Agilent ParBERT 81250 Measurement Software

Framework User Guide

Agilent Technologies

Important Notice

This document contains propriety information that is protected by copyright. All rights are reserved. Neither the documentation nor software may be copied, photocopied, reproduced, translated, or reduced to any electronic medium or machine-readable form, in whole or in part, without the prior written consent of Agilent Technologies.

© Copyright 2001 by:
Agilent Technologies
Herrenberger Straße 130
D-71034 Böblingen
Germany

The information in this manual is subject to change without notice. Agilent Technologies makes no warranty of any kind with regard to this manual, including but not limited to the implied warranties of merchantability and fitness for a particular purpose.

Agilent Technologies shall not be liable for errors contained herein or direct, indirect, special, incidental, or consequential damages in connection with the furnishing, performance, or use of this manual.

Brand or product names are trademarks or registered trademarks of their respective companies or organizations.

Authors: t3 medien GmbH

Contents

Framework User Guide, July 2001

Introduction to the Measurement User Interface

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

Capabilities The MUI 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 MUI 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 MUI software is structured as follows:

- The frame application of the MUI comprises the overall functions to handle individual measurement types.

- The individual measurement types (DUT Output Timing Measurement or Eye Opening Measurement, for example) are provided as separate plug-ins (ActiveX controls), that can be installed one-by-one onto your system.

- When installing the software, two systems (DEMO_A and DEMO_B) for demonstration purposes are provided. In most illustrations in the MUI documentation these systems will be used as an example.

Framework user guide   This user guide provides basic information on the features of the Agilent 81250 Parallel Bit Error Ratio Tester Measurement Software (MUI) and gives instructions showing how to make best use of them. The *Framework User Guide* describes the general use cases and shows how to handle measurements in general.

It is recommended to read this guide before starting to work with the MUI.

Measurement guides   For each measurement type installed on your host PC, an additional document will be provided, for example: *DUT Output Timing 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.

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

To start the web-based program online now, open an internet browser and enter the URL

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.

It is split into three parts:

- GUIDED TOUR

  This Guided Tour presents the most important features of the Agilent 81250 Parallel Bit Error Ratio Tester. It runs for 10 minutes but can be halted at any time.

- TUTORIAL

  The Tutorial shows how to work with the system and how to use some special features.

- GETTING STARTED

  Getting Started is a guided tour that demonstrates how to use the system. It can be halted and continued at a later point of time.

Example of a DUT Output Timing Measurement

To show you the capabilities of the MUI, this chapter describes how to set up and make use of a measurement via an example of a DUT output 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 MUI, create a new workspace and measurement for the DUT and run the measurement.
   See *"Setting Up and Running the DUT Output Timing Measurement" on page 11.*

For this example, we use the following hardware components:

*   E4861A generator/analyzer 2.67 Gb/s module

*   E4862A as generator frontend

*   E4863A as 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 output port and the generator to the input port.

3 Save the system setting *MUI_DEMO*.
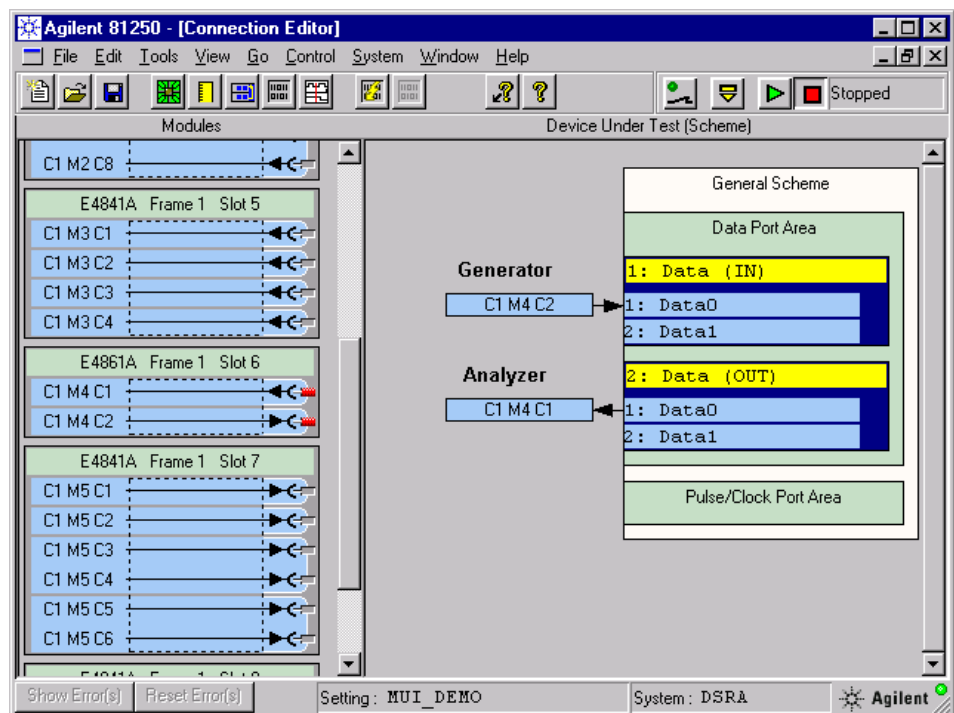
NOTE The other analyzer and generator modules shown in the figure are not required for this example.

4 Establish the physical connection between the analyzer and the generator.
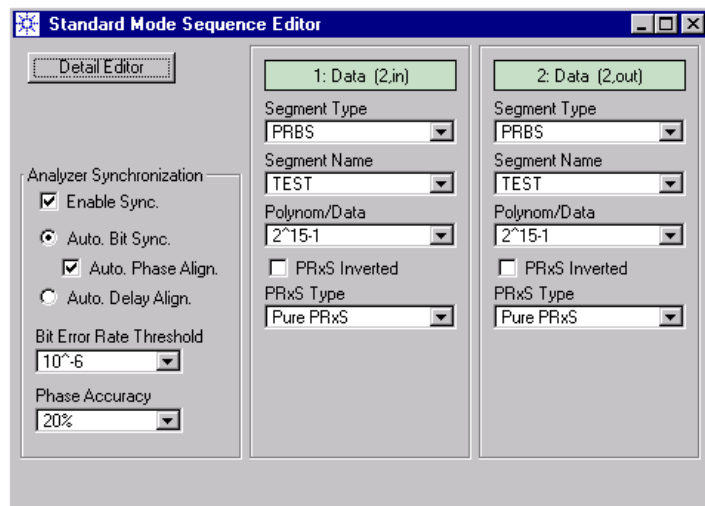
For a detailed description of the *Agilent 81250 User Software*, refer to the 81250 *System User Guide*.

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.

| Bit Error Rate - Port 2: Data							
Time Since Start: 00:00:06					Reset Port	Reset All	
Port 2: Data			Actual Number of Bits	Actual Number of Errors	Actual Bit Error Rate	Accum. Number of Bits	
Term	Rst	S					
1: Data0	R	☑	4.240000e+008	0.000000e+000	0.000000e+000	2.560000e+009	
	Summary		4.240000e+008	0.000000e+000	0.000000e+000	2.560000e+009	

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 81250 *System User Guide.*

Setting Up and Running the DUT Output Timing Measurement

Use the *Agilent 81250 Measurement User Interface* to set up a the DUT output timing measurement:

