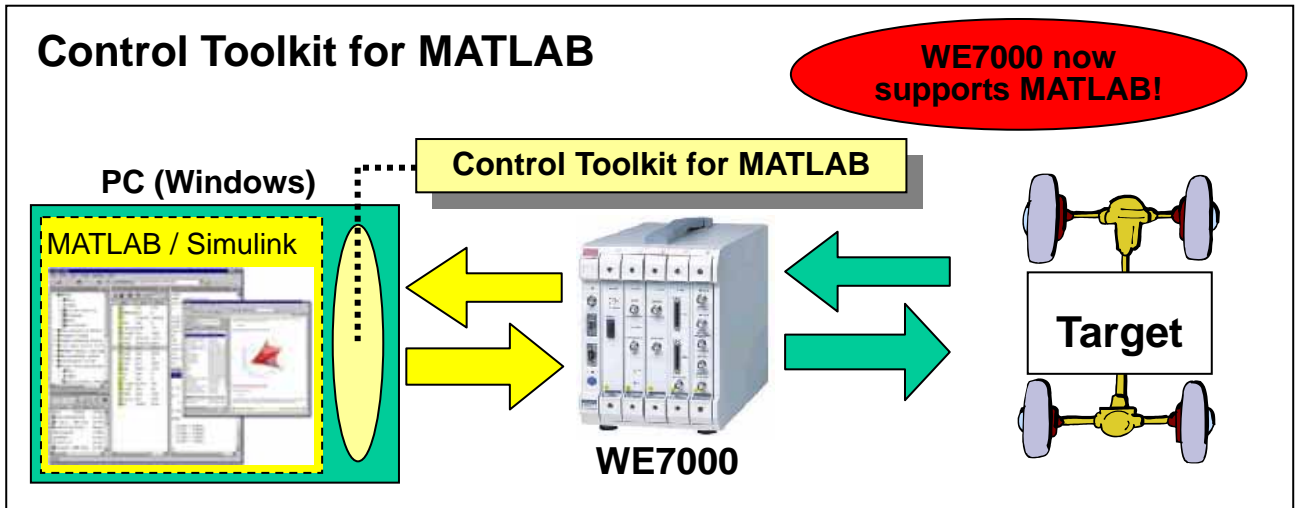


# Control Toolkit for MATLAB

Control Toolkit for MATLAB is a software interface used to control the WE7000 from MATLAB. This toolkit combines the advanced and versatile analysis and display functions of MATLAB with the WE7000 providing a seamless working environment from signal generation and measurement to analysis.



**Feature 1:** Windows for setting various measurement conditions, those that are the same as the Control Software\*, can be opened by simply calling a function from MATLAB.

\* Standard software for controlling the WE7000

**mexWeShowModuleWindow**  
Call the measurement parameter setup window

**mexWeShowTrigWindow**  
Call the synchronized operation setup window

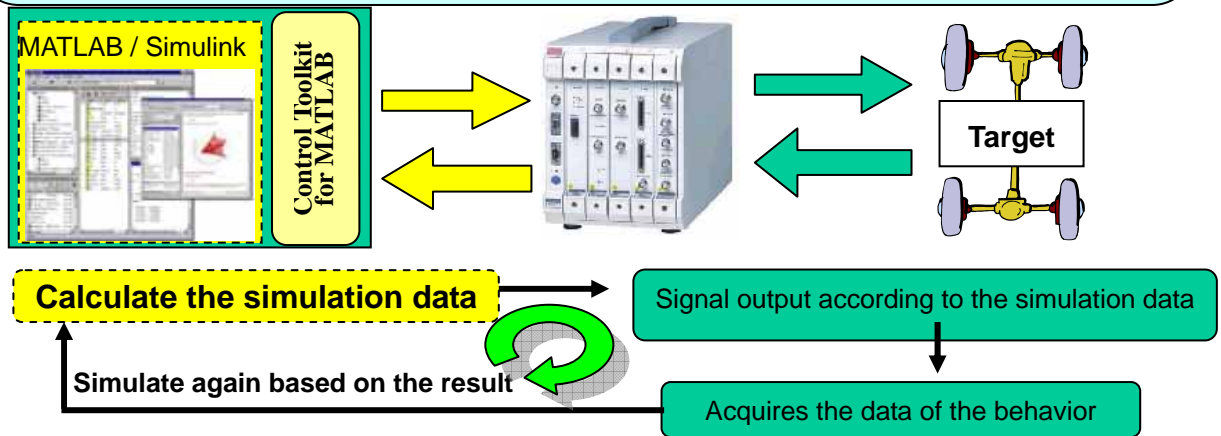
**mexWeShowLinearScaleWindow**  
Call the scale conversion setup window

*No need to create dedicated windows or programs for setting measurement parameters.*

## Feature 2:

- The simulation results of MATLAB can be output as a signal to the actual target using the WE7000 signal output module.
- Comparison can be made between the simulation result and the actual operation by measuring the behavior of the target on the WE7000 while outputting the signal.

