modifying the display of the measurement results after a measurement has been run.

How to Change the Graphical Display of a Measurement

For this procedure, a measurement has been run and results are available.

♦ Right-click within the graphical display to open the context menu.

The context menu opens, allowing you to define various how the data is displayed and evaluated or to open the *Properties* dialog.

View Settings The *View Settings* menu allows you to change how the data is displayed, for example, to change the scale.

Display Options The *Display Options* submenu allows you, for example, to toggle the markers and define the zoom.

Data Settings If you right-click on top of a results curve, the context menu allows you to define the appearance of the curve.

Marker Settings If you right-click on top of a marker, the context menu allows you to define the appearance of the markers.

How to Change the Alphanumerical Display of a Measurement

For this procedure, a measurement has been run and results are available.

1 In the *Port/Terminal* area of the tabular view, click the + or – sign to collapse or expand a measurement or a port. This allows you to display or hide the terminals of a measurement or a port in the numerical view.

2 In the *Port/Terminal* area of the tabular view, click the *Color* field of a terminal to set the color of the resulting graph.

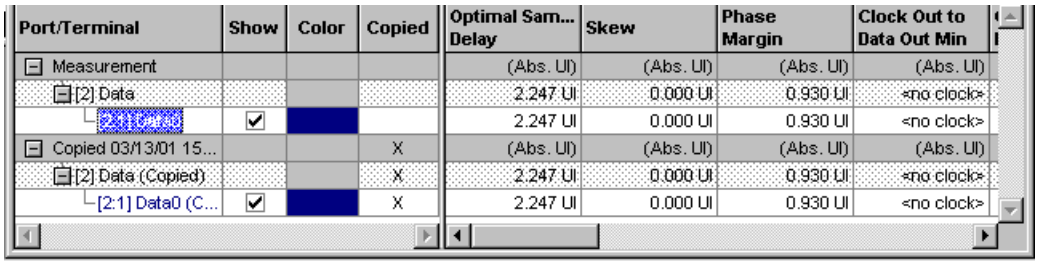
3 In the *Port/Terminal* area of the tabular view, disable or enable the *Show* option of a terminal to switch the display of the resulting graph on or off.

How to Copy Measurement Results

For this procedure, a measurement has been run and results are available.

1 From the menu bar choose *Edit – Copy* to copy the data of a measurement, a port or a terminal to the clipboard.

2 From the menu bar choose *Edit – Paste* to insert the data of a measurement, a port or a terminal previously copied to the clipboard.



This allows you to insert data from one measurement into another, for example as a reference.

How to Remove Copied Data from the Measurement

♦ From the context menu, choose:

– *Clear* to remove the selected copy.

– *Clear Copied Data* to remove all copied data.

How to Export Measurement Results

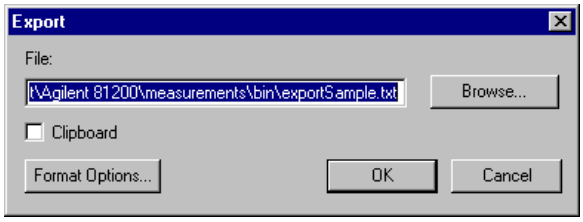
After the execution of a measurement, you can export the result data to a file to be used by other applications. The format of the exported data can be set according to your needs.

How to Export Measurement Results

A measurement has been run and results are available.

1 In the *Workspace* tree, select the measurement.

2 From the menu bar, choose *Measurement – Export Result Data*.



3 In the *Export* dialog,

– enter the name of the target file (click the *Browse* button to select the location in the file system)

or

– select *Clipboard* if you want to copy the data to another application immediately.

