

Simulink[®] Test[™] Release Notes



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Version: 1.0

New Features

Introduction to Simulink Test

Simulink® Test™ provides tools for authoring, managing, and systematically executing simulation-based tests. You can create nonintrusive test harnesses to test models and subsystems. You can generate reports, archive and review test results, rerun failed tests, and debug the component or system under test.

Test harness for subsystem and model testing

Test harnesses provide a separate, nonintrusive testing environment for your models. A test harness associates with a particular model or model component and persists with the model. You define tests by adding inputs and assessments to the harness, and you can set harness-specific simulation parameters. The test harness synchronizes model changes to the main model. The test manager can access the test harnesses in your model. See “Refine, Test, and Debug a Subsystem” and “Test Harness and Model Relationship”.

Test Sequence block for defining tests and assessments

Test Sequence blocks concisely define a series of test steps and transitions using MATLAB® action language. Each step defines the block output values and the condition that triggers the transition to another test step. You can define a test step hierarchy using different transition modes. Test Sequence blocks include concise output functions, such as square and sawtooth, and operators that return temporal information, such as the elapsed step time or the duration of a condition.

You can assess the model operation in the test sequence, or in a separate Test Sequence block. See “Test Downshift Points of a Transmission Controller” and the Test Sequence block.

Test manager for test authoring and systematic test execution

The Simulink Test manager enables you to organize and run large sets of tests for Simulink models. Using the test manager, you can author and execute test cases individually or as a batch. You can also link to test requirements from each test case if you have a Simulink Verification and Validation™ license. After you execute tests, the test outcome and any simulation output appear in the **Results and Artifacts** pane of the test manager.

Baseline, equivalence, and back-to-back testing with pass-fail criteria

You can test models using baseline and equivalence test case templates in the test manager. Baseline test cases compare simulation output to defined expected outputs. Equivalence test cases compare simulation output a second simulation. The simulation output comparison is evaluated according to absolute or relative tolerances, which you specify under **Baseline Criteria** or **Equivalence Criteria**. For more information on tolerances, see “How Tolerances Are Applied to Test Criteria”.

Archiving and reporting test cases and test results

After you execute tests, you can export the results in the **Results and Artifacts** pane of the test manager to a file or save them in a report. For more information on exporting results and generating reports, see “Export Test Results and Generate Reports”.