*This sequence of operations can be performed from MATLAB.*



## Examples of the Functions on MATLAB

**mexWeInit**  
Initializes communications.

**mexWeOpenStation**  
Declares the use of a measurement unit.

**mexWePower**  
Turns ON the measurement unit.

**mexWeOpenModule**  
Declares the use of a measurement module.

**mexWeSetControl**  
Sets the measurement parameters of a module.

**mexWeStart**  
Instructs the module to start measurements.

**mexWeGetScaleData**  
Retrieves the measured values.

Analyze and display using various MATLAB functions.

**mexWeCloseHandle**  
Releases the measurement unit and module in use.

**mexWeExit**  
Ends communications.

## Specifications

### Supported OSs

Microsoft Windows 95/98/Me, Windows NT 4.0, Windows 2000 Pro, or Windows XP.

(A CD-ROM drive is required for installation.)

### Supported MATLAB Versions

MATLAB Ver.6.1(R12.1) to Ver.7.01(R14 SP1)

\* The 707741 WE Control API is also required in using this product. MATLAB toolbox is not required.

### Model

Name	Model
Control Toolkit for MATLAB	707747

## List of Functions (Excerpt)

Command	Function
<b>Initialization and Termination</b>	
mexWeInit	Initializes communications.
mexWeExit	Ends communications.
mexWeOpenStation	Retrieves the station handle.
mexWeOpenModule	Retrieves the module handle.
mexWeCloseHandle	Releases various handles.
<b>Turning ON/OFF the Station Power</b>	
mexWePower	Turns ON/OFF the standby power to the station.
<b>Setting and Querying Measurement Conditions</b>	
mexWeSaveSetup	Saves the current setup parameters to a file or preset
mexWeLoadSetup	Loads a file or preset values and updates the current setup parameters.
mexWeSetControl	Sets parameters.
mexWeGetControl	Retrieves parameters.
mexWeSetScaleInfo	Sets scale conversion information.
mexWeGetScaleInfo	Retrieves scale conversion information.
<b>Showing, Hiding, Querying the GUI</b>	
mexWeShowModuleWindow	Shows the module window.
mexWeCloseModuleWindow	Hides the module window.
mexWeIsModuleWindow	Queries the show/hide condition of the module window
mexWeShowTrigWindow	Shows the trigger window.
mexWeCloseTrigWindow	Hides the trigger window.
mexWeIsTrigWindow	Queries the show/hide condition of the trigger window
<b>Starting and Stopping Measurements</b>	
mexWeStart	Starts the measurement.
mexWeStop	Stops the measurement.
<b>Retrieving Measured Values</b>	
mexWeGetScaleCurrentData	Retrieves the instantaneous physical data.
mexWeGetCurrentData	Retrieves the instantaneous data.
mexWeGetScaleData	Retrieves the physical data.
mexWeGetAcqData	Retrieves the raw data.
mexWeSaveScaleData	Saves the physical data to a file.
mexWeSaveScaleAsciiData	Saves the physical data to a file in ASCII format.
mexWeLatchData	Issues a latch.

Microsoft, Windows, and Windows NT are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries. MATLAB is a registered trademark of The MathWorks, Inc. in the United States.

**YOKOGAWA** ◆

YOKOGAWA ELECTRIC CORPORATION

Measurement Sales Dept./Phone: 81-422-52-6614, Fax: 81-422-52-6624

Network Solutions Sales Dept./Phone: 81-422-52-6765, Fax: 81-422-52-6793

YOKOGAWA CORPORATION OF AMERICA Phone: 1-770-253-7000, Fax: 1-770-251-2088

YOKOGAWA EUROPE B.V. Phone: 31-33-4622142, Fax: 31-33-4641616

YOKOGAWA ENGINEERING ASIA PTE. LTD Phone: 65-2419933, Fax: 65-2412606

Subject to change without notice.

[Ed : 04/b] Copyright ©2000

Printed in Japan. 010(YG)

MS-07E