Instrument Control Toolbox Release Notes

Contents

Summary by Version

This table provides quick access to what is new in each version. For clarification, see "About Release Notes" on page 1.

Version (Release)	New Features and Changes	Version Compatibility Considerations	Fixed Bugs and Known Problems	Related Documentation at Web Site
Latest Version V2.5 (R2007b)	Yes Details	Yes Summary	Bug Reports Includes Fixes	Printable Release Notes: PDF Current product documentation
V2.4.2 (R2007a)	Yes Details	Yes Summary	Bug Reports	No
V2.4.1 (R2006b)	No	No	Bug Reports	No
V2.4 (R2006a)	Yes Details	No	Bug Reports	No
V2.3 (R14SP3)	No	No	Bug Reports	No
V2.2 (R14SP2)	Yes Details	No	Bug Reports	No

About Release Notes

Use release notes when upgrading to a newer version to learn about new features and changes, and the potential impact on your existing files and practices. Release notes are also beneficial if you use or support multiple versions.

If you are not upgrading from the most recent previous version, review release notes for all interim versions, not just for the version you are installing. For example, when upgrading from V1.0 to V1.2, review the New Features and Changes, Version Compatibility Considerations, and Bug Reports for V1.1 and V1.2.

New Features and Changes

These include

- New functionality

- Changes to existing functionality

- Changes to system requirements (complete system requirements for the current version are at the MathWorks Web site)

- Any version compatibility considerations associated with each new feature or change

Version Compatibility Considerations

When a new feature or change introduces a reported incompatibility with the previous version, its description includes a **Compatibility Considerations** subsection that details the impact. For a list of all new features and changes that have reported compatibility impact, see the "Compatibility Summary for Instrument Control Toolbox" on page 13.

Compatibility issues that are reported after the product has been released are added to Bug Reports at the MathWorks Web site. Because bug fixes can sometimes result in incompatibilities, also review fixed bugs in Bug Reports for any compatibility impact.

Fixed Bugs and Known Problems

MathWorks Bug Reports is a user-searchable database of reported problems, workarounds, and fixes. The MathWorks updates the Bug Reports database as new problems and resolutions become known, so check it as needed for the latest information.

Access Bug Reports at the MathWorks Web site using your MathWorks Account. If you are not logged in to your MathWorks Account when you link to Bug Reports, you are prompted to log in or create an account. You then can view bug fixes and known problems for R14SP2 and more recent releases.

The Bug Reports database was introduced for R14SP2 and does not include information for prior releases. You can access a list of bug fixes made in prior versions via the links in the summary table.

Related Documentation at Web Site

Printable Release Notes (PDF). You can print release notes from the PDF version, located at the MathWorks Web site. The PDF version does not support links to other documents or to the Web site, such as to Bug Reports. Use the browser-based version of release notes for access to all information.

Product Documentation. At the MathWorks Web site, you can access complete product documentation for the current version and some previous versions, as noted in the summary table.

Version 2.5 (R2007b) Instrument Control Toolbox

This table summarizes what is new in Version 2.5 (R2007b):

New Features and Changes	Version Compatibility Considerations	Fixed Bugs and Known Problems	Related Documentation at Web Site
Yes Details below	Yes	Bug Reports Includes Fixes	Printable Release Notes: PDF Current product documentation

New features and changes introduced in this version are:

- "Instrument Control Toolbox Block Library" on page 4
- "Instrument Drivers" on page 5
- "spoll GPIB Status Information" on page 5
- "Obsolete Functions" on page 5
- "New Error Message" on page 5

Instrument Control Toolbox Block Library

There are four new Simulink® blocks that can send and receive data over TCP/IP and UDP in Simulink.

- **TCP/IP Receive** — Receive data over a TCP/IP network from a specified remote machine.
- **TCP/IP Send** — Send data over a TCP/IP network to a specified remote machine.
- **UDP Receive** — Receive data over an UDP network from a specified remote machine.
- **UDP Send** — Send data over an UDP network to a specified remote machine.

Instrument Drivers

- Additional instrument drivers are now available for Agilent, LeCroy, Tabor, and Tektronix instruments.

- Support for Keithley version 8.3 GPIB drivers is updated.

spoll GPIB Status Information

Additional GPIB status information provided with the `spoll` function.

Obsolete Functions

The following functions are obsolete as of this release. Any attempt to use these functions now results in an error message.

Obsolete Function Name	New Function Name
freeserial	fclose
instrcomm	tmtool
instrcreate	tmtool

Compatibility Considerations

In the previous release, `freeserial` was nonoperational and generated a warning. Now any call to this function generates an error.

In previous releases, `instrcomm` and `instrcreate` opened their own graphical user interfaces. The functionality of these interfaces is available in the `tmtool` GUI.