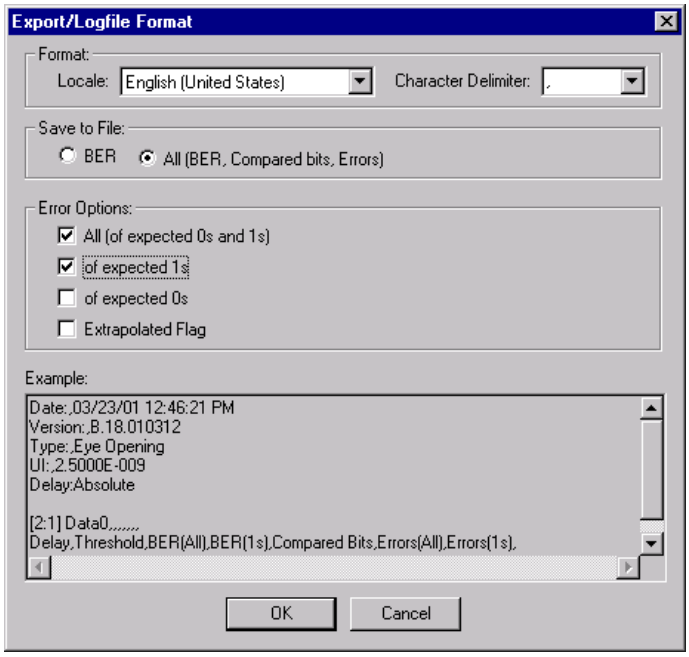
In both cases, the results will be exported in the output format specified via *Format Options*.

How to Set the Export Format

1 In the *Workspace* tree, select the measurement.

2 From the menu bar, choose *Measurement – Export Result Data*.

3 In the *Export* dialog, click *Format Options*.



4 In the *Export/Logfile Format* dialog, select the following options:

Item	Purpose	Possible values
Locale	To set the time zone and format to be used.	"German" or "English"
Character Delimiter	To set the character to separate the values.	";" or "Tab" (Tabulator)
Save to File	To determine whether the BER or the raw measurement data will be saved.	"BER" or "All"
Error Options	To determine if you want to export the errors if "1" is expected, but "0" received, if "0" is expected, but "1" received, or both. The *Extrapolated Flag* is for future use. For the moment, it is ignored (always 0).	

The *Example* field displays how the exported data will look like according to the selected options.

5 In the *Export/Logfile Format* dialog, click *OK* to save the options.

NOTE The export format options are related to the measurement and will be saved together with the measurement.

To Export Data to Excel via the Export File

1 From the menu bar of the ParBERT Measurement Software, choose *Measurement – Export Result Data* and export the data to a text file.

2 In Microsoft Excel, choose *File – Open* and select the file.

3 In the converter assistant, specify the character delimiter selected in the *Export/Logfile Format* dialog

4 Follow the instructions to complete the data import.

To Export Data to Excel via the Clipboard

1 From the menu bar of the ParBERT Measurement Software, choose *Measurement – Export Result Data* and select the option *Clipboard*.

2 In Microsoft Excel, choose *Edit – Paste* to insert the data.

3 In the converter assistant, specify the character delimiter selected in the *Export/Logfile Format* dialog

4 Follow the instructions to complete the data import.

How to Print a Measurement

The Agilent 81250 Parallel Bit Error Ratio Tester Measurement Software allows you to print the settings and the results of measurements.