1 Start the MUI to create a new workspace with a new DUT output timing measurement for the system DSRA.
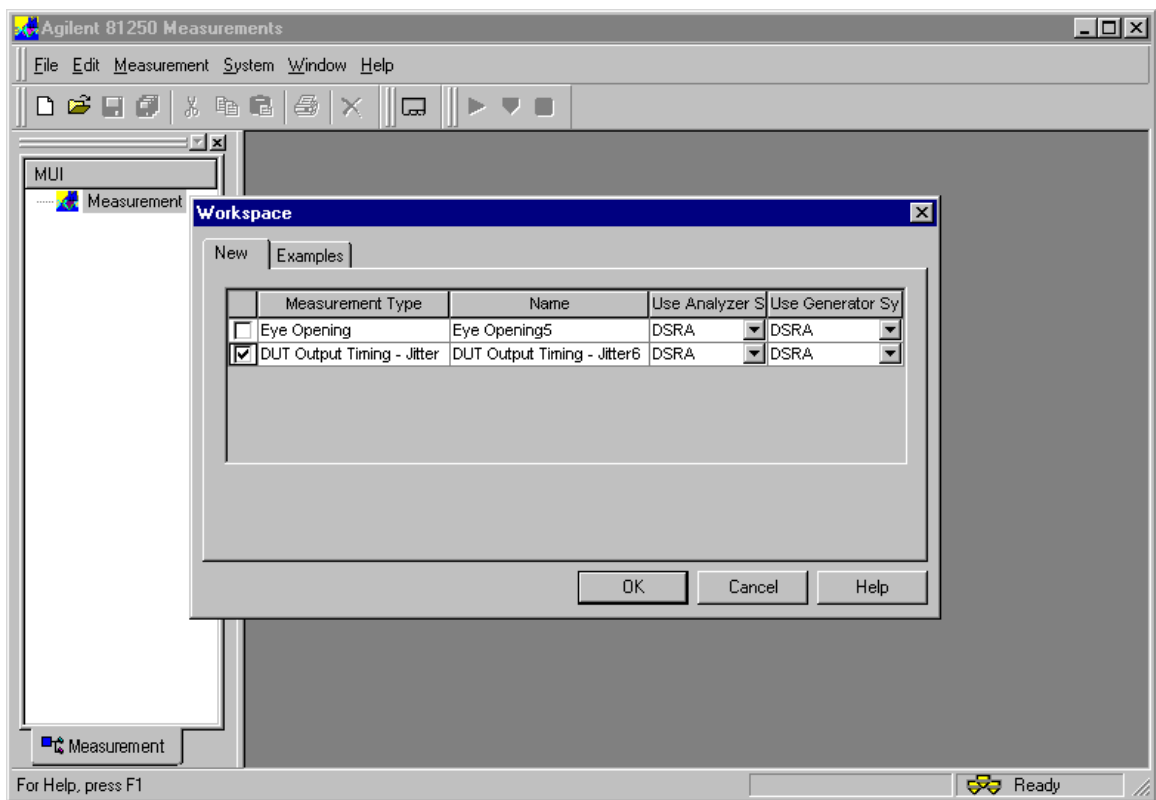
2 Select the demo settings *MUI_DEMO* for the measurement.

For the moment, there is no need to change the other parameters and options.
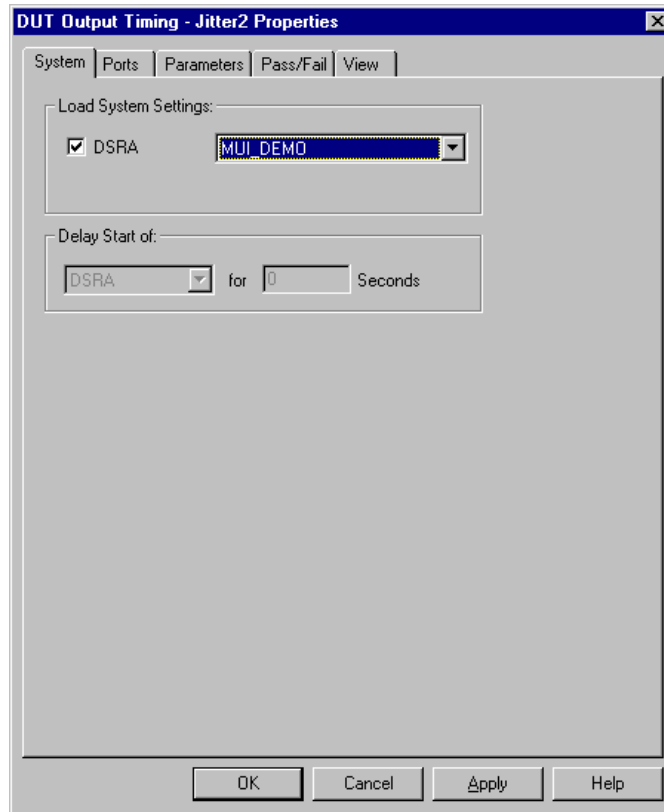
3 In the *Properties* dialog, click *OK*.

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

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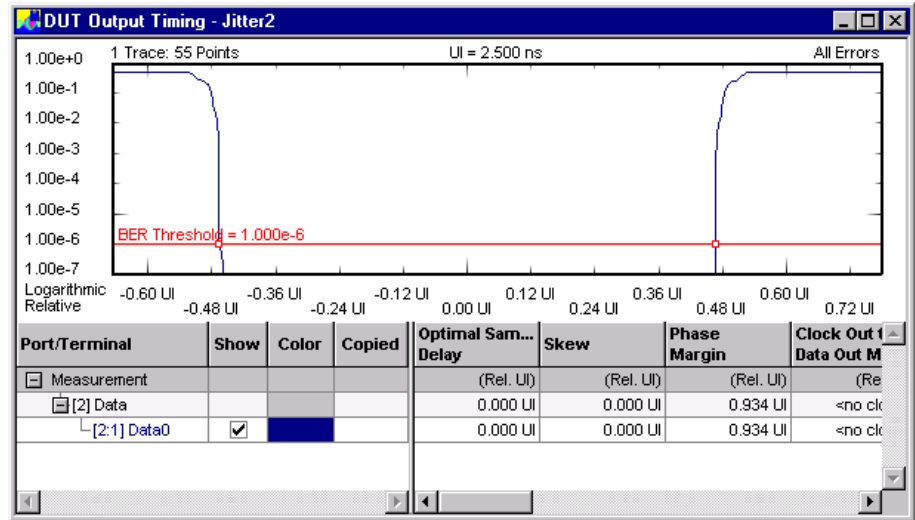
On this screen, you can modify the graphical display of the results to improve result evaluation.

General Information on the MUI

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

- *"Prerequisites" on page 16* lists the prerequisites you have to meet to run the measurements.

- *"How to Start and Stop the MUI" on page 17* explains how to start and stop the application.

- *"Elements of the MUI" on page 19* gives information on the elements of the user interface and some basic definitions. The MUI uses *workspaces* to manage one or more *measurements* and their results.

- *"How to Set User Preferences" on page 22* allows you to set some preferences.

- *"Using Edit Functions" on page 23* explains how to modify the elements of a workspace.

- *"How to Change the Server Connection" on page 25* 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 MUI" on page 49* shows how to modify the MUI 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.

- If you want to control the hardware from a remote PC, the firmware server must be up and running. Both MUI and GUI check for a running firmware server on startup and will start a local one if they can not connect.