New Error Message

The `fwritef` and the `fprintf` functions will return an error message if the `flowcontrol` property is set to `hardware` and a hardware connection is not detected. Previously, MATLAB would fail to respond while it waited for the connection.

Compatibility Considerations

In the previous release, MATLAB® would become unresponsive if the flowcontrol property was set to hardware and a hardware connection was not detected. The fwrite and the fprintf functions will now return an error message.

Version 2.4.2 (R2007a) Instrument Control Toolbox

This table summarizes what is new in Version 2.4.2 (R2007a):

New Features and Changes	Version Compatibility Considerations	Fixed Bugs and Known Problems	Related Documentation at Web Site
Yes Details below	Yes	Bug Reports	No

New features and changes introduced in this version are:

Confirmation Dialog Preference Settings Moved

The preferences for setting whether a dialog confirms that you want MATLAB Instrument Driver Editor and MATLAB Instrument Driver Testing Tool to create new files are in a new location. You now access them in the General > Dialog Confirmations node of the MATLAB Preferences dialog.

For details on these Instrument Control preference settings, see "General Preferences for Instrument Control".

Compatibility Considerations

In previous versions of MATLAB and Instrument Control Toolbox, these dialog preferences were found under the Instrument Control node of the Preferences dialog.

Version 2.4.1 (R2006b) Instrument Control Toolbox

This table summarizes what is new in Version 2.4.1 (R2006b):

New Features and Changes	Version Compatibility Considerations	Fixed Bugs and Known Problems	Related Documentation at Web Site
No	No	Bug Reports	No

Version 2.4 (R2006a) Instrument Control Toolbox

This table summarizes what is new in Version 2.4 (R2006a):

New Features and Changes	Version Compatibility Considerations	Fixed Bugs and Known Problems	Related Documentation at Web Site
Yes Details below	No	Bug Reports	No

New features and changes introduced in this version are:

- "Generic Instrument Drivers Supported" on page 9
- "LeCroy Driver" on page 9
- "Agilent Instrument Simulations" on page 10

Generic Instrument Drivers Supported

This release includes support for generic instrument drivers that allow Instrument Control Toolbox to communicate with devices or software that do not use industry-standard drivers or protocols.

For more information, see "Using Generic Instrument Drivers" in the Instrument Control Toolbox documentation.

LeCroy Driver

This release includes support for LeCroy instrument drivers.

Several drivers ship with the toolbox. You can find these drivers by looking in the directory

```
matlabroot\toolbox\instrument\instrument\drivers
```

where *matlabroot* is the MATLAB installation directory, as seen when you type

```
matlabroot
```

at the MATLAB command prompt.

Many other drivers are available on the MathWorks Web site at

```
http://www.mathworks.com/matlabcentral/fileexchange
```

including drivers specifically for Instrument Control Toolbox under the Test and Measurement category.

Agilent Instrument Simulations

Instrument Control Toolbox includes simulations of the Agilent 33120a function generator and Agilent e3648 DC power supply. These simulations are available as instrument drivers.

You can see the drivers shipped with the release by looking in the directory

```
matlabroot\toolbox\instrument\instrument\drivers
```

where *matlabroot* is the MATLAB installation directory, as seen when you type

```
matlabroot
```

at the MATLAB command prompt.

The Agilent simulations are provided by the drivers

```
generic_agilent_33120a.mdd
generic_agilent_e3648a.mdd
```

Version 2.3 (R14SP3) Instrument Control Toolbox

This table summarizes what is new in Version 2.3 (R14SP3):

New Features and Changes	Version Compatibility Considerations	Fixed Bugs and Known Problems	Related Documentation at Web Site
No	No	Bug Reports	No

Version 2.2 (R14SP2) Instrument Control Toolbox

This table summarizes what is new in Version 2.2 (R14SP2):

New Features and Changes	Version Compatibility Considerations	Fixed Bugs and Known Problems	Related Documentation at Web Site
Yes Details below	No	Bug Reports	No

New features and changes introduced in this version are

Advantech GPIB Supported

Supported GPIB interfaces now include Advantech GPIB.

For further information, type

```
instrhelp gpib
```

Compatibility Summary for Instrument Control Toolbox

This table summarizes new features and changes that might cause incompatibilities when you upgrade from an earlier version, or when you use files on multiple versions. Details are provided in the description of the new feature or change.

Version (Release)	New Features and Changes with Version Compatibility Impact
Latest Version V2.5 (R2007b)	See the **Compatibility Considerations** subheadings for these changes: • "Obsolete Functions" on page 5 • "New Error Message" on page 5
V2.4.2 (R2007a)	See the **Compatibility Considerations** subheading for this change: • "Confirmation Dialog Preference Settings Moved" on page 7
V2.4.1 (R2006b)	None
V2.4 (R2006a)	None
V2.3 (R14SP3)	None
V2.2 (R14SP2)	None