How to Specify the Printer Setup

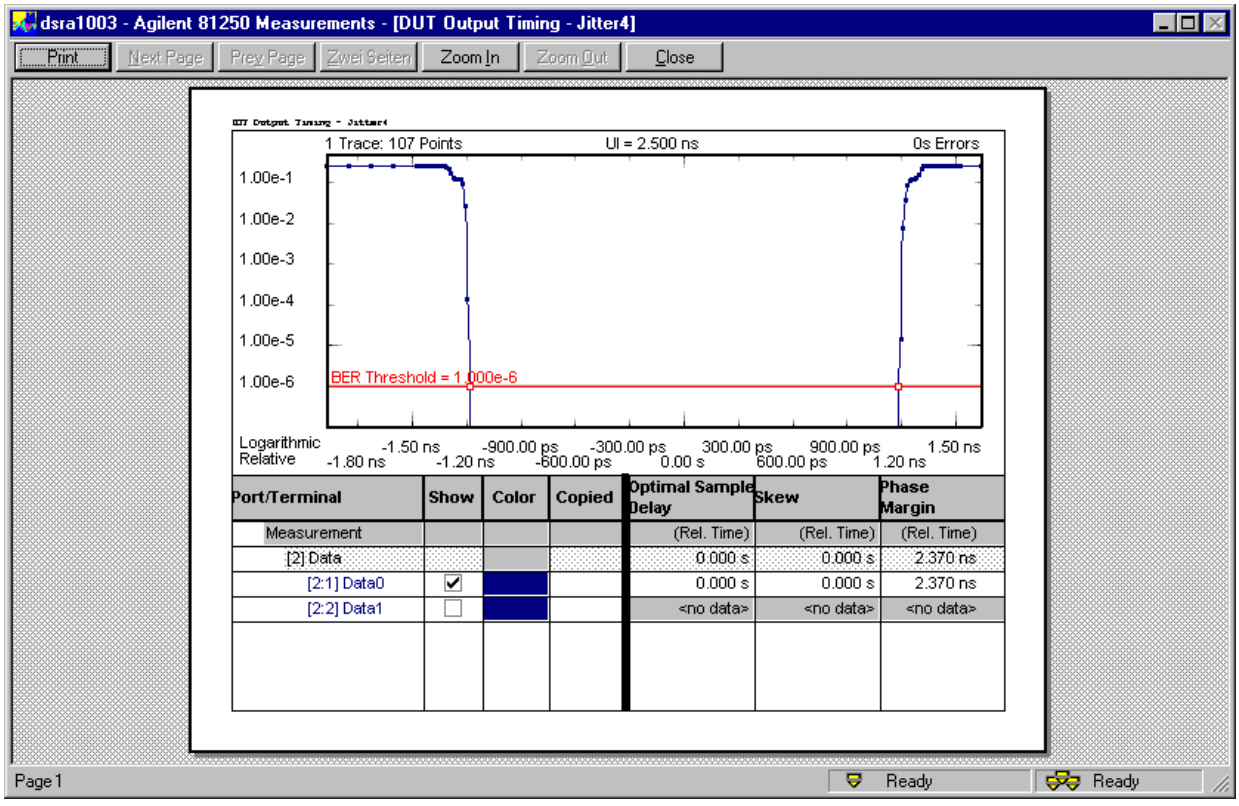
1 From the main menu, choose *File – Page Setup*.

2 In the standard *Printer Settings* dialog, select the printer to be used and its properties.

How to Preview the Print Page Format

1 From the main menu, choose *File – Print Preview*.

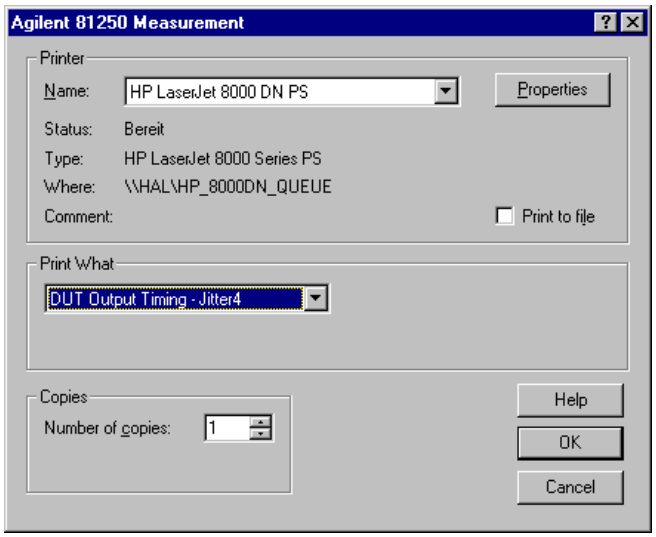
2 The printout will be displayed on the screen. You can zoom to display details.