- 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)

  – external events are not allowed

- 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 MUI

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

How to Start the MUI

♦ 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 resets the windows, preferences and menus to your default 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 allows you to select one of the measurement types installed on your PC.
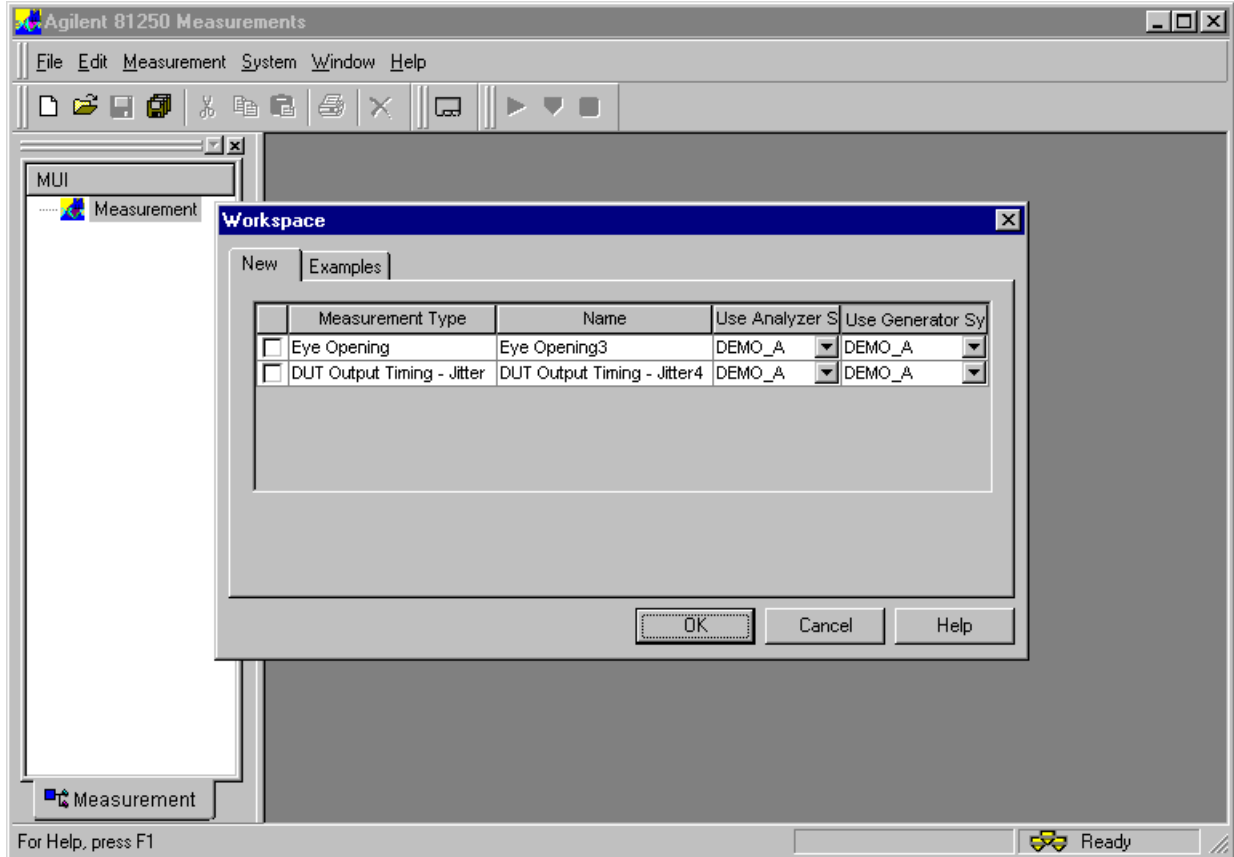
In this dialog, you can select the measurement to be included in the workspace.

When you have created the measurement, you can immediately run it (see *"How to Run a Measurement" on page 37*) 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 36*).
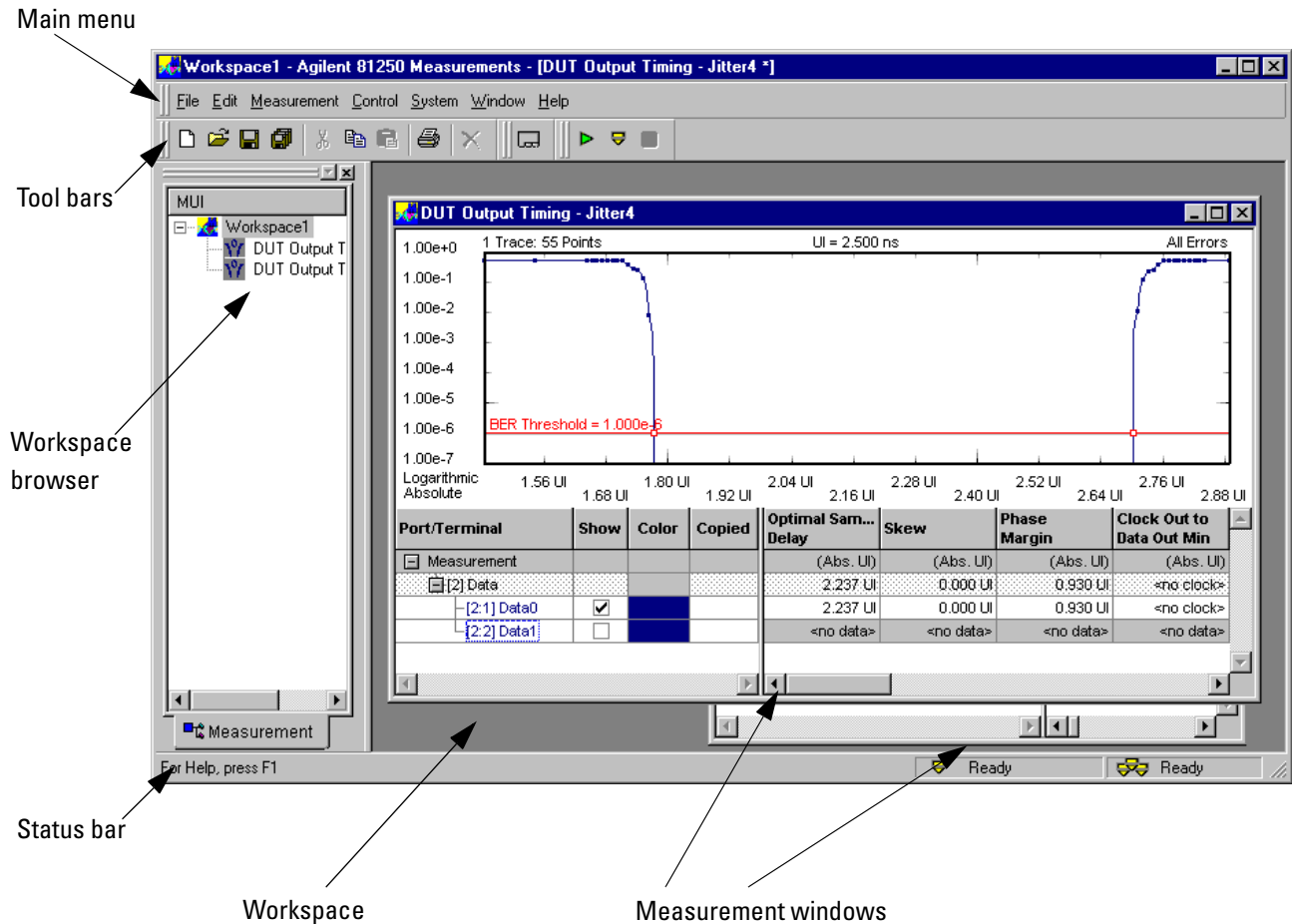
How to Close the MUI

♦ 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 MUI

The MUI consist of the following areas:

Main menu

Tool bars

Workspace
browser

Status bar

Workspace

Measurement windows

- 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.