3 In the *Preview* dialog, click *Print* to send the page(s) to the printer.

How to Print a Measurement Without Preview

1 From the main menu, choose *File – Print*.



2 In the *Agilent 81250 Measurement* dialog box, choose the printer, the measurements, and the number of copies to be printed.

3 In the *Agilent 81250 Measurement* dialog box, click *OK* to start the print job.

How to Modify the Elements of the ParBERT Measurement Software

You can modify the interface of the ParBERT Measurement Software according to your needs.

How to Show or Hide the Workspace Browser

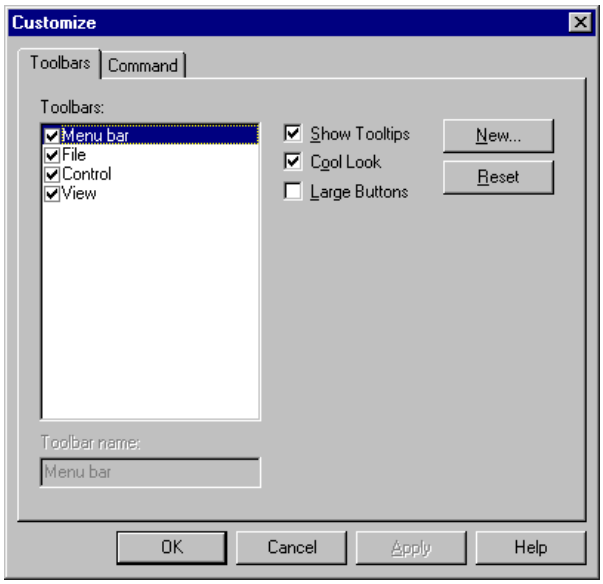
♦ From the menu bar, choose *Window – Workspace*.

How to Show or Hide the Status Bar

♦ From the menu bar, choose *Window – Status Bar*.

How to Show or Hide Tool Bars

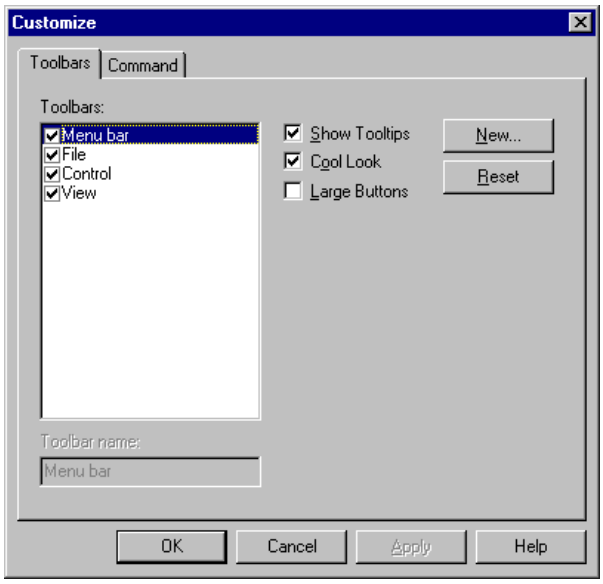
1 From the menu bar, choose *Window – Tool Bars*.



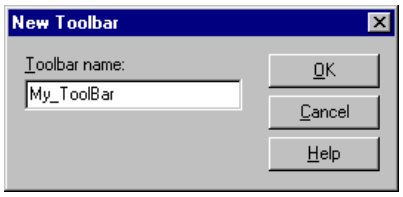
2 In the *Customize* dialog, select the tool bars to be displayed and their properties.

How to Create a New Tool Bar

1 From the menu bar, choose *Window – Tool Bars*.

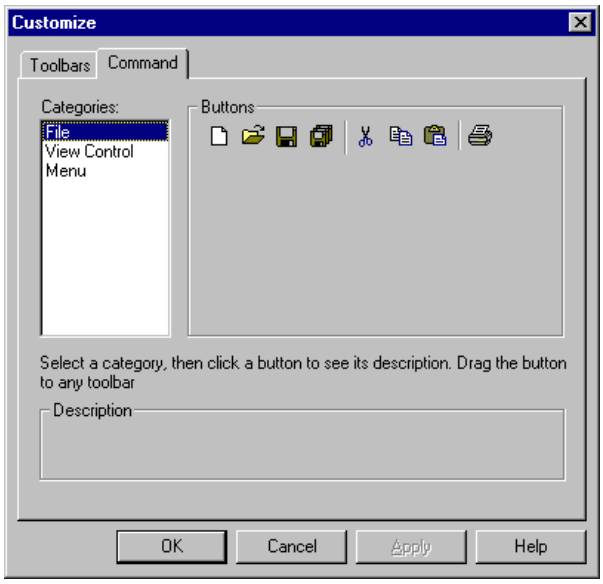


2 In the *Customize* dialog, click *New*.

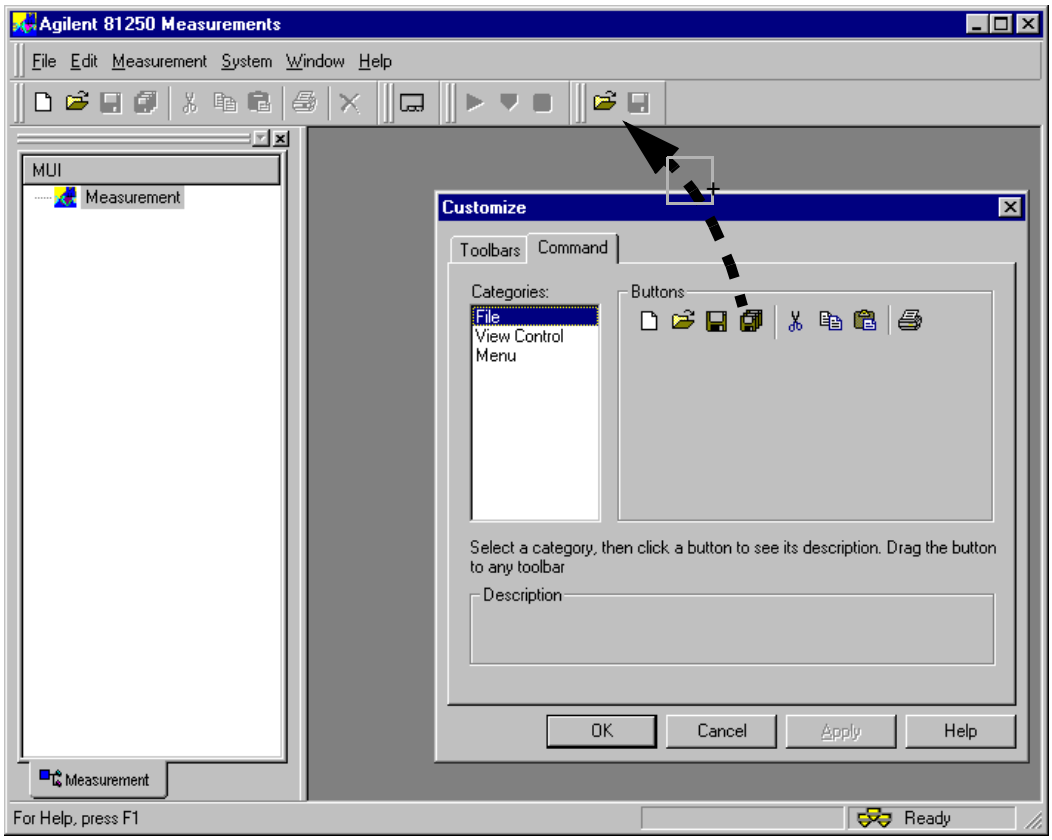


3 In the *New Toolbar* dialog, enter the name. The tool bar will be displayed on the screen and added to the *Toolbars* list.