Current unit interval

Graphical view

Splitter bar

Port/Terminal section   Numerical view
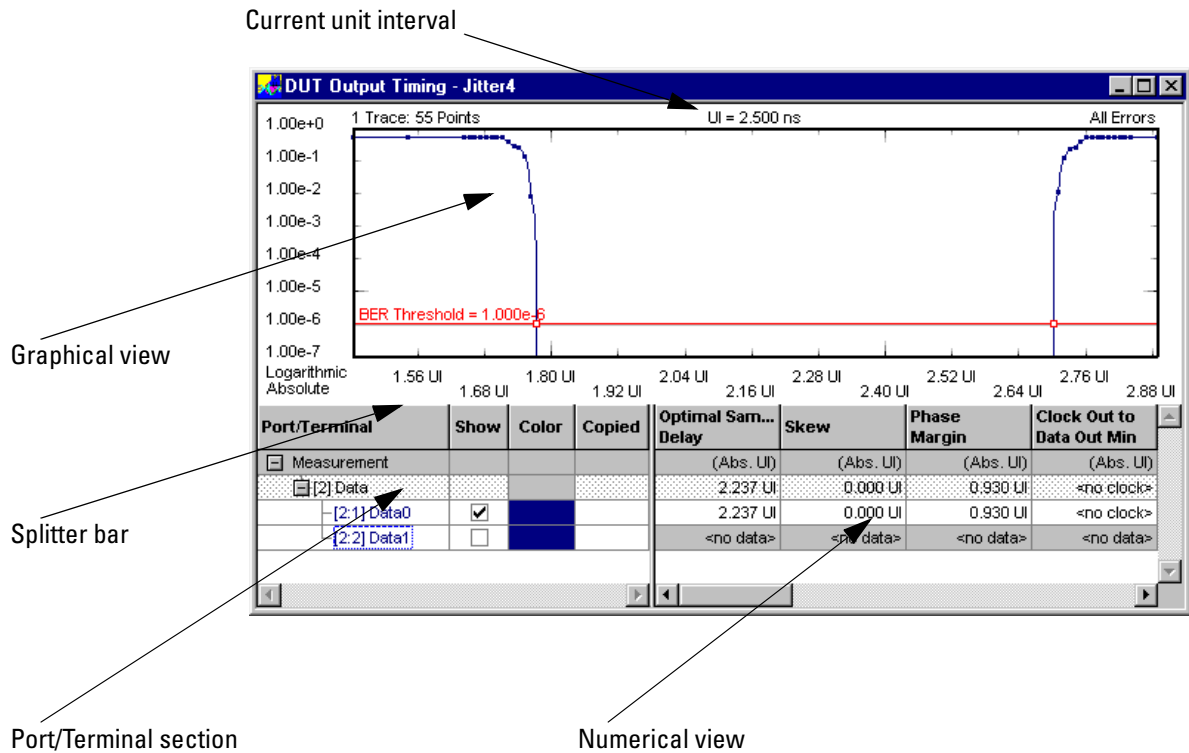
For the displayed parameters, refer to *Definitions* in the reference related to each measurement.

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 MUI" 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 MUI, 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 MUI, the most recently used workspace will be loaded automatically (or not). This allows you to open your current environment automatically, when starting the MUI.

How to Set User Preferences

1 From the menu bar, choose *Edit – Preferences*.
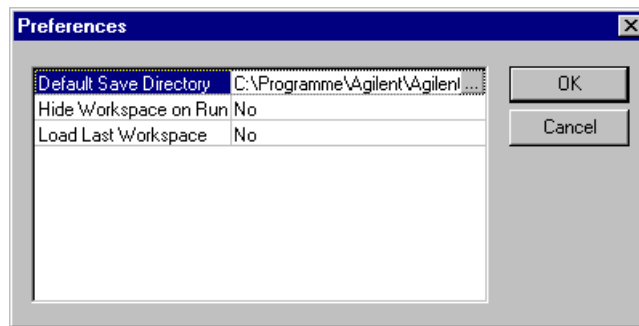
2 In the *Preferences* dialog, click the item to be modified in the left column.

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 MUI 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 cleared anytime (context menu of the port/terminal section, *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.

Select measurement

Select measurement results
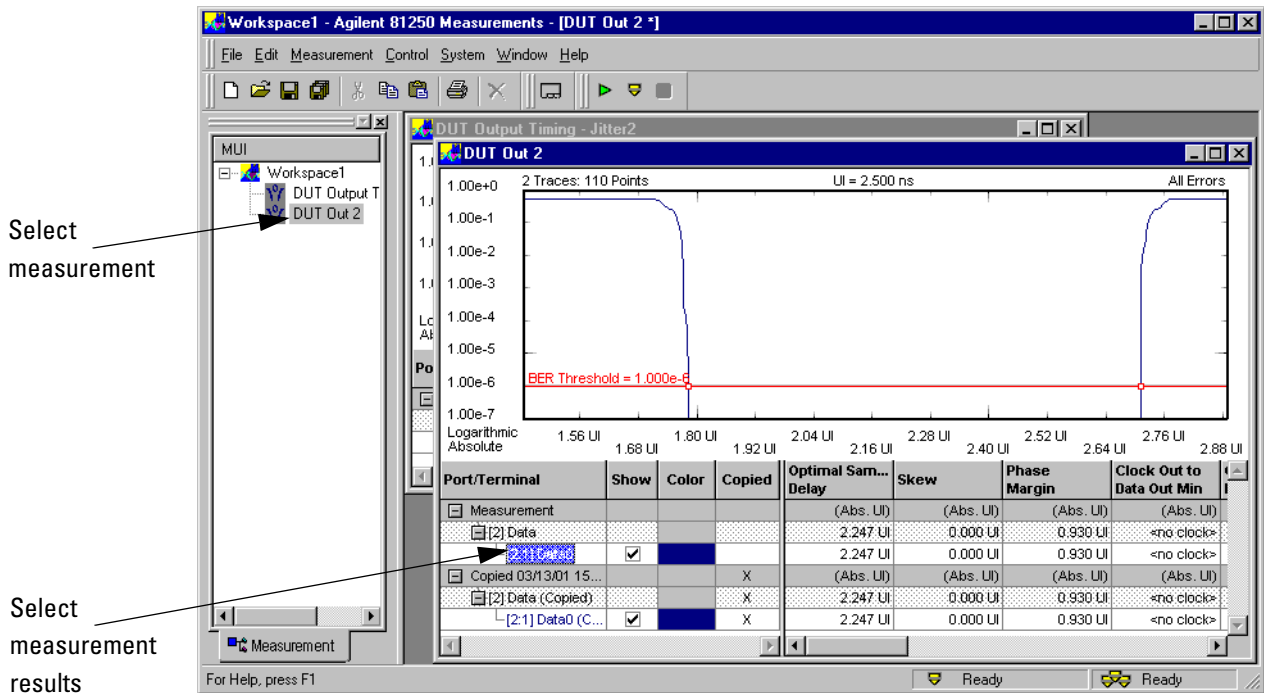
To Copy a Measurement

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. You can change the connection if necessary.

How to Set the Connection to the Firmware Server

1 From the menu bar, choose *System – Server Connection*.
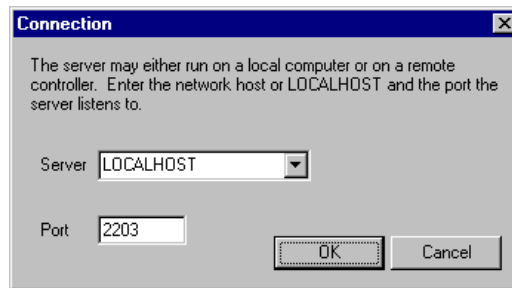
2 In the *Connection* dialog, enter the server name and the port number. Contact your system administrator for the information, if necessary.

3 Click *OK* to connect to the 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 (MUI) and comprises all files belonging to a MUI session:

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

  For workspace management files, MUI uses the extension MWS.

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

  For measurement files, MUI uses the extension MCP.

Workspaces may 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 work with 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 MUI provides several possibilities to create a new workspace:

• When starting the MUI, 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 22*) when starting the MUI.

• If the MUI is already running, you can choose *File – New Workspace* to create a new workspace.

How to Create a New Workspace

The MUI must already be running.