4 In the *Customize* dialog, select the *Command* tab.



5 Select one of the *Categories* and drag & drop the buttons you need onto the new tool bar.



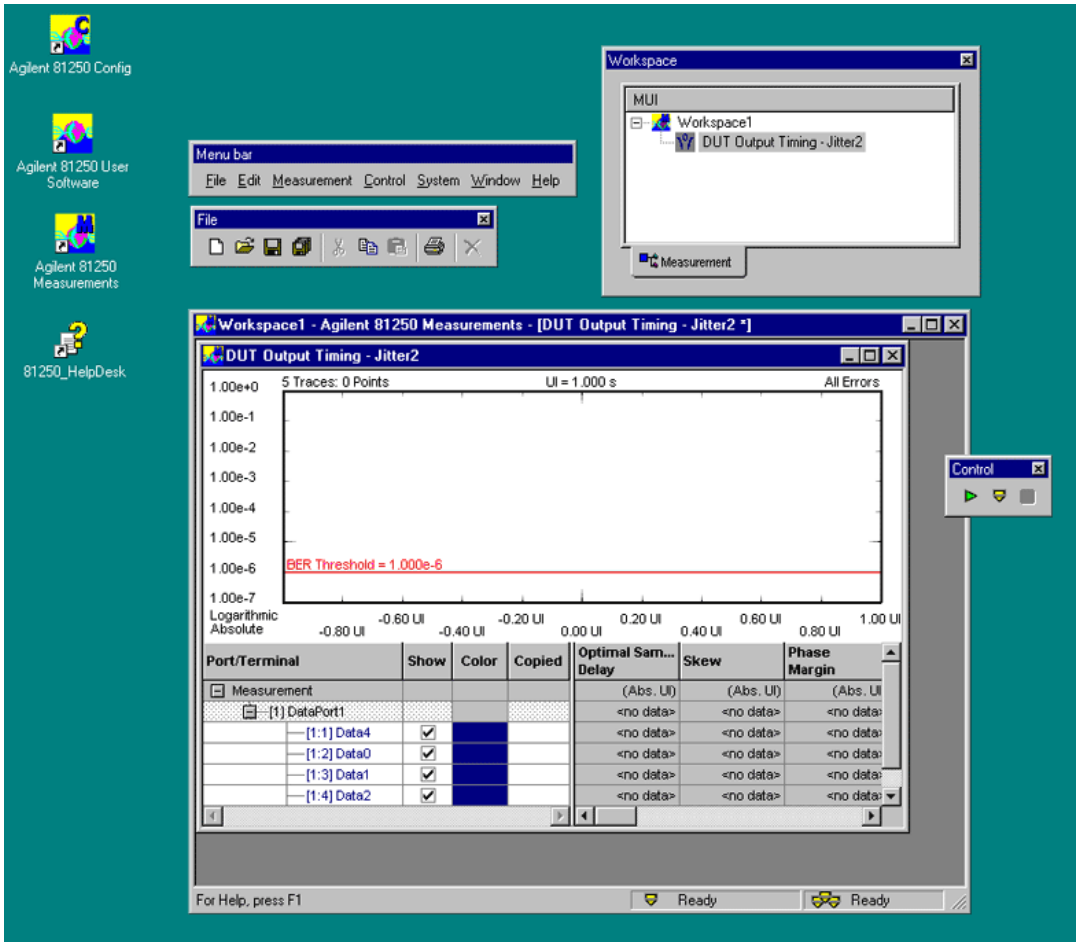
The resulting tool bar looks like this:

6 Click *OK* to save the modifications.

This allows you to create a tool bar comprising all the commands and menus you need. Now, you can switch off the predefined tool bars and menus.

NOTE If you want to make the changes for one of the predefined tool bars undone, select the tool bar in the *Toolbars* page of the *Customize* dialog and click *Reset*.

TIP Tool bars and the workspace tree are floating windows. Double-click one of these elements and you can move it freely on you screen:



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