1 From the main menu, choose *File – New Workspace*.
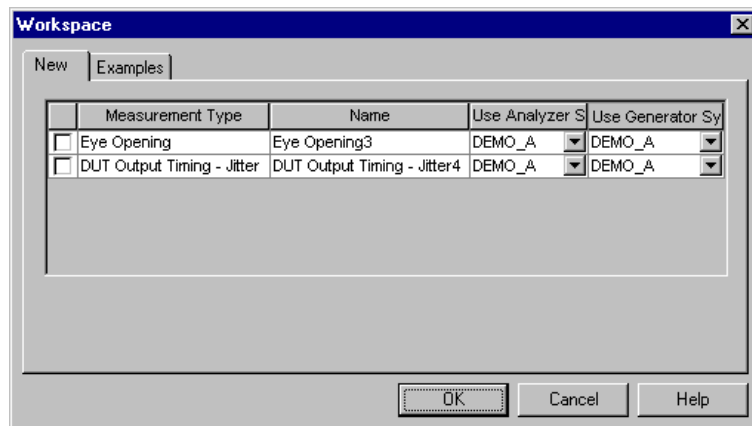
2 In the *New* tab of the *Workspace* dialog, select

  – the measurement type to be added to the new workspace

  – the analyzer system and

  – 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.
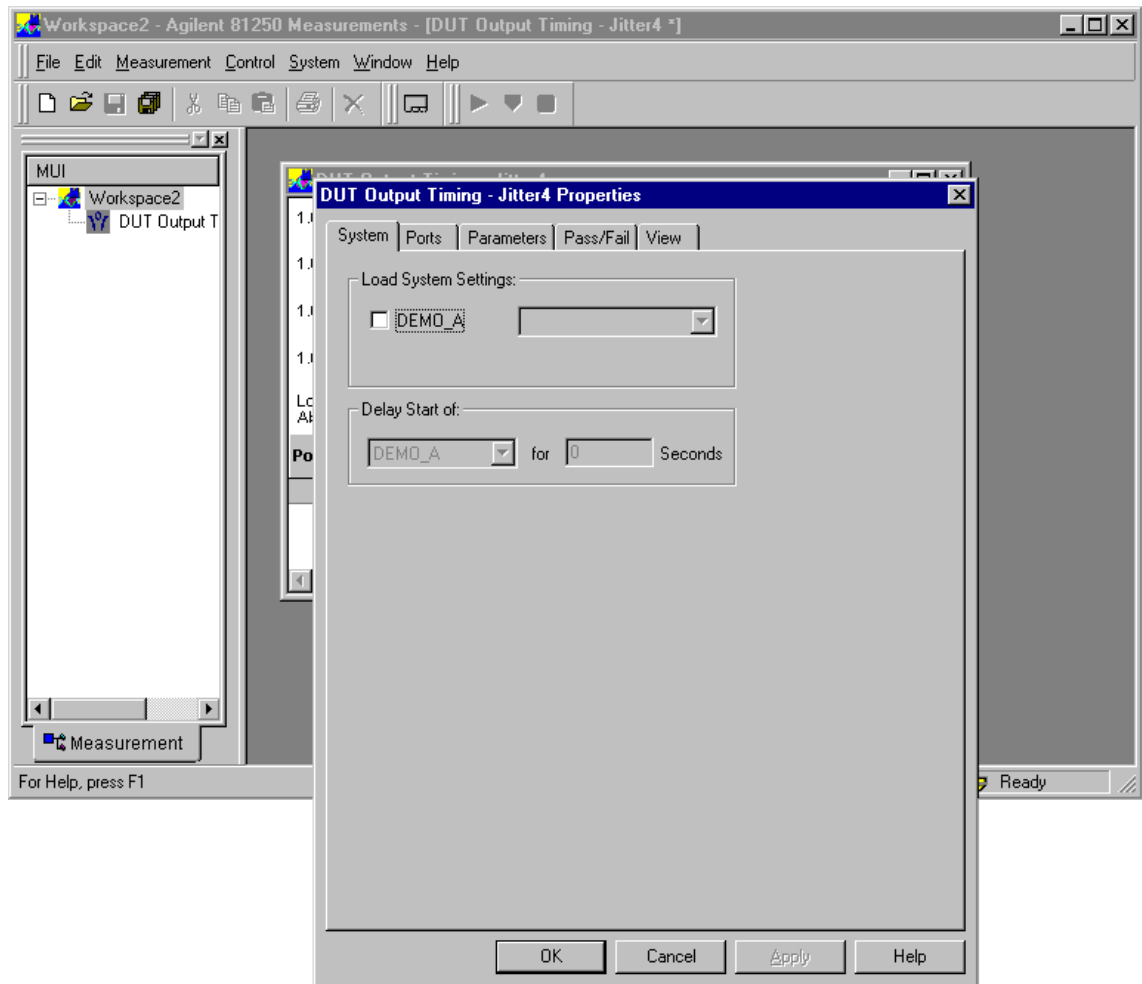
4 Click *OK* to close the *Properties* dialog. Now, you can run the measurement (see *"How to Run a Measurement" on page 37*) with the default parameter values that will work in most cases.

Later on, you can modify the parameters if required (see *"How to Set Up a Measurement" on page 36*).

For information on the parameters, refer to *"How to Set Up a Measurement" on page 36* and to the guide related to the selected measurement.

How to Open a Workspace

The MUI must already be running.

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, select the workspace to be loaded and click *OK*.

TIP To open one of the most recently used workspaces choose the workspace from the recent file list in the *File* menu.

Recent file list
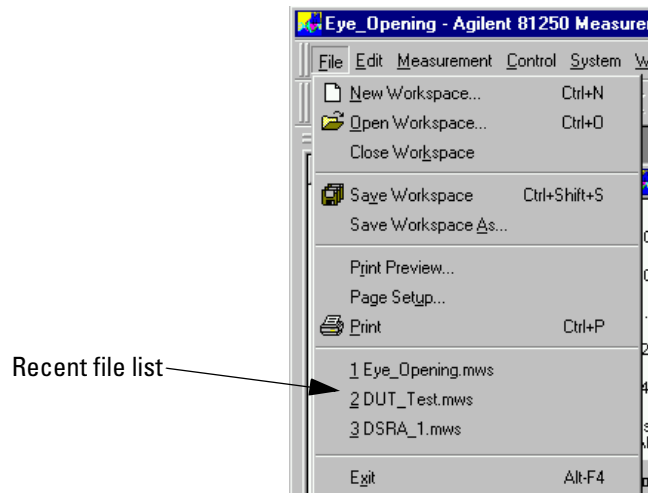
How to Add a Measurement to a Workspace

1 From the main menu, choose *Measurement – New Measurement*.
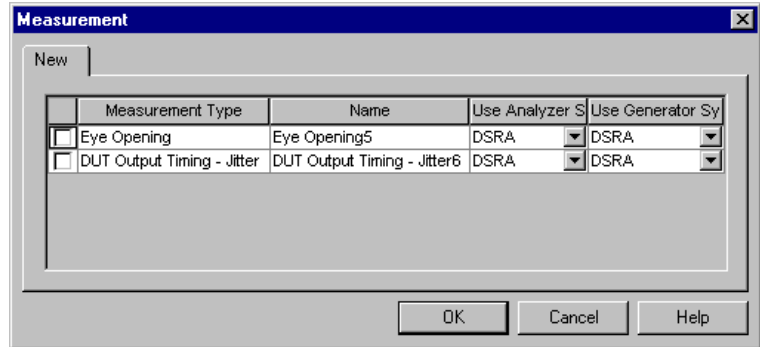
2 In the *New* tab of the *Measurement* dialog, select

– the measurement type to be added to the new workspace

– the analyzer system and

– 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 MUI 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 MUI 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

– the analyzer system and

– 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, 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 menu bar, choose *Measurement – Open Measurement*.

TIP To open one of the most recently used measurements, choose the file from the recent file 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 menu bar, choose *Window – Measurements*.
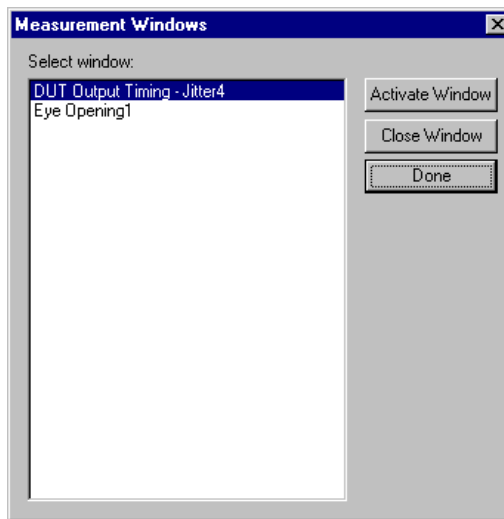
2 In the *Measurement Windows* dialog, select the desired measurement and

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

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

– click *Done* to leave 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 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

For each measurement type a set of parameters has to be configured to specify the system being used for the current measurement.
The properties can be set when creating a new measurement or modified later on.

When you create a new measurement the *Properties* dialog will be displayed automatically. To change the parameters later on, select the measurement and choose *Measurement – Properties* from the menu bar.

How to Set Up a Measurement

1 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.
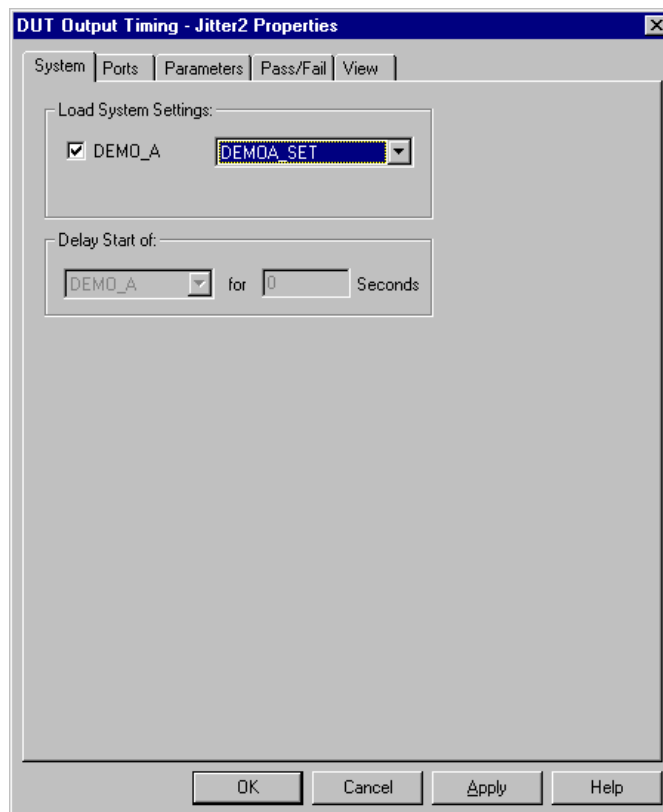
For detailed information on the parameters, see the reference of the related measurement type: for example, DUT Output Timing Measurement or Eye Opening Measurement

2 In the *Properties* dialog, click *Apply* to accept the modifications without leaving the *Properties* dialog. Or click *OK* to accept the modifications and close the *Properties* dialog.

How to Run a Measurement

After you have configured a measurement and its parameters completely, the MUI is ready to execute the measurement. The execution can be controlled via the buttons of the *Control* tool bar:
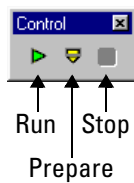
NOTE To run a measurement you have to establish the physical connection to the Agilent 81250 Parallel Bit Error Ratio Tester.

How to Execute a Measurement

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

2 In the *Control* 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, the subsequent measurement will always run for the same time.

If the MUI 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 MUI 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.

The selected   One measurement
measurement   is running
is running
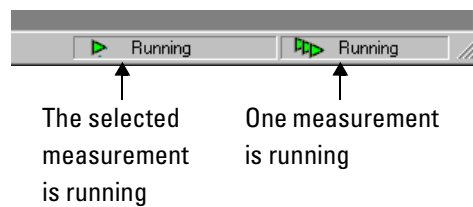
When the measurement is complete, the results will be displayed.

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

If a measurement has been started via the *Run* command and is currently running, but displays unexpected results, you can stop the measurement run before completion.

♦ In the *Control* tool bar, click *Stop* to abort the measurement.

The MUI stops the measurement. Any measurement results available will be displayed in the measurement window.

How to Change Measurement Properties after Running

When a measurement run is completed, the results will be displayed in the measurement window. Some of the properties can be modified to analyze the results using different criteria and to improve the result evaluation and the display according to your needs.

How to Change the Graphical Display of a Measurement

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

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

2 From the context menu of the measurement, choose the following view settings (these settings are measurement specific and do not apply to the fast eye mask and the BER threshold measurement):

Option	Description	Definition
All Errors	To display all errors.	BER (All Errors, the default) is defined as the total number of errors, divided by the total number of compared bits: $$BER_{AllErrors} = \frac{(\sum Error1s + \sum Error0s)}{(\sum Comp1s + \sum Comp0s)}$$
1s Errors	To display the errors if "1" is expected, but "0" received.	In case of 1s Error, the BER is the number of errors if a 1 is expected, divided by the total number of compared bits: $$BER_{AllErrors} = \frac{\sum Error1s}{(\sum Comp1s + \sum Comp0s)}$$
0s Errors	To display the errors if "0" is expected, but "1" received.	In case of 0s Error, the BER is the number of errors if a 1 is expected, divided by the total number of compared bits: $$BER_{AllErrors} = \frac{\sum Error0s}{(\sum Comp1s + \sum Comp0s)}$$
Relative	To display a relative time scale.	
Absolute	To display an absolute time scale.	

Option	Description	Definition
Unit Interval	To display the time scale in unit intervals.	
Seconds	To display the time scale in seconds.	
Show Points	To display the measured points. The MUI uses linear interpolation for the graph between two sample points.	

3 From the context menu of the measurement choose the following display options:

Option	Description
Show Markers	To display markers (cursors) make tracing of data more comfortable.
Show Marker Readout	To display the current settings of the markers.
Show Zoom Graph	To display an additional window for the zoomed graph.
Zoom Graph Tracks Mouse	The display of the zoomed graph follows the movement of the mouse.
Zoom 10x	To zoom the display 10 times.
Zoom 20x	To zoom the display 20 times.
Zoom 40x	To zoom the display 40 times.
Optimizations	
Update Plots While Running	To choose whether the plot will be updated while the measurement is running.
Rendering Speed	To optimize the measurement for rendering speed.
Memory Usage	To optimize the measurement for the amount of memory to be used. If you switch this option off, the measurement may slow down.

4 If markers are enabled, an additional item is available in the context menu of the measurement:

Option	Description
Markers Color	To choose the color of the markers.
Hide	To hide the markers.

Your changes will modify the graphical display immediately.

The following illustration shows some of the elements to be modified:
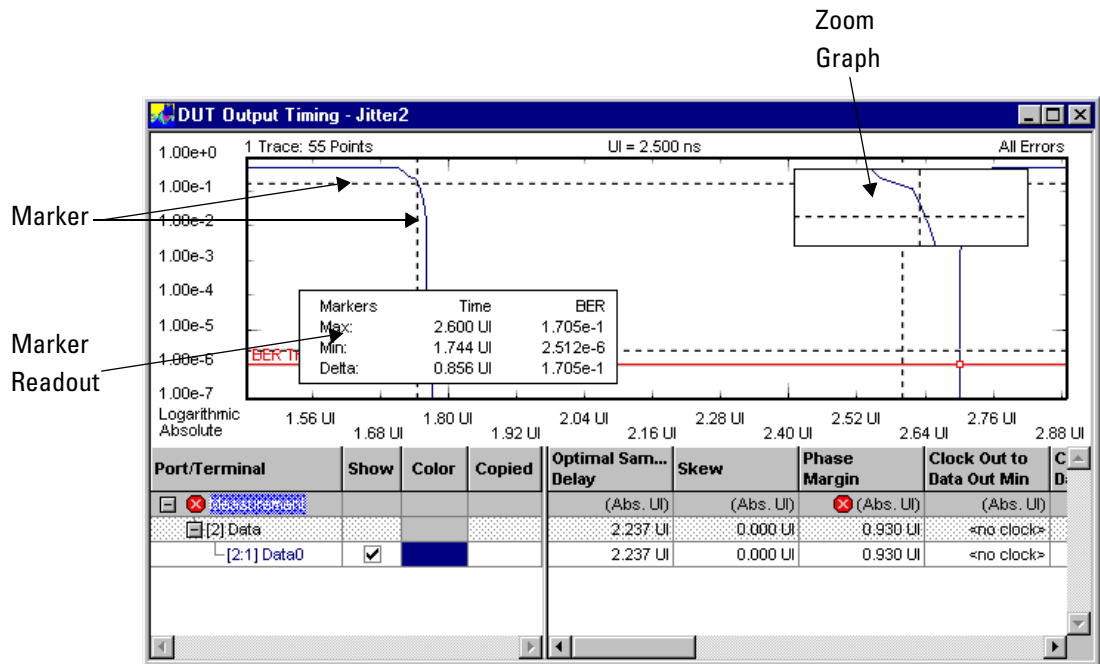
How to Change the Result Display of a Measurement

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.

Port/Terminal	Show	Color	Copied	Optimal Sam... Delay	Skew	Phase Margin	Clock Out to Data Out Min	
⊟ Measurement				(Abs. UI)	(Abs. UI)	(Abs. UI)	(Abs. UI)	
⊟ [2] Data				2.247 UI	0.000 UI	0.930 UI	<no clock>	
[2:1] Data0	✔			2.247 UI	0.000 UI	0.930 UI	<no clock>	
⊟ Copied 03/13/01 15...			X	(Abs. UI)	(Abs. UI)	(Abs. UI)	(Abs. UI)	
⊟ [2] Data (Copied)			X	2.247 UI	0.000 UI	0.930 UI	<no clock>	
[2:1] Data0 (C...	✔		X	2.247 UI	0.000 UI	0.930 UI	<no clock>	

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*.
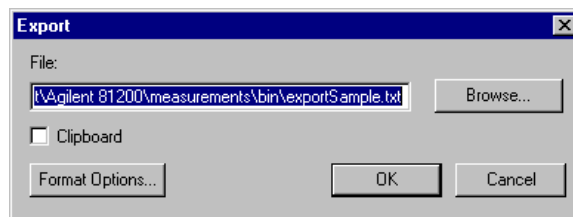
3 In the *Export* dialog,

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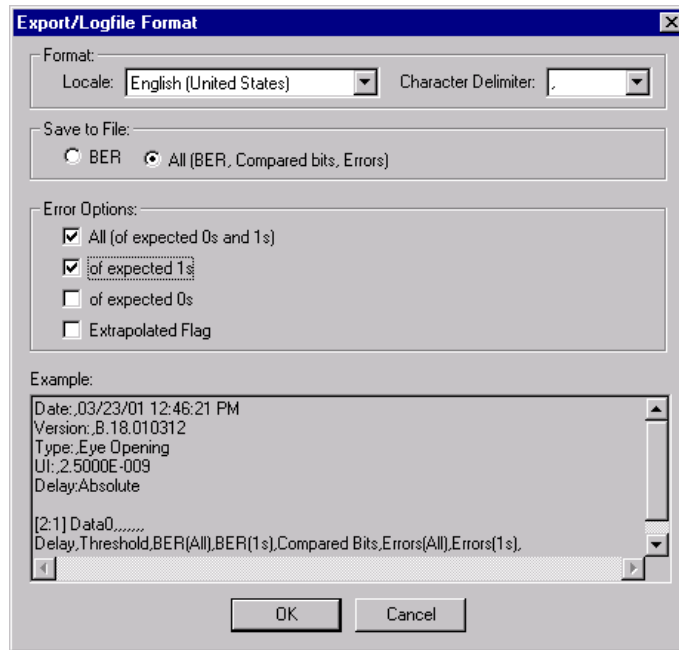
4 In the *Export/Logfile Format* dialog, select the following options:

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 MUI, 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 MUI, 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 (MUI) 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 View and Print a Measurement

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

2 The printout will be displayed on the screen. You can zoom to display details.
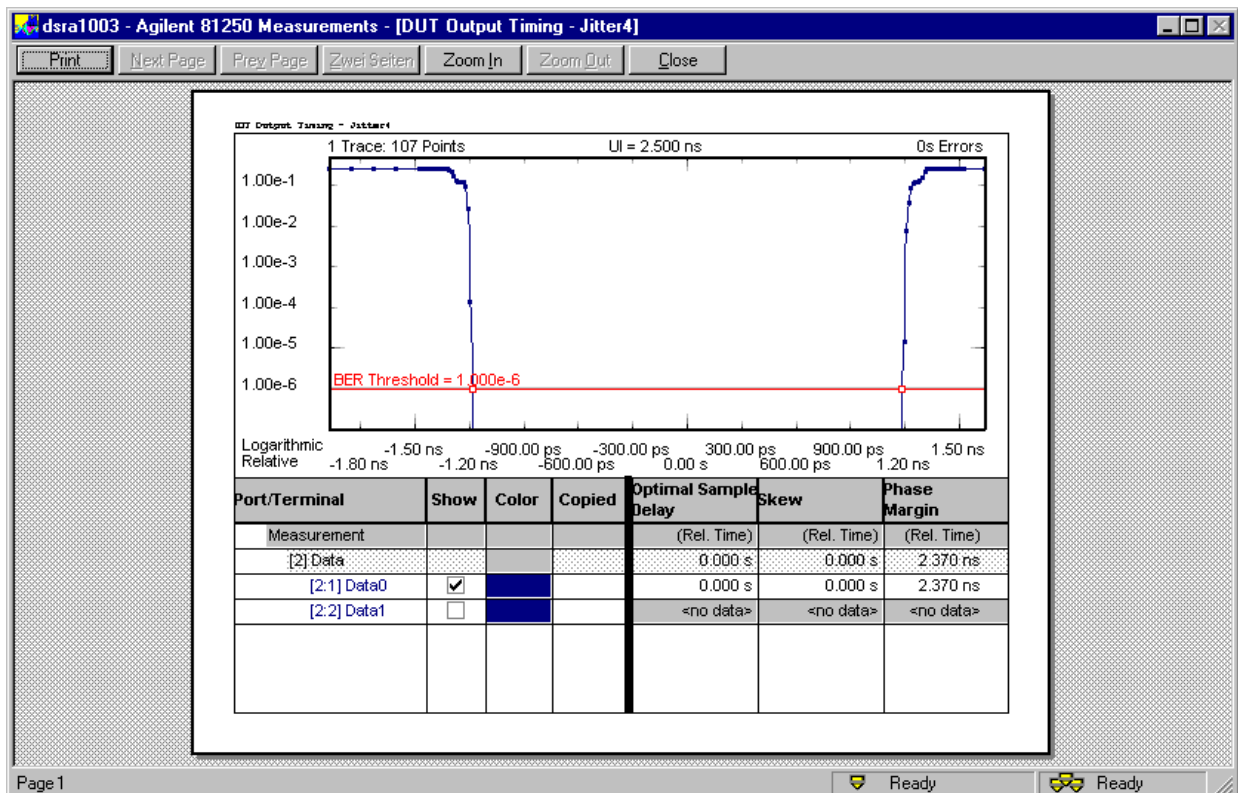
3 In the *Preview* dialog, click *Print* to send the page(s) to the printer.

How to Print a Measurement Without Preview

1 From the main menu, choose *File – Print*.
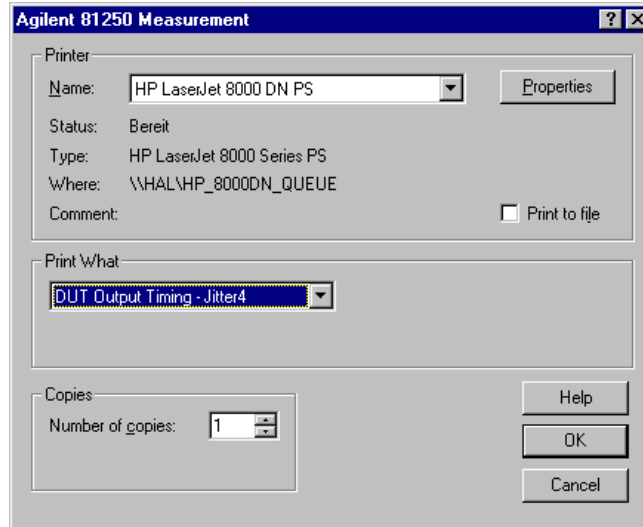
2 In the *Agilent 81250 Measurement* dialog, choose the printer, the measurements and the number of copies to be printed.

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

How to Modify the Elements of the MUI

For your convenience, you can modify the interface of the MUI 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*.
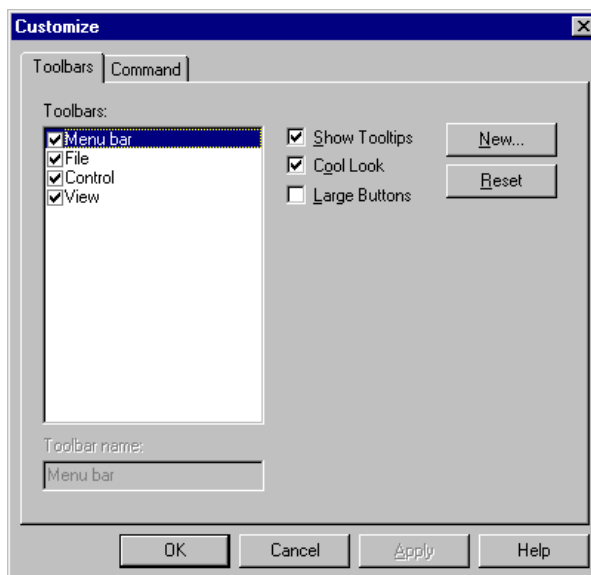
2 In the *Customize* dialog, select the tool bars to be displayed and their properties.

How to Create a New Tool Bar

1 From the menu bar, choose *Window – Tool Bars*.
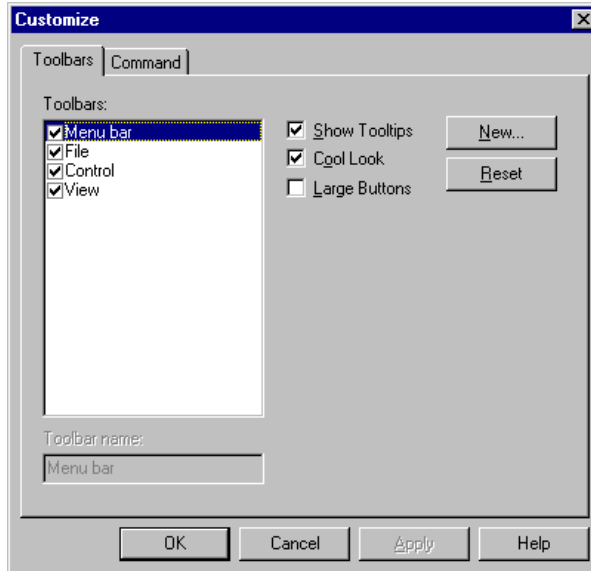
2 In the *Customize* dialog, click *New*.
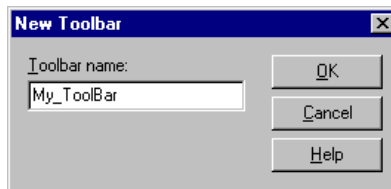
3 In the *New Toolbar* dialog, enter the name. The tool bar will be
displayed on the screen and added to the *Toolbars* list.

4 In the *Customize* dialog, select the *Command* tab.
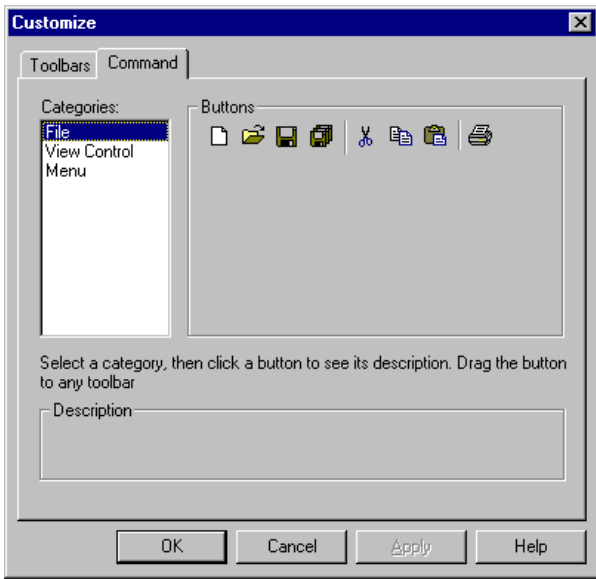
5 Select one of the *Categories* and drag & drop the buttons you need onto the new tool bar.
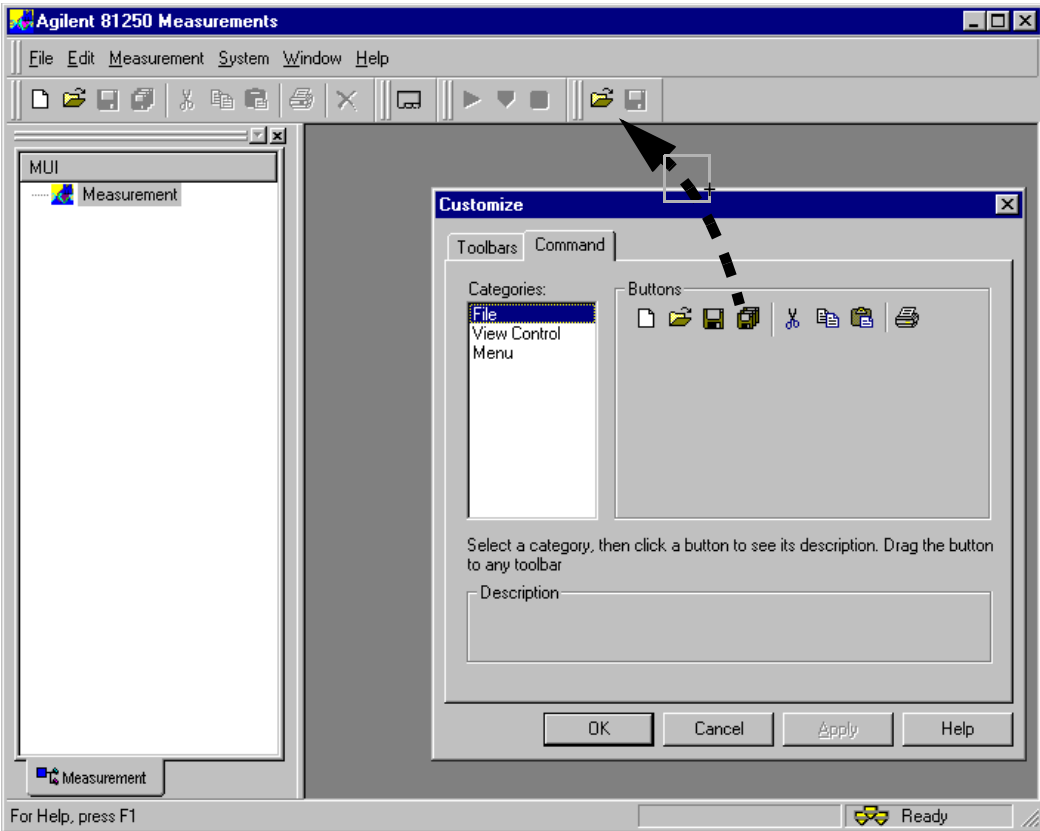
The resulting tool bar looks like this:

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:

Index

system
    analyzer 29, 33
    generator 29, 33

T

terminals
    copying 42
tool bar
    floating window 52
    hide 49
    show 49
    user defined 50

U

UI 40
unit interval 40
user preferences 22

W

workspace 27
    adding a measurement 31
    creating a new 28
    floating window 52

    hide 22
    loading the last 22
    opening an existing 30
    recently used 30
    saving 31
Workspace dialog 29
    New tab 29

Z

zoom